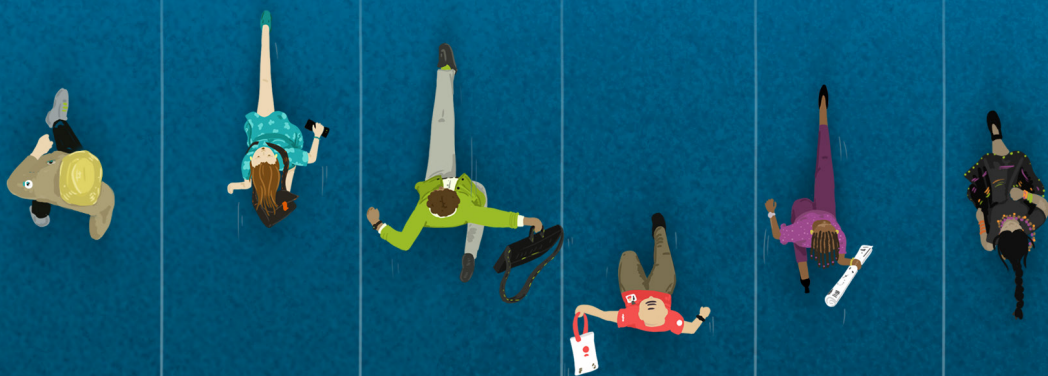


DEVELOPMENT IN THE AMERICAS

Markets for Development

Improving Lives through Competition



Edited by
Vanessa Alviarez
Matias Busso
Philip Keefer
Cezar Santos
Rodolfo Stucchi



MARKETS FOR DEVELOPMENT

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Inter-American Development Bank

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Preface

Latin America and the Caribbean stands at a pivotal moment. In recent decades, the region has made undeniable progress. Poverty has fallen, education has expanded, and social programs have broadened access to essential services. The region has also strengthened macroeconomic stability and has built more resilient financial systems. Yet, growth remains sluggish, productivity has stagnated, and opportunity is unevenly distributed. For too many, hard work does not lead to better jobs, innovation struggles to scale, and prosperity stays out of reach.

Among its core objectives, the Inter-American Development Bank's institutional strategy (IDBStrategy+) includes reducing poverty and inequality and bolstering sustainable growth. Achieving these goals requires well-functioning institutions and markets that foster private sector-led development through fair competition and lower barriers to entry, among other enabling conditions. This book is a direct contribution to that agenda. It examines how competition—or the lack thereof—shapes the region's economic performance, and how better-functioning markets can unlock productivity, growth, and opportunity.

When markets are open and competitive, they reward innovation, drive productivity, create quality jobs, and deliver better goods and services. They attract investment and encourage entrepreneurship. But when competition is weak—when markets are fragmented, closed, or dominated by a few—resources are misallocated, incumbents entrench their advantages, and entrepreneurship and growth stall.

This edition of the *Development in the Americas* series places competition at the center of the development agenda. It shows how limited competition holds back productivity growth and contributes to inequality. It documents how distortions in product, input, and labor markets can prevent high-performing firms from scaling and promising ideas from spreading. And it examines the institutional and structural forces—both persistent and emerging—that shape the region's competitive landscape.

At the heart of this story are firms (that create jobs)—the engines of productivity, sites of innovation, and main providers of employment. Yet across the region, many face limited incentives to grow or challenge incumbents. The book shows how a lack of competition can be pervasive, affecting many markets.

There is a need for reforms. The book highlights examples where reforms have created more competition, created jobs, and improved lives.

This book takes a broad view of reforms to improve competition. Beyond antitrust enforcement, it considers the full range of barriers that prevent markets from being contestable: regulatory burdens, infrastructure gaps, trade barriers, limited access to finance and skills, and uneven enforcement of rules. It examines how state capacity, economic structure, and institutional design influence markets and how competition shapes firm behavior, technology adoption, job creation, and wage setting.

Delivering reforms in these areas requires more than good intentions—it demands robust evidence. This is where the IDB's role as a knowledge bank comes in.

In this regard, we are proud to announce CompeteLAC, a new set of comparable indicators on competition spanning product, input, and labor markets, developed by the IDB. By making competition measurable and comparable, it equips policymakers, competition authorities, and researchers with the evidence required to support informed decisions and advance effective reforms. Currently, coverage spans a subset of countries; expanding coverage will be critical to support reforms across the region.

Stronger competition is essential for development. Opening markets and leveling the playing field empowers business dynamism, drives innovation and investment, and ensures that markets serve people—consumers, workers, and entrepreneurs with new ideas.

This is not a call for unfettered markets but for fair, well-regulated competition as part of a broader strategy to build state capacity, protect rights, and adapt to technological and global shifts. We hope this book encourages decision makers, business leaders, academics, and civil society to see competitive markets not as an abstract ideal but as a part of concrete, feasible reforms to foster growth, create jobs, and improve lives.

Ilan Goldfajn

President

Inter-American Development Bank

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Executive Summary

Latin America and the Caribbean has made undeniable progress over recent decades, but growth remains too slow, inequality too high, and productivity too stagnant. Behind these persistent challenges lies a common thread: weak competition. When markets are closed, concentrated, or fragmented, resources are misallocated, innovation stalls, and opportunity narrows. This report argues that strengthening competition is essential to unlocking the region's potential for faster, more inclusive, and more sustainable growth. Drawing on new evidence—including CompeteLAC, a unique dataset of comparable competition indicators—it shows where markets are falling short, how this affects firms, workers, and consumers, and what reforms can deliver a more dynamic and fair economy.

Why Competition Matters for Development

Competition is not just about prices—it is a foundation of inclusive growth. When firms face rivals, they must innovate, improve quality, and lower costs. Consumers benefit from more affordable goods, workers from fairer wages, and economies from the shifting of resources toward the most productive firms.

For Latin America and the Caribbean, the stakes are high: If product markets were as competitive as those in advanced economies, gross domestic product would be about 11 percent higher and inequality 6 percent lower. Greater competition compels firms to expand production, hire more workers, and invest more. It also raises government revenue by encouraging formalization. By contrast, when firms wield excessive power in labor markets, they limit hiring to keep wages low, leading to fewer jobs, lower pay, and weaker overall growth.

Because competition shapes both growth and inequality, competition policy is ultimately macroeconomic policy. This report argues for

frameworks that foster fair competition, with stronger and more independent antitrust institutions, regulations that reduce rather than entrench distortions, and infrastructure and regional integration that enable more firms to compete on equal terms.

The Cost of Weak Competition

Product market competition is comparatively weak in the region.

Market concentration—how much of a market is controlled by a few firms—is roughly four times higher in Latin America and the Caribbean than in advanced economies, while markups average 1.35, as compared to 1.20. These differences remain even after costs of innovation and brand development are accounted for.

Labor markets reveal similar imbalances. Workers in the region take home only about half the value they generate, compared with 65 percent in the United States and 81 percent in other advanced economies.

These disparities affect important sectors. Telecommunications often remain expensive as a result of high concentration. In banking, high profitability and concentration play an important role in keeping financing costs high, alongside other contributing factors. And, in many supply chains, large intermediaries use market power to squeeze upstream producers.

Weak competition also stifles dynamism. Although new firms often enter the market, they are usually small, informal, and not very productive, contributing little to jobs or innovation. Ninety-five percent of firms employ fewer than five workers, absorbing 57 percent of employment. The largest and most productive firms, with more than fifty employees, account for just 1 percent of firms and 20 percent of jobs. Investment in innovation is also modest: Firms in advanced economies spend nearly 4 percent of sales on innovation, as compared to 2.5 percent in the region, and 1.03 percent on research and development, as opposed to only 0.26 percent in the region. With little pressure on incumbents, creative destruction is weak, and productivity stagnates.

How Policy Can Unlock More Dynamic Markets

Reforms across Latin America and the Caribbean demonstrate that barriers to competition can be overcome—and the benefits are tangible.

In telecom, number portability empowered consumers, driving down prices.

The introduction of instant, low-cost digital payment systems has reshaped financial transactions. In Brazil, reforms enabling loan portability reduced interest rate spreads, while, in Uruguay, the adoption of multi-acquirer card machines lowered market concentration. Mexico's competitive bidding for insulin procurement lowered costs and improved access. These examples show how bold, well-designed policies can deliver real gains for consumers, workers, and firms.

Building on these successes, governments can focus on three priorities:

- **Deepen regional integration.** Fragmented markets keep firms small and isolated. Better infrastructure, harmonized regulations, and streamlined borders can create scale, foster innovation, and link firms to global value chains. In a shifting global trade environment, regional integration is a powerful lever for productivity and growth.
- **Make regulation smarter and procompetitive.** Rules that keep firms small or protect incumbents suppress dynamism. Removing size-dependent regimes, conducting regulatory audits, and designing evidence-based regulations can level the playing field, encourage scaling, and boost productivity.
- **Strengthen competition agencies.** Effective oversight requires independent, well-resourced institutions with the authority to review mergers, sanction cartels, and prevent abuses. Today, agencies in Latin America and the Caribbean lag by far their OECD peers in activity and autonomy. Strengthening them is essential to deter anticompetitive behavior and safeguard contestable markets.

From Lessons to Action

Weak competition is not inevitable; it reflects choices, institutions, and policies that can change. Whether markets are open or closed depends on three conditions:

1. **Regulation and trust.** Where governments earn citizen trust, regulation is designed better, and barriers are lower.
2. **State capability.** Strong bureaucracies and stable parties ensure procompetitive reforms are implemented and that they last.
3. **Political organization.** Broad business representation advocates for public goods, while fragmented lobbying entrenches privileges for incumbents.

To succeed, reforms must go beyond rules on paper. Governments need to invest in state capability and credible enforcement, through independent courts, a professional bureaucracy, and competition agencies with real autonomy. Party institutionalization and stable policy arenas are also crucial to prevent reforms from being reversed by political cycles. On the business side, aggregating interests through representative associations can shift demands toward public goods, like infrastructure and clear rules, rather than firm-specific favors. At the same time, countries should audit and phase out hidden barriers through coordinated regulatory and tax reviews and should sequence reforms in packages during windows of political opportunity. Finally, tight safeguards are needed to curb privileges and rents resulting from political connections that entrench incumbents.

Progress in the region shows that barriers can be dismantled and markets opened. The task now is to extend these reforms, scale up what works, and ensure institutions have the tools they need to keep markets fair and contestable.

Improving Lives through Competitive Markets

Markets have a remarkable ability to channel individual self-interest toward broader social gains. Yet in Latin America and the Caribbean, their reputation is often met with skepticism. Public opinion surveys reveal that many citizens view markets as unfair, benefiting a privileged few while leaving the majority behind.¹ In response, support is often strong for policies that curb the influence of market forces. This book argues that these concerns are not unfounded; markets in the region frequently fall short of delivering inclusive welfare gains. But the diagnosis, and the policy response it inspires, is often misguided. The issue is not that markets operate too freely but that governments do too little to prevent their capture and distortion. Rather than dismantling barriers to the entry of new businesses, policy often entrenches them, shielding incumbents and limiting competition.

An often overlooked aspect of economic development is that it requires well-functioning markets. In them, people and firms can trade goods and services, guided by prices. Whether it's clothing, medicine, or a phone plan, businesses are prepared to provide what people need. If someone wants to earn a living, firms are there to hire labor in exchange for wages. Market prices can make transactions efficient. Adam Smith, often called the father of modern economics, argued that market forces could drive prosperity by guiding resources to their most efficient use—a concept famously known as the “invisible hand.” For this to happen, prices must truly reflect supply and demand, with no one having the power to manipulate them. History, however, is full of examples of firms that seem to dominate large swaths of specific markets. How important are these powerful entities to the broader

¹ Public opinion data from the 2023 Latinobarómetro survey reflect this skepticism. Half or nearly half of respondents believe that national companies (51 percent), international companies (44 percent), or banks (44 percent) work to improve their quality of life. Moreover, 77 percent perceive the distribution of income in their country as unfair or very unfair.

economy, and what is their impact on economic prosperity in Latin America and the Caribbean?

“Market power” may seem an abstract term, but it can significantly affect everyday life. Consider José, a typical worker in one of the region's cities. He earns a modest wage and carefully budgets his income to cover basic needs. But in an economy dominated by a few firms, his purchasing power is constrained. With competition limited, these firms can set higher prices for essential goods and services, such as groceries, transportation, and internet access, forcing José to pay more while earning the same. The strain on his budget leaves little room for savings or an improved standard of living. The impact goes beyond prices; a market without competition also restricts job opportunities, as fewer firms means lower overall production. Over time, reduced competition stifles innovation and productivity, and the variety and quality of products and services that José can buy remain limited.

This market environment also alters the distribution of economic gains. Higher prices and fewer job opportunities squeeze José's purchasing power, while firm owners reap a disproportionate share of the benefits. In places with only a few employers, dominant firms can set wages below workers' true contributions, further constraining incomes. As a result, people like José carry a double burden—higher living costs and stagnant wages. José's experience illustrates a broader reality: When firms wield market power to influence both prices and wages, the economy tilts in their favor, leaving workers and consumers with fewer opportunities and a diminished stake in economic prosperity.

Moreover, economic growth and business dynamism also stagnate. Consider Ana, a small business owner with strong ideas and ambition, who struggles to expand. She could hire a worker like José, but she doesn't. Despite her drive, the broader economic environment holds her back. Her firm remains small, unable to compete with larger incumbents or gain market share. When dominant firms feel little competitive pressure, inefficiencies persist, and the economy falls short of its potential.

In recent years, a few procompetitive reforms have begun to reshape this landscape, delivering tangible benefits for workers like José and entrepreneurs like Ana. Regulatory changes and new entrants in telecommunications, for example, have expanded access to and lowered prices for mobile and internet services, allowing José to afford better ones. The introduction of digital payment systems has made financial transactions faster and cheaper, giving Ana new ways to reach customers and manage her business. Loan portability reforms are starting to help consumers like José gain access to more competitive credit, lowering their borrowing costs and

giving them greater flexibility to manage their finances. Trade liberalization has also brought some benefits, like greater product variety—more types and brands of, for instance, shoes or smartphones—and lower prices for consumers across the region. These reforms show that competition policies can make a real difference. As this book will show, however, much remains to be done.

To what extent does market power still drive high prices, low wages, and weak business dynamism in Latin American and Caribbean economies? Would greater competition across the entire economy meaningfully improve José's quality of life? Could a more level playing field help entrepreneurs like Ana innovate, hire, and grow? This introductory chapter shows that it would, and by a lot, in the product markets where José purchases goods and the labor markets where he earns his income. Lack of competition affects many other markets, as well. In the banking sector, for instance, Ana may hesitate to apply for a loan because interest rates are still too high. In markets for primary and intermediate goods, limited competition may impose high input costs on her small business. Assessing how increased competition affects prices, wages, and overall economic efficiency can provide a better understanding of its potential to raise living standards across the region.

Two caveats are worth noting at the outset. First, the book's results draw on diverse data sources and country studies. While often based on subsets of countries, the conclusions are broadly generalizable, given the region's shared structural characteristics and institutions. Second, many of the data points, examples, and claims in this chapter are intended to illustrate the broad themes and findings explored throughout the book. To maintain accessibility and flow, detailed references are not included here. However, the underlying evidence—including data, case studies, and citations to academic and policy work—is fully documented in the chapters that follow.

Better Markets for Development

To understand the importance of competition, consider product markets, where consumers like José buy goods and services from firms and where businesses like Ana's compete with others. In competitive markets, prices closely reflect production costs, such as labor, raw materials, and equipment. Any firm that charges more risks losing customers to rivals who provide the same goods and services for lower prices. Competition ensures consumers like José have many alternatives, and it forces firms to set prices based on costs and prevailing market conditions (that is, to act as price takers). Some

firms, however, can have significant market power and charge prices well above costs. At these higher prices, the quantity of goods demanded falls, and firms produce and sell less; but they still earn profits because of the high markup—the gap between the price and the cost. When high markups are widespread, prices rise, and output shrinks.

Firms may gain market power as a result of inherent economic characteristics of their sectors—such as high fixed or sunk costs, or strong network effects that generate economies of scale or scope—but also through government action or inaction. Regulatory barriers can limit entry, and weak institutions may fail to prevent incumbent firms from engaging in anti-competitive behavior. In some cases, the pursuit of market power can have positive effects: Firms that innovate may need the prospect of pricing power to justify risky investments. Firms that invest in branding enjoy pricing power compared to those who do not, but in exchange they offer consumers the promise of reliable quality. Social welfare is more likely to be reduced, however, by market power derived from collusion or strategies that block low-cost entrants. In Latin America and the Caribbean, market power is less likely to stem from innovation or dynamic competition; innovation levels, for example, remain far below those in the countries of the Organisation for Economic Co-operation and Development (OECD). Instead, firms may rely on control over inputs or distribution, strategic branding, or product differentiation with limited substitutability² to entrench their pricing power. Even in markets that appear competitive, structural and strategic barriers can often constrain entry and blunt the forces of competition, allowing high markups to persist.

While the rise of market power has become a global concern, the experience in Latin America and the Caribbean reflects distinctive characteristics: widespread informality³ and a scarcity of medium-sized firms (the so-called “missing middle”), both of which are consistent with an economy where dominant firms are prevalent; a regulatory environment that appears particularly distortionary and may insulate incumbents from competitive pressure; and limited capacity for antitrust enforcement. These features raise concerns that market power in the region could be especially pronounced. An important contribution of this book is to show that these concerns are supported by evidence. To this end, it introduces a new set of indicators designed to describe how markets function across Latin America and the Caribbean (see Box 1.1 on the CompeteLAC dataset).

² “Substitutability” refers to the extent to which one good or service can replace another in production or consumption.

³ In this book, “informality” refers to firms that are legally required to make social security contributions but do not.

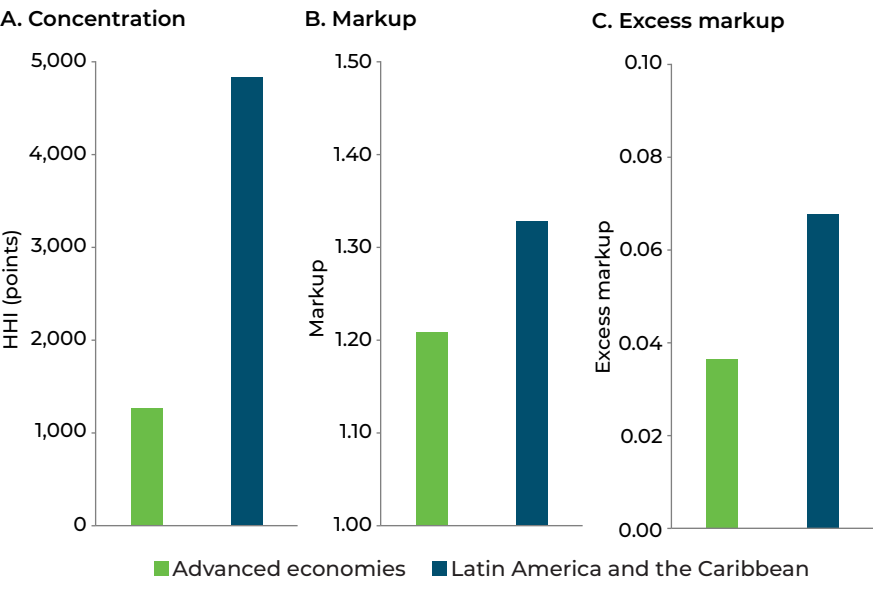
Box 1.1. CompeteLAC: A Novel Dataset about Competition in Latin America and the Caribbean

The CompeteLAC dataset is the first publicly available resource on competition in Latin America and the Caribbean, offering harmonized firm-level data from eight countries: Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Peru, and Uruguay. Developed through a regional collaborative effort, the dataset addresses classification, sampling, and data quality challenges, enabling consistent cross-country analysis. It provides policymakers and researchers with tools to study market dynamics, productivity drivers, and market power through four core modules: market concentration, firm dynamics, performance, and market power. CompeteLAC makes possible the attainment of broad and granular insights into competition and productivity across the region's economies, with detailed indicators reported by country, sector, and year. The results in the remainder of the book draw on CompeteLAC but also expand the analysis with other data sources and evidence, covering additional countries in the region. Although based on a subset of countries, the findings can be extrapolated to others, as many share important characteristics and institutions. Going forward, the aim is for CompeteLAC to be regularly updated, with new data and additional countries included over time. CompeteLAC is described in more detail in Chapter 2.

Evidence clearly shows that firms in Latin America and the Caribbean exert substantial market power. One such indicator is the region's high concentration of economic activity, as compared to advanced economies (Figure 1.1, Panel A). On average, markets have the equivalent of two firms of equal size, versus eight in advanced economies. Concentration alone does not imply weak competition, however; two firms can still compete aggressively in a concentrated market. What matters is not just how many firms there are but how they behave. Beyond high concentration, firms in Latin America and the Caribbean charge significantly higher markups than those in advanced economies. As shown in Figure 1.1, Panel B, the average firm in the region charges around 35 percent above production costs, compared to 20 percent in advanced economies. These high markups do not necessarily translate into excess profits; firms with substantial fixed costs, such as those related to research and development, branding, or regulatory compliance, often require higher markups to break even. Still, excess markups—beyond what is needed to cover fixed costs, like costs of innovation and brand development—are also higher in the region, indicating weaker competitive pressure (Figure 1.1, Panel C).

Chapter 2 discusses the state of competition in product markets across Latin America and the Caribbean. It shows that high markups are

Figure 1.1. Concentration, Markups, and Excess Markups



Source: Alvarez and Morales (forthcoming).
Note: Panel A displays the Herfindahl-Hirschman Index (HHI), computed as the sum of squared market shares of all firms within a market, which indicates the degree of industry concentration. Panel B presents firm-level markups estimated using a second-order Translog production function with two inputs: capital and cost of goods sold. Panel C reports excess markups, defined as the gap between a firm's observed markup and its zero-profit (optimal) markup—that is, the markup that would arise under perfect competition—estimated using the same methodology as in Panel B. The bars reflect the median HHI, markup, and excess markup by country and industry (based on the North American Industry Classification System—NAICS), covering both manufacturing and service sectors. Advanced economies include Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Italy, Japan, the Netherlands, Portugal, the Republic of Korea, Slovenia, Spain, Sweden, and the United Kingdom. Latin American countries include Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

widespread in manufacturing but even more pronounced in the service sector, which is critical to employment and productivity in the region. Markups are driven by incumbent firms wielding increasing pricing power rather than shifts in market share toward larger firms—a phenomenon that differs from that observed in, for instance, the United States.

Now, how do these low-competition markets affect the economy? The evidence in Chapter 2 shows that households in Latin America and the Caribbean pay significantly more for goods and services than they likely would in more competitive markets—an outcome that, on its own, warrants policy attention. The market structures and firm behaviors associated with high markups may also have broader, more insidious implications for formality, productivity, growth, and other key economic outcomes; for example, higher output stemming from more competition and more formalization imply higher tax revenues for the government.

To quantify these effects, a macroeconomic model was calibrated to multiple economies.⁴ Standard competition policy often focuses on firm behavior within formal markets. But in Latin America and the Caribbean, understanding competition requires examining the interaction between formal and informal sectors and how institutions—like tax systems and regulatory enforcement—shape market dynamics. The model used here incorporates these structural features to capture the unique mechanisms by which market power operates in the region. In it, some firms operate informally, are small, and hold minimal market share, while larger, formal firms tend to dominate markets. Within this framework, tax policies are crucial in shaping this formal–informal divide, influencing firms' decisions to remain formal and their associated markups. As a result, they indirectly affect overall productivity and economic efficiency by altering the competitive landscape.

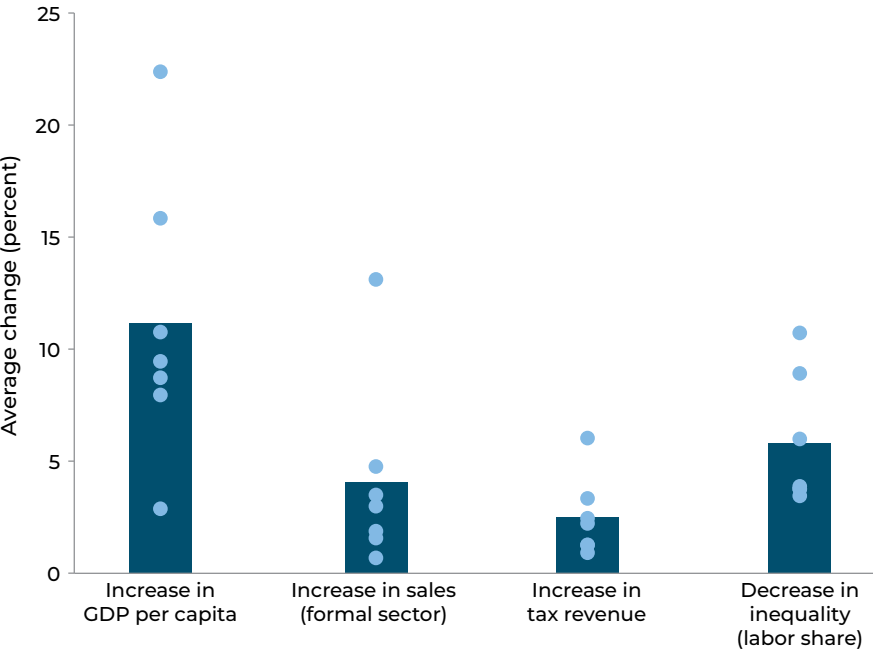
Consider the small entrepreneur, Ana. She can avoid paying taxes and making social security contributions if she chooses to run an informal business. The decision to do so, however, gives her an incentive—despite her entrepreneurial drive—to keep the firm small to avoid drawing attention from the authorities, which would trigger higher compliance costs. Meanwhile, larger, formal firms capture greater market share and gain the ability to charge higher prices with higher markups. For workers like José, Ana's choice means fewer formal employment opportunities with decent wages and protections.

How different would Latin American and Caribbean economies be if their markups fell to the level observed in the most advanced economies? The model offers a sobering answer to this question. To illustrate it, take a specific country in the region and measure the markups firms charge across different sectors, as discussed in more detail in Chapter 2. Next, imagine an alternative scenario in which all firms charge the same markup, set to the level observed in advanced economies. How would this change affect the macroeconomy of that country?

Figure 1.2 reports the results of this thought experiment along several aspects of the economy for seven Latin American and Caribbean countries, each represented by a dot in the figure. The first bar in the figure shows that, on average, the gross domestic product (GDP) per capita would increase by 11.1 percent—a significant rise in household incomes. There would be substantial variation across countries, however. Although all would experience

⁴ The model was developed and individually calibrated by Martinez and Santos (2025) for the following countries: Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, and Uruguay.

Figure 1.2. The Macroeconomic Impact of More Competition in Product Markets



Source: IDB staff calculations, based on country censuses or survey data, including Pesquisa Industrial Anual (Brazil), Encuesta Nacional Industrial Anual (Chile), Encuesta Anual Manufacturera (Colombia), Registro de Variables Económicas (Costa Rica), Super Intendencia de Companias (Ecuador), Encuesta Manufactura (Mexico), and Encuesta Anual de Actividad Económica (Uruguay).

Note: The figure presents the average percentage change resulting from increased market competition in key economic indicators across seven Latin American and Caribbean economies, following the methodology of Martinez and Santos (2025). The four bars illustrate the estimated impact of more competitive markets on GDP per capita, formal sector sales, tax revenue, and labor share. Each dot represents an individual country, highlighting the variation in projected gains across the region.

economic growth with more competitive markets, some whose markets were already relatively competitive would experience a smaller increase. While the lowest rise in GDP would be around 3 percent, some countries would gain more than 20 percent.⁵

Why does an economy grow with more competition? The reason is that greater competition forces large firms to charge lower markups, reducing

⁵ The GDP gains from increasing competition in the region's product markets are sizable, averaging 11.1 percent. This is in line with related work; for example, De Loecker, Eeckhout, and Mongey (2021) estimate that rising market power in the United States since the 1980s reduced GDP by about 10 percent. These magnitudes are generally larger, but of the same order, as gains from other reforms; Kambourov (2009), for instance, finds that Chile's trade liberalization in the 1990s raised long-run GDP by 7 percent.

consumer prices. With lower prices, demand for goods rises, prompting firms to increase production. The resulting increased output across the economy translates into higher GDP overall.

More competition influences other aspects of the economy, as well, including the level of formalization. As mentioned, informality rates in Latin American and Caribbean countries are significantly higher than in more advanced economies, and competition plays a role in shaping this divide. The second bar in Figure 1.2 shows that, as competition increases, the share of sales from the formal sector rises across the region, increasing by an average of 4.1 percentage points. When competition increases and markups decline, formal firms lower their prices, sell more, and expand. The resulting growth in the formal sector's share of total sales reduces the relative weight of informal businesses.

As governments often struggle to collect taxes from informal businesses, higher formalization rates have the added benefit of helping them overcome an important challenge for public finances in the region by making tax collection more efficient and reliable. As competition increases and more firms operate formally, government tax revenues rise. Figure 1.2 shows an average increase of 2.5 percent in revenues as a fraction of GDP, which implies an increase of 13.9 percent in government revenues.

Competition among firms is also central to determining the distribution of a country's income: the fraction that flows to workers, in the form of wages, and to capital owners, in the form of profits. When firms hold greater market power, they produce less—both individually and in the aggregate—and thus hire fewer workers. This has two direct effects on the labor market. First, overall employment declines, with some individuals exiting the labor force.⁶ Second, because most people cannot afford not to work, the weaker labor demand pushes many to accept lower wages. As a result, aggregate wages stagnate or decline, reducing total labor compensation compared to more competitive economies, and the labor share falls. Conversely, when market power decreases, the aggregate effect is a shift in income toward workers, raising the labor share and reducing inequality. Figure 1.2 illustrates this pattern: Across Latin American and Caribbean countries, a rise in competition is associated with an average 5.8 percent increase in the labor share, implying a meaningful reallocation of income and a decline in inequality.⁷

⁶ See Chapter 4 of Eeckhout (2021).

⁷ As is discussed in Chapter 3, competition among workers also helps shape the distribution of income between labor and capital. Unionization, for instance, enables workers to negotiate collectively, enhancing their bargaining position relative to firms. This bargaining power tends to be strongest when unions can limit the pool of available labor, thereby reducing competition among the workers themselves.

Lack of Competition in the Production Chain

Companies can exert market power not only when selling their products but when buying inputs, especially labor. Return to the case of José. He contributes substantially to his employer's productivity and wants to change jobs for better pay. His options are limited, however; few feasible opportunities are available outside of his current role, so his bargaining power is weak. His employer knows this and sees no need to offer a raise. Meanwhile, the entrepreneur, Ana, would like to open a competing store nearby and hire someone like José. But she encounters numerous obstacles, from limited access to credit to burdensome zoning regulations. So, her store never opens, and José stays in his role, earning a lower wage.

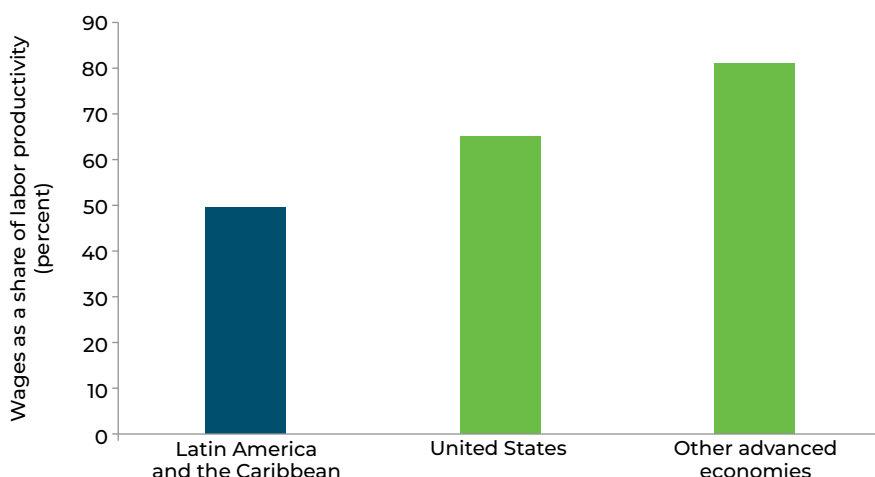
Labor market power arises when firms can impose markdowns—that is, pay wages below workers' marginal contributions to production without losing them. This often reflects limited competition within local labor markets, as defined by geography, occupation, skills, and industry. Labor market power can stem from employer concentration (the domination of the market by a few employers), which allows firms to internalize the effect of hiring on wages. It can also arise in labor markets with differentiated jobs, where workers value amenities or incur high switching costs, allowing firms to retain them at lower wages. Information frictions, mobility barriers, and weak options for outside employment further limit wage competition, even when many employers are present.

On average, workers in Latin America and the Caribbean take home in the form of wages 50 percent of what they contribute to their employers. In contrast, they take home 65 percent and 81 percent, respectively, in the United States and other advanced economies (Figure 1.3, Panel A). Like power in the product market, labor market power also reduces productivity. When firms have labor market power, they hire fewer workers than in a competitive labor market because hiring more people would require raising wages for all employees. This leads to lower employment and lower wages. With fewer workers hired, total output is lower, too. In addition, the wage markdown varies across firms, resulting in labor misallocation—that is, labor is not being allocated to its most productive use. Chapter 3 looks at labor markets, using rich data to document the prevalence of labor market power and employer concentration across occupations and regions. It shows how a lack of outside options—as a result of geography, lack of human capital, and regulation—drives down wages in the region.

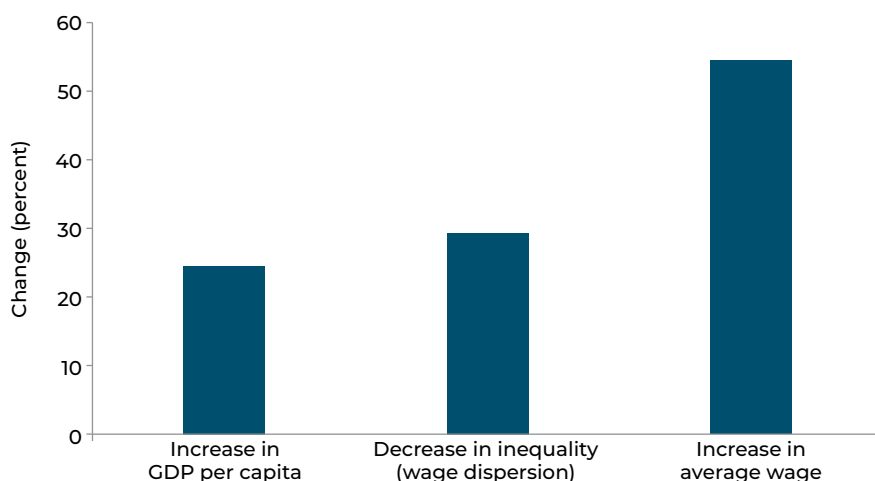
To quantify the effects of labor market power on welfare, Figure 1.3, Panel B, shows the results from a macroeconomic model in which firms

Figure 1.3. Labor Market Power and Its Effects in Latin America and the Caribbean

A. Average take-home pay per US\$100 contributed to the firm by workers



B. Average increase from reducing labor market power



Source: IDB staff calculations, based on World Bank Enterprise Surveys (WBES) and country censuses or survey data, as outlined in Figure 1.2.

Note: Panel A shows the average share of value-added that workers receive as wages for each 100 U.S. dollars they generate, calculated as the inverse of the average markdown ($1/\mu$), following the methodology of Akerberg, Caves, and Frazer (2015). Estimation details are consistent with those presented in Figure 3.1. This panel includes data from the following economies: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, and Uruguay. Panel B reports the projected percentage change in GDP per capita, reduction in wage dispersion, and increase in average wages under labor market conditions similar to those observed in advanced economies, following the methodologies of Armangué-Jubert, Guner, and Ruggieri (2025) and Card et al. (2018). Countries included in this simulation are Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Peru, and Uruguay. Other advanced economies include Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Italy, Japan, the Netherlands, Portugal, the Republic of Korea, Slovenia, Spain, Sweden, and the United Kingdom. Latin American countries include Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

compete for workers but also have labor market power and thus can influence wages—a setting known as oligopsony.⁸ The model, calibrated to ten Latin American and Caribbean economies, allows the inclusion of firms of different sizes, levels of productivity, and job amenities (that is, non-wage perks, such as better schedules or locations). Firms' average labor market power is estimated for each country. Based on this model, a counterfactual scenario can be simulated by increasing labor market competition in those economies to match that of advanced countries. The results are striking. GDP per capita in Latin America and the Caribbean would rise by as much as 25 percent, on average. These improvements would come not from increased investments or additional human capital but, rather, from reallocating workers to more productive firms and reducing wage distortions. With increased competition for workers, low-productivity firms would shrink or exit, while high-productivity ones would expand, thereby boosting overall efficiency. In this more competitive world, José would have more outside options, increasing his bargaining power.

As labor market power decreases, wages move closer to the worker's actual contributions, reducing wage inequality (as measured by wage dispersion) by almost 30 percent. In short, stronger labor market competition could deliver better matches between workers and firms and fairer employee compensation.

Of course, modern economies require more than workers to produce goods and services. Production consists of a web of firms across several sectors interacting by buying and selling goods and services as intermediate inputs. Market power can arise in any of these transactions, influencing the efficient allocation of resources across the entire economy. Bottlenecks in the economy may occur when upstream firms, like Ana's, are small and competitive but sell their output to intermediaries with market power. These middle-tier firms can exert buyer market power by paying lower prices for inputs—markdowns that often stem from sector-specific characteristics or the nature of the products traded. In the milk supply chain, for example, storage and spoilage concerns give intermediaries an advantage, allowing them to negotiate lower prices from primary producers.

Moreover, within this network, some sectors are more central to the economy than others, interacting with a broader range of industries. When firms in those sectors behave noncompetitively, distortions can propagate throughout the economy. Telecommunications is a clear example: Nearly all sectors depend on its services, while it relies on a narrower set of

⁸ The results are based on estimations done by Armangué-Jubert, Guner, and Ruggieri (2025).

specialized input providers. This centrality can enable telecom firms to exert market power both as sellers and as buyers, charging high prices to downstream users and negotiating lower prices from upstream suppliers. Chapter 4 explores supply chains and input–output linkages. It documents how upstream firms—especially in concentrated sectors—can exert buyer power, depressing supplier margins and distorting firm growth across the economy.

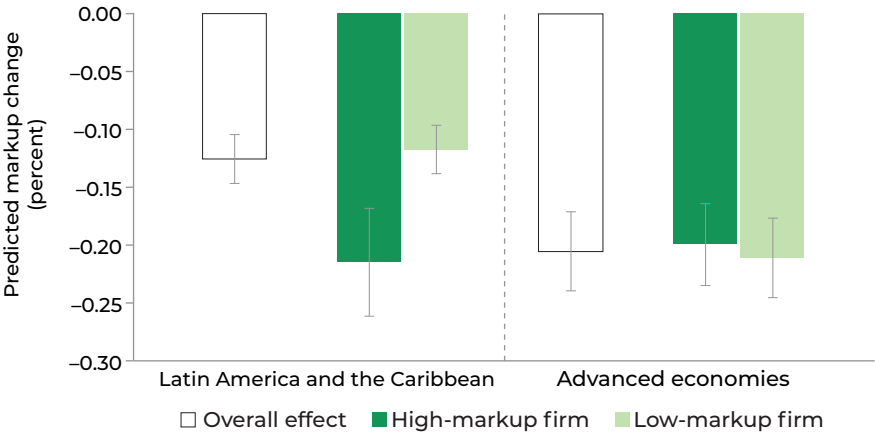
But power within supply chains is also shaped from the outside. In many countries across Latin America and the Caribbean, imported goods are an essential part of both consumption and production. As a result, foreign competition becomes part of the domestic equation, shaping how prices are set and how firms perform. It does so through two main channels: by putting pressure on firms to lower prices and improve efficiency and by expanding access to cheaper and better inputs—not only for importers, but for firms that rely on them indirectly through domestic supply chains. Together, these forces can shift market power and reshape competitive dynamics.

Chapter 8 explores how these mechanisms play out when trade opens quickly and at scale, showing the ways in which a competition shock altered market structures across the region. In sectors more exposed to competitive pressure, markups declined and dominant firms lost ground. But the effects were not uniform. In more concentrated markets, trade pressure did not always erode power. Much depended on how external pressure interacted with domestic market structure, influencing how gains from liberalization were distributed across the economy.

Figure 1.4 compares the effects of import competition on market power in Latin America and the Caribbean versus those in advanced economies. In both groups of countries, average markups decline. But the patterns differ sharply. In advanced economies, the reduction in markups is nearly twice as large and more evenly distributed across firms. In Latin America and the Caribbean, the overall decline is smaller—but concentrated among firms that had the highest initial markups. This suggests that, in the region, competitive pressure has been strongest for incumbents with more pricing power.

Firms also require the use of buildings, machines, and other capital goods for production, which are often financed through credit provided by banks. Few sectors are as vital—and as powerful—as banking. Banks sit at the heart of modern economies, channeling savings into investment, enabling day-to-day transactions, and shaping the pace of growth and innovation. Workers like José need access to banking to manage their finances and consumption, while credit is vital for the survival and growth of small businesses like Ana's. But when a handful of banks dominate the system,

Figure 1.4. Markup Response to a Competition Shock

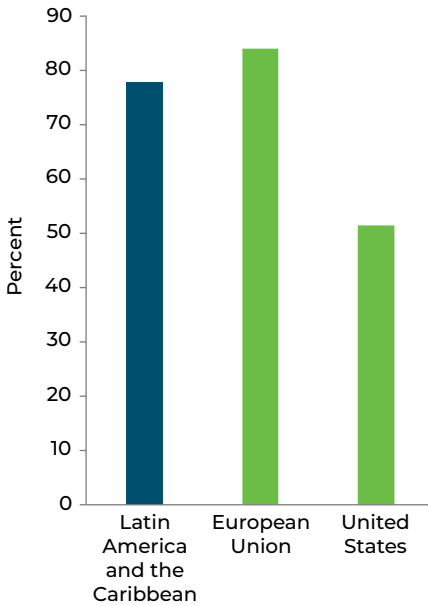
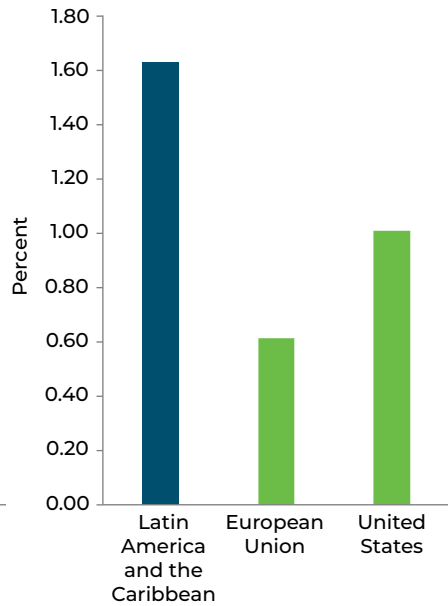
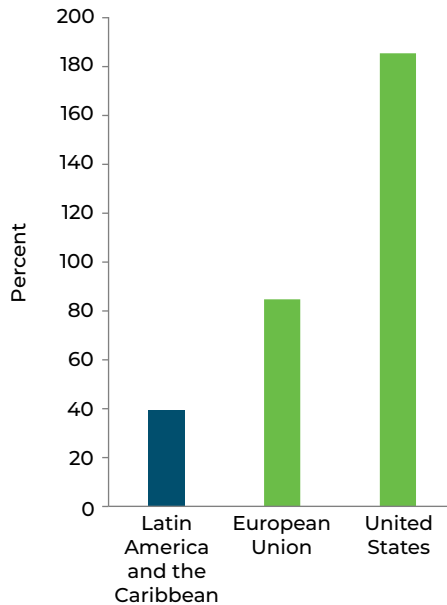


Source: Alvarez and Morales (forthcoming).
Note: Firm-level markups are estimated over the period 2001–15 for manufacturing goods, using a second-order Translog production function with two inputs: capital and cost of goods sold. “Overall effect” shows the predicted change in markups for the full sample of firms; “high-markup firms” are those whose average markup lay above the cross-firm median in the pre-2000 period, and “low-markup firms” those below it. “Competition shock” is measured as the 2001–15 change in Chinese imports in four-digit NAICS industries with local production. Advanced economies comprise Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Italy, the Netherlands, Portugal, Slovenia, Spain, Sweden, and the United Kingdom; Latin America and the Caribbean comprises Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

market power can distort credit allocation, limit access for small businesses, and increase the risk of costly financial crises.

Does the banking sector in Latin America and the Caribbean exhibit market power? This is a challenging question, as the products banks buy and sell are less tangible than those of other sectors. A starting point is to look at market concentration and compare the banking sector in the region’s countries to those in more advanced economies, such as the European Union and the United States. Panel A of Figure 1.5 shows the share of assets held by the five largest banks across different economies. At 78 percent, this concentration is high in Latin America and the Caribbean—a ratio comparable to the 84 percent found in the European Union but much higher than the 51 percent in the United States.

But, though correlated, concentration and market power need not go hand in hand. As markups for banking products are virtually impossible to calculate, one must look elsewhere. Banks are required to report their returns to relevant authorities, and one key statistic is return on assets (ROA). This financial ratio, reported in Panel B of Figure 1.5, measures a bank’s profitability relative to its total assets, indicating how effectively the bank utilizes its assets to generate income. As the figure shows, the

Figure 1.5. The Landscape of Competition in Banking**A. Five-bank asset concentration****B. Return on assets (ROA)****C. Total credit as a share of GDP**

Source: IDB staff calculations, based on World Bank Global Financial Development data (2001–21).

Note: Estimates for Latin America and the Caribbean include Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela. The value reported for the European Union reflects the unweighted average across its member states; the United Kingdom is excluded from this calculation.

average ROA for banks in Latin America and the Caribbean is, at 1.63, significantly higher than those in the United States (1.01) and the European Union (0.62).

In short, the evidence above suggests a high concentration in the banking sector across Latin America and the Caribbean, along with significantly higher returns than elsewhere. Do these features of the financial system affect credit markets in the region? Panel C of Figure 1.5 suggests they do. The credit-to-GDP ratio stands at just 39 percent, far below the 84 percent observed in the European Union and the 185 percent found in the United States. This comparatively low ratio stems from several factors. Market power in the banking sector compounds these challenges by reducing competitive pressure and limiting the scale and scope of credit available in the economy. Chapter 5 provides a more detailed examination of how a lack of competition in banking influences economic outcomes across Latin America and the Caribbean. Interest rates for consumers and firms, for instance, are quite high, and expensive credit has direct consequences for both consumers and entrepreneurs. For someone like José, bank credit is essential when financing a significant purchase or covering expenses during a spell of unemployment. When access to credit is constrained or the available credit is costly, the welfare of consumers like José suffers. The same holds for entrepreneurs like Ana. To operate their businesses, they need credit to invest in machinery, cover payroll, and manage day-to-day expenses. Scarce and expensive credit hinders firm growth.

The gains from a more competitive banking sector in the region can thus be large. Promoting competition in banking, however, requires targeted reforms that enhance loan portability, interoperability, and access. Brazil's loan portability reform is a leading example. By allowing borrowers to transfer loans across institutions under better terms, the policy has led to measurable reductions in interest rates and expanded access to credit. Extending similar portability mechanisms to a broader range of loan products could further improve the welfare of consumers. Equally important is reducing barriers to market entry in underserved areas. Government efforts to expand branch networks, such as Brazil's Banco para Todos and Mexico's Banco del Bienestar, illustrate how increasing physical presence can promote competition and financial inclusion.

Digital financial infrastructure also offers a powerful lever for reform. Policies that mandate interoperability in payment systems, like Uruguay's shift to multi-acquiring and Peru's 2022 regulation, have already reduced market concentration and merchant fees. Brazil's Pix system, launched by the central bank, shows how public platforms can level the playing field by boosting deposit competition and attracting users to smaller banks.

As digital payments expand, regulators must ensure network effects do not reinforce dominance by a few providers. Requiring compatibility across platforms, investing in shared infrastructure, and promoting data-sharing protocols can all help foster a more competitive financial ecosystem.

Fewer Challengers, Fewer Breakthroughs

High prices, low wages, and reduced prices for input producers are only some of the symptoms of too little competition. Uncompetitive markets also tend to exhibit low dynamism—the flip side of dominant firms not being effectively challenged by rivals. In dynamic and competitive economies, a continuous process of firm entry, growth, and exit fuels innovation and productivity. New entrepreneurs such as Ana open firms that introduce fresh ideas, technologies, and business models. Some disrupt incumbents or create new markets, while others expand consumer choice through better products and services. When successful, these firms scale up, create more job opportunities for workers like José, and attract investment, generating ripple effects that benefit the economy as a whole. In response, incumbent firms are pushed to innovate and operate more efficiently. This reallocation of labor and capital from stagnant to dynamic firms—known as creative destruction—raises aggregate productivity and accelerates the spread of superior technologies. Business dynamism is thus the engine that translates competition into sustained economic progress.

But when competitive pressures weaken, this virtuous cycle stalls. New firm entry—especially when it brings novel products, services, or ideas—is often seen as a sign of innovation. In Latin America and the Caribbean, entry rates are relatively high, yet this apparent dynamism has not led to meaningful gains in innovation or productivity. The problem is the nature of the entrants: Their quality and economic impact are often limited. Many markets in the region are segmented, with a few dominant firms catering to high-end consumers with stringent quality demands while a large number of smaller, less productive firms serve the lower end. Entry into the high-quality segment remains infrequent, whereas entry into the low-quality segment happens often but does little to boost overall productivity.

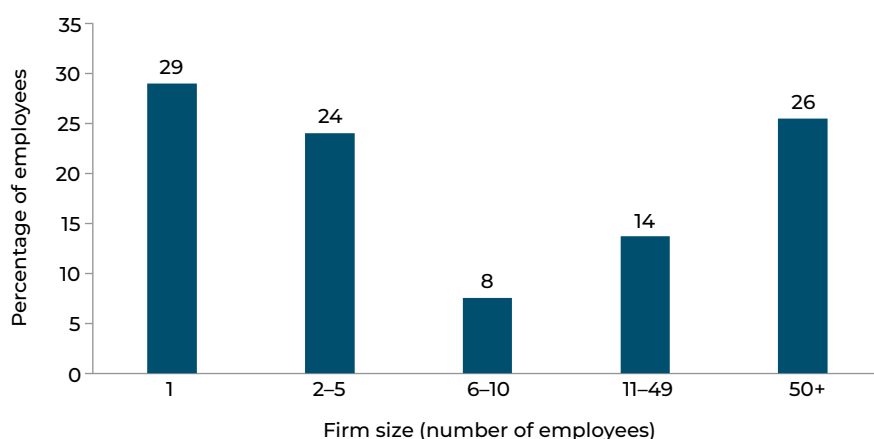
As discussed in Chapter 6, which examines firm dynamics in the region through the lens of market competition, most new firms initially operate on a small scale, with low productivity and a high likelihood of operating informally. While informality facilitates entry by lowering regulatory and financial thresholds, it also changes the profile of the entrants. Many informal firms remain stagnant, never formalize, and rarely innovate or grow. Consequently, high entry rates do not necessarily translate into more intense competition

or technological advancement. Moreover, for creative destruction to be effective, inefficient firms must exit, allowing resources to be reallocated toward more productive uses. This process is impaired in the region, where informal firms operate outside legal and financial oversight, making them difficult to monitor, regulate, or close through formal mechanisms. As a result, low-productivity firms often persist, occupying space and consuming resources without making meaningful contributions to productivity growth or innovation. In this way, informality distorts the entry, growth, and exit processes, ultimately weakening competition.

Lack of competition also means incumbent firms have little incentive to innovate, since the pressure to lower costs or differentiate products is weaker when market power is secure. In more competitive environments, by contrast, firms innovate to gain an edge—either by cutting costs or offering new products that temporarily set them apart. In this way, innovation not only responds to competition; it helps shape it. As discussed in Chapter 7, in Latin America and the Caribbean, innovation spending among incumbents is lower than in advanced economies, with firms devoting around 2.5 percent of sales to innovation, compared to nearly 4 percent in richer countries. Most of this investment goes toward adopting existing technologies—often through upgrades to machinery—rather than developing new products or processes. Larger, older, and export-oriented firms are more likely to innovate, in part because they have better access to finance. Competitive pressure can push firms to innovate as a way to survive, but it can also reduce expected returns, discouraging investment in innovation. The relationship is not linear. High markups—an indicator of weak competitive pressure—are associated with lower investment and slower job creation.⁹ This suggests market power is not being reinvested in productivity-enhancing innovation, reinforcing the need to understand the structural and institutional factors that shape firms' decisions.

Weak competition is also made weaker by the restrained growth of small and medium-sized enterprises (SMEs). In many advanced economies, these firms are the backbone of innovation and job creation. In Latin America and the Caribbean, however, SMEs often remain small, and many are informal and not too productive, hobbling their capacity to challenge large incumbents. As a result, the competitive pressures exerted by smaller firms remain weak. These dynamics contribute to the so-called “missing middle.” As shown in Figure 1.6, a disproportionately high share of workers in the region is employed in microenterprises—firms with five or fewer employees—while employment in medium-sized firms is strikingly low. Both micro

⁹ See detailed discussion in Chapter 2.

Figure 1.6. Average Share of Workers across Firm Size

Source: IDB staff calculations, based on household survey data from Argentina, Chile, Colombia, Costa Rica, Ecuador, Mexico, Paraguay, and Peru (Q1-2025) and Bolivia and Uruguay (Q4-2024).

Note: The share of workers is calculated by firm size bracket for working-age employees living in urban areas and employed in the private sector at the time of the survey.

and large firms account for more employment, producing a U-shaped distribution that reflects structural barriers to SME growth. This fragmentation hinders the emergence of a vibrant, competitive middle tier of firms that could disrupt market leaders and fuel innovation from below.

Importantly, these dynamics have implications for the interpretation of market concentration. Reallocation from low- to high-productivity firms can increase concentration, as the more productive firms lower prices, expand their market shares, and grow larger. While concentration and market power sometimes move in tandem, they can also diverge; a high concentration may reflect efficiency rather than market dominance. Still, policies must ensure it does not translate into entrenched power. This underscores the importance of market contestability—ensuring that firms, regardless of size, face meaningful threats of entry or displacement. Achieving contestability requires reducing regulatory hindrances to entry and growth, improving access to finance for smaller firms, and strengthening the institutions, such as competition authorities, that uphold the rules of the game. Without these conditions, entrepreneurs like Ana will struggle to compete and innovate, and productivity gains will be left on the table.

A Region of Fragmented Markets

Weak competitive pressures in many markets may reflect underlying fragmentation. Fragmentation describes a condition where markets are

“thin”—with too few buyers, sellers, or workers—and poorly connected across geography, sectors, or technologies. In such environments, limited outside options reduce the scope for substitution among products, employers, and providers. For workers like José, this means fewer job opportunities and weaker bargaining power. For entrepreneurs like Ana, it can mean difficulty reaching customers, gaining access to suppliers, or adopting new technologies. In the end, the situation undermines contestability, blunts the disciplining force of competition, and entrenches incumbents. Some sources of fragmentation are structural, such as geography, while others arise from policy choices or firm behavior, often interacting with market-specific technological features. This book identifies and explores across chapters four dimensions of fragmentation: geography, technology, human capital, and international trade.

Geographical fragmentation occurs when physical distance, inadequate infrastructure, and logistical bottlenecks result in spatially segmented markets. This is particularly salient in Latin America and the Caribbean, where large countries, uneven population densities, and underinvestment in transportation and digital infrastructure exacerbate the costs of reaching buyers, suppliers, or job opportunities. Chapter 4 discusses how poor connectivity in rural areas distorts supply chains and gives rise to buyer market power. Middlemen in the Amazon fisheries sector, for example, often serve as the only link between fishers in isolated regions and end consumers. This bottleneck allows intermediaries to capture a disproportionate share of the value chain, paying fishers a fraction of the final price for their catches. The introduction of community-owned boats, which enabled producers to bypass intermediaries and reach new markets, raised prices and incomes for primary input producers by 27 percent—evidence that expanding geographical access can directly enhance competition.

Geographical fragmentation also affects labor markets. Chapter 3 presents evidence that transportation gaps, sparse local labor demand, and weak intermediation services make job transitions costly for workers in remote or underserved regions, as a result of which they are less likely to move across jobs, occupations, or industries. This diminished responsiveness of labor supply enables firms to exert labor market power. In such contexts, infrastructure investment—especially in transportation, broadband, and mobility-enhancing services—becomes a procompetitive tool that expands the effective reach of markets.

But barriers to competition don't stop at national borders. Chapter 8 shows that international trade itself is shaped by hidden frictions, particularly the cost of moving goods. International shipping costs for Latin America and the Caribbean are, on average, nearly 18 percent higher than in advanced

economies. In part, this reflects structural differences—exports from the region tend to be heavier, which raises ad valorem shipping costs. But limited competition on many trade routes also plays a role, especially where few carriers operate. These higher costs act as hidden barriers for smaller firms and drive up input prices across supply chains. They also complicate the interpretation of prices: Because freight charges are often bundled into reported trade values, part of the observed response to tariff cuts may reflect changes in shipping margins, not in producer pricing. Thus, competition may remain muted even after tariffs fall, especially where physical and regulatory bottlenecks persist.

Technological incompatibility is another source of fragmentation, especially in sectors with strong network effects or multi-sided digital platforms. In telecommunications and digital payments, for instance, firms can entrench market power through closed systems that raise switching costs and reduce interoperability. Chapter 4 explores Uruguay's telecommunications market before the introduction of cell phone number portability. Customers were effectively locked into their providers, as switching meant losing their phone numbers—a significant cost, given that numbers are linked to identities, services, and social networks. After number portability was introduced in 2022, switching increased, and competition intensified. Firms responded with lower data prices, larger data packages, and new offers, leading to a shift in market dynamics.

In the case of payment systems, Uruguay also provides a compelling case. For years, exclusive arrangements tied each acquirer (the financial institution that processes credit or debit card payments on behalf of a merchant) to a single card network, forcing merchants to maintain several contracts if they wished to accept various cards. As documented in Chapter 5, the transition to a multi-acquiring system allowed any acquirer to process more than one card brand. The reform reduced market concentration, enabled new entrants, and introduced such service innovations as better antifraud tools and faster settlements. These gains stemmed not from direct antitrust enforcement but from redesigning the market infrastructure to remove artificial silos.

A more subtle but equally important form of fragmentation arises from how human capital is distributed in the workforce. Chapter 3 highlights the implications of low general skill levels in Latin America and the Caribbean. Workers can find it difficult to switch employers or sectors because their skills are not recognized or portable across firms or industries. This limits their bargaining power and reduces competitive pressure on employers to raise wages, improve working conditions, or invest in training. Large employers in isolated places, for example, can exert labor market power because workers

have few credible alternatives. This type of fragmentation is especially acute for low-income and informally employed workers, who typically receive little on-the-job training and have little access to certifications. Investing in transferable skill development—particularly through vocational education systems and modular certifications—can help break these barriers. As the chapter argues, deepening labor markets requires not just matching platforms but foundational human capital reforms.

Market fragmentation also occurs when domestic markets remain disconnected from regional and international markets. As discussed in Chapter 8, obstacles to trade, non-harmonized standards, and weak cross-border infrastructure divide Latin American and Caribbean economies into smaller, disconnected markets, limiting competition and preventing firms from reaching scale. Deeper regional integration can increase productivity and the intensity of competition by expanding the pool of competitors and consumers. Yet integration efforts in Latin America and the Caribbean have often stalled or remained partial, particularly in services and public procurement. Efforts to harmonize rules, digitize customs and certification processes, and reduce restrictions other than tariffs can be essential to stitching together fragmented markets.

Integration into international markets has also shifted the geography of market power in ways that challenge standard narratives. Although trade liberalization expanded consumer choice and lowered input costs in many sectors, it also allowed the most productive and already dominant firms—often exporters or multinationals—to consolidate their positions. As these firms expanded, they acquired greater market shares, not necessarily through aggressive pricing, but by outcompeting smaller rivals in scale, logistics, and brand recognition. As a result, average markups in open sectors have not always fallen—and in some cases have risen—driven by shifts in market composition rather than firm-level behavior.

This consolidation has a cross-border dimension. In many economies in the region, foreign-owned firms now dominate high-markup segments of the market. While their presence can bring investment, it also means that the rents—that is, the excess profits—associated with market power often accrue abroad. These dynamics are exacerbated in countries with less capacity to tax or regulate large multinational firms, making it difficult to attain and reinvest the gains from trade locally. In effect, market openness without institutional strength can allow profits to flow outward, leaving behind only modest domestic benefits. Cross-border mergers and acquisitions further reinforce these dynamics. In several sectors—such as beer, retail, and telecommunications—market concentration has risen not organically but through acquisition-led expansion by multinationals. Without

effective merger review and antitrust oversight, such consolidation can entrench pricing power and undermine the benefits that trade liberalization was meant to deliver.

Across all these dimensions, a consistent message emerges: Fragmentation weakens competition, not solely as a result of firm behavior but because of structural features that limit the connectivity and depth of markets. Addressing it demands investment in the competition infrastructure. This includes expanding physical and digital connectivity, ensuring interoperability in critical systems, equipping workers with transferable skills, and linking domestic markets to larger regional networks. Of course, regulation also plays a crucial role.

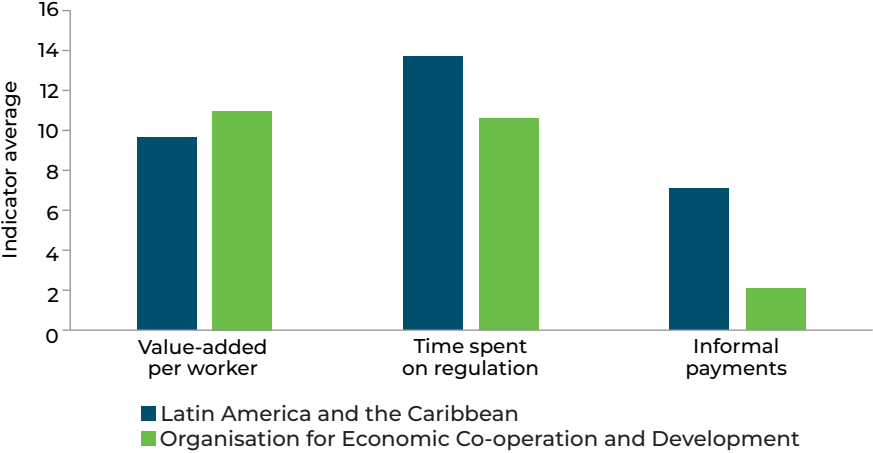
To Regulate or Not to Regulate?

In Latin America and the Caribbean, imperfect regulatory design and uneven enforcement can be major sources of market power. Instead of curbing firm activities that impose costs on society (negative externalities), regulation sometimes protects incumbents or discourages new entrants. Enabling competition in the region's institutional context requires smarter—not necessarily less—regulation.

Different forms of regulation can be vital to protecting public interests. Some regulations are intended to curb market failures that, for instance, affect worker safety, environmental sustainability, or consumer health; these may include rules that enforce labor rights, control sanitary conditions in food production, or establish safety protocols in transportation. Other regulations, like minimum wages, can be implemented to promote redistribution. Even well-intended rules, however, can prove detrimental. In Latin America and the Caribbean, regulatory burdens are especially high, as documented in Chapter 9. Figure 1.7 reports that firms in the region spend more time dealing with regulation than their OECD counterparts. Moreover, these firms engage more often in informal payments, often to circumvent some types of regulation. Perhaps not surprisingly, given these burdens, Latin American and Caribbean firms are less productive than those in OECD countries, as can be seen from their lower levels of value-added per worker.

Some regulations can act as barriers to entry. A prospective entrepreneur like Ana, for example, may decide her country's regulations are too burdensome to start or run a business. Or she may find regulations simply bar her from operating her business. Another issue is regulations that hinder firm growth. Several countries in Latin America and the Caribbean, for instance, offer preferential tax treatment for smaller firms. Given the widespread informality in the region, this tax tool provides an important encouragement for

Figure 1.7. Regional Averages of Manufacturing Firms' Performance and Regulatory Experiences



Source: IDB staff calculations, based on data from the 2006–24 waves of the World Bank Enterprise Surveys (WBES).

Note: Averages are computed for the complete sample, including the waves of the survey from 2006 to 2024. OECD averages exclude Latin American and Caribbean firms. Productivity variables are log-transformed. Value-added per worker is measured as the natural logarithm of the firm's value-added, divided by the number of workers in the firm. Time spent on regulation is measured as a fraction of managers' time spent on regulatory matters (as a percentage). Informal payments are measured as the share of firms that incur informal payments (as a percentage). Informal payments are considered gifts or payments made to public officials to "get things done" regarding customs, taxes, licenses, regulations, services, and so on.

small firms to formalize; it can, for example, facilitate Ana's compliance with all the regulations to which her firm is subject. This type of policy also creates an incentive for firms to remain small, however. If Ana's firm grows beyond the threshold that qualifies it for lower taxation, its costs increase. Indeed, evidence shows that in countries where such policies exist, a large fraction of firms cluster just below the threshold. The tax tool becomes what economists refer to as a size-dependent policy—a measure that targets smaller firms and inadvertently discourages growth. Even when such policies are formally uniform across firms of different sizes, their enforcement may still deter expansion. If large firms are more likely to be inspected for compliance with labor regulations, for example—perhaps because they are more visible to the government—that, too, can create incentives to stay small.

When societies face distortions from weak competition—high prices, low wages, and widespread informality—they often resort to regulation rather than tackling the underlying barriers to competition. In labor markets, dominant firms can pay workers like José less than their productivity. Minimum wages can narrow this gap, but they are blunt tools: If set too high, they risk reducing formal hiring or pushing workers into informality. Uniform wage floors across diverse sectors and regions—each with different

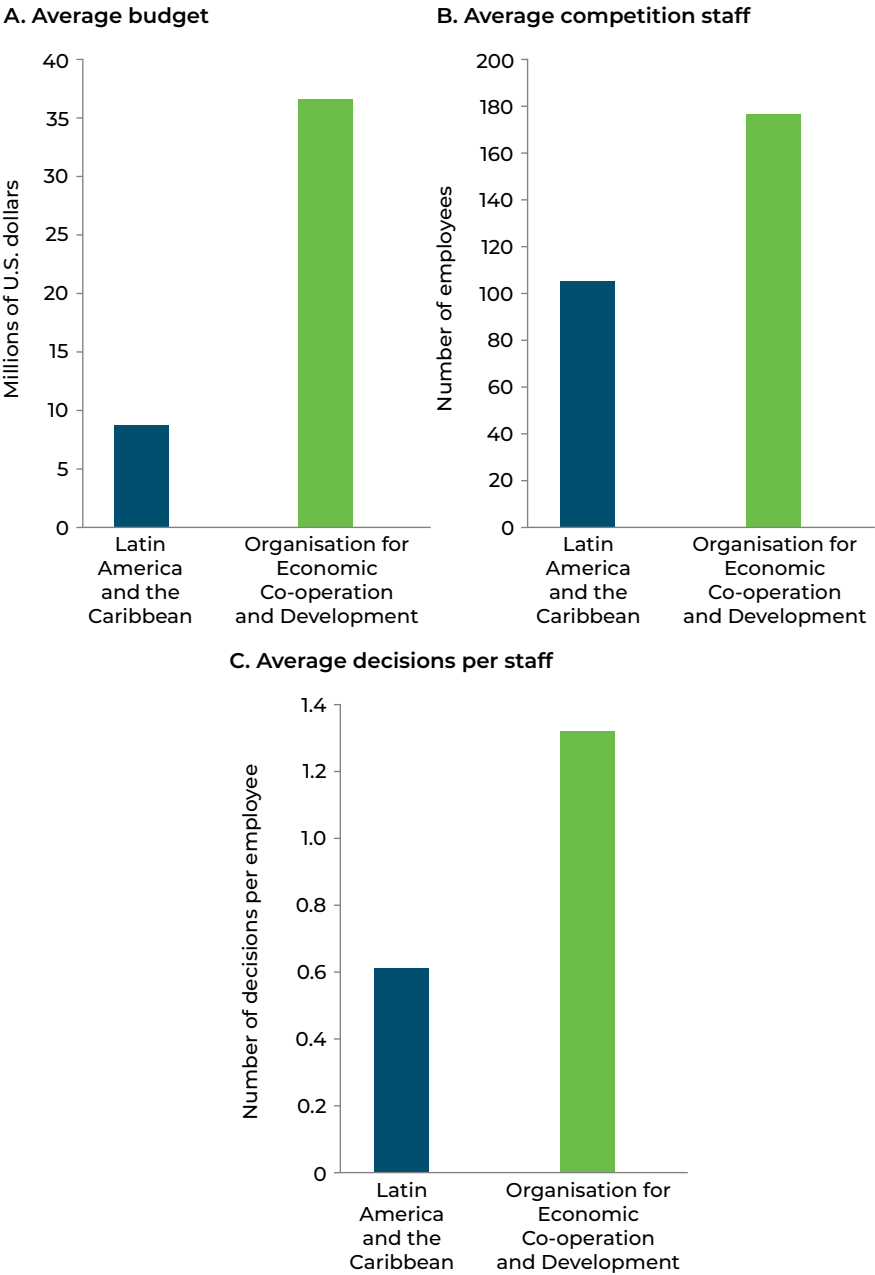
cost structures and productivity levels—can generate unintended consequences. In practice, weak enforcement in the region limits redistribution and fuels distortions, as firms stay small or informal to avoid scrutiny, reinforcing the “missing middle” and curbing competition. Similarly, price controls—sometimes used in the region to fight inflation—can offset excessive markups but often generate resource misallocation. Ultimately, rather than directly regulating wages or prices, it is more effective to address the root causes of weak competition.

Chapter 9 discusses what can be done to strengthen regulatory institutions. Effective regulation requires clear objectives, evidence-based design, and mechanisms to evaluate both benefits and costs, including, crucially, effects on competition. Few countries in Latin America and the Caribbean have institutional frameworks that support these practices; only a handful conduct regulatory impact assessments or use public consultations systematically. International experience shows that smarter regulation—especially when it reduces unnecessary entry barriers to prospective entrepreneurs like Ana—can boost productivity, enhance the welfare of consumers like José, and make economies more inclusive.

In a world with widespread market power, an important piece of regulation is antitrust. Chapter 10 examines the role of antitrust policy in promoting competition and curbing firm behavior that restricts market access and harms consumer welfare. While most firms in Latin America and the Caribbean do not engage in such behavior, anticompetitive conduct is both widespread and costly. At the same time, enforcement capacity remains inadequate; agencies lack resources, independence, and the legal authority they need to act effectively. Figure 1.8 presents data comparing the activities of antitrust agencies in Latin America and the Caribbean with those in OECD countries. Antitrust agencies in the region operate with substantially lower budgets than their OECD counterparts. Moreover, they employ significantly fewer staff. In addition, their productivity—measured by the number of decisions per staff member—is lower. These differences suggest there is considerable room for improvement in the performance of the region’s antitrust agencies. Their challenges may be greater, however, than those in many advanced economies, where antitrust agencies can focus narrowly on cartel detection or merger review. In Latin America and the Caribbean, where structural market distortions are more pervasive and enforcement resources less abundant, competition authorities must also play a developmental role, advocating for procompetitive regulation, shaping markets, and pushing for reforms that improve contestability in thin or informal markets.

One example of the anticompetitive practices targeted by antitrust policy is the behavior of cartels, which raise prices and increase the costs of

Figure 1.8. Regional Averages of Antitrust Enforcement, 2020–22



Source: IDB staff calculations, based on Competition Trends, OECD.
Note: The average agency budget for each group of jurisdictions in Latin America and the Caribbean is based on data from 13 countries. Reported values were converted from euros to U.S. dollars using annual average exchange rates from the International Monetary Fund. The number of staff dedicated to competition functions is based on data from 15 countries. The average number of decisions per staff member is estimated as the ratio of the number of decisions (cartel, abuse of dominance, and mergers) to staff.

goods and services consumers like José buy. The overall human cost of these practices can be substantial, as shown by a Mexican insulin case where an end to bid rigging led to improved patient health outcomes. Yet, despite the harm inflicted by cartel behavior, the likelihood of detection is low. This is especially true in Latin America and the Caribbean, where weak institutions and insufficient enforcement resources make such behavior unlikely to be identified and punished.

Beyond cartels, firms restrict competition through the abuse of dominance. This includes exclusionary contracts, denial of interoperability, and restrictions on customer switching—all especially prevalent in telecoms and payment and digital platforms. Targeted policy reforms can reduce market concentration by improving portability rules or breaking up vertically integrated payment networks, helping consumers like José when, for example, they switch mobile phone providers. Small entrepreneurs like Ana can also benefit from better terms when they can easily use interoperable payment systems across multiple card companies. Abuse of dominance, however, remains difficult to detect and prosecute.

Antitrust enforcement is only one piece of effective competition policy. Agencies must also advocate for procompetitive regulation and monitor how government actions affect market dynamics. In practice, as Figure 1.8 shows, most agencies in Latin America and the Caribbean lack sufficient budgets, staffing, and autonomy to fulfill these roles. Even when penalties are formally large, the low probability of detection undermines their deterrence value. Strengthening legal frameworks, expanding the use of leniency programs, and supporting cross-country cooperation—especially among smaller countries with more limited enforcement capacity—can yield large social and economic gains at limited fiscal cost. Consumers like José and entrepreneurs like Ana have much to gain from the lower prices and greater flexibility that come with increased competition.

Mapping the Road to Competition

Building more competitive markets requires policy action on three complementary fronts. First, market fragmentation—across geography, technology, human capital, and trade—hinders competition by reducing the depth and connectivity of markets. Tackling it demands investment in the infrastructure of competition: improving physical and digital connectivity, ensuring interoperability of key systems to promote the entry of new firms, products, and services into markets, fostering the development of general and transferable skills, and advancing regional integration.

Second, excessive regulatory burdens and distortions must be addressed. Many governments in Latin America and the Caribbean impose complex, overlapping, or poorly designed rules that deter entry and constrain firm growth. While some regulations serve legitimate public goals—such as protecting health, safety, or the environment—others are outdated, discretionary, or influenced by incumbent firms. These distortions disproportionately raise the cost of formalization, particularly for small and medium-sized firms. A smarter regulatory agenda is needed, one that safeguards essential protections while removing rules that entrench market power. This includes simplifying and harmonizing licensing systems, strengthening regulatory impact assessments, and increasing transparency in rulemaking and enforcement.

Third, antitrust agencies must be equipped with sufficient tools, resources, and independence to detect and deter anticompetitive behavior.

Together, reforms on these three fronts can help level the playing field—ensuring that firms compete on merit rather than privilege, that consumers benefit from lower prices and better services, and that workers like José and entrepreneurs like Ana face fewer structural barriers to opportunity and growth.

Addressing conditions that inhibit competition will require more than isolated reforms, however. Chapter 11 argues that a strategic, systematic approach is essential to dismantle the complex web of outdated, redundant, or protectionist regulations that restrict entry and entrench market power. A first step is a comprehensive legal and regulatory audit to identify the rules—often buried in obscure legislation or sectoral norms—that create artificial barriers to competition. Some of these rules may only generate rents for private firms without any real benefit to the public. This inventory should classify regulations according to their impacts on contestability, transparency, and efficiency, distinguishing between those that promote public welfare and those that serve narrow interests.

Furthermore, piecemeal deregulation should be avoided. Tackling distortions sector by sector invites opposition from powerful incumbents who have the most to lose and the capacity to organize politically. Instead, broad, simultaneous reform packages that bundle changes across multiple sectors can reduce opposition, increase the visibility of collective benefits, and build cross-sectoral coalitions. This approach aligns with political economy insights that emphasize the value of sequencing and coordination in overcoming entrenched resistance. At the same time, it is crucial to recognize that not all regulations are distortive or rent-seeking. Many exist for good reason and entail legitimate policy tradeoffs. While they may adversely affect competition, they can be essential to safeguarding public welfare.

Reform efforts must, therefore, distinguish between necessary protections and those that primarily shield incumbents.

The goal is not deregulation for its own sake but smarter regulation that preserves essential standards while enhancing market openness. Hidden obstacles to entry—such as technical norms, licensing systems, or discretionary permits—should be prioritized. These measures are often cloaked in pro-social language but are used to protect insiders from competition. Simplifying, harmonizing, and digitizing licensing and certification processes can level the playing field without compromising legitimate policy objectives. New regulations should undergo independent cost-benefit analysis, with explicit consideration of long-term distortions, rent-seeking risks, and implementation capacity. The competition authority should have a voice when new regulations are proposed.

To ensure legitimacy and sustainability, the reform process should actively involve the legislature as a representative body of public preferences. Legislative debate and oversight help ground reform in democratic accountability. The process must, however, be fully transparent to prevent its appropriation by narrow interests. Public communication is also essential: Governments must explain reforms clearly, showing how lower prices, better services, and more innovation are linked to fairer, more open markets. Without broad public understanding and institutional support, even well-designed reforms risk reversal.

Finally, no reform will be effective if it fails to recognize that the persistence of low competition is not just a product of market fragmentation, inadequate regulation, or poor institutional design. Procompetitive reforms often fail to materialize because the equilibrium of interests that sustains the status quo—high concentration, limited entry, and protected incumbents—remains politically stable. Chapter 11 discusses the reasons behind this stability to provide a roadmap for reform to those policymakers interested in fostering competition for a more equal society.

Looking Ahead: Building on the Power of Competition

Competition is a powerful driver of economic development. Where it thrives, innovation accelerates, productivity grows, and opportunities expand for firms, workers, and consumers alike. Latin America and the Caribbean has already taken steps toward more open and dynamic markets—from the trade liberalization of the 1990s, to enabling consumers to keep their phone numbers when switching providers, to allowing borrowers to transfer loans. These past achievements show how reforms can boost entrepreneurship, improve consumer welfare, and generate better jobs.

Yet, as this chapter has shown, challenges remain. Data covering multiple markets reveal that competition in Latin America and the Caribbean is generally weaker than in advanced economies, often marked by higher market concentration and fewer dynamic entrants. This lack of rivalry can raise prices, limit choices, and constrain the growth of smaller, innovative businesses. Closing these gaps could yield substantial economic gains—potentially increasing GDP per capita and helping to reduce inequality across the region.

Seizing this opportunity requires deliberate action to make markets more contestable and inclusive. Reducing fragmentation, improving regulations to encourage entry and innovation, and strengthening competition authorities can all help ensure markets remain open and fair. These efforts promise not only to improve market outcomes but to deliver more inclusive and sustainable growth. The rest of this book explores these issues in detail—documenting where and why competition is weak, showcasing where progress is already being made, and identifying the policies and institutions that can make markets work better, unlock opportunities, and improve people's lives.

Product Market Power: Patterns that Matter

Every time you buy a product—whether a loaf of bread, a cell phone, or an airline ticket—the price you pay reflects not just the cost of production but market power—the seller's ability to set prices above competitive levels. In competitive markets, firms have little room to charge excessive prices because consumers can easily switch to alternatives. But when companies dominate an industry, competition weakens, prices rise, and consumers bear the cost. Market power shapes not only the prices people pay but investment, innovation, and the pace of long-term growth.

Evidence suggests that market power has been rising globally, with concentration (the extent to which a market is controlled by a few firms) and markups (the difference between prices and production costs) increasing across many industries and countries (De Loecker, Eeckhout, and Unger 2020). These changes have been associated with slower productivity growth, declining labor shares, and falling business dynamism (Autor et al. 2020; Covarrubias, Gutiérrez, and Philippon 2020). In this context, concerns about competition have become central to understanding broader economic outcomes, not only in advanced economies but in middle-income regions.

In Latin America and the Caribbean, the implications are particularly salient. The region's competitive landscape is shaped by a combination of persistent barriers to market entry, segmented and often fragmented markets, weak regulatory enforcement, and widespread informality¹ within the economy (Eslava, Meléndez, and Urdaneta 2021). These barriers slow the growth of new and innovative firms, reinforce the dominance of incumbents, and lead to higher prices and fewer choices for consumers. Moreover, they affect which firms survive, how much they invest, and whether technological advances translate into broader productivity gains. In this setting, market power reinforces structural vulnerabilities and deepens the

¹ “Informality” refers to businesses that are legally required to make social security contributions but do not.

development constraints that hold back more inclusive and sustained economic growth.

Markups in Latin America and the Caribbean are high—significantly higher than in advanced economies—and unevenly distributed. In some sectors, they are concentrated among a small set of firms; in others, they are more broadly spread across the market. These patterns are unlikely to be explained by differences in technology or cost structures alone. Instead, they reflect limited competition and structural barriers that weaken market discipline—that is, the pressure on firms to operate efficiently and responsibly to reduce the risk of losing customers or investors. To document the patterns, this chapter presents the results of an analysis using CompeteLAC—a firm-level dataset covering eight countries in the region. The data are designed to allow consistent measurement of markups and concentration across sectors and countries, capturing important dimensions of market power in Latin America and the Caribbean. Details on the construction and scope of the dataset are provided in Box 2.1.

Still, interpreting markups requires care. A high markup can point to weak competition—but not always. In many cases, it reflects the cost of reaching scale, building networks, or investing in new products. Markups measure how far prices sit above the cost of producing one more unit. But that margin alone doesn't capture the complexity behind firm strategies or market structure. They offer important clues—but not the full story.

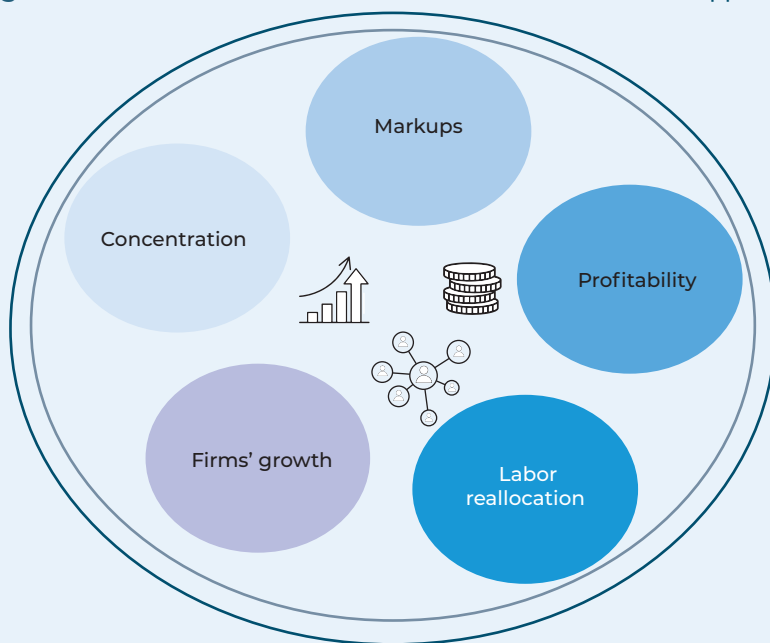
Box 2.1. The CompeteLAC Dataset: The Key to Analyzing Regional Market Power

The CompeteLAC dataset is the first publicly available collection of indicators on competition in Latin America and the Caribbean, providing an essential resource for understanding market dynamics in the region. It is based on firm-level data collected by national statistical offices through economic censuses and manufacturing surveys, which are transformed into comparable indicators that can be consistently tracked across time, sectors, and countries. At this stage, the dataset covers eight economies—Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Peru, and Uruguay—offering policymakers and researchers a unique perspective on the structure and performance of markets in Latin America and the Caribbean. CompeteLAC was developed through a collaborative regional effort, and it addresses such challenges as classification discrepancies, sampling variability, and differences in data quality. The harmonized framework ensures consistency while accommodating the unique economic contexts of each country.

(continued on next page)

Box 2.1. The CompeteLAC Dataset: The Key to Analyzing Regional Market Power *(continued)*

Figure B2.1.1. Market Power across Indicators: A Multifaceted Approach



Source: IDB staff elaboration.

By making these insights publicly accessible, CompeteLAC empowers researchers and policymakers to analyze the evolution of competition, identify productivity drivers, and examine the dynamics of market power across Latin America and the Caribbean. These dynamics cannot be determined by a single measure; to gain a full understanding, an extensive set of indicators is required (see Figure B2.1.1).

To address this need, the dataset spans four core modules, together comprising hundreds of indicators designed to capture distinct aspects of competition and productivity dynamics:

1. **Market Concentration** captures the degree of market dominance through indicators such as the Herfindahl–Hirschman Index (HHI), concentration ratios (CR4), and dominance indexes.
2. **Firm Dynamics** tracks the evolution of firms in the market, including entry and exit rates, job creation and destruction, and the reallocation of labor.
3. **Performance** measures how efficiently firms operate, with indicators covering profitability, value-added per worker, and total factor productivity (TFP).

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Box 2.1. The CompeteLAC Dataset: The Key to Analyzing Regional Market Power *(continued)*

4. **Market Power** quantifies the ability of firms to influence prices in output and labor markets, measured through such metrics as markups, mark-downs, output elasticities, and expenditure shares.

Each indicator is reported at the country, sector, and year levels and includes firm-level distributions (for example, means, standard deviations, percentiles, and density plots) to enable both aggregate and granular analyses of competition and productivity. These indicators cover the economy as a whole, as well as specific sectors, ensuring versatility for diverse analytical needs.

The dataset currently covers eight countries, which together account for about 75 percent of Latin America and the Caribbean's gross domestic product and have an average GDP per capita of around US\$12,800, compared to roughly US\$9,000 for the rest of the region. For Brazil, it relies on the *Pesquisa Industrial Anual* (PIA), 1996–2021; for Colombia, the *Encuesta Anual Manufacturera* (EAM), 1995–2021; for Chile, the *Encuesta Nacional Industrial Anual* (ENIA), 1995–2012; and for Costa Rica, the Revec dataset, which combines matched employer–employee records, corporate tax returns, firm-to-firm transactions, and customs data, 2005–2020. For Ecuador, the dataset draws on the *Superintendencia de Compañías* (SuperCías), 2001–2022, with markup estimates available from 2008; for Mexico, the *Encuesta Manufacturera*, 2009–2021; for Peru, the *Encuesta Económica Anual* (EEA, INEI), 2000–2019; and for Uruguay, the *Encuesta Anual de Actividad Económica* (EAAE), 2007–2019.

A notable strength of CompeteLAC is its panel dimension: Firm or plant identifiers are available in all countries, enabling researchers to track firms over time. In several cases—Brazil, Chile, Colombia, Costa Rica, Ecuador, and Mexico—the underlying source is a census, providing near-universe coverage of formal manufacturing firms. In others, such as Peru and Uruguay, the data come from nationally representative surveys, which nevertheless allow for the construction of robust firm- and sector-level indicators.

The objective of its developers is to continue expanding CompeteLAC by broadening the database's sectoral coverage within each country, by keeping it as up to date as possible, and, above all, by incorporating additional countries to build a comprehensive regional resource on competition dynamics. At present, coverage concentrates on manufacturing, with data on services available in Costa Rica and Ecuador and on mining in Brazil. While manufacturing accounts for only 12 to 20 percent of GDP in the eight countries, it remains central because its standardized and quantifiable production processes allow for rigorous empirical analysis. At the same time, systematically extending coverage to services and other sectors is essential to build a more complete picture of competition dynamics in the region—**even if measurement in these areas is inherently more complex, as their outputs often lack clear physical units**

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Box 2.1. The CompeteLAC Dataset: The Key to Analyzing Regional Market Power *(continued)*

and depend more on subjective or contextual factors. Progress in this direction will require sustained national efforts to generate and share comparable data so the region as a whole can build a robust resource for monitoring and fostering competition. The role of the Inter-American Development Bank is to facilitate and support these efforts as part of its broader commitment to strengthening competition policy and promoting more dynamic, inclusive, and resilient economies in Latin America and the Caribbean.

Measuring Market Power in the Region and the World

How much pricing power do firms in Latin America and the Caribbean have? To answer this question, this chapter looks at markups. Many studies use market concentration as a proxy for pricing power because it's easier to calculate and uses widely available data. These measures can be misleading, however. They depend heavily on how the market is defined, and even small changes in geographical scope or product categories can produce very different results. A market may, for example, look highly concentrated but still show no signs of pricing power—large firms may just be operating efficiently, spreading out high fixed costs, or passing savings on to consumers. So, without knowing how prices compare to costs, concentration tells us little about real competitive pressure.

Markups, on the other hand, offer a more direct way to measure pricing power. Since they are based on firm-level data—specifically, how much a firm spends on inputs and how much output it produces—they don't rely on potentially arbitrary market definitions. This chapter estimates markups using a production-based method, which links input costs to changes in output. Box 2.2 outlines the methodology and its main assumptions.

This approach builds on the idea that, under competition, output should rise proportionally with input use. By comparing the evolution of sales and inputs at the firm level, the amount firms are able to charge over marginal cost can be inferred. The resulting markup estimates allow for consistent cross-country and cross-sector comparisons.

It is important to interpret markups carefully. High markups do not automatically signal weak competition or market failure. In some cases, they reflect high fixed costs, scale economies—that is, cost advantages that arise when firms increase production—or successful innovation, especially

Box 2.2. Measuring Market Power

Why is market power hard to measure?

At first glance, identifying market power may seem simple—some firms are clearly dominant, while others compete to survive. But actually measuring market power is much more complicated. The most common proxy used is market concentration, which looks at how much of a market is controlled by the largest firms. These measures are popular because they're easy to calculate. However, they rely heavily on how the market is defined. If the definition is too broad, they can underestimate how dominant some firms are. If it's too narrow, they can exaggerate market power.

Concentration measures also ignore international trade. Imports can keep prices in check even when only a few domestic firms operate in the market. On the flip side, a market that seems competitive may actually be dominated by a few exporters, making it look less concentrated than it actually is. A market may appear concentrated yet be exposed to significant foreign competition (Gutiérrez and Philippon 2017; Rossi-Hansberg, Sarte, and Trachter 2021). The following summarizes some of the main concepts and methods relating to the measurement of market power.

Why markups matter. Markups offer a direct view of firms' pricing power by measuring the difference between prices and marginal cost. Unlike concentration measures, which are sensitive to how markets are defined, markups reflect firm-level behavior and can be compared consistently across sectors and countries (De Loecker and Warzynski 2012).

How markups are estimated. This chapter takes a production approach to markups, estimating them using data on firm-level revenue and input expenditures. The idea is that, when firms face competition, their output should grow proportionally with their input use. If it doesn't, and prices rise faster than costs, the difference reflects pricing power.

Why input choice matters. Markups must be based on a flexible input—one that firms can adjust freely—because the estimation relies on how input costs influence firms' production decisions. If the input can't be adjusted, its cost no longer reveals how firms respond to market conditions. Materials typically meet this condition; labor often does not. In Latin America and the Caribbean, employment protections, severance rules, and legal rigidity make labor particularly costly to adjust. To avoid bias, this chapter follows the literature and uses materials as the input of reference (Raval 2023).

Correcting for timing and shocks. Firms choose how much labor, materials, and other inputs to use before they know exactly what the demand for their products will be. However, the data typically record effective input use alongside

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Box 2.2. Measuring Market Power *(continued)*

actual sales revenue, which reflects demand that was only realized after production decisions were made. When demand falls unexpectedly, the data make it appear that the firm used too many inputs. This creates a bias in estimating markups, which seem smaller than they actually were at the time of decision making. In this analysis, an adjustment is made to correct for this and provide a better reflection of the intended behavior (De Loecker and Warzynski 2012).

The role of production functions. The analysis estimates a Translog production function with three inputs: capital, labor, and materials. This flexible approach allows output elasticities to vary across firms and industries, which is important in a region with diverse production technologies and firm sizes.

Other methods and tradeoffs. Demand-based methods or estimates using the cost of goods sold also exist. But these methods either rely on rich consumer data (which are hard to get) or assume labor and materials are equally flexible (which is often not true in developing economies). Using production data is more feasible, and the data are consistent across countries (Atkeson and Burstein 2008; Döppler et al. 2024).

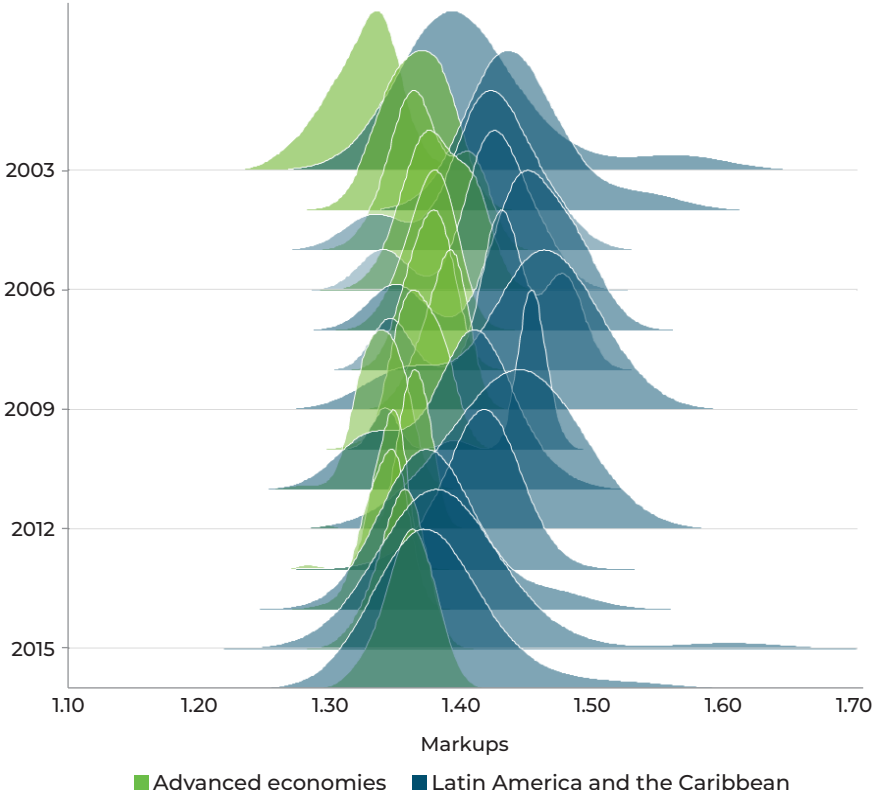
Why this matters. Estimating markups helps us understand not only who has pricing power, but whether competition is working. These measures are essential to interpreting firm performance, market structure, and, ultimately, the forces shaping growth and productivity.

in sectors where firms invest heavily to improve efficiency or expand capacity. Markups measure the wedge between prices and marginal costs, but they do not capture the full cost structure or competitive dynamics in a market. They therefore provide a useful perspective on pricing behavior but not a definitive verdict on market power.

In the comparisons that follow, these estimates are used to benchmark Latin American and Caribbean countries against peers and global averages. The goal is not just to document where markups are high but to gain an understanding of how their level and distribution relate to structural features of competition and what that implies for productivity, investment, and firm dynamics across the region.

When examining markups of six major economies in Latin America and the Caribbean, a clear pattern emerges: They tend to be persistently high compared to those in advanced economies. Figure 2.1 compares the distribution of markups in the region with those of advanced economies from 2003 to 2016, showing both their levels and how they have evolved over time.

Figure 2.1. Comparative Evolution of Markup Distribution



Source: Alvarez and Morales (forthcoming).
Note: The figure shows markups weighted by gross output in manufacturing sectors between 2003 and 2016. Firm-level markups are estimated using a second-order Translog production function with two inputs: capital and costs of goods sold. Advanced economies include Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Italy, Japan, the Netherlands, Portugal, the Republic of Korea, Slovenia, Spain, Sweden, and the United Kingdom. Latin American countries include Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

As the figure shows, markups across the Latin American countries analyzed in this sample are consistently higher. The median markup in the region is around 1.35, compared to 1.20 in advanced economies. This means that for every US\$1.00 it costs a firm to produce a good or service, consumers in the region typically pay US\$1.35, versus US\$1.20 in advanced economies. In other words, firms in Latin America and the Caribbean are charging roughly 35 percent above marginal cost.

This gap can reflect several factors, such as high fixed costs, investment needs, or differences in firm efficiency. For producers, higher markups may help cover these fixed costs or increase profit margins. But they can also signal weaker competitive pressure. In less competitive markets, firms have

fewer incentives to lower prices, improve product quality, or invest in long-term productivity improvements. For consumers, this means higher prices and reduced purchasing power, limiting access to goods and services and lowering overall welfare.

The markup gap was especially pronounced in the early 2000s, and, while it has narrowed somewhat, it remains substantial. This pattern holds across most of the distribution: From the 1st to the 95th percentiles, markups in Latin America and the Caribbean are systematically higher than in advanced economies. Only at the very top—beyond the 99th percentile—do firms in advanced economies begin to match or exceed the highest observed markups in the region.

These findings are consistent with earlier estimates of markup levels. Using data on listed firms between 1990 and 2015, De Loecker and Eeckhout (2018) report average markups of around 1.60 for South America. Eslava, Garcia-Marin, and Messina (2025), drawing on the World Bank Enterprise Surveys (WBES), find the average price markups in Latin America and the Caribbean are approximately 1.87. In both cases, the samples include manufacturing and nonmanufacturing firms, mirroring the composition shown in Figure 2.1.²

The dispersion of markups is also wider in the region, as seen in Figure 2.1. Firms operate across a broader range of pricing power, along a distribution with a longer upper tail—reflected in the presence of firms charging especially high markups—and with more variation across sectors. In contrast, advanced economies exhibit a more compressed distribution. This greater spread in the region suggests deeper structural differences in competitive intensity, barriers to market entry, and firm dynamics.

At the top of the distribution, prior research suggests, extreme markup values in advanced economies are often driven by a small group of dominant firms—particularly in the United States—linked to rising concentration and the expansion of “superstar” effects in certain sectors (Autor et al. 2017; Covarrubias, Gutiérrez, and Philippon 2020; Heresi 2024).³

Understanding what drives these differences—whether firm size, market structure, or policy environment—is essential to assessing how market power shapes productivity, investment, and inequality in the region.

² It is worth noting that the International Monetary Fund’s *World Economic Outlook* documents that markup growth between 2000 and 2015 was more pronounced in advanced economies than in emerging ones (IMF 2019, Chapter 2). Its analysis focuses on changes in markups rather than levels, and its definition of “emerging economies” leans heavily toward Central and Eastern Europe, unlike the focus here on Latin America and the Caribbean. The two exercises are, therefore, not directly comparable and should be viewed as complementary rather than overlapping.

³ Superstar firms are the top performers in their industries, capturing a dominant share of the market despite the presence of many competing firms.

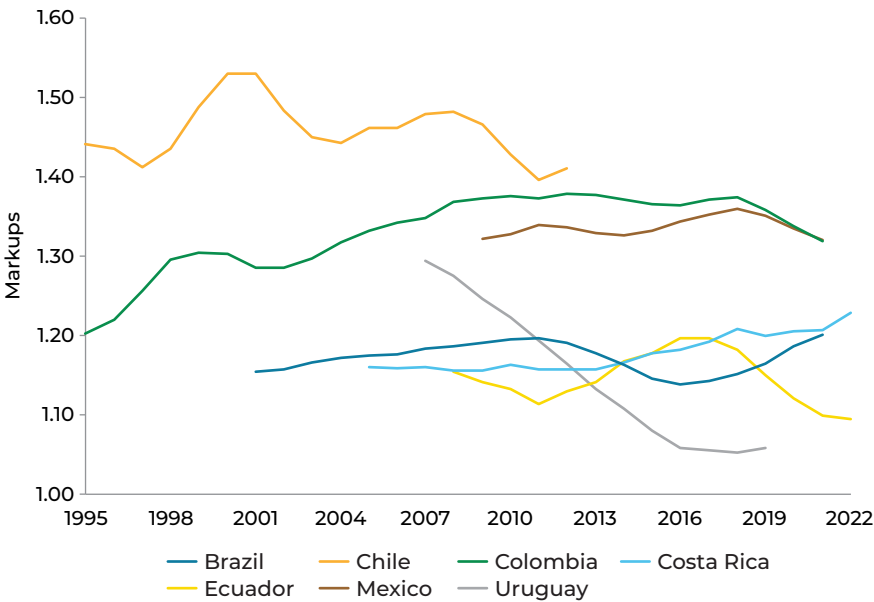
Markup Trends at the Country Level

How have markups evolved in Latin American and Caribbean economies? The analysis begins by examining aggregate markup trends over time for the countries in CompeteLAC. It then explores whether particular sectors are driving these patterns. Finally, the evolution of markups is broken down across different percentiles, shedding light on how firms at various points in the distribution have been affected.

This section shifts the focus from firm-level distributions to country-level averages. Figure 2.2 presents the evolution of aggregate markups across economies in the region from 1995 to 2022. These are revenue-weighted national averages that reflect both pricing strategies and the structure of each economy. Box 2.3 discusses different aggregation measures and why the choice of weighting matters for interpretation.

Figure 2.2 reveals striking cross-country differences. Chile exhibits the highest markups in the region, remaining consistently elevated despite some fluctuations. Colombia follows a gradual upward path, maintaining relatively high levels. Mexico, while slightly below Chile and Colombia, also remains

Figure 2.2. Markup Trends in Selected Latin American Countries



Source: IDB staff calculations, based on data from CompeteLAC.
Note: The figure shows markups in the manufacturing sector for years in which data are available for each country. Firm-level markups are estimated using a second-order Translog production function with three inputs: capital, labor, and materials. Markups are weighted by the firm's revenue.

Box 2.3. Aggregating Markups: Why the Method Matters

Aggregating firm-level markups into an economywide measure is neither trivial nor straightforward; there is no single correct method. For this analysis, a choice was made between two types of weighting: revenue weighting and cost (or input) weighting.

Revenue-weighted markups give more weight to firms with higher sales. This means that even if a firm raises prices while losing volume, its markup still pulls up the aggregate. As a result, revenue-weighted markups reflect both pricing behavior and market reallocation, capturing structural changes in competition over time.

Input-weighted markups, on the other hand, use firms' input shares as weights. This method aligns more closely with welfare analysis under imperfect competition. Unlike revenue-weighted markups, input-weighted markups do not reflect changes in market share. The weighting cancels out firm-level expenditure shares and collapses to an economy-wide ratio of total revenue to total cost, scaled by output elasticity.^a

The analysis presented in this chapter uses revenue-weighted markups as the benchmark. These are consistent with economic aggregates like gross domestic product, profitability metrics, and commonly used concentration measures, such as the Herfindahl-Hirschman Index (De Loecker, Eeckhout, and Unger 2020). This weighting choice allows for easier comparison of markups across countries while capturing shifts in market-specific characteristics.

^a This is equivalent to Hall's (1988) aggregate markup, derived directly from macro aggregates. The choice of weighting affects how shifts in market power are interpreted—whether they stem from firm behavior or from changes in market structure.

on the higher end, with a more stable trajectory in recent years. Uruguay, in contrast, shows a steady decline in markups over the past two decades, now coming closer to the competitive benchmark.⁴ Costa Rica and Ecuador follow more moderate trends, without sharp increases or sustained declines.

These divergent patterns raise important questions about how domestic competition, regulatory conditions, sectoral composition, and market size

⁴ The level of markups is similar to that reported by Casacuberta and Gandelman (2023). Unlike the findings presented here, however, their study documents a stable trend over time. This divergence likely reflects methodological differences. Casacuberta and Gandelman (2023) estimate production functions using Wooldridge's (2009) single-stage generalized method of moments (GMM) estimator with instrumental variables, which assumes that the error term is uncorrelated with input choices and that unobserved productivity follows a Markov process. Markups are then derived from these estimates. Moreover, the approach here incorporates the full set of higher-order input interactions, allowing the analysis to capture richer substitution patterns and sectoral heterogeneity.

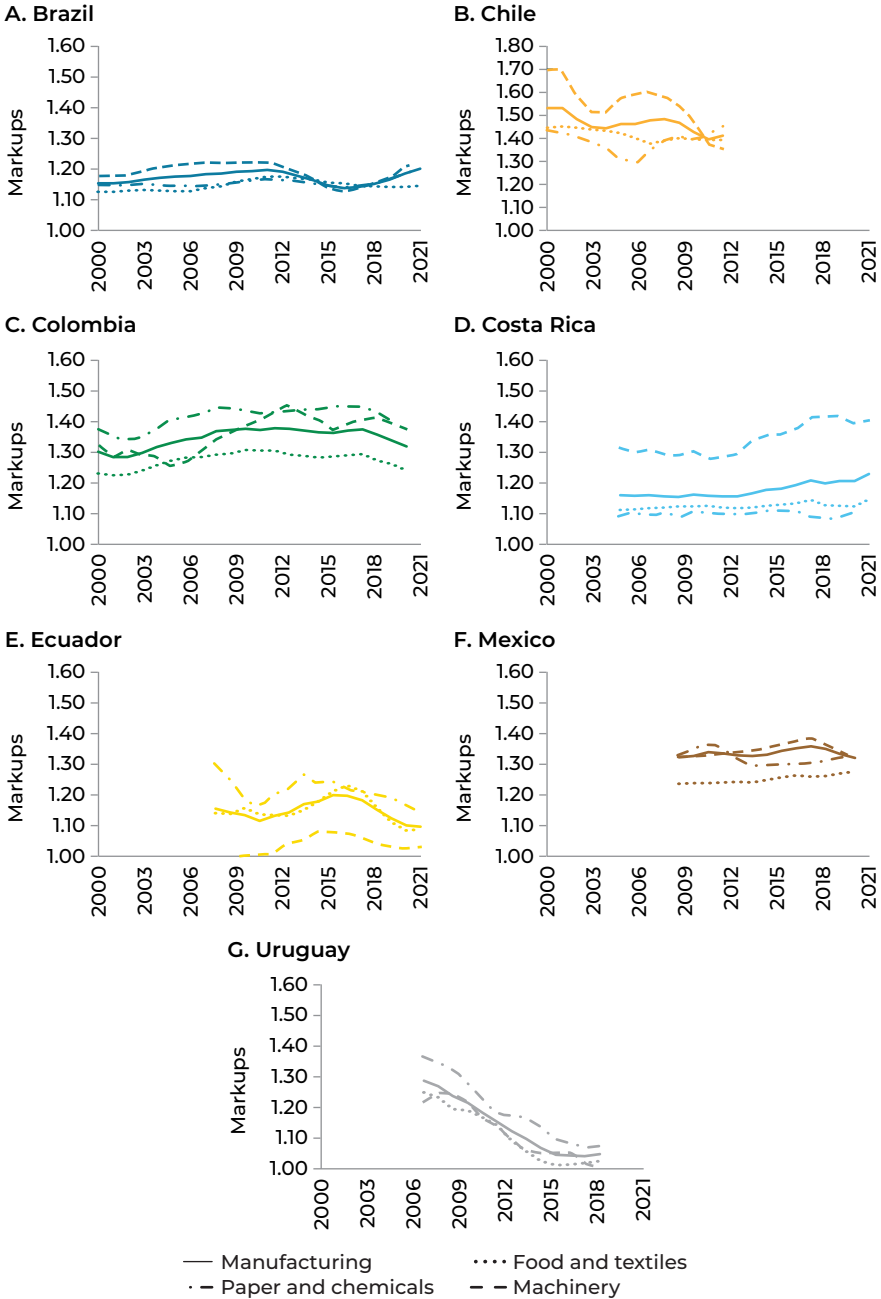
influence firm behavior.⁵ Aggregate trends can mask crucial sectoral differences. Looking first at manufacturing, Figure 2.3 breaks down markup evolution by industry for seven Latin American and Caribbean economies, providing a more detailed view of how pricing power has evolved across sectors. The figure shows both the overall manufacturing sector and a breakdown into main industries: food and textiles, paper and chemicals, and machinery. Several patterns stand out. First, while manufacturing-wide markups generally align with country-level trends, sector-level variations reveal important differences. In Chile, for instance, markups in the paper and chemicals sector are persistently lower than in other industries, while machinery, though starting from a higher level, shows a declining pattern over time. Ecuador displays the opposite trend—machinery consistently has the lowest markups, while paper and chemicals maintains the highest pricing power throughout the period. Costa Rica presents a striking exception, with the machinery sector standing apart, exhibiting markups nearly twice as high as the other industries.

Second, in many countries, sectoral trends move together, suggesting that national factors—such as economic cycles, trade policies, or domestic competition—may play a significant role in shaping pricing power. Despite sectoral differences, the overall trajectory within each country often reflects common external pressures or policy environments.

So far, the chapter has focused on markups in manufacturing sectors. In contrast, services are much more heterogeneous, and analyzing pricing power in these sectors poses distinct challenges. Services are much more exposed to variation in pricing power than manufacturing. While manufacturers are often under pressure from national or global competitors, service providers operate in markets that are far more local. Even within a country, goods move across regions; services usually don't. This limits competitive discipline and makes local conditions—such as regulation, firm size, and customer base—central to pricing.

Understanding markups in services is particularly important for Latin America and the Caribbean. Services are the region's largest source of employment and play a defining role in labor market outcomes. Many countries in the region have made transitions directly from agriculture to services, skipping the industrialization phase typical of advanced economies. Since most sectors rely on services—such as transportation, finance, or communications—as main inputs, market inefficiencies in services can hold back productivity across the economy.

⁵ These aggregate patterns are consistent with findings from other country-specific studies. Tello, Tello-Trillo, and Rojas (2025), for example, examine manufacturing firms in Peru and report markup levels broadly comparable to those observed in Mexico over the period 2011–19, with a gradual downward trend over time.

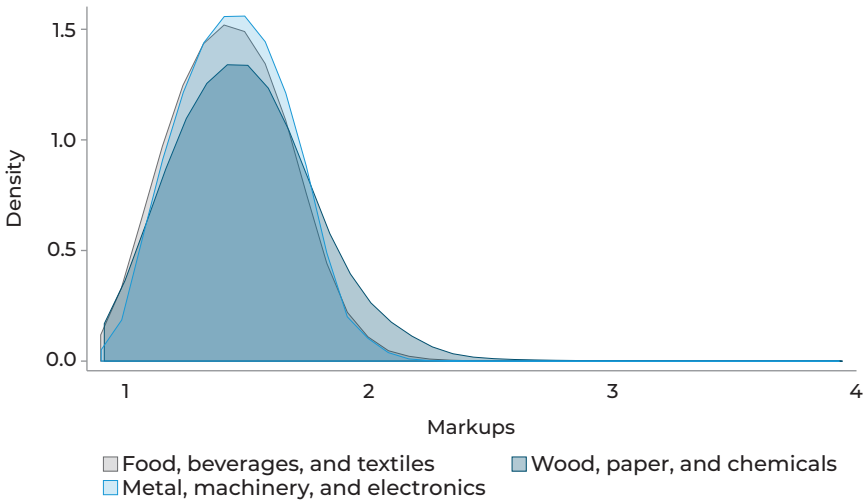
Figure 2.3. Markup Evolution across Sectors


Source: IDB staff calculations.

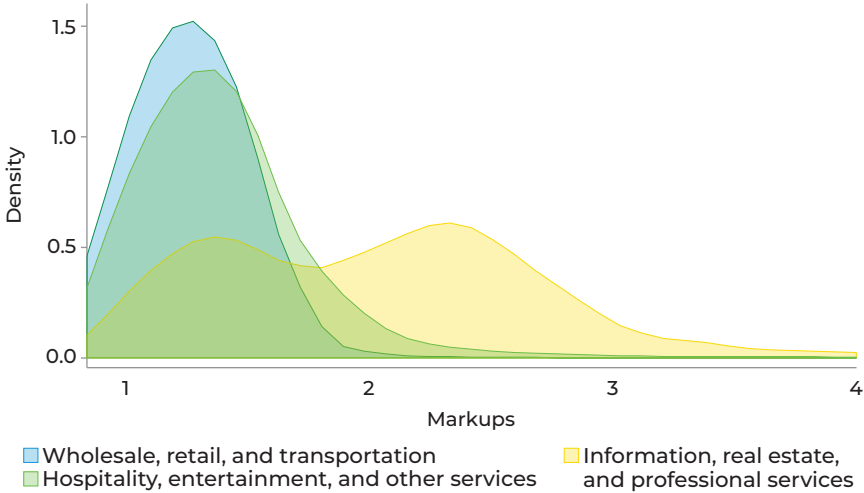
Note: The analysis includes firm-level markups in manufacturing sectors, covering years for which data are available for each country. Manufacturing sectors are classified according to the two-digit NAICS system. Firm-level markups are estimated using a second-order Translog production function with three inputs: capital, labor, and materials.

Figure 2.4. Markup Distribution, by Sector

A. Manufacturing



B. Services



Source: Alvarez and Morales (forthcoming).
Note: The figure shows markups in manufacturing and service sectors for countries in Latin America and the Caribbean for which data are available between 2000 and 2016. Firm-level markups are estimated using a second-order Translog production function with two inputs: capital and costs of goods sold. Markups are pooled from firm-level data using sales weights. Countries include Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

The result is visible in the data. Figure 2.4 illustrates this pattern across six countries in the region. In manufacturing (Panel A), markups tend to cluster around a narrower range. But in services (Panel B), the spread is wide. Firms in sectors like retail or transportation operate with modest markups,

suggesting tighter competition. Others, especially in professional services, hospitality, or real estate, charge well above cost. This suggests that, in many service markets, firms are less threatened by the entry of or pricing discipline from rivals.

As services account for a growing share of employment and value-added across the region, the uneven distribution of market power becomes increasingly relevant. Differences in local market conditions allow firms in some sectors to sustain higher markups, shaping price dynamics, firm profitability, and the ways in which productivity gains ripple through the economy.⁶

What Drives Market Power?

Product market power arises when firms are able to set prices above marginal cost and sustain these margins without triggering competitive responses. This can happen for many reasons, including barriers to entry, substantial fixed costs, control over key inputs or distribution, weak substitutability, or large differences in firms' capabilities. These mechanisms often reinforce each other, limiting the pressure that would otherwise force firms to compete on price.

A central mechanism behind persistent pricing power is limited contestability—that is, the degree to which prices in a market are constrained by the threat of potential competition. High fixed or sunk costs, scale economies, and regulatory hurdles can make it difficult for new firms to enter or grow. In sectors like telecommunications or energy, large upfront investments and complex licensing often deter entry, even in the absence of formal restrictions—shielding incumbents from pressure. In some cases, these barriers reflect legitimate needs, such as ensuring safety, reliability, or efficient coordination. But in others—especially where institutions are weaker—incumbents may benefit from preferential access to infrastructure, permits, or public contracts, making it harder for new firms to compete. These dynamics help explain why pricing power often persists even in markets that appear competitive on the surface (Syverson 2011; Holmes and Schmitz 2010).

⁶ Estimating markups in services poses challenges not presented by manufacturing, given that service outputs are often intangible, heterogeneous, and harder to measure. In manufacturing, inputs and outputs are more standardized, while services typically involve labor-intensive processes, customized transactions, and localized markets. This makes markup estimates for services more sensitive to assumptions about cost structures.

Control over important inputs and distribution channels can also limit competition. Through vertical integration, exclusivity clauses, or control of logistics, firms can raise rivals' costs or block their access to the market. These strategies are especially effective in services, where geographical fragmentation and weak oversight allow dominant players to entrench their positions even without formal mergers or high concentration (Berry and Waldfogel 2010).

Perceived quality adds another layer. When consumers see products as distinct—because of branding, reputation, or customer experience—firms can command higher prices. Think of smartphones, where brand loyalty and design differences give certain firms wide pricing power, even when technical features are similar. These differences reduce the willingness to switch, even in crowded markets. Where quality is hard to observe, or changing products is costly, competition softens and markups endure (Berry, Levinsohn, and Pakes 1995; Chandra, Handel, and Schwartzstein 2019).

Large cost differences between firms can also drive market power. In many sectors, a few firms can produce at significantly lower cost than their competitors. In a competitive market, cost advantages should lead to lower prices. But when competitive pressure is weak, firms have little reason to pass savings on to consumers. Instead, they hold onto the margins. The extent to which lower costs translate into lower prices—known as pass-through—depends not just on technology but on whether other firms are in a position to challenge and discipline the market (De Loecker, Eeckhout, and Unger 2020; Edmond, Midrigan, and Xu 2018).

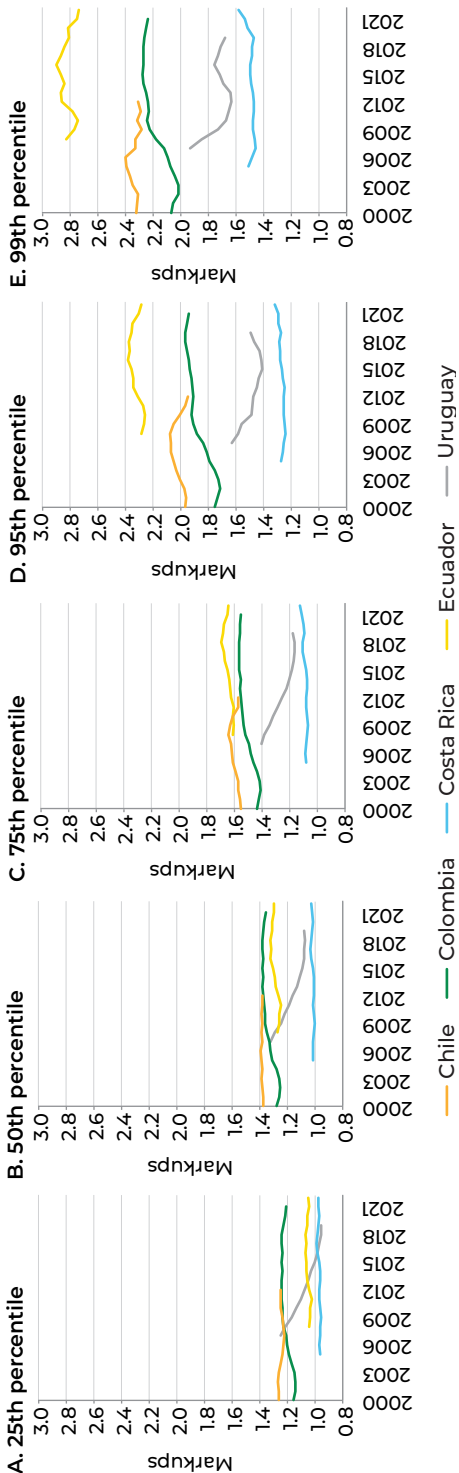
Over time, firms can entrench market power through strategic investments that reshape market dynamics. Firms invest in branding, customer relationships, data infrastructure, and vertical integration, not only to grow but to reduce future competition. Even when markets are formally open, entry becomes less effective when a few firms control certain channels or shape consumer expectations. Concentration persists not by law but by strategy (Sutton 2001).

Taken together, these mechanisms help explain why product market power often persists, and why it cannot be understood by looking only at the number of firms or the legal openness of a market. Effective competition depends on how markets function in practice—on who can enter, who can grow, and whether pricing power is meaningfully constrained.

Who Is Gaining Market Power?

A vital question remains: Do markup changes affect all firms equally, or are shifts concentrated at specific points in the distribution? Figure 2.5

Figure 2.5. Markup Evolution in Selected Latin American Countries



Source: IDB staff calculations, based on data from CompetelAC.

Note: The figure shows markups in manufacturing sectors in years for which data are available for each country. Firm-level markups are estimated using a second-order Translog production function with three inputs: capital, labor, and materials. Markups are aggregated from the firm level to the national level using sales weights.

addresses this by tracking the evolution of markups across different percentiles. The results reveal a stark divergence between firms at the lower and upper ends of the distribution.

Across all Latin American and Caribbean countries in the sample, markups have remained relatively stable over time at every percentile. A persistent feature of the distribution, however, is the much higher markups observed at the top. Firms at the 90th and 99th percentiles consistently show markups more than 50 percent above those at the median, and this has also remained remarkably stable. In Ecuador, Chile, and Colombia in particular, firms at the 99th percentile maintain markups that are disproportionately higher than the rest of the distribution.

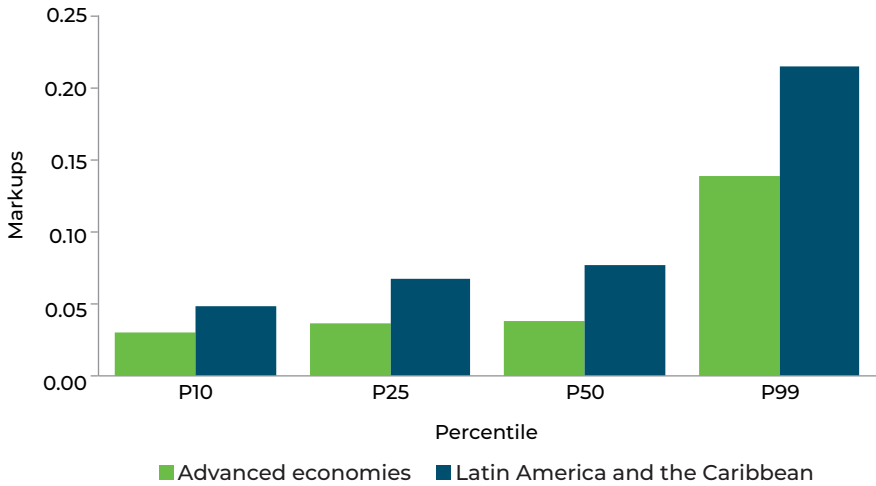
The stability of the markup distribution in Latin America and the Caribbean also stands in contrast to the pattern observed in the United States. While markups below the 90th percentile have remained stable in the United States, the 90th percentile has risen steadily, leading to a growing concentration of market power among a small group of firms (De Loecker, Eeckhout, and Unger 2020). In Latin America and the Caribbean, firms at the top of the markup distribution have long held high levels of market power but without the upward drift seen in the United States.

High or Just High Enough? A Look at Profits

High markups can reflect strong pricing power, but they do not always imply excessive profits. Firms with substantial fixed costs—such as investments in research and development, brand development, or regulatory compliance—often require higher markups just to break even. Necessary cost recovery can be distinguished from pure pricing power by examining excess markups: the portion of markups that exceeds what would be needed to maintain zero economic profit. In other words, while some markup is expected and even necessary in competitive markets, excess markups represent pricing power beyond what is required to recover costs and, therefore, may be more indicative of distortions in competition.

Figure 2.6 shows the distribution of excess markups across firms in Latin America and the Caribbean and advanced economies (excluding the United States), based on the sample of countries used here. The figure focuses on selected percentiles of the firm-level markup distribution.

Several patterns emerge. In advanced economies, excess markups are relatively flat across the lower half of the distribution, showing little increase from the 10th to the 50th percentile. A noticeable rise only appears at the 99th percentile, suggesting that in these economies, substantial pricing power is concentrated among a small group of firms.

Figure 2.6. Excess Markup by Markup Percentiles

Source: Alvarez and Morales (forthcoming).

Note: Firm-level markups are computed using a second-order Translog production function with two inputs: capital and costs of goods sold. Bars denote the median of excess markup in each markup percentile by country and industry (based on the North American Industry Classification System, or NAICS). It includes both manufacturing and service sectors. Advanced economies include Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Italy, Japan, the Netherlands, Portugal, the Republic of Korea, Slovenia, Spain, Sweden, and the United Kingdom. Latin American countries include Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

In contrast, excess markups in Latin America and the Caribbean rise steadily across the distribution. Firms at the lower and middle percentiles already charge above cost-recovery levels, and the gap widens progressively toward the top. By the 99th percentile, firms in the region exhibit excess markups more than 20 percent above cost-recovery thresholds, well above the levels observed in advanced economies.

This pattern indicates that elevated markups in the region are widespread across firms, rather than being concentrated in a narrow segment of the market. For policymakers, this suggests strengthening competition will require systemic reforms that lower barriers to market entry, improve market discipline, and encourage greater resource reallocation across the entire economy.

It is worth noting that excess markups in both the region and in advanced economies (excluding the United States), where European countries are overrepresented, remain lower than those observed in the United States. There, median excess markups reach about 15 percent and climb to nearly 40 percent at the 75th percentile (De Loecker, Eeckhout, and Unger 2020), reflecting the ability of firms to scale up across a large and integrated market. In other advanced economies, by contrast, national borders and regulatory

barriers continue to fragment markets, limiting the scale advantages firms can achieve even when the infrastructure is strong. In Latin America and the Caribbean, fragmentation is deeper and more structural; smaller domestic markets, weaker infrastructure, and persistent barriers to integration constrain firms' ability to grow and sustain high markups, even when competitive pressures are limited.

The broader economic consequences of these high markups are clear. When firms maintain prices far above cost-recovery levels, output falls relative to more competitive conditions. This contraction in output dampens demand, especially for labor and other inputs, limiting the resources available for more dynamic and productive firms to expand. Consequently, high markups impede resource reallocation and stifle the productivity growth and economic dynamism essential for long-term development.

Drivers of Markup Changes

Understanding what drives aggregate markup changes is essential for assessing the evolution of market power. Are firms adjusting their own pricing behavior, or are those with high markups gaining market share even if their individual markups remain stable?

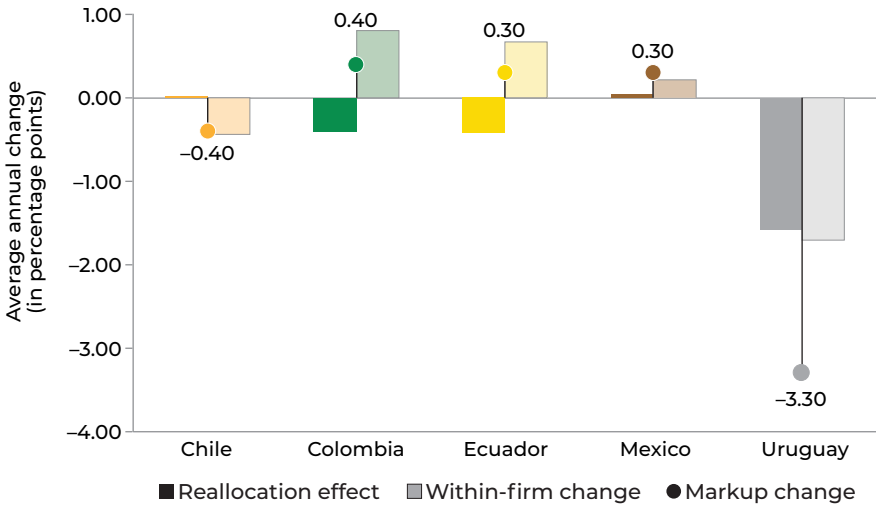
Within-firm changes reflect adjustments in a firm's own markup over time, potentially driven by pricing strategies, productivity gains, or shifts in input costs. Reallocation effects, by contrast, reflect structural changes in the economy, where market share shifts toward firms with inherently higher (or lower) markups.

To understand how these forces play out in practice, it is useful to look separately at changes within firms and shifts across firms. When markups rise, is it because individual firms are becoming more dominant—or because the structure of the market itself is tilting toward firms with more pricing power?

Figure 2.7 illustrates these two forces. The lighter bars show the contribution of within-firm changes, while the darker ones capture the contribution of reallocation effects. A positive within-firm component means firms are individually raising their markups; a positive reallocation component indicates those with higher markups are expanding their market shares. The overall change, represented by the dots, reflects the combined effect.

The patterns vary sharply across countries. Colombia and Ecuador show consistent increases in average markups over time, driven by within-firm changes. In both cases, the reallocation component is negative, meaning that market share is shifting toward lower-markup firms, partially offsetting the within-firm gains. Mexico also shows a positive but smaller increase,

Figure 2.7. Average Annual Change in Markup and Its Decomposition Components



Source: IDB staff calculations, using data from CompeteLAC.

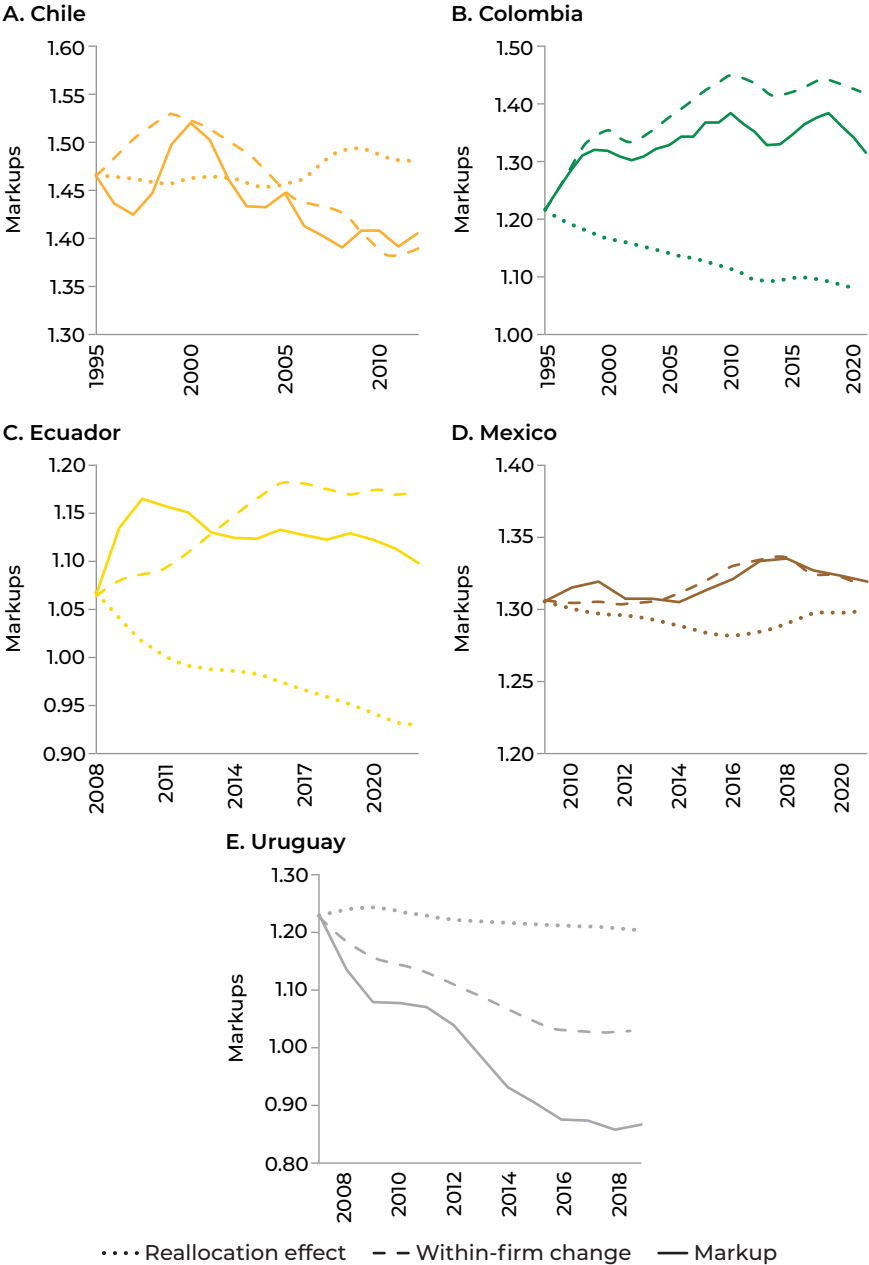
Note: Markups are calculated for firms that appear in the sample at least two-thirds of the time. They include sales-weighted markups. Firm-level markups are estimated using a second-order Translog production function with three inputs: capital, labor, and materials.

again largely explained by within-firm adjustments, with reallocation playing little role. In contrast, Chile displays a small but steady decline in average markups, driven primarily by within-firm reductions. Uruguay stands out with a sharp fall in markups. Uruguay's results reflect the combined effect of within-firm reductions and negative reallocation: Firms are individually lowering their markups, and market share is shifting toward lower-markup firms, amplifying the overall decline.

Figure 2.8 provides a time-series perspective, showing how aggregate markups would have evolved over time if only within-firm changes or only reallocation effects had been in play. This decomposition helps reveal not just the drivers of overall markup changes but whether these forces have remained stable or shifted over time.

In Colombia, the steady rise in aggregate markups is almost entirely explained by within-firm increases, while reallocation has persistently exerted a downward pull. Ecuador shows a similar pattern, with firm-level pricing power strengthening against a relatively neutral reallocation trend. In Chile, the decline in aggregate markups is primarily due to within-firm reductions, with little change from reallocation over time. Mexico exhibits relatively flat trends in both components, with mild firm-level increases and minimal reallocation effects.

Figure 2.8. Evolution of Aggregate Markups: Firm-Level Changes versus Market Share



Source: IDB staff calculations, using data from CompeteLAC.
Note: Markups are calculated for firms that appear in the sample at least two-thirds of the time. They include sales-weighted markups. Firm-level markups are estimated using a second-order Translog production function with three inputs: capital, labor, and materials. Reallocation does not include the entry component.

As previously noted, Uruguay presents a distinct case. The decline in aggregate markups reflects both within-firm reductions and increasingly negative reallocation effects over time. Initially, firm-level declines dominated, but, over the years, reallocation dynamics—lower-markup firms gaining share—have played a growing role in deepening the aggregate decline.

Unlike in the United States, where the rise in aggregate markups has been largely attributed to the reallocation of market share toward “superstar” firms with higher markups, the patterns in Latin America and the Caribbean are more mixed. In most countries, changes in firm-level pricing behavior, rather than shifts in market structure, account for the bulk of the observed trends.⁷ This distinction matters for policy; efforts to promote competition should concentrate not only on firm behavior but on monitoring market structure to prevent future shifts that could entrench market power.

Market Power and the Macroeconomy

Market power has implications for economic performance that go beyond firm-level dynamics. This section examines how markups influence macroeconomic outcomes, including investment rates, industry concentration, and net job creation. Understanding these relationships is essential to assessing the broader impact of market power on growth, employment, and income distribution in Latin America and the Caribbean.

Markups and Investment Rates

A central question in the debate on market power is whether high markups are a reflection of dynamic firms that invest and innovate or stagnant ones that dominate through barriers to entry. In theories of “good” market concentration—a small number of firms control a large part of the market—higher markups result from technological change, with the few leading firms expanding their market share through greater efficiency and sustained investment. These theories are consistent with the “winner-takes-most” view put forth by Autor et al. (2017) and the “superstar firms” hypothesis of Autor et al. (2020).

In contrast, “bad” concentration theories link high markups to rising entry barriers, monopolistic rents,⁸ limited pass-through of cost savings to

⁷ De Loecker and Eeckhout (2018) find that in Europe, aggregate markup increases are more influenced by changes in firm-level markups than by the gaining of market share by incumbents with significant pricing power.

⁸ Monopolist rent is an amount of income that exceeds what is economically or socially necessary.

consumers, and low incentives among dominant firms to invest or innovate. For more on this, see Gutiérrez and Philippon (2017) and Covarrubias, Gutiérrez, and Philippon (2020).

To begin to answer this question and assess the broader economic implications of market power for Latin America and the Caribbean, it is crucial to examine whether firms with higher markups behave differently than those with lower markups in terms of investment. Do they reinvest more into their businesses, or do they hold back on investment, potentially reinforcing market concentration? A firm-level analysis helps provide this understanding by examining the relationship between markups and investment rates.

The analysis explores how investment responds to changes in markups by estimating a panel regression in which the dependent variable is a firm's investment rate and, to capture possible nonlinearities, the explanatory variables include both the markup and its square.⁹ The model controls for standard determinants of corporate investment and accounts for time-varying economic conditions across industries through sector-year fixed effects. Given the panel nature of the data, all regressors are log-transformed and lagged by one year, helping to mitigate endogeneity concerns and capture firms' dynamic decision making.

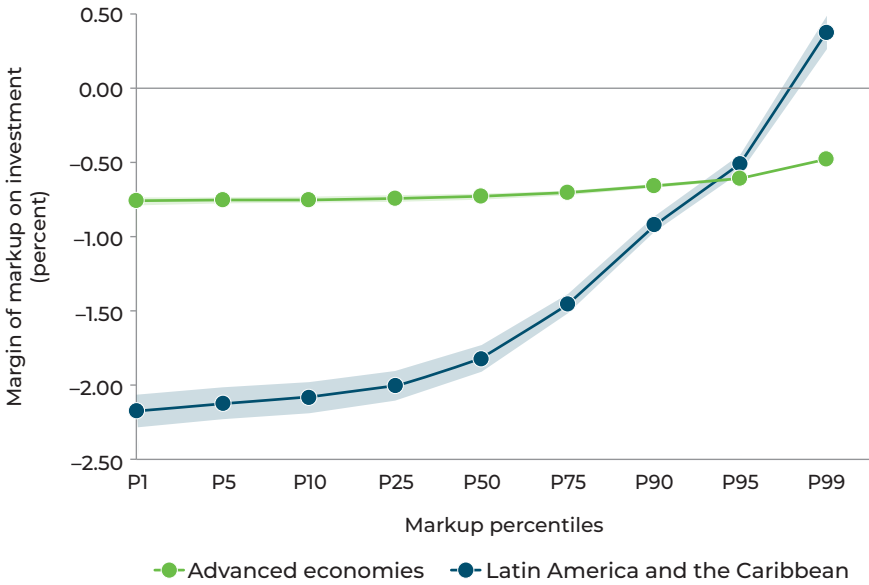
Crucially, the effect of markups on investment varies depending on where a firm sits in the markup distribution. Rather than assuming a uniform relationship, the analysis traces how this link evolves across firms with different degrees of pricing power; this offers a more precise understanding of whether high-markup firms are using their market positions to invest in future growth or simply reinforcing their dominance.

The analysis demonstrates that the relationship between markups and investment varies significantly across regions, revealing important differences in how firms allocate capital as their pricing power increases. Figure 2.9 plots the marginal effect of markups on firm-level investment across different points in the markup distribution.

In advanced economies, the effect of markups on investment is negative but relatively small and stable across firms. This suggests that while higher markups may slightly dampen investment incentives, firms in these economies do not experience a sharp decline in investment as their pricing power increases.

⁹ Investment is captured through capital expenditures, which represent spending on new or existing fixed assets to maintain or expand productive capacity. The investment rate is calculated as the ratio of current investment to the capital stock in the previous period.

Figure 2.9. Markups and Investment, by Region



Source: Alvarez and Morales (forthcoming).

Note: Firm-level markups are computed using a second-order Translog production function with two inputs: capital and costs of goods sold. Controls include sector-year fixed effects and firm fixed effects. The figure plots the marginal effect of markups on investment rate,

$$\frac{\partial \log(I_t/K_{t-1})}{\partial \log(\mu_{t,t-1})} = \hat{\beta}_1 + 2\hat{\beta}_2 \log(\mu_{t,t-1}),$$

for each percentile of the markup distribution. Advanced economies include Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Italy, Japan, the Netherlands, Portugal, the Republic of Korea, Slovenia, Spain, Sweden, and the United Kingdom. Latin American countries include Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

In contrast, except for the most dominant firms, those in the sample of Latin American and Caribbean countries show a strong negative relationship between markups and investment. Rising markups in the region do not appear to be linked to greater efficiency or reinvestment but, rather, reflect weaker competitive pressures, which allow firms to sustain high prices without reinvesting in productivity-enhancing activities.

However, this relationship changes at the top of the markup distribution. From the 50th percentile onward—and especially above the 90th percentile—the negative effect shrinks markedly, becoming positive for the very top firms. This suggests that the most dominant firms may use their market power to finance investment, potentially in R&D, branding, or capacity expansion. Unlike firms with mid-level markups, they may have the scale, market reach, or access to finance needed to reinvest profits effectively.

This asymmetry underscores a dual challenge. Most firms appear to use markups to shield themselves from competition rather than reinvest. But at the very top, a smaller group may be leveraging market power to grow further—possibly reinforcing market concentration over time. If left unaddressed, this dynamic could limit aggregate productivity growth, especially if investment becomes increasingly concentrated among a few dominant players.

Market Power and Industry Concentration

Market concentration and markups are jointly shaped by firm behavior, competitive dynamics, and structural factors within an economy. While high concentration is often associated with greater market power, the relationship between the two is not straightforward. Industries with a few dominant firms may exhibit high markups, but concentration alone does not determine pricing power; cost structures, barriers to entry, and firm-specific efficiencies are also relevant. Conversely, high markups can persist in relatively unconcentrated markets, particularly when firms differentiate their products or take advantage of network effects.¹⁰ Given these complexities, the analysis does not assume a causal link between concentration and markups but, rather, examines how these two dimensions of market power evolve together.

To explore this relationship, Figure 2.10 plots markups against the Herfindahl-Hirschman Index (HHI), a widely used measure of market concentration based on firms' market shares, across industries in several Latin American and Caribbean economies.¹¹

The data reveal striking cross-country differences. In Colombia, Costa Rica, Ecuador, and Uruguay, nearly half of all industries are classified as highly concentrated, while Brazil, Chile, and Mexico have a larger share of industries with lower levels of concentration and more dispersed market shares among firms.

Yet the correlation between concentration and markups varies considerably. In some cases, such as Colombia and Ecuador, even highly concentrated sectors exhibit moderate pricing power, suggesting that institutional checks, cost structures, or competitive dynamics may prevent

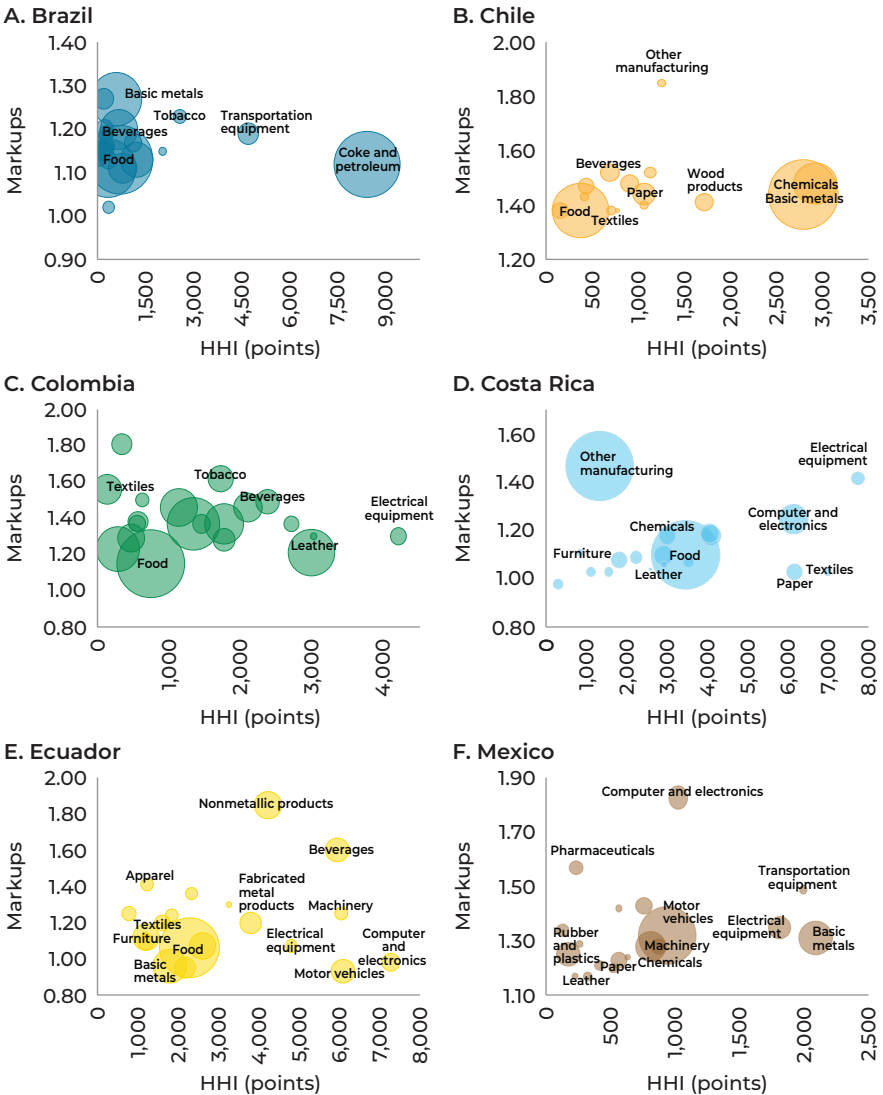
¹⁰ Network effects refer to situations where the value of a product increases as more users adopt it.

¹¹ The Herfindahl-Hirschman Index (HHI) is calculated as the sum of the squared market shares of all firms in an industry: $HHI = \sum_{i=1}^N s_i^2$, where s_i represents the market share of firm i and N is the total number of firms in the industry. The HHI ranges from close to zero (highly competitive) to 10,000 (monopoly).

dominant firms from raising prices. In contrast, countries like Brazil and Uruguay present examples of sectors with low concentration but high markups—likely reflecting firm-level strategies such as product differentiation, brand loyalty, or limited market contestability.

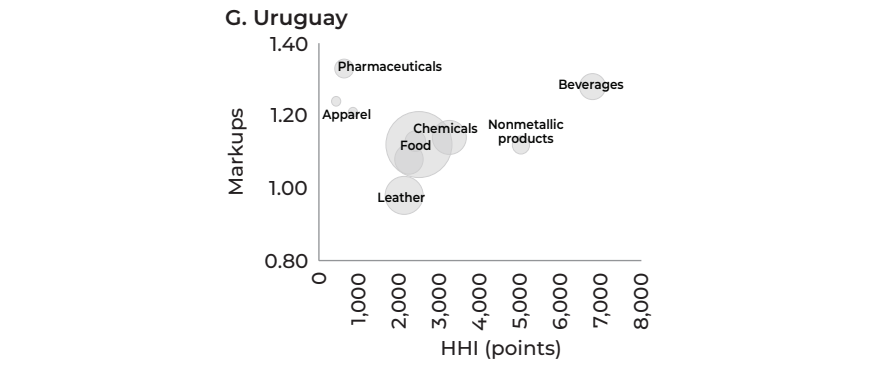
These findings underscore a broader point: market power is not dictated by structure alone. It emerges from a combination of institutional context, firm behavior, and competitive intensity. Understanding these

Figure 2.10. Markups and Concentration in Selected Countries



(continued on next page)

Figure 2.10. Markups and Concentration in Selected Countries *(continued)*



Source: IDB staff calculations, based on data from CompeteLAC.
Note: Firm-level markups are estimated using a second-order Translog production function with three inputs: capital, labor, and materials. Each marker represents the size of a two-digit ISIC sector. The Herfindahl-Hirschman Index, which measures concentration, is calculated at the four-digit ISIC level and weighted to the two-digit level using sales weights. Markups are sales weighted from the firm level to the two-digit sector level. Differences in markups and HHI are calculated as long differences, taking the first and last year of data observed for each country. According to the U.S. Department of Justice, industries with an HHI below 1,000 are considered unconcentrated, those between 1,000 and 1,800 are moderately concentrated, and those above 1,800 are highly concentrated.

nuances is critical for designing effective policy responses, particularly in a region where the interaction between concentration and pricing power varies widely.

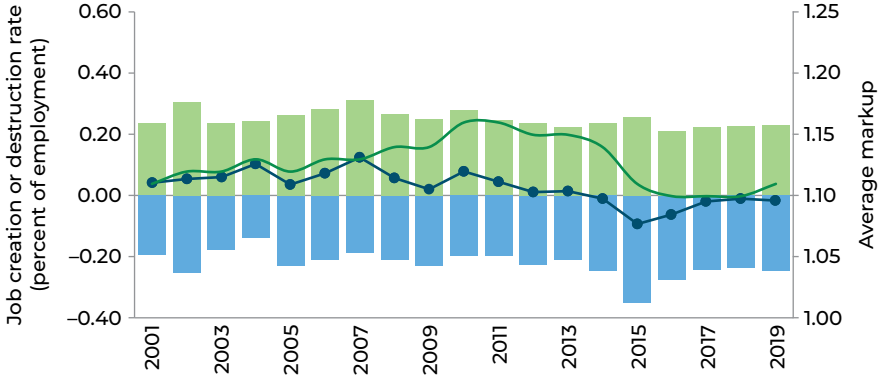
Market Power and Net Job Creation

How does market power, as measured by firm-level markups, relate to net job creation across Latin American and Caribbean economies? While net job creation captures overall employment growth, it can result from different labor market dynamics, ranging from a stable environment with low turnover to one characterized by high job churn, in which job creation is offset by equally high levels of job destruction. The latter scenario is often associated with a more dynamic and adaptive economy, where firms enter, expand, and exit in response to market conditions.

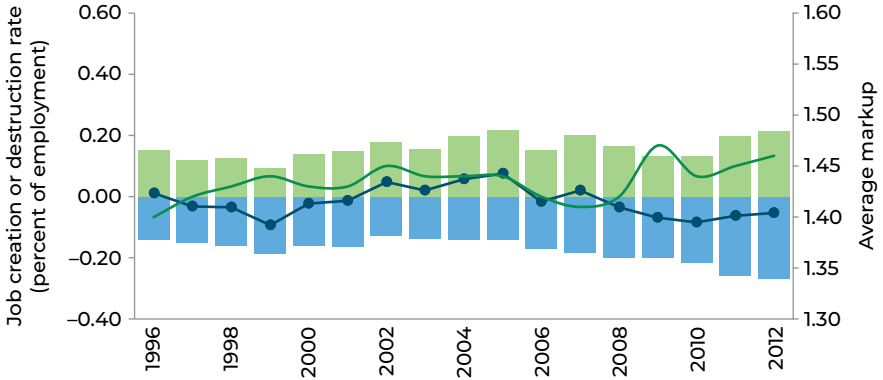
Figure 2.11 presents the evolution of average markups alongside job creation, job destruction, and net job creation for six Latin American countries. The evidence suggests that, in most cases, periods of higher markups coincide with weaker employment outcomes. In Chile, net job creation declines after 2005, precisely when markups begin trending upward. Brazil follows a similar pattern, with job creation deteriorating as markups remain elevated, although, in recent years, net job creation appears to stabilize as markups decline.

Figure 2.11. Markups, Job Creation, and Job Destruction

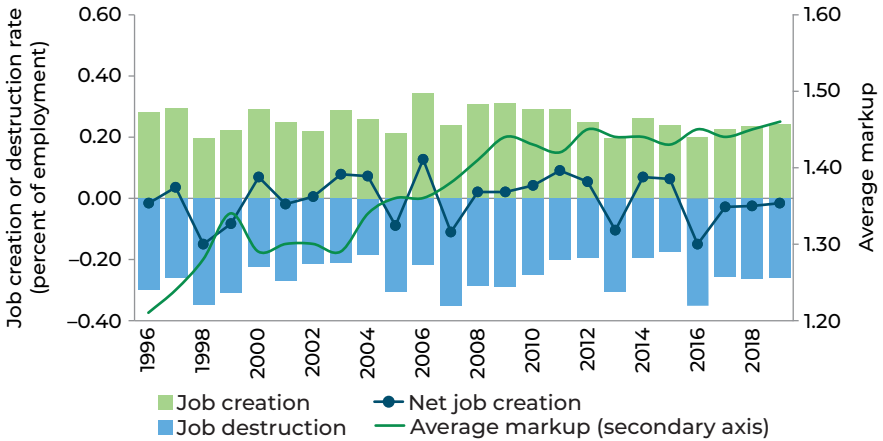
A. Brazil



B. Chile

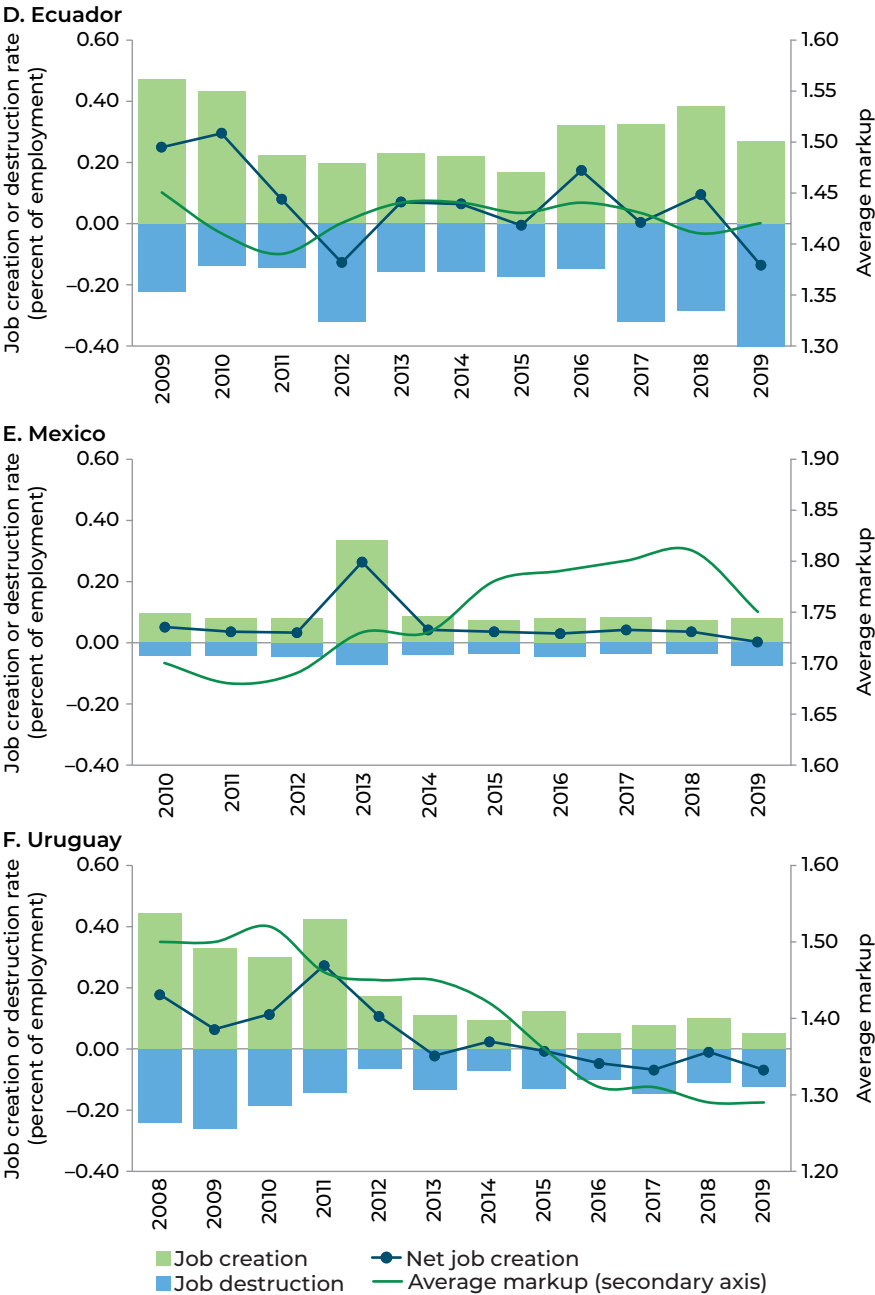


C. Colombia



(continued on next page)

Figure 2.11. Markups, Job Creation, and Job Destruction (continued)



Source: IDB staff calculations, based on data from CompeteLAC.
Note: Firm-level markups are estimated using a second-order Translog production function with three inputs: capital, labor, and materials. Average markups are calculated as the unweighted average of firm-level data at the yearly level. Job creation and destruction are calculated following Davis and Haltiwanger (1992), who calculate net job creation as the sum of job creation and job destruction.

Colombia and Ecuador exhibit more volatility, but, in both cases, job creation remains subdued even as markups fluctuate.¹² Uruguay stands out as the only country where both markups and net job creation have steadily fallen over time, suggesting that lower markups have not necessarily led to stronger employment growth.

Mexico presents a distinct case. A sharp rise in markups around 2012 coincides with an uptick in job creation, diverging from the patterns seen elsewhere in the region. This surge in job creation proves temporary, however, as net job creation trends downward in the following years while markups increase.

Although markups alone do not dictate employment trends, the data suggest that, in several cases, rising market power has coincided with weaker job dynamics. Whether this reflects firms reducing employment as they gain pricing power or broader economic shifts affecting both markups and job creation is a question that requires further analysis.

A Distinct Experience in Latin America and the Caribbean

While much of the global discussion on rising markups has focused on Europe and the United States, Latin America and the Caribbean presents a distinct experience. Markups in the region remain high by international standards, yet they have moderated slightly over time. Unlike in advanced economies, where rising markups have been driven largely by reallocation toward high-markup firms, changes reflect firm-level pricing adjustments, with little evidence of market share reshuffling.

Excess markups—pricing that exceeds the level required to maintain zero economic profit—highlight the extent of market power in the region. In contrast to other advanced economies, where most firms price only moderately above cost-recovery levels, Latin America and the Caribbean exhibits a much wider dispersion of excess markups. A significant share of firms set prices well above cost-recovery thresholds, suggesting markups are not merely compensating for costs but reflect sustained market power. This raises concerns about barriers to competition, inefficient resource allocation, and potential welfare losses, as firms with excessive pricing power may restrict output, limit entry, or stifle innovation.

Understanding the trends documented in this chapter is a necessary starting point for policymakers. These patterns—high and uneven markups—matter because they shape firm behavior, distort resource allocation,

¹² Eslava, Haltiwanger, and Pinzón (2022) develop a detailed analysis of job creation in Colombia using manufacturing firm-level data.

and limit the benefits of growth for consumers and workers. They influence how prices are set, how productivity gains are shared, and who garners the returns from market activity. The next chapters will explore the deeper structural drivers of market power in Latin America and the Caribbean. Specifically, they will examine whether weak firm dynamics, input market power (especially in labor markets), and burdensome regulatory environments contribute to persistent markups in the region. An understanding of these mechanisms is essential to designing policies that promote competitive markets while ensuring firms thrive based on efficiency and innovation rather than entrenched dominance.

Labor Market Competition for Better Jobs

In well-functioning labor markets, workers are paid in line with the value they generate. This curbs excessive rent extraction by both firms and workers, helping maintain fair wages, firm profitability, and market efficiency. Labor market power refers to a firm's ability to set wages below the value of workers' productivity due to factors like limited competition or employer concentration. At first glance, the sheer number of firms in Latin America and the Caribbean suggests little reason for labor market power to exist. Mexico's most recent economic census reported over 4.5 million establishments, while Brazil has approximately 3.4 million registered firms. With so many employers, one might expect a highly competitive labor market, where firms compete for workers and pay similar wages for similar work.

Despite the large number of employers overall, competition is often limited within local labor markets, where a few dominant firms account for a disproportionate share of employment. Combined with low worker mobility and limited bargaining options, this concentration enables employers to pay wages below workers' actual contribution to production. On average, workers in the region take home 50 cents for every dollar they generate in value—a wage markdown (hereafter, “markdown”) that exceeds levels observed in more advanced economies. For comparison, recent estimates suggest the average worker in the United States receives 65 cents on the dollar, while in Europe the figure is 81 cents. These markdowns are higher for white collar workers.

Many of the drivers of labor market power in advanced countries are relevant in Latin America and the Caribbean, but some factors are more specific to the region. One issue is the lack of competitive pressure from productive small and medium-sized enterprises (SMEs). By remaining small, these firms fail to challenge the dominance of larger companies. Large, more productive firms pay higher wages than SMEs, yet they still underpay relative to workers' contributions to the value of the firm. The productivity

gap between large firms and SMEs is so wide that large firms can attract talent while paying well below workers' actual value. Large firms exhibit the largest gaps between wages and productivity within their sectors.

The consequences of labor market power extend beyond wages. As discussed in Chapter 1, labor market power lowers output and contributes to a more unequal distribution of income, reducing gross domestic product (GDP) per capita and labor's share of income. When a few large firms dominate labor markets they set production below optimal levels, depressing both wages and employment below the economy's potential—a phenomenon known as allocative inefficiency. While public policy can address these issues, traditional approaches like minimum wage policies risk introducing additional distortions to the market if they are poorly implemented. Instead, policies that enhance labor mobility and support the growth of smaller firms could both boost output and increase labor's share of national income.

Why Wages May Fall Short

The relevant labor market is often much smaller than one might assume. What matters for firms and workers is not the broader economy but the local one, as job opportunities are determined by geographical location, skills, occupations, and industry experience, in what are commonly referred to as local labor markets. This term is often used interchangeably with “labor market.” Labor market power can arise for several reasons, including a limited number of employers, varying job amenities, or information frictions; see recent reviews by Manning (2021), Card (2022), and Azar and Marinescu (2024).¹

To understand the drivers of labor market power, it is useful to start with the textbook benchmark case of a perfectly competitive labor market. In a competitive labor market, many firms compete for workers, and no single firm's hiring decisions influence the market wage. Each firm is small enough to hire workers as it needs to without affecting the wage level. Workers are paid their contribution to firms' revenues, also called the marginal revenue product of labor. In this ideal, hypothetical market, workers are perfectly and instantly mobile across jobs, jobs are all similar, and there is perfect information

¹ That is, obstacles that hinder people's access to information about where vacancies are available, how much those jobs pay, and so on. Such obstacles can arise for many reasons, such as poor communication infrastructure, language or cultural barriers, lack of transparency, and so on. The word “friction” in this sense can also refer to obstacles to other kinds of access, such as access to finance or to adequate infrastructural services.

about where jobs are available and how much they pay. The highest possible level of production is obtained, given firms' productivity distribution.

At the opposite end of the spectrum from a competitive market is a monopsony, where only one employer controls the hiring in a labor market (Robinson 1969). In this situation, the employer can't just hire more workers at the same wage—it must raise wages to attract additional people, because workers are only willing to work more if the pay goes up. But if the firm pays everyone the same wage, then hiring one more worker at a higher wage means it has to increase pay for all workers, which makes expanding the workforce more expensive. That discourages the firm from hiring as many people as it otherwise would and creates a wedge—called a mark-down—between how much value workers create and how much they are paid.² As a result, wages, employment, and total output end up lower than in a market with lots of competing employers. In this way, monopsony makes the economy less productive.

In between these two extreme cases is an oligopsony, where a few large firms compete for workers while considering each other's employment decisions (that is, they engage in strategic interactions). Like a pure monopsony, oligopsony leads to lower employment and wages below the marginal revenue product of labor, reducing productivity through allocative inefficiency. The markdown in some oligopsonistic markets depends on the ratio of the employment Herfindahl-Hirschman Index (HHI)—the sum of squared employment shares of all firms—to the market-level elasticity of labor supply (Boal and Ransom 1997). When labor supply is less elastic—that is, when the number of people willing to work is less responsive to changes in wages—firms' hiring decisions have a greater effect on equilibrium wages, resulting in fewer hires and higher markdowns. A merger in such a market increases the HHI, leading to even lower employment and, likely, to higher markdowns.

These simple abstractions, what economists call “models,” assume identical firms and workers, where firms produce similar outputs, have comparable productivity levels, and offer jobs with uniform working conditions. Labor market power can also arise, however, in markets with differentiated jobs, where monopsony power stems not from a small number of firms but from workers' diverse preferences for wages and job amenities (Bhaskar and To 1999; Berger, Herkenhoff, and Mongey 2022). In these models, if workers' current jobs provide amenities they value that are hard to find elsewhere

² In economics, a wedge refers to a gap or difference between two values that should be equal in an efficient market but aren't, usually because of some kind of market failure or price distortion.

(for example, jobs that are perceived as more fulfilling, with flexible hours, or located in places where commuting is easier), firms can pay them less than their marginal revenue product. Even when firms compete by offering prospective employees higher wages, they do not attract all workers in the market, as workers value wages and amenities differently. This results in equilibrium markdowns, where wages remain below the marginal product of labor despite competition.

A competitive market also assumes perfect information and costless worker mobility. If job search and matching are costly, however, competition remains limited even when many employers are present (Manning 2003; Mortensen 2010; Moscarini and Postel-Vinay 2010). In such cases, equilibrium wages depend on workers' outside options, which are shaped by the tightness of the labor market and job-switching costs. When outside options are weak, firms can attract and retain workers with lower wages. The unavailability of alternative employment opportunities can grant employers market power, allowing them to pay wages below the workers' contributions to production.

Wage bargaining—whether individual or collective—can be an opposing force to employers' labor market power by enabling workers to negotiate higher wages. Individual bargaining power, strengthened by outside job options or negotiation skills, can raise a worker's wage and reduce the worker's personal markdown (Hall and Krueger 2010). Collective bargaining can shield broader groups of workers from monopsony power by setting higher wage floors, standardizing pay, and reducing wage inequality (Farber et al. 2021). Wage bargaining can push wages closer to the worker's marginal product, thereby narrowing the markdown. In the extreme case of equal bargaining power, the markdown disappears entirely. Under certain conditions, bargaining may even result in negative markdowns, where wages exceed the marginal revenue product of the last worker (Mertens 2023). For wage bargaining to be effective, labor markets must exhibit adjustment frictions. Firms need to face costs when modifying employment levels, such as money already invested in training, barriers to job searches, or constraints imposed by labor market institutions (McDonald and Solow 1981; Kline et al. 2019).

Labor Market Power by the Numbers

Recent studies have documented the presence of labor market power in both advanced and developing economies. One approach involves directly estimating firms' markdowns (Morlacco 2020; Yeh, Macaluso, and Hershbein 2022). The markdown quantifies by how much the wage deviates from the

(last hired) worker's contribution to production.³ Economic censuses and surveys provide the necessary data to construct the markdowns. Two components for this computation are directly observed in the firms' censuses: the total wage bill paid to workers and the value of production. The last element needed is the firms' output elasticity of labor, which estimates how much the number of workers a firm wants to employ rises or falls when wages go up or down. This labor supply elasticity is not directly observed in the censuses and needs to be estimated. Chapter 4 discusses several estimates of firms' markdowns, depending on various methods based on the firms' production functions.⁴ Importantly, these markdown estimates remain valid even when product market markups are present (as discussed in Chapter 2).

Census and survey data used jointly with a standardized methodology provide a measure of labor market power across eight countries in the region: Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Peru, and Uruguay. These data are complemented by firm-level information from the World Bank Enterprise Surveys (WBES) for a subset of countries that meet the necessary quality criteria for credible estimation.⁵ While these represent the best available data for measuring market power in the region, an important limitation is that, except in Mexico, they capture only firms in the formal sector. These firms are sufficient to provide a meaningful picture of labor market power, however, because they tend to be larger on average than informal ones and employ the largest share of labor.

A simple way to characterize overall labor market power in an economy is by calculating the average firm-level markdown, weighted by the number of employees. The inverse of this measure indicates how many cents per dollar contributed to the firm by the workers' labor is taken home by the average worker (in the form of wages). Across the Latin American countries studied in the sample used here, this share ranges from 32 to 73 cents, highlighting significant markdowns in all cases; these are slightly higher than in advanced

³ Explicitly, under profit maximization the markdown is defined as the ratio of the labor elasticity of the production function to the share of revenues paid as wages.

⁴ The markdowns presented in this chapter are calculated using elasticities derived from a Cobb-Douglas revenue production function, with the wage bill as the measure of labor input, following Akerberg, Caves, and Frazer (2015). Elasticities are estimated by country, industry, and year. For each firm in the sample, these estimates of revenue function elasticity enable calculation of the marginal revenue product of labor and its comparison to the average wage paid by the firm, yielding a firm-level wage markdown. The results are robust to alternative approaches, including more flexible production functions and different levels of industry aggregation.

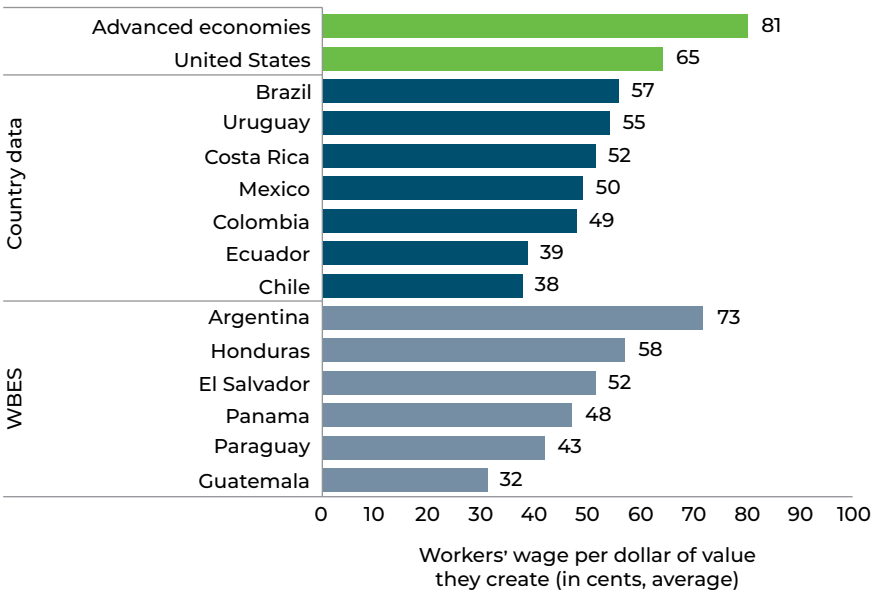
⁵ The chapter throughout refers to "firms," although for measurement purposes the analysis relies on plant-level (rather than firm-level) information.

economies, where the average worker takes home 81 cents per dollar produced (Figure 3.1, Panel A). Using a similar methodology, Yeh, Macaluso, and Hershbein (2022) find that the average worker in the United States takes home 65 cents per dollar they contribute to their firm—more than in most Latin American economies. In Europe, an analysis of large firms estimates this share at 63 cents (Diez, Malacrino, and Shibata 2022). In Germany in particular, Mertens (2023) finds no evidence of employer labor market power in the median firm, possibly reflecting the role of German labor market institutions in strengthening workers' bargaining power.

Despite some fluctuations over time, markdowns in Latin America and the Caribbean are high and relatively stable in countries with available time series data (Figure 3.1, Panel B), mirroring the evolution of markups discussed in Chapter 2. This persistence is similar to the pattern observed in Europe (Diez, Malacrino, and Shibata 2022) but contrasts with findings in the United States, where markdowns declined in the 1990s but increased in the 2000s (Yeh, Macaluso, and Hershbein 2022). The stability of markdowns in the region suggests these wage gaps are driven by structural features of labor markets rather than temporary factors.

Figure 3.1. Take-Home Wage (in Cents) per Dollar Value Contributed to Firms

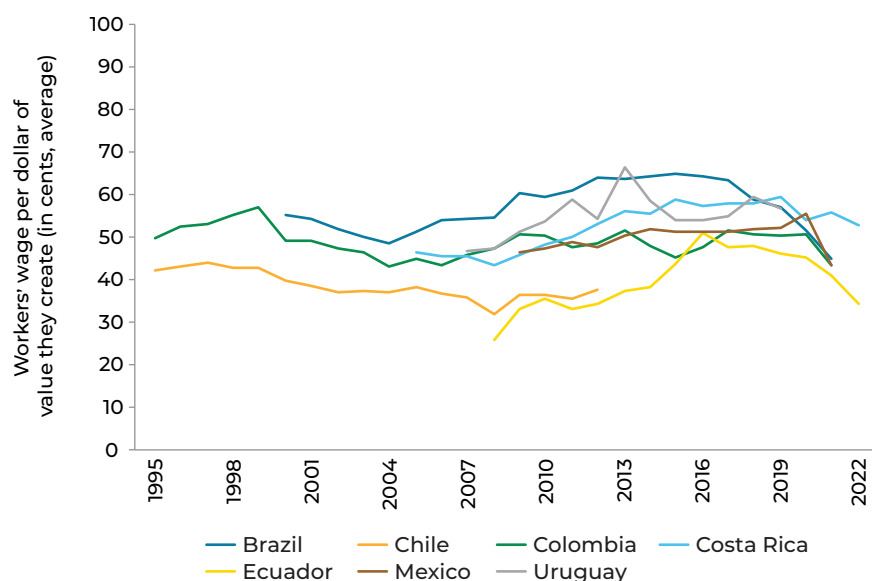
A. Average markdowns by country (all years), in cents



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Figure 3.1. Take-Home Wage (in Cents) per Dollar Value Contributed to Firms *(continued)*

B. Average markdowns by country over time, in cents



Source: IDB staff calculations, using World Bank Enterprise Surveys (WBES), CompeteLAC, and Alviarez and Morales (forthcoming). The benchmark estimate for the United States was obtained from Yeh, Macaluso, and Hershbein (2022). The information from CompeteLAC covers the period from 1995 to 2022. Similarly, the time frame for WBES data varies by country, providing point-in-time estimates for the years 2006, 2010, 2017, and 2023.

Note: The two graphs in the figure display the average portion of wages workers receive for each dollar of value they create in their work, calculated as the inverse of the markdown rate ($1/\mu$). This approach, based on the methodology outlined by Akerberg, Caves, and Frazer (2015), uses total wages in the production equation, except for Brazil, where total employment is considered. Labor supply elasticities are estimated by country, sector, and year at the two-digit industry level (ISIC Rev 4). The country estimates are weighted averages of individual firms' markdowns, using the employment share of each firm as weight. In Panel A of the figure, the top bars represent estimates from CompeteLAC, while the bottom bars show estimates based on the WBES. Advanced economies include Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Italy, Japan, the Netherlands, Portugal, the Republic of Korea, Slovenia, Spain, Sweden, and the United Kingdom. Panel B provides the trend over time from CompeteLAC.

These measures of markdowns have several advantages. They are grounded in well-established economic theory, do not require strong assumptions about the structure of markets, and have minimal data requirements for their calculation. It is possible, however, that different methods for measuring markdowns yield different results, adding complexity to empirical applications. Across estimates in this chapter, the markdown measures are found to be positively correlated across different methodologies and assumptions. When a single methodology for estimating production function is used, average correlations across measures range from 0.40 to 0.60,

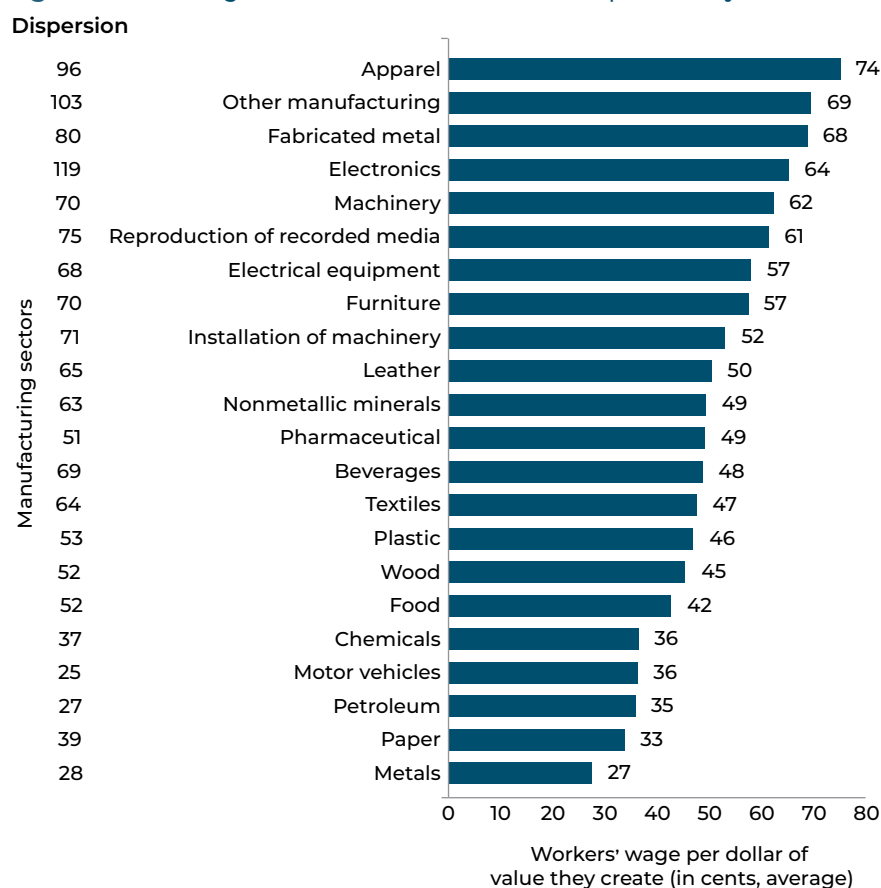
depending on data disaggregation levels, the inputs in the production function (employment versus payroll) used for the analysis, and how data were aggregated (that is, the selection of weights). Correlations of markdown measures across methods are also positive, but lower. Specifically, when comparing markdowns estimated using Akerberg, Caves, and Frazer's (2015) approach with those estimated using De Loecker and Warzynski's (2012) approach—two well-established methods in the literature—correlations emerge that range from 0.25 to 0.5.⁶

Although these markdown estimates may seem large, they are comparable in magnitude to those found in the literature for various countries in the region. Applying a common methodology to all countries and using the WBES, Amodio et al. (2024) find that the average markdown for countries in Latin America is 2.36, which means that, on average, workers earn a wage of 42 percent of the value they produce. Similarly, Eslava, García-Marin, and Messina (2025) find that markdowns are, on average, 1.85 for all sectors and 1.46 for manufacturing, indicating workers take home 54 and 68 cents, respectively, for every dollar they produce.

Single-country studies on labor market power in Latin America employ diverse methodologies and data sources leading to varying results, with the overall consensus that markdowns are pervasive in labor markets around the region. In Colombia, firms pay workers a wage equivalent to approximately 70 cents for each dollar contributed by the workers to their firms (Tortarolo and Zarate 2018; Amodio and de Roux 2024). This number aligns with the 70 cents estimated for Peru (Amodio, Medina, and Morlacco 2024) but is slightly higher than the 67 cents reported for Mexico (Estefan et al. 2024). Brazil, on the other hand, ranks at the lower end of the distribution, with wage take-home shares ranging between 44 and 50 cents following market liberalization (Tucker 2017; Felix 2022). In Uruguay, the wage take-home share has declined over time, from 83 cents during 2002–16 to 60 cents in 2007–19 (Casacuberta and Gandelman 2023, 2024).

Markdowns are prevalent in most industries, although some variation occurs (Figure 3.2). Workers in the chemical and metal industries take home 25–35 cents per dollar of what they contribute to the companies that employ them. In comparison, those in apparel and electronics take home about 70 cents. In more than half of these industries, workers take home less than

⁶ This range is the result of the methods' differing approaches to estimating the elasticities of production functions. While Akerberg, Caves, and Frazer (2015) standardize elasticity by sector, De Loecker and Warzynski (2012) allow elasticities to vary by firm. Lower correlations are linked with greater sectoral disaggregation and the use of payroll as the labor production input.

Figure 3.2. Average Markdowns and Markdown Dispersions by Sector

Source: IDB staff calculations, based on CompeteLAC. Countries included are Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, and Uruguay, spanning 1995 to 2022. Data availability varies by country within this time frame.

Note: The figure displays the average portion of wages workers receive for each dollar of value they create in their work, calculated as the inverse of the markdown rate ($1/\mu$) for two-digit manufacturing sectors, as defined in ISIC Rev 4. Manufacturing sectors included in the graph are those represented in at least three countries. Markdowns were estimated following the same methodology outlined in Figure 3.1. Dispersion is measured by the regional average interquartile range of markdowns.

half of what they produce. Considerable variation also occurs in the markdowns observed across firms within the same economic sector. The regional average interquartile range of markdowns varies from 25 cents to a dollar per dollar of production (labeled “Dispersion” in Figure 3.2). This widespread prevalence of markdowns across sectors and the variation across firms suggests that these wedges are related to firm-level differences (such as firm-specific job amenities or location) rather than sector characteristics, such as sector-specific technology or industry-specific institutions or regulations.

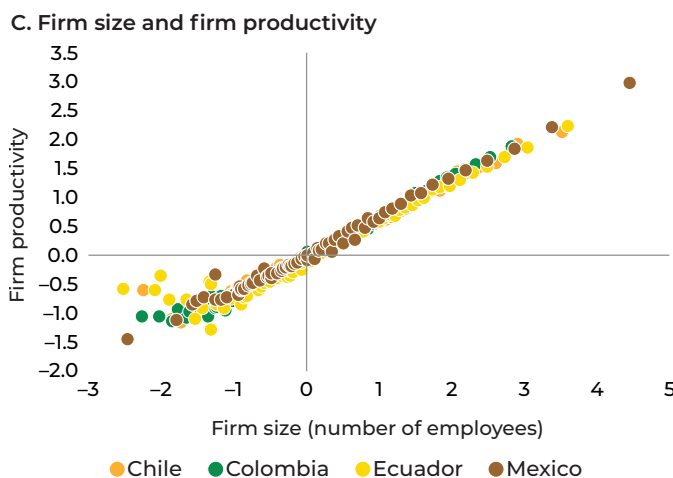
Across economies in the region, and consistent with the wage bargaining mechanisms discussed earlier, a nonnegligible share of firms exhibit markdowns that reflect workers' market power—cases in which workers take home more than what they contribute to their employers in terms of marginal revenue. Data from two countries are used to explore this phenomenon: In Chile, approximately 28 percent of firms show markdowns below one, while in Mexico the figure is about 33 percent. While measurement error is a possible explanation for these markdowns below one, its presence alone is not sufficient to dismiss other plausible interpretations—particularly since measurement error could bias estimates in either direction.

The larger firms in each industry have higher markdowns. Based on firm-level data in Chile, Colombia, Ecuador, and Mexico, Panel A of Figure 3.3

Figure 3.3. Firm Size, Markdowns, Wages, and Productivity



(continued on next page)

Figure 3.3. Firm Size, Markdowns, Wages, and Productivity (*continued*)

Source: IDB staff calculations, based on CompeteLAC except Mexico, for which the economic census for the manufacturing sector only is used.

Note: Each figure displays a bin scatterplot examining various indicators against the log of firm employment (size). On the y-axis, Panel A illustrates markdowns, Panel B depicts log firm wages, and Panel C showcases log firm productivity. The plots are constructed from residuals derived from regressions of the y variables on firm size. These regressions incorporate local labor market fixed effects, defined as two-digit sectors in all countries. Firm productivity estimations follow Hsieh-Klenow (2009). Markdowns are estimated following De Loecker and Warzynski (2012) and Yeh, Macaluso, and Hershbein (2022), using labor as a key component in the production equation. Elasticities are estimated by firm and year at the four-digit industry levels for Colombia and Ecuador and at the three-digit level for Chile and Mexico. All sectors are categorized according to the ISIC Rev 4 classification system.

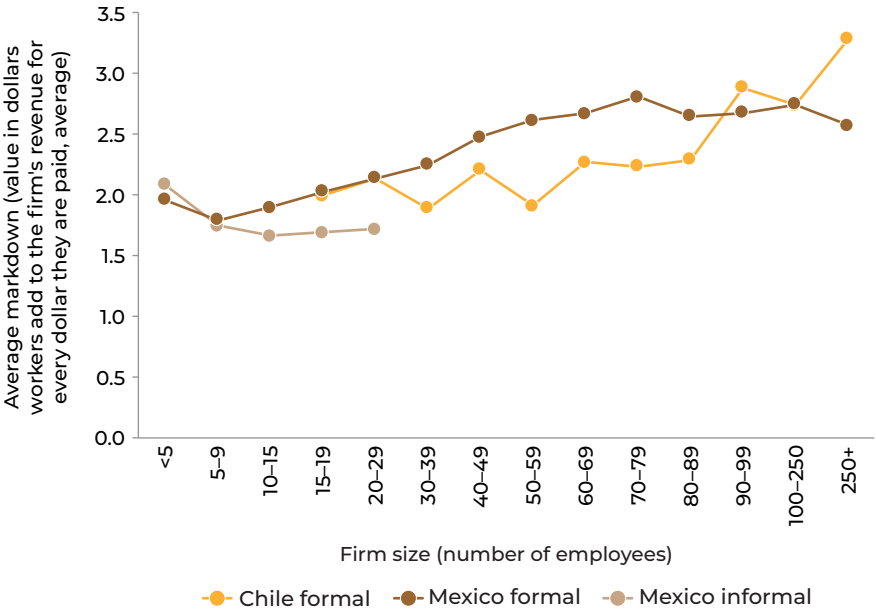
plots the average markdown on the vertical axis and the average number of employees (in logs) on the horizontal axis in different bins, after controlling for two-digit industry fixed effects. There is a hockey-stick relationship between these variables. Small and medium-sized firms have relatively low markdowns in all countries, while the relationship becomes positive and linear for larger firms. Yeh, Macaluso, and Hershbein (2022) find a similar result for the United States. Moreover, they show that this result holds after controlling for the age of the firms.

It may seem, at least a priori, counterintuitive that larger firms have larger markdowns; after all, these firms typically offer “good jobs” (Brown and Medoff 1989; Oi and Idson 1999; Lamadon, Mogstad, and Setzler 2022). They pay higher wages than small and medium-sized firms (Figure 3.3, Panel B) and can afford to do that because they are also more productive. Panel C of Figure 3.3 plots a measure of productivity, the residual value-added net of the cost of labor and capital (weighted by the average labor share in the sector), normalized by the sector average, against firms’ size. The positive association between firms’ productivity and size confirms that

the largest firms in each sector are more productive. This allows them to pass that higher productivity on to their workers in the form of higher wages but, as the higher markdowns indicate, less than proportionally.

Markdowns are larger in firms with higher shares of white-collar workers and in sectors that typically employ more highly educated workers. In both Chile and Mexico, regression models using markdowns as the dependent variable and the proportion of white-collar workers in the firm as the independent variable—while controlling for local labor market fixed effects—produce positive and statistically significant results. This suggests that firms employing more skilled labor are better positioned to exert market power, paying workers below their marginal product. Although higher education levels may boost productivity, limited competition in the labor market allows firms to capture a larger share of the surplus. Similarly, white-collar jobs, often concentrated in specialized sectors, may offer fewer outside employment options, enabling firms to impose greater markdowns despite higher skill levels. Blue-collar workers, on the other hand, may be shielded

Figure 3.4. Average Markdown by Firm Size and Formality Status



Source: IDB staff calculations, based on the Encuesta Nacional Industrial Annual 2012 (Chile) and Censo Económico 2013 (Mexico).

Note: The figure presents the average markdown by firm size category for formal and informal firms in Mexico, as well as for formal firms in Chile. In Mexico, a firm is considered informal if it pays no social security contributions and formal if it makes any contributions to the program, regardless of whether the amount contributed meets the legally mandated minimum of 18 percent of the firm's wages. For methodological details, see the note below Figure 3.1.

somewhat from markdowns because minimum wages affect them more than white-collar workers or because they have higher rates of unionization.

As mentioned, the estimates presented here primarily reflect firms in the formal sector and do not capture informal businesses or microenterprises. In the case of Mexico, however, the economic census includes establishments of all sizes, both formal and informal, where informality is defined as firms that are legally required to make social security contributions but contribute zero instead. Figure 3.4 presents the average markdown by firm size and formality status for Mexico and, for comparison, for Chile. The figure shows two results. First, it confirms that markdowns tend to increase with firm size. This trend is especially pronounced among formal firms in Mexico, where average markdowns rise steadily from around 2 for small firms to over 3 for the largest size category. A similar, though somewhat less steep, increase is observed among formal firms in Chile. Second, informal firms in Mexico consistently exhibit lower markdowns than their formal counterparts across nearly all size categories. Among informal firms, markdowns remain relatively flat, hovering between 1.6 and 1.8. While these are lower than those of formal firms in Chile and Mexico, they are still higher than the levels typically observed in formal firms in more advanced economies.

Few Employers, Many Workers

Employers' ability to pay workers below their marginal revenue productivity may stem from a limited number of firms hiring workers in a given labor market. While the average local labor market in Latin America and the Caribbean may have many firms, employment and wages are often concentrated among a few employers. In Mexico, for instance, the average labor market in 2018 had 139 firms, and Brazil had 42 in 2017. The observed distribution of employment, however, suggests a level of concentration equivalent to a market with just three equally sized firms in Mexico or two in Brazil.

The Herfindahl-Hirschman Index (HHI), already mentioned, is a standard measure of concentration in a local labor market, calculated as the sum of the squared employment or payroll shares of firms operating in that market. By convention, this sum is multiplied by 10,000. In a pure monopoly, where a single firm employs all workers, the HHI equals 10,000. Conversely, in a market with many firms of equal (very small) size, the HHI approaches 0. A key decision in computing the HHI is defining what constitutes a local labor market. The literature considers as part of the same labor market workers and firms within the same geographical unit—such as a state, municipality, or commuting zone (a region defined by commuting patterns)—and the same industry (for example, chemicals) or occupation.

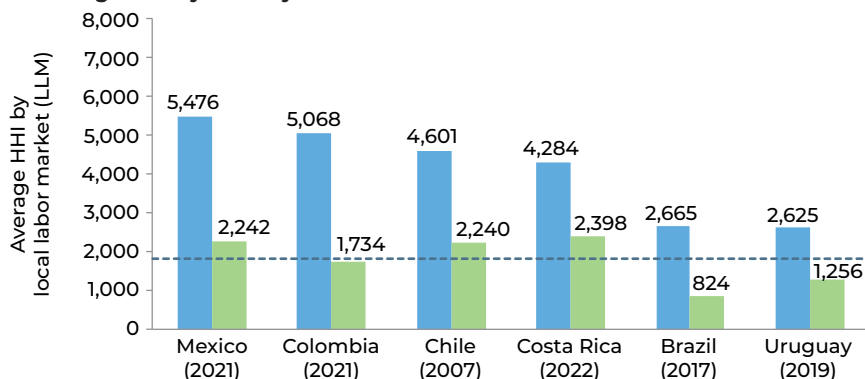
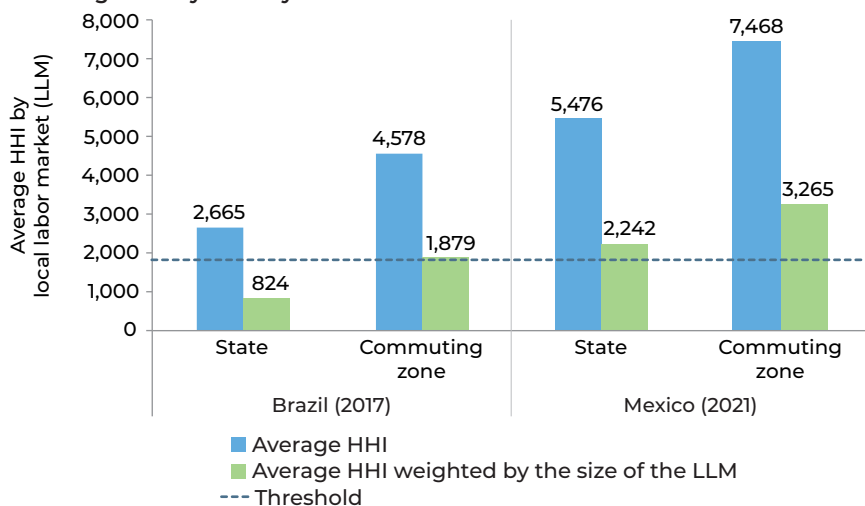
Given the distribution of workers and firms, broader geographical definitions and more aggregated industry classifications tend to yield lower HHIs. Countries have many local labor markets, so, to capture the average labor market concentration, it is useful to calculate a simple unweighted average of HHIs. In contrast, the weighted average—where weights reflect the relative size of each local labor market—captures the degree of concentration experienced by the average worker in that economy.

The average local labor market in Latin America and the Caribbean is highly concentrated. Panel A of Figure 3.5 shows the average HHI across several countries. Based on data availability, local labor markets in the figure are defined at the state (or province) level by the three-digit manufacturing industry code. In all countries, the average local labor market shows HHIs in the 2,600–5,500 range. Are these concentration levels high? They are equivalent to having two to four equally sized firms operating in the local labor market. In the United States, a standard threshold used by government agencies to consider a labor market to be concentrated is an HHI higher than 1,800 (see Box 3.1 on antitrust policies, which discusses the rationale behind these guidelines in more detail). This threshold is plotted in Figure 3.5 with a dashed line.⁷ Because Latin America is a highly urbanized region, much of the economic activity is located in large urban areas, which are likely to have less concentrated labor markets. Weighting the local labor markets' HHI by their economic significance shows that the average worker in Latin American economies still faces labor markets that are concentrated.⁸ The weighted HHI ranges from 800 to 2,200.

These results are similar to (or slightly lower than) those found in the literature. In Brazil, Felix (2022) finds the average unweighted payroll HHI close to 2,800 and a corresponding weighted HHI close to 800. In Peru, Amodio, Medina, and Morlacco (2022) find the average payroll HHI to be 6,500, with a weighted average of 3,700; both results highlight considerable concentration in the labor market. Garcia-Marin (2021) finds that the average employment HHI from 2005 to 2019 across labor markets in Chile was 6,890, while the weighted version of this index stood at 4,350. The results obtained in this chapter for Latin American countries are also consistent with those reported in a meta-analysis by Sokolova and Sorensen (2021), which suggests that poorer countries tend to have more concentrated labor markets. They are,

⁷ Berger et al. (2023) argue that when assessing the impact of firm mergers on welfare, the narrow nature of labor markets and a high degree of monopsony power imply that workers benefit by defining a highly concentrated market as a post-merger HHI above 1,000 or 1,500.

⁸ Weights are constructed as the share of the wage bill of the local labor market in the wage bill of the total economy.

Figure 3.5. Local Labor Market Concentration**A. Average HHI by country****B. Average HHI by country and local labor market**

Source: IDB staff calculations, based on CompeteLAC.

Note: The figure shows both the average HHI and the HHI weighted by the size of the local labor market for each country (last year available). The HHI for each local labor market is computed by summing the squares of each firm's share of the total wages and salaries (wage bill) within that market. The local labor market (LLM) size or weight is the ratio of the total wage bill of each local labor market to the entire national wage bill economy for a given year. Panel A displays average HHI values for local labor markets, defined as the intersection of a state and a three-digit sector or industry. Panel B compares average HHI values calculated using two definitions of local labor markets: one defined by the intersection of a state and a three-digit manufacturing sector, and the other by a commuting zone combined with a three-digit manufacturing sector. For Mexico, a commuting zone includes one or more municipalities, based on commuting patterns between places of work and residence, following the methodology of Blyde, Busso, and Romero (2020). In Brazil, a commuting zone consists of a single municipality. In both graphs, a threshold of 1,800, derived from the 2023 U.S. Department of Justice and Federal Trade Commission Merger Guidelines (refer to Box 3.1), identifies markets with an average HHI above this value as highly concentrated. All sectors are categorized according to the ISIC Rev 4 classification system.

however, likely a lower bound of the real concentration in Latin America's labor markets, as the geographical unit considered by the measures is perhaps too coarse. In a sense, these measures assume workers are perfectly mobile within states (which are usually large geographical areas).

A more realistic definition of a local labor market encompasses a geographical area where workers can find jobs within a reasonable commuting distance. In Brazil and Mexico, this can be approximated using well-defined commuting zones. Panel B of Figure 3.5 presents concentration measures based on these smaller geographical units, combined with three-digit sectors. In Brazil, these estimates account only for formal establishments of all sizes, while in Mexico, they also include informal establishments.

Both weighted and unweighted average concentration measures exceed the threshold for high concentration by 25–75 percent. At least 90 percent of local labor markets in Mexico and 70 percent in Brazil fall into this highly concentrated category. Labor market concentration in these countries is also significantly higher than in the United States under comparable definitions. Benmelech, Bergman, and Kim (2018) estimate an average HHI of approximately 5,400 for the United States, while Azar, Marinescu, and Steinbaum (2017) and Azar et al. (2019) find that the average U.S. local labor market is highly concentrated, with an HHI ranging from 3,000 to 4,000 and a weighted HHI of about 1,600—both well below the levels observed in Brazil and Mexico.

This labor market concentration appears to have meaningful effects. The literature documents a negative relationship between HHI and wages. Azar, Marinescu, and Steinbaum (2017) and Azar et al. (2019) estimate that the elasticity of real wages with respect to HHI is around -0.1 , implying that moving from the 25th to the 75th percentile of concentration reduces posted wages by 17 percent. Similar findings emerge from Benmelech, Bergman, and Kim (2018) and Rinz (2020), who use different data sources but reach conclusions consistent with these findings.

The link between concentration and labor market power can be further explored by examining how markdowns vary with firms' employment shares within their local labor markets. Using firm-level data, the analysis next follows Brooks et al. (2019) to estimate a model that relates firms' markdowns to their employment shares, controlling for year and local labor market fixed effects.⁹ The results show that the largest firms in a local labor market tend to have the highest markdowns, suggesting their dominant position allows them to pay workers less than their marginal contribution to production.

⁹ To address endogeneity concerns, a firm's employment share in the previous year is used as an instrument for the current employment share.

Table 3.1. Markdowns and Concentration in Mexico

Variables		Markdowns	
Firm's share of employment in the local labor market (LLM)	0.512*** (0.039)	0.509*** (0.039)	0.279*** (0.059)
Fixed effects			
Local labor market	Yes	Yes	
Year		Yes	
Plant ID			Yes
Observations	67,625	67,625	67,216
R-squared	0.003	0.003	0.001

Source: IDB staff calculations, based on CompeteLAC.

Note: This table shows the relationship between markdowns (μ) and a plant's share of employment in the local labor market (concentration) for Mexico. The analysis employs the plant's share of employment from the previous year as an instrumental variable to address any fluctuations in hiring and attrition. The regression includes local labor market and year fixed effects. Local labor markets, markdowns, elasticities, and the industry classification system follow the same definitions and methodologies for Mexico as in Figure 3.3.

*** $p < 0.01$. Robust standard errors in parentheses.

The Puzzling Pervasiveness of Labor Market Power

Labor market power and employer concentration are prevalent in both advanced countries and Latin America and the Caribbean, although they appear to be more pronounced in the latter. The pervasiveness of labor market power in the region is particularly puzzling, given the high levels of labor informality. As shown above, informal firms have lower markdowns; in addition, the availability of informal work in the form of self-employment—often considered an “outside option” for workers—should limit firms' ability to suppress wages (Amodio, Medina, and Morlacco 2024).

What are the roots of labor market power in Latin America and the Caribbean? An important factor is employer concentration. As discussed earlier, many workers are in “thin” labor markets, where productive jobs are scarce and attractive alternatives to their current employment are limited. This lack of options weakens workers' bargaining power, enabling firms to set wages below competitive levels. Even in “thick” labor markets with many firms, however, labor market power persists. The fragmentation of production—characterized by a few dominant firms alongside many smaller employers—fails to generate sufficient alternatives for workers to counterbalance effectively the market power of large firms.

A combination of three factors enables the largest firms to retain significant wage-setting power. First, large firms face little real competition, even in local labor markets with many employers. This is because most

potential competitors are small and, as discussed earlier, highly unproductive. The firms in the middle—the mid-sized firms—that could challenge large employers are simply missing. Second, worker mobility in the region is costly. Even when better opportunities exist elsewhere, the financial and logistical barriers to relocating make it difficult for many workers to pursue them. Finally, policy mechanisms intended to curb firms' labor market power may be ineffective as a result of institutional weakness. The following sections explore these factors in greater detail.

Missing Middle, Missing Competition

The employment structure in Latin America is highly fragmented. As will be further discussed in Chapter 6, a large share of workers is employed by microfirms (firms with one to four employees). At the same time, the region is home to several regional multinational companies—known as “Multilatinas”—that have achieved significant global competitiveness (Santiso 2012). The middle tier of the firm size distribution, however, is notably sparse. Eslava et al. (2023) compare the employment distribution by firm size across several countries. The contrast between Latin America and the Republic of Korea is particularly striking. In both, approximately 15 percent of the workforce is employed by firms with more than 100 employees. The share of self-employed workers and those working in microfirms is much higher in Latin America (59 percent) than in Korea (37 percent), however. The difference lies in the middle of the distribution: In Korea, small and medium-sized enterprises (SMEs) employ 49 percent of workers with 10–100 employees, nearly double the 26 percent observed in Latin America. This fragmentation in the region exacerbates productivity dispersion, which remains substantial even within narrowly defined sectors (Busso, Madrigal, and Pagés 2013).

One hypothesis is that the largest, most productive firms benefit from this market structure; the absence of competition from mid-sized firms enables the largest ones to pay workers below their marginal revenue product while still attracting top talent, reinforcing the large firms' labor market power and suppressing wages. As presented in Table 3.2, this idea can be tested directly in Chile and Mexico by examining if the extent of the “missing middle” correlates with the wage markdowns of the largest 10 percent of employers in each market. The missing middle is measured as the difference in employment size between the largest firm in a local labor market and the median-sized firm. A larger gap indicates a more pronounced missing middle, meaning fewer mid-sized firms are present. To gain a better understanding of the distribution of the missing-middle measure, note

Table 3.2. Focusing on Large Firms: Employment, Missing Middle, and Informality

Dependent Variable: Markdowns						
Variables	Mexico				Chile	
Log employment of max (Sij) - p50 (Sij)	0.047*** (0.009)	0.045*** (0.010)	0.043*** (0.009)	0.046*** (0.008)	0.011* (0.006)	0.010* (0.006)
HHI (Labor)		0.318*** (0.050)	0.391*** (0.043)	0.439*** (0.066)		1.465* (0.784)
Informality (share of employment of informal firms in LLM)			-0.199 (0.112)			
Informality (share of informal establishments in the LLM)				-0.539* (0.281)		
Constant	2.257*** (0.078)	2.203*** (0.075)	2.342*** (0.070)	2.649*** (0.262)	1.429*** (0.017)	1.406*** (0.023)
Fixed effects						
Geography	Yes	Yes	Yes	Yes		
Sector	Yes	Yes	Yes	Yes	Yes	Yes
Observations	105,799	105,799	104,113	104,113	6,728	6,728
R-squared	0.128	0.130	0.129	0.130	0.209	0.210

Source: IDB staff calculations, based on Censo Económico for Mexico (1998–2018) and Encuesta Nacional Industrial Anual for Chile (1995–2012).

Note: The sample consists of the largest 10 percent of employers within each local labor market (LLM). The dependent variable is markdowns as the outcome; regressors include the difference of log employment between the firm with the highest and median shares of employment in the LLM; HHI as a measure of concentration; two different measures of informality (the share of employment by informal firms in the LLM and the share of informal establishments in the LLM), and geography and sector fixed effects. The HHI for each LLM is computed by summing the squares of each firm's share of the total employment (labor share) within that market. Local labor markets, markdowns, elasticities, and industry system classification follow the same definitions and methodologies outlined in Figure 3.3.

***p < 0.01; **p < 0.05; *p < 0.1. Robust standard errors in parenthesis.

that, on average, the largest firm in each sector has about 2,800 employees in Mexico and 1,300 in Chile, while the median firm has 33 employees in Mexico and 30 in Chile.

In Mexico, markets with a more pronounced missing middle (that is, a larger size gap) tend to have dominant firms—those in the top 10 percent by size—that pay lower wages relative to their productivity. This relationship holds even after accounting for overall labor market concentration, as measured by the employment HHI (Table 3.2, Column 2). Unsurprisingly, markdowns tend to be higher in more concentrated markets. The wage-suppressing effect is even stronger, however, when the missing middle is

larger. This pattern persists even after controlling for the degree of informality in the local labor market, whether measured by the share of informal employment (Table 3.2, Column 3) or the share of informal firms (Table 3.2, Column 4). Columns 5 and 6 of Table 3.2 show that, in Chile, the measure of missing middle and average markdowns of the largest firms in that local labor market are positively related (as is employer concentration).

An important limitation of this analysis is that the data for Mexico and Chile do not fully capture the extent of the missing middle, as they exclude the self-employed and, in the case of Chile, do not include small firms. This omission may lead to an underestimation of the true size of the missing middle. As a result, the findings likely represent a lower bound on the effect of labor market fragmentation on the ability of dominant firms to exert labor market power.

The missing middle in the size distribution of firms and the high levels of concentration of the formal sector in Latin America and the Caribbean can be attributed to several factors. Size-dependent policies prevent or remove the incentive of small and medium-sized productive firms to grow (Hsieh and Klenow 2009; Guner, Ventura, and Xu 2008). Financial frictions play a key role, as Buera, Kaboski, and Shin (2011) show that limited access to finance constrains firm growth, leading to a market dominated by a few large firms. Sectoral composition also contributes, with structural changes favoring larger firms in certain industries (Buera and Kaboski 2012). Infrastructure constraints, such as unreliable access to electricity, further exacerbate concentration by reducing the productivity of smaller firms (Fried and Lagakos, forthcoming). Additionally, the high cost of middle management in developing economies, as examined by Hjort, Malmberg, and Schoellman (2022), hinders firms' ability to scale up production, linking this challenge to the region's deficits in human capital. Some of these issues are further explored in Chapter 6.

The High Cost of Low Mobility

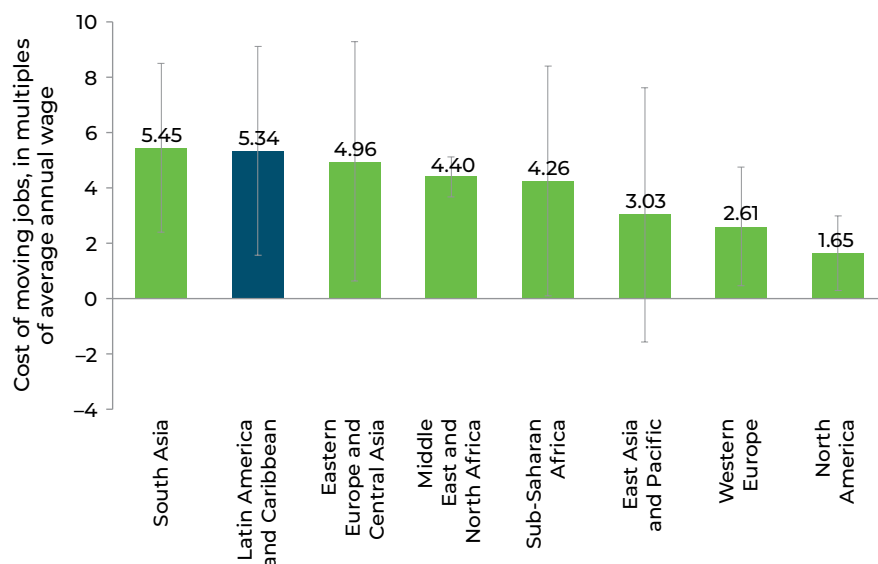
The second factor contributing to high markdowns in the region is low worker mobility. Mobility is vital to limiting labor market power. It expands workers' outside options, increases competition among employers, and prevents wage suppression (Caldwell and Danieli 2024). When workers have good outside options and can more easily switch jobs (Schubert, Stansbury, and Taska 2022), firms must offer competitive wages and benefits to attract and retain talent, strengthening workers' bargaining power.

An extreme form of mobility constraint is the use of noncompete agreements, which workers sometimes sign when joining a company. These impose post-employment restrictions that prevent employees from joining or

starting competing businesses within specified time and geographical limits. While their primary justification is to protect firms' intangible capital—such as trade secrets, client lists, proprietary management practices, or specialized training—they can also serve anticompetitive purposes. Starr, Prescott, and Bishara (2021) find that nearly 40 percent of workers in the United States have signed noncompete clauses at some point. By restricting workers' post-employment options and potentially increasing the benefits of staying with a given employer, noncompete agreements tend to reduce job switching (McAdams 2019). When the contracts are enforced, wages tend to be lower (Starr 2019). While no comparable data are available on the prevalence of non-compete clauses in Latin American labor markets, their incidence is likely to be low, given the high levels of informality and the predominance of micro-firms. Among high-skilled workers and managers within large firms and multinationals, however, their relevance warrants closer monitoring.

Imperfect worker mobility can be driven by a multitude of factors, many of which are particularly relevant in Latin America and the Caribbean. Adopting an approach that is agnostic about the specific sources of (im)mobility, Artuc, Lederman, and Porto (2015) estimate labor mobility costs across advanced and developing countries and find the region among those with the highest estimated labor mobility costs globally, as shown in Figure 3.6. These costs can reach up to 3.2 times the average annual

Figure 3.6. Labor Mobility Costs in Latin America and the Caribbean



Source: IDB staff calculations, based on Artuc, Lederman, and Porto (2015).

wage—a significant figure that may enable firms to pay wages below the workers' contribution to production.

Why is labor mobility so costly in Latin America and the Caribbean? Labor mobility in the region remains limited by four main types of barriers. First, inadequate infrastructure—particularly in transportation, housing, and connectivity—restricts geographical mobility, reducing the effective size of labor markets. Second, workers face significant information frictions, as timely and accurate knowledge about external job opportunities, wages, and working conditions is scarce, weakening their bargaining power. Third, ineffective education systems and insufficient reskilling opportunities hinder workers' ability to make transitions across occupations and industries. Finally, some labor market regulations create barriers to mobility, discouraging movement on both the workers' and the firms' sides.

This section, “The High Cost of Mobility,” reviews the first three factors and leaves the discussion of regulations to “Policies Fall Short,” which follows. As will be seen there, poorly designed regulations are not only an obstacle to labor mobility; they can be a source of the nexus described earlier between the missing middle and missing competition.

Stranded in Place

Frictions related to infrastructure tend to limit the size of the local labor market. High transportation costs create barriers that prevent workers from making transitions to higher-paying sectors and firms (Donovan and Schoellman 2021). Infrastructure investment in Latin America and the Caribbean has consistently lagged other middle-income regions, contributing to a substantial infrastructure gap (Cavallo, Powell, and Serebrisky 2020). These deficiencies are especially severe outside major cities, exacerbating labor market imbalances.

Infrastructure challenges are also significant within the region's large cities, where obstacles to labor mobility persist despite urbanization. Over 80 percent of Latin America's population reside in urban areas, where commuting costs remain substantial. Calatayud et al. (2021) estimate them at 1.1 percent of GDP in Buenos Aires, Montevideo, and São Paulo; 1.0 percent in Santiago; 0.9 percent in Bogotá and Rio de Janeiro; 0.8 percent in Lima; 0.7 percent in Santo Domingo; and 0.5 percent in San Salvador and Mexico City. Manning and Petrongolo (2017) show that job attractiveness declines sharply with distance even in well-connected areas like the United Kingdom, suggesting that Latin America's more pronounced infrastructure deficiencies likely amplify labor market inefficiencies on a larger scale.

The barriers to geographical mobility are clearly a case in which not necessarily less, but often more, state intervention is needed. Many investments that could lower these costs create positive externalities—that is, benefits to society in general that are not taken into account by firms and workers when making decisions about employment and pay—and are unlikely to be provided sufficiently by the private sector alone. Vial Lecaros, Zárate, and Pérez Pérez (2023), for example, find that improved public transportation in Santiago, Chile, reduces spatial mismatches between workers and jobs and weakens firms' labor market power by providing the workers with greater access to job opportunities. Similarly, Martinez et al. (2019) find that enhanced public transportation in Lima, Peru, significantly increased employment and hourly earnings among women, highlighting the potential of targeted investments in urban infrastructure.

The Less You Know

Mobility is often restricted by information frictions. Poor information regarding job opportunities will increase monopsony power by limiting the ability of workers to move to better jobs. Jäger et al. (2024) find that employed workers wrongly anchor their beliefs about outside options on their current wages, with workers in low-paying firms underestimating wages elsewhere. In developing countries, information frictions are exacerbated by informality and the inability of workers to signal correctly their true skills, which are often acquired on the job. Information frictions are also prevalent in markets with abundant information. Busso, Montaña, and Muñoz-Morales (2023) show that even in high-skilled labor markets in Colombia, the provision of clear signals about field-specific skills significantly improves job matches and increases earnings, especially for graduates from less prestigious institutions.

Mounting evidence suggests that simple interventions that certify workers' skills can alleviate information frictions, allowing them to find better jobs. Abebe, Caria, and Ortiz-Espina (2021) find that helping workers in Ethiopia credibly describe their skills for potential employers greatly improves their chances of finding a formal job, raises the probability of a stable job with an open-ended contract, and increases earnings and job satisfaction four years later. In South Africa, Carranza et al. (2022) find that giving jobseekers assessment results that can be shared with firms increases employment and earnings. In Uganda, Bassi and Nansamba (2022) find that helping jobseekers obtain and understand the benefits of references from previous employers can also help them signal their skills and increase their earnings.

In Latin America and the Caribbean, job intermediation services that help workers identify good employment opportunities are scarce (Alaimo et al. 2015). Active labor market policies could be expanded to give job seekers more support. Providing labor market guidance to employed workers could also help reduce their employers' monopsony power. More broadly, any effort that expands the range of firms where individuals can work is likely to raise wages and productivity by limiting monopsony power.

Tough Transitions

Empirical research strongly supports the idea that transferable skills increase worker mobility. Workers with skills applicable across firms or occupations have better outside options, which often lead to higher wage growth (Gathmann and Schönberg 2010). Basic cognitive abilities (for example, literacy and numeracy) and socioemotional skills (such as problem solving and critical thinking) enable workers to acquire new competencies on the job. And because these skills are transferable, they facilitate transitions across occupations, industries, and geographical locations and are associated with higher wages in both advanced countries (Lindqvist and Vestman 2011; Deming 2017) and Latin American economies (Busso, Montaña, and Muñoz-Morales 2023). In contrast, firm-specific skills restrict workers' employment options, weakening their bargaining positions and reducing wages when they switch jobs (Neal 1995). Policies that enhance general human capital—such as expanding access to high-quality education and continuous training—can increase labor market competition by broadening workers' employment alternatives. Investments in foundational education, lifelong learning, and adult retraining initiatives improve workers' bargaining positions and, thus, limit firms' labor market power.

Policies Fall Short

Much of the discussion under “The High Cost of Mobility” focused on the barriers that hinder workers from moving to better opportunities—that is, on the supply side of the labor market. Increasing worker mobility also requires robust job creation, however—after all, where can workers move if there are no alternative jobs available? As discussed earlier, a main factor limiting the creation of good jobs is the lack of competition that characterizes many labor markets in Latin America and the Caribbean. Excessive market fragmentation and a thinly populated middle segment in the firm size distribution result in high market power among dominant firms and weak incentives to create better jobs. The following examines how labor

market institutions and regulations can serve as powerful tools to address insufficient competition and low worker mobility. It also recognizes, however, how they can backfire and reinforce the very forces they are intended to mitigate—contributing to further fragmentation and, simultaneously, increasing mobility costs.

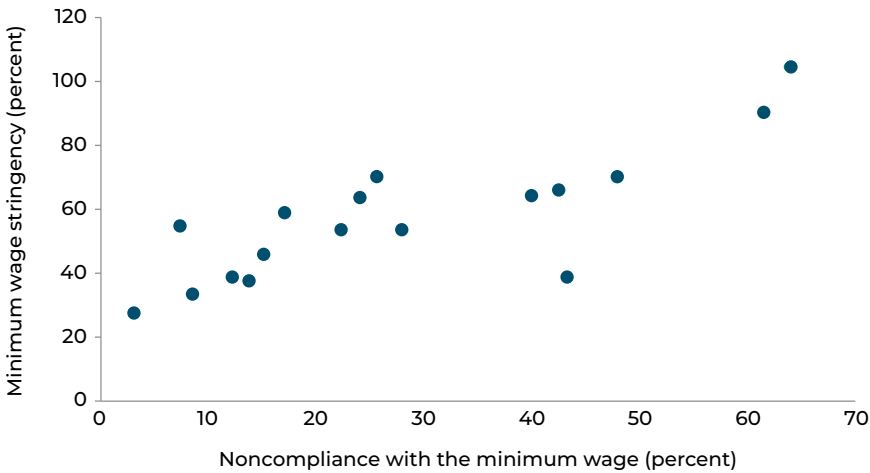
Pros and Cons of a Minimum Wage

Perhaps the most widely used policy tool to counteract firms' labor market power in the advanced world is the minimum wage. In markets with monopsony-like conditions, a binding minimum wage can prevent employers from paying below a certain threshold by setting a wage floor (Manning 2003). Its effects can, however, vary across firms. As discussed earlier, larger firms tend to have higher wage markdowns, meaning a minimum wage can improve efficiency by raising both wages and employment—particularly in more productive firms. Arnold and Peebles (2024) provide empirical support for this intuition, showing that, in the United States, the minimum wage increases employment in the largest firms but leads to employment losses in smaller, less productive ones; see also Dustmann et al. (2022) for similar evidence in Germany. When the minimum wage is set too high, however, it can trigger too much concentration of economic activity in the largest, more productive firms, which may end up charging higher markups in the product market (Lo Bello and Pesaresi 2025), thus hurting consumers (as discussed in Chapter 2).

Minimum wage increases in Brazil and Mexico provide evidence of the effects of such policies. Engbom and Moser (2022) find that an increase in the minimum wage in Brazil after 1994 had broad spillover effects, raising wages further up the distribution and reducing inequality in the formal labor market. They also show that potential negative effects on employment and output were mitigated by a reallocation of workers toward more productive firms. Similarly, Campos-Vásquez and Esquivel (2021) show that a near doubling of the real minimum wage along Mexico's northern border in 2019 significantly increased wages without detectable employment losses, while Campos-Vásquez and Esquivel (2023) document a substantial decline in poverty.

The effectiveness of minimum wages in curbing labor market power in Latin American countries cannot be taken for granted, though. The result generally depends on two factors that are closely linked: the level of the minimum wage and the government's capacity to enforce it. As Figure 3.7 illustrates, higher minimum wages are often associated with a larger share of employees earning below the legal wage floor, despite regulations mandating compliance (Gindling and Ronconi 2025). This suggests enforcement

Figure 3.7. Minimum Wage and Noncompliance with the Law



Source: IDB staff calculations, based on Lotti, Messina, and Nunziata (2025), using national household and labor force surveys and ILO minimum wage data.
Note: Each dot represents a country: Argentina, Bolivia, Brazil, Colombia, Costa Rica, the Dominican Republic, Ecuador, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. See Appendix Table A1 in Lotti, Messina, and Nunziata (2025) for details. Minimum wage stringency is the level of the minimum wage divided by percentile 70 of the wage distribution, by country. Minimum wage noncompliance is the proportion of full-time, private-sector nonagricultural employees who are legally covered by minimum wage regulations but whose actual wages fall below the statutory minimum.

is frequently weak, and noncompliance increases with the level of the minimum wage, limiting the policy’s potential to strengthen workers’ bargaining power—Mexico and Brazil, the two cases discussed above, started from low levels of minimum wages, which perhaps helps explain the positive impacts on average wages.

Moreover, high minimum wages and strong enforcement may trigger firm-level adjustments such as layoffs, leading to increases in self-employment (Lotti, Messina, and Nunziata 2025), a rise in informal employment within microenterprises that are difficult to monitor, or, in the long run, a substitution of labor for capital, which ends up hurting low-income workers (Hurst et al. 2022). In addition, evidence from structural models supports the idea that distortions introduced by minimum wages can hinder employment growth in more productive firms. Alfaro et al. (2023) show that eliminating minimum wage and size-dependent distortions leads to a substantial expansion in formal manufacturing employment and a significant rise in median income. These results suggest that minimum wage policies not only can distort the allocation of labor; they can limit the economy’s ability to generate wage gains. This increased fragmentation of production can lead to more labor market power within the formal sector.

Thus, while minimum wages can be an effective tool for reducing firms' labor market power, setting them too high can discourage hiring, prompting governments to weaken enforcement to protect formal employment. This leads to an important guideline for minimum wage policy, even in the presence of monopsony power: The level may be high enough to act as a binding constraint for some workers, ensuring it has an impact, but not so high that it triggers negative effects on the economy and prevents markets from functioning efficiently. Setting the minimum wage at or above the median wage—as seen in many countries in the region—is almost certainly too high.

The Power of Bargaining

The minimum wage, even if properly designed, will not be very effective in restoring workers' bargaining power at higher points of the wage distribution. Collective bargaining, on the other hand, has the advantage of possibly strengthening the bargaining power of workers who earn substantially more than the minimum wage. Unionized labor has historically achieved higher wages and benefits than their nonunionized counterparts (Fang and Hartley 2022). In a recent study for Norway, Dodini, Salvanes, and Willén (2024) find that unions can counteract monopsonistic wage suppression, particularly in markets with limited employment alternatives. The impact, which varies by worker type and the level of market concentration, highlights unions' role in redistributing firm rents, especially to lower-wage workers in concentrated markets, and thereby reduces local income inequality. Azkarate-Askasua and Zerecero (2024) reach similar conclusions for France. Union wage gains, however, are intimately related to the ability of workers to move to better opportunities.

Although studies of the impact of unions on labor market power in Latin America and the Caribbean are scarce, their findings align with international evidence. Kohli (2024) finds that a weakening of union power in Brazil led to lower wages and reduced labor formality. This result indicates that measures to reduce the cost of formal labor do not necessarily increase formal employment. Evidence from Brazil also suggests collective bargaining can improve not only wages but job amenities. Lagos (2024) shows that increased union power in Brazil was associated with both higher wages and improved job amenities, without a decline in employment. Similarly, Casacuberta and Gandelman (2023) show how the resurgence of wage councils with a strong union presence in Uruguay reduced wage markdowns.

Can these results be extended to the rest of Latin America and the Caribbean? Probably not. In Uruguay, unions remain relatively strong, with more than 20 percent of workers unionized and collective

bargaining agreements covering a significant portion of the workforce—about 95 percent. Coverage is similar in Argentina. But in the rest of the region unions are much weaker, which limits their capacity for collective action except in specific sectors, such as the public sector. Public perception as shown by surveys across the region aligns with these observations. In Argentina, nearly 30 percent of the population considers labor unions among the three most powerful institutions. In most countries across the region, however, unions are viewed as among the least powerful institutions, with only about 12 percent of Latin Americans selecting them as one of the top three most influential entities (Ronconi 2021).

To sum up, unions can play a role in giving workers a voice and strengthening their bargaining power, thereby reducing firms' monopsony power in the labor market. It is equally important, however, to ensure that unions effectively represent their members' interests. Supporting unions does not automatically equate to supporting workers, as evidenced by the fact that most Latin Americans believe labor unions are usually corrupt (Ronconi 2021). Policymakers can promote transparency in union activities and ensure, through democratic processes, that unions have genuine member support. Just as firms are subject to oversight for compliance with unionization laws, unions and their leaders are subject to the same legal standards. It is within the mandate of labor authorities to ensure that labor legislation is applied consistently to both firms and unions.

Size-Dependent Policies Matter

Although labor regulations that limit firings help reduce uninsurable labor market risk (Bertola 2004), they can hinder job growth by discouraging firms from expanding formal employment (Bentolila and Bertola 1990; Besley and Burgess 2004). In Latin America and the Caribbean, strict employment protections—such as high severance payments, requirements for advance notice of termination, and complex administrative procedures—limit labor mobility, job creation, and hiring (Heckman and Pagés 2003). Moreover, firing restrictions in Latin America are one of many size-dependent policies. Many microfirms in the region are either exempt from such legislation or are not subject to enforcement. As a result, firing restrictions contribute to the fragmentation of production, reinforcing the patterns of market power in the formal sector discussed earlier.

Size-dependent policies that increase productivity dispersion—such as special tax regimes for small firms or policies that make formal employment costly while subsidizing informal hiring—are likely to exacerbate both monopsony power and allocative inefficiency. A case in point is payroll taxation,

which, by international standards, is notably high in the region. To the extent that wages are flexible, payroll taxes can be passed on to workers in the form of lower wages. Informality can act as a buffer, however, limiting firms' ability to shift these additional costs onto workers. Similarly, a binding minimum wage can serve as a wage floor, preventing firms from passing additional costs onto employees. When this occurs, payroll taxes function as a size-contingent policy, since microfirms hiring informal workers are effectively exempt from paying them.

Eliminating special tax regimes, along with reforms to make social security universal and delinking it from the labor market in both access and financing, could help reduce productivity dispersion. This would involve lowering employer and employee contributions for benefits such as health care and pensions, thereby reducing the resources channeled to micro- and informal firms. At the same time, these reforms would enhance competition among larger, formal firms by populating the missing middle, thereby reducing labor market power among dominant players.

Regulation or Competition?

To analyze the policy implications of the growing evidence of monopsony power in labor markets, including the findings in this chapter, it is useful to draw parallels with the traditional literature on monopoly power. Baumol (1977) introduced the concept of a natural monopoly, where a single producer is the most efficient way to supply a good. In such cases, policy focuses on regulating these firms, acknowledging that their pricing and output decisions will not be optimal without oversight. This contrasts with cartels, in which firms collude to create monopoly power without any productivity gains. In these cases, the appropriate policy response is to reduce the cartel's market power rather than simply regulate prices. Some policy strategies are discussed in Chapter 10.

When considering the policy implications of monopsony power in labor markets, it may be helpful to adopt a conceptual framework similar to that used for monopoly power. A key question is why monopsony power exists. If it arises from productivity reasons—such as when concentrating the hiring of certain workers among a few employers is the most efficient way to organize production—then regulating, rather than eliminating, this monopsony power becomes the primary policy objective. Tools like setting minimum labor standards (for instance, minimum wages) or promoting collective bargaining are appropriate measures to mitigate the potential harms of what could be considered “natural monopsony power.” In curbing monopsony power, it is important to highlight the role of competition

commissions. In the United States, for example, the Department of Justice and the Federal Trade Commission Merger Guidelines explicitly consider the potential for increased monopsony power when evaluating proposed mergers (see Box 3.1).

Box 3.1. Trust in Antitrust

Antitrust regulations are crucial in preventing mergers that could diminish competition. In the United States in 2021, 3,500 merger transactions were reported to the Federal Trade Commission (FTC) and the Department of Justice (DOJ), marking a 115 percent increase from the previous year (U.S. Federal Trade Commission and Department of Justice 2021). While corporate consolidation aims for efficiency, it can threaten competitive market structures by increasing market power, leading to higher prices, lower wages, reduced product quality, fewer choices, and restricted access to essential inputs by competitors (U.S. Federal Trade Commission 2024a).

In highly concentrated markets, firms may achieve dominance following mergers. To address those mergers that may produce this outcome, authorities use market concentration measures to block transactions. In 2023, the FTC and DOJ responded to a surge in mergers by strengthening their regulatory frameworks under federal antitrust laws. Among these revisions were stricter Herfindahl-Hirschman Index (HHI) thresholds, returning to 1982 levels that allowed an HHI above 1,800 and a change in HHI over 100, or a post-merger market share not exceeding 30 percent. This represented a substantial tightening from the 2010 guidelines, which allowed a post-merger HHI of up to 2,500 and an HHI change of up to 200 (U.S. Federal Trade Commission and Department of Justice 2021).

Notably, regulatory agencies now also assess the impact of corporate dominance on labor markets, considering adverse effects on wages, wage growth, and job quality, including benefits, working conditions, and training opportunities. This comprehensive approach acknowledges frictions, such as high job search and relocation costs and specialized skill requirements that narrow labor markets.

These changes to the regulatory frameworks followed the blocking by the DOJ of Penguin Random House's acquisition of Simon & Schuster, which would have made PRH the largest book publisher in the United States. The merger was expected to reduce competition in the purchase of manuscripts and reduce the authors' compensation (Gordon and Italie 2022). The DOJ's action marked the first time a U.S. merger was blocked in response to labor monopsony concerns. Later, in February 2024, the FTC, supported by nine state attorneys general, initiated legal action to prevent Kroger's \$24.6 billion acquisition of Albertsons. Together, these retailers held over one-third of the

(continued on next page)

Box 3.1. Trust in Antitrust *(continued)*

grocery market, operating 9,000 stores across 48 states with over half a million employees. The FTC argued the merger would harm consumers through higher prices and reduced quality while also weakening grocery employees' bargaining power, leading to job losses, lower wages, and diminished benefits. Facing legal challenges, Albertsons withdrew from the proposed merger (U.S. Federal Trade Commission 2024b).

Berger et al. (2023) evaluate the impact of stricter regulatory thresholds, using U.S. Census data in a framework that allows for monopsony forces to shape labor markets. They analyze the effects of changes in HHI thresholds on wages across local labor markets defined by commuting zones and sectors. Assuming mergers yield a 5 percent efficiency increase, their findings suggest that, under the less stringent 2010 guidelines, workers experienced negative wage effects.

Other studies corroborate these findings. Marinescu, Ouss, and Pape (2020) analyze matched employer-employee data from France, controlling for worker and firm characteristics. They find that a 10 percent rise in labor market concentration decreased wages by nearly 1 percent and employment by over 12 percent for new hires. Unionized sectors exhibited smaller wage effects. Simulations of horizontal mergers between top employers showed particularly severe impacts in low-concentration sectors, such as retail, with annual wage losses of 24 million euros and 8,000 fewer jobs (Marinescu, Ouss, and Pape 2020).

Arnold (2019) uses U.S. Census data, a Cournot competition model, and difference-in-difference analysis to examine pre- and post-merger worker conditions. He finds that mergers increasing local labor market concentration led to wage reductions of at least 2 percent for directly affected workers and 0.22 percent for others in the same market, indicating negative spillovers. Employment fell by 16.5 percent in mergers that heightened concentration, though even those without concentration changes saw a 13 percent employment drop, suggesting other factors like overhead cuts also play a role.

Wage effects also vary with skill levels and unionization. Prager and Schmitt (2021) use data on mergers of hospitals in the United States to compare wage growth in markets with and without concentration-increasing mergers. In the most concentrated markets, wages were 4 to 6.8 percent lower for skilled staff in non-health-related positions and nursing and pharmacy staff four years after the mergers. Higher unionization levels mitigated these effects; increasing union membership from 1.5 percent of workers to 40.8 percent reduced wage cuts from mergers by about 80 percent.

The evidence underscores the importance of considering labor market concentration in merger assessments; factors like skill levels and unionization shape the impacts of mergers on employees. Stricter guidelines and policy approaches that account for these elements can more effectively mitigate negative consequences for workers and promote fairer outcomes across sectors.

Whenever possible, however, the most effective policies will be those that reduce inefficient barriers to labor market competition. The first general policy recommendation would be to remove the frictions that enable monopsony power and address it at its source—much like a doctor treating the root cause of an illness rather than just its symptoms. By eliminating inefficient labor market frictions that both reduce productivity and create monopsony power, these interventions can improve outcomes on multiple fronts. Importantly, there is little evidence of a tradeoff between efficiency and equity in this context. Reducing labor market frictions tends to enhance productivity while promoting greater equity.

Unavoidable Tradeoffs

While certain measures to reduce productivity dispersion—particularly those that address the missing-middle problem by reallocating resources from low-productivity firms to firms with intermediate productivity—can simultaneously improve productivity and increase the labor share (by reducing markdowns), other scenarios present more complex tradeoffs. When optimal productivity policies concentrate resources in a few high-productivity firms, a tension arises between efficiency and equity goals. In these cases, the analogy with regulating natural monopolies is relevant, highlighting the potential role of well-regulated collective bargaining processes.

Mandating minimum labor conditions, including minimum wages, inevitably involves tradeoffs. To ensure no one is excluded from formal wage employment, regulations would need to be so lenient that they are not binding for most workers. Conversely, making these regulations binding for a meaningful share of workers—deliberately left undefined—would likely impose excessive costs on those at the bottom of the wage distribution. Even when such policies seem to improve working conditions without noticeable employment losses, some groups, albeit small, almost certainly will be excluded from formal wage employment. While this policy-driven reallocation of workers from low- to high-productivity firms can improve allocative efficiency and reduce monopsony power, it also imposes transitional costs on small producers and their workers.

In short, monopsony power in labor markets should be addressed primarily by promoting greater competition. This requires removing barriers to workers' mobility and improving their outside options. Rather than accepting limited competition and attempting to manage its consequences, policy should promote competition wherever feasible. Some policy tools include investing in infrastructure to enhance spatial mobility, strengthening reskilling systems to support occupational transitions, easing overly

burdensome labor regulations to encourage job creation, and eliminating size-dependent distortions that constrain the growth of productive small and medium enterprises. While increasing competition should be the first-best approach, it is not always feasible—or even desirable, as in the case of natural monopsonies. In such instances, a carefully designed application of labor regulation may be warranted to impose binding but not excessively distortive constraints on firms.

Bottlenecks: Market Power in Supply Chains

In any modern economy, production requires complex interconnections of producers who source goods or services from different firms. In certain situations, this allows some producers to exert market power on their suppliers. This chapter shifts the perspective toward buyer market power and how it interacts with the linkages among sectors. From this standpoint, understanding market power requires examining how sectors are connected and how buyers—especially large firms—shape supply chain dynamics beyond the influence of producers alone.

Sector relevance—that is, how sectors relate to firms and to each other—is an important determinant of the effects of market power along the supply chain. For example, if a sector with many connections to other sectors, such as transportation or telecommunications, has significant market power, the increased costs it imposes can affect downstream sectors that depend on its inputs, driving up their production costs. This, in turn, fuels final prices and reduces affordability. An understanding of how specific sectors interact within the economy helps with the identification of vulnerabilities and informs effective policy responses.

Market power in supply chains manifests at a number of levels, shaping competition and access to markets. Suppliers controlling certain inputs can impose higher prices, restrict supply, or set restrictive terms that disadvantage smaller manufacturers. Manufacturers can take advantage of economies of scale to secure preferential pricing and dictate contract terms to both suppliers and retailers, reinforcing their market dominance. Distributors, who control logistics, can create bottlenecks by limiting which products reach retailers, favoring certain brands, and restricting market access for smaller producers. At the retail level, dominant firms—such as large supermarket chains or online platforms—can exert significant influence by demanding lower prices, exclusive

agreements, and preferential treatment, further shaping competition and consumer pricing.

In many cases, market power resides not with the seller (as discussed in Chapter 2) but, rather, at the buyer level. Similar to employer market power (discussed in Chapter 3), buyer market power refers to the ability of large purchasers—such as traders, wholesalers, retailers, or multinational firms—to influence prices, contract terms, and market conditions in their favor due to their size and purchasing volume. Unlike seller market power, which enables firms to raise prices above competitive levels (creating a markup), buyer market power allows them to push prices downward (creating a markdown), often squeezing suppliers and reshaping supply chain dynamics.

The effects of buyer market power in supply chains can be beneficial. It can better enable producers to exploit economies of scale that reduce costs and allow firms to obtain inputs for less, which may enable them to pass on some of these savings to buyers through lower prices. Large buyers can provide financial support to their suppliers by facilitating access to working capital, land, and certifications, helping the suppliers meet quality standards and regulatory requirements. Additionally, long-term contracts can ensure steady demand, reducing the pass-through of economic shocks, while technical assistance improves productivity and know-how for smaller suppliers. Buyers also share fixed costs, helping suppliers overcome barriers to entry.

Buyer market concentration can, however, also lead to inefficiencies and distortions.¹ Large buyers may prioritize a narrow range of suppliers, limiting diversity in the supply chain. Suppliers may face barriers to entry, restricted access to financial resources, and information asymmetries regarding logistics and market connections, while dominant buyers impose markdowns that force the suppliers to accept lower prices. Firms with strong buyer power may buy in relatively small quantities, discouraging investment in innovation and leading to supply disruptions or lower-quality goods. Buyer market power can also suppress wages and impose exclusionary agreements, increasing regulatory and compliance costs for smaller players.

The analysis considers market power in supply chains from two perspectives. First, it explores how market power in some sectors can amplify its effects on the rest of the economy through sectoral linkages. Then it zooms in on specific sectors, examining the role of buyer market power and

¹ Market concentration refers to the extent to which a market is dominated by only a few firms.

how these dynamics play out in agriculture and food production in Latin America and the Caribbean.

Chain Links across Sectors

Sectors that Matter Most

Not all sectors in the supply chain interact equally with firms in the economy. Some are central in connecting industries and driving broader economic activity, while the effects of others are more localized.

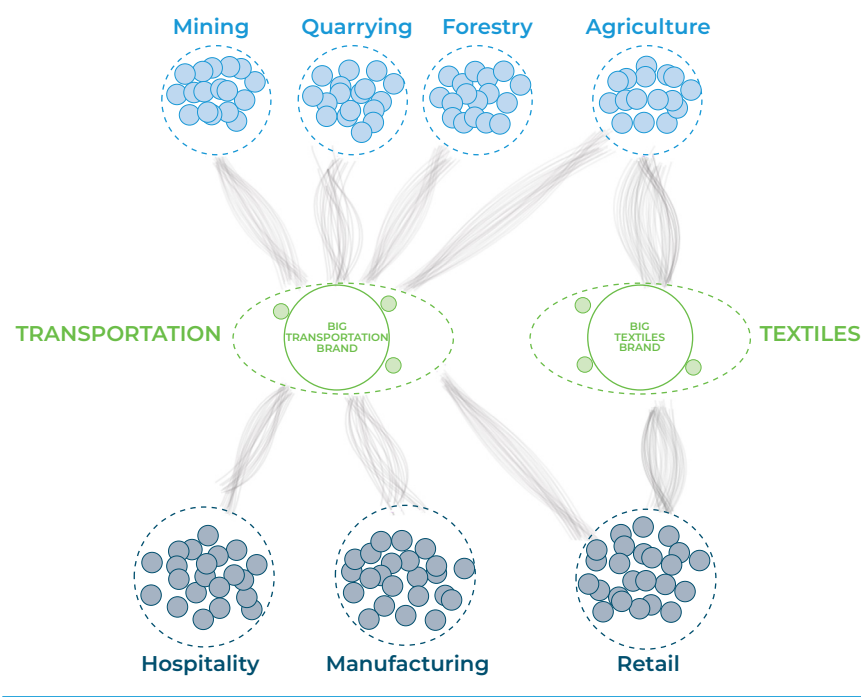
Consider transportation in Latin America and the Caribbean, particularly road freight services. This sector is essential for economic activity, connecting agricultural producers, manufacturing hubs, and export ports. In countries like Argentina and Brazil, agriculture—whether the raising of soybeans, beef, or corn—relies heavily on road transportation to move goods both domestically and internationally. The interconnectedness of transportation means that when firms in this sector exercise market power, the effects are felt far beyond logistical costs, influencing the competitiveness of agricultural exports, the price of essential goods, and the functioning of supply chains across the economy. High transportation costs in Brazil, for example, frequently present a barrier to agricultural competitiveness, affecting both producers and downstream industries dependent on agricultural inputs (Purdue University 2024).

Now consider the textile sector, another important industry in the region but one with fewer interconnections. While textile manufacturing is a significant employer in countries like Mexico and Peru, it mainly serves to produce finished or semifinished goods, such as clothing or fabrics, for export or local consumption. Unlike transportation, the influence of this sector is largely confined to its immediate markets—retailers, wholesalers, and consumers. Market power in textiles may drive up prices for final goods, but it does not create the same widespread ripple effects through other industries as transportation does. Figure 4.1 illustrates this idea.

This comparison demonstrates why looking solely at sector-specific markups provides an incomplete picture of market power. In Latin America and the Caribbean, sectors like transportation, energy, telecommunications, and banking often act as bottlenecks, with their influence amplified by their extensive connections to other industries. Examining these interconnections reveals how pivotal sectors shape the broader economy and, in many cases, the region's ability to compete globally.

An important question is how to identify those pivotal sectors, and a powerful tool for doing so is input–output analysis. By providing a detailed

Figure 4.1. Sector Linkages and Market Power

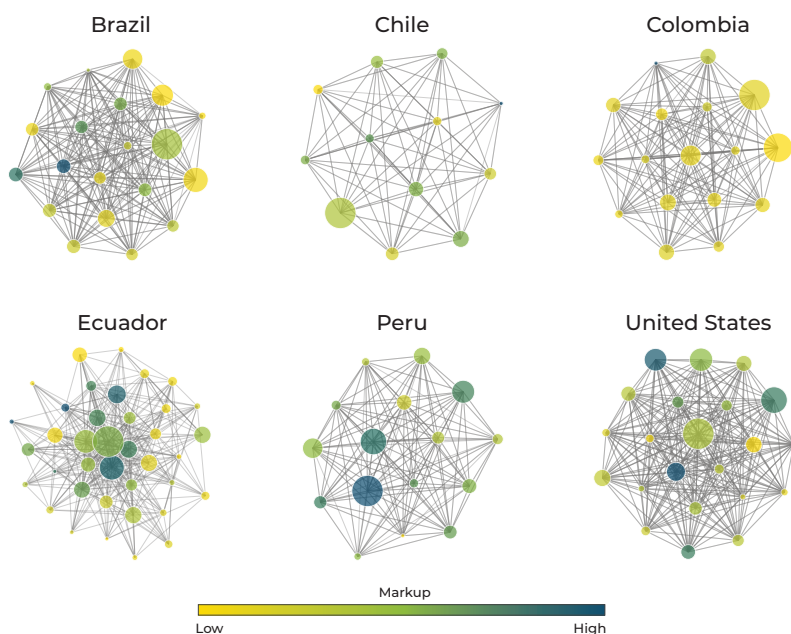


Source: IDB staff elaboration.
Note: Each dot in the figure represents a firm. The diagram illustrates how firms are linked across sectors, with wavy lines indicating buyer-supplier relationships. Two firms—one in transportation and one in textiles—hold significant market share within their respective sectors, indicated by their central positions and size. Their influence differs, however; the transportation firm is more connected across multiple sectors, making it more central to the network. This contrast highlights the dependence of market power impacts not only on a firm’s dominance within a sector but on how embedded it is in the broader production network.

representation of how the output of one sector is used as an input by others, it captures the flow of goods and services across industries and helps determine which sectors occupy central positions in the economic network.²

Figure 4.2 presents a graphical representation of the relationships among sectors identified by input-output analysis for several countries in Latin America and the Caribbean and the United States. It illustrates the connections across sectors (represented by circles), emphasizing the flow of resources and their influence on economic activity. The size of each circle reflects the number of connections a sector has, while the saturation of the

² Input-output tables have rows showing how a sector’s outputs are distributed to other sectors and final demand, while columns reflect the inputs required by the sector to produce its output.

Figure 4.2. Input–Output Matrix and Concentration

Source: IDB staff calculations, using OECD intercountry input–output tables for Brazil, Chile, Colombia, and Peru; the Central Bank of Ecuador’s *Matriz Insumo-Producto por Industria* (MIP); and U.S. Bureau of Labor Statistics input–output tables. Markups are based on CompeteLAC.

Note: The figure illustrates the production networks for Brazil, Chile, Colombia, Ecuador, Peru, and the United States, showing sector size and markups. For Ecuador and the United States, transactions representing less than 2 percent of total sales were excluded. These networks are constructed using each country’s input–output tables.

color represents the sector’s concentration level as indicated by its markups, using the same measures as were used in Chapter 2.

The countries in the figure differ greatly. Brazil exhibits a balanced network, with significant purchases in refined petroleum, food production, and the automotive sector indicating strong energy, food, and industrial demand. Chile, in contrast, has a more concentrated structure dominated by food products, followed by the paper and chemical industries; this suggests reliance on a few key sectors. Colombia also emphasizes food products but has a more distributed network. Notable shares in the petroleum and chemical industries reflect its industrial and energy dependence. Peru presents a broader purchasing distribution, with food products, manufacturing, and basic metals prominent. The industrial structure in the United States is more diversified, with primary metal industries, construction materials, and finance at the forefront. Unlike Chile and Ecuador, where purchasing power is concentrated in a few industries, the U.S. network presents a balanced distribution of purchases across multiple sectors, reinforcing its economic complexity.

Disproportionate Influence

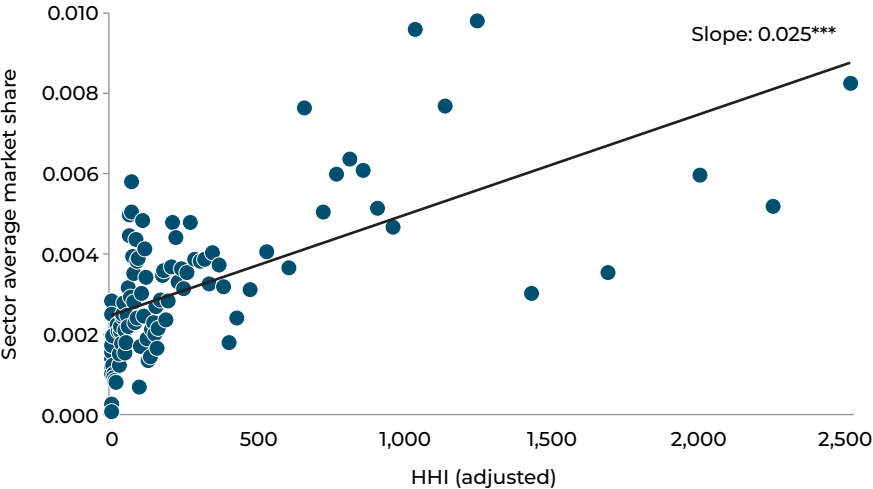
Sectors with more connections to other sectors can exert a disproportionate influence on the economy. If they experience an external shock, it could spread to other sectors. Similarly, if they have market power, it will affect a larger share of the economy.

How market power may be transmitted throughout the supply chain can be described by analyzing its relationship with two sector characteristics: the sector's overall impact on the economy through its linkages, as measured by Leontief multipliers, and the sector's importance to the industries it supplies, measured as the average of sectoral market power across its downstream connections.

A sector's Leontief multiplier quantifies the total output across all sectors generated by an increase of one U.S. dollar in final demand for the sector, capturing the cumulative effects throughout the supply chain. It reflects how much of each input is required to produce a unit of the sector's product, accounting for how changes in demand propagate through all cross-sector linkages. Thus, the multiplier serves as a measure of a sector's importance within the supply chain. Figure 4.3 shows that sectors vital to the supply chain tend to exhibit higher concentration, as measured by the Herfindahl-Hirschman Index (HHI).³

Figure 4.3. HHI Index versus Sector Importance

A. Sector average market share versus market concentration

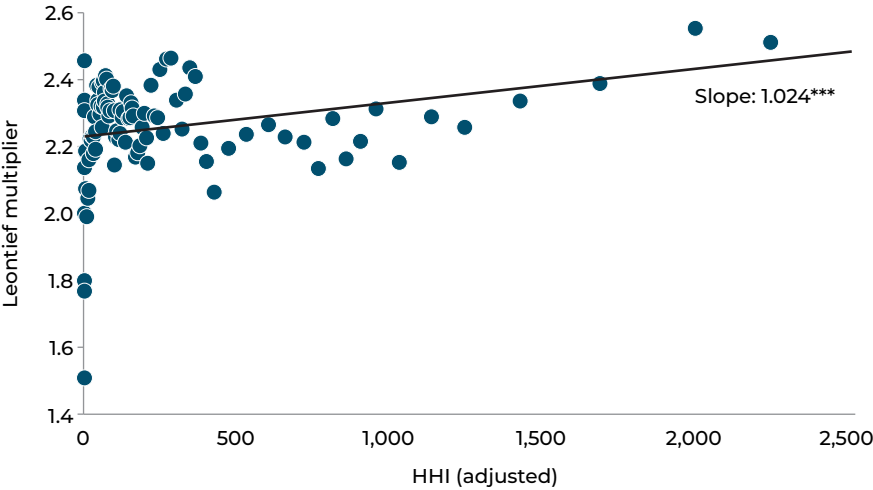


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³ The HHI is calculated by summing the squares of the market shares of all firms in the market. In a monopolistic market, the index equals 10,000, whereas in a highly

Figure 4.3. HHI Index versus Sector Importance *(continued)*

B. Leontief multiplier versus market concentration



Source: IDB staff calculations, based on data from OECD intercountry input-output tables for Brazil, Chile, Colombia, and Peru; HHI values are based on CompeteLAC.

Note: Leontief multipliers, calculated using the OECD input-output data, represent the increase in total output resulting from a rise of one U.S. dollar in the sector's final demand. Sector average market shares indicate the overall market power of a sector within the supply chain. Asterisks indicate levels of statistical significance. $p < 0.05$ is denoted by *, $p < 0.01$ by **, and $p < 0.001$ by ***.

The second characteristic—a sector's importance to the industries it supplies—is studied by computing the weighted average of sectoral market shares, where the weight adjusts for the size of the market supplied by the sector in the economy. Similar to how firms with larger market shares within a sector have greater market power, sectors with dominant market shares in the supply network can exert a greater influence.

Figure 4.3 shows that sectors with higher within-sector market power, as reflected by higher concentration, also exhibit significant market power across the network, as measured by their large market share in transactions with other sectors. This is not entirely surprising, because more concentrated sectors often produce specialized or differentiated goods that are essential for downstream industries. These characteristics allow such sectors to exert influence not only within their own boundaries but across the broader supply network, amplifying their economic significance. Box 4.1 extends this analysis to the United States. These patterns raise the question of whether such concentrations of market power are to be expected,

competitive one, it approaches 0. According to the guidelines of the U.S. Department of Justice, an HHI below 1,000 indicates a “not concentrated” market, values between 1,000 and 1,800 signify a “moderately concentrated” market, and values above 1,800 indicate a “highly concentrated” market.

given the structural features of the sectors involved. In many of the pivotal sectors identified—such as transportation, energy, telecommunications, and banking—high market concentration often results from natural barriers to entry, economies of scale, and strong network externalities. These features may reflect technological or logistical efficiencies that make domination by a few large firms more cost effective. Infrastructure-heavy sectors, for instance, often require large upfront investments, making the coexistence of many small competitors impractical. As a result, some degree of concentration may be an inherent outcome rather than a market failure.

At the same time, the centrality and systemic importance of these sectors imply (as discussed in more detail in Chapter 9) that their market power can have far-reaching effects, warranting close regulatory oversight. Many of these industries are already subject to regulation precisely because of their influence on economic resilience—and because market power in such sectors can more easily propagate through the production chain.

Box 4.1. Sector Importance and Market Power in the United States

A broader perspective on sector importance and market power can be obtained by conducting a production-based analysis, following De Loecker, Eeckhout, and Unger (2020), to estimate firm-level markups in the United States. Unlike methods that rely on assumptions about market competition or consumer behavior, this approach looks at the minimization of firm costs. By analyzing how firms adjust various inputs, such as labor and materials, to minimize costs for a given output level, it estimates marginal costs based on the relationship between input costs and revenues. Markups are then derived by comparing these marginal costs to the prices the firms charge. Detailed firm-level data from the Compustat database (1955–2016), which includes such metrics as sales, cost of goods sold (COGS), and capital expenditures, are used to estimate firm-level output elasticities, and sector-level markups are calculated as averages of the firm-level markups.

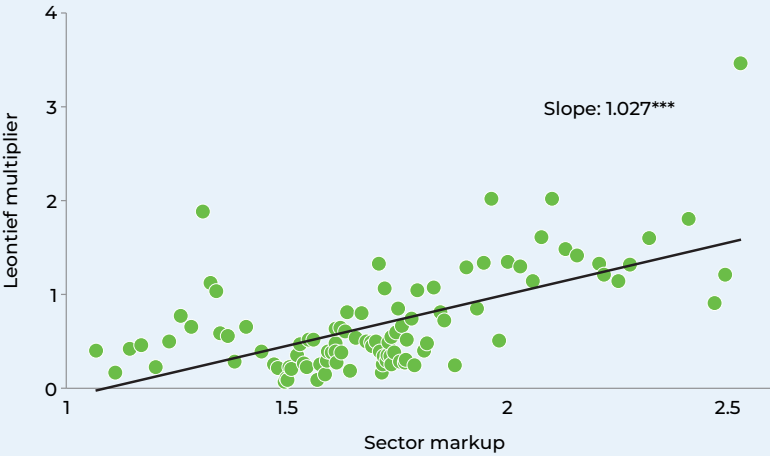
Figure B4.1.1 explores the relationship between market concentration and sector importance in the United States, focusing on average sector markups. Following Burstein, Carvalho, and Grassi (2020) and Juárez (2024), the HHI is used as a summary measure for markups, enabling a direct comparison with Latin America and the Caribbean. The results indicate a positive relationship among market concentration (proxied by higher average sector markups), Leontief multipliers, and sector average market shares. These findings mirror trends observed in Latin American and Caribbean countries, suggesting the relationship between market power and a sector's role within the supply chain is a fundamental economic phenomenon not limited to developing economies.

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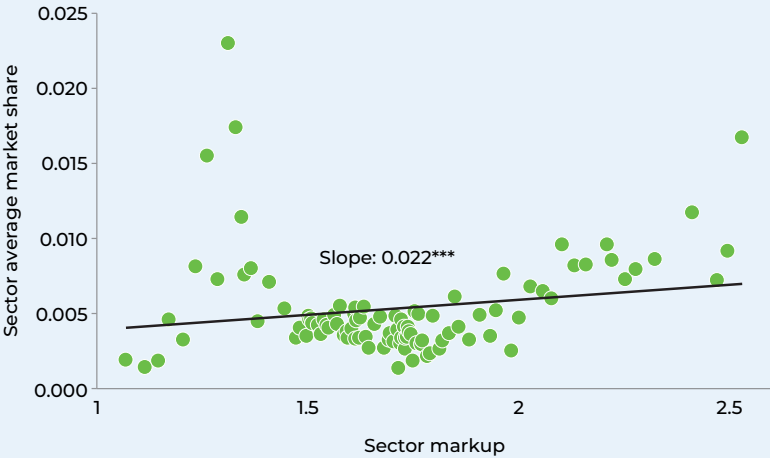
Box 4.1. Sector Importance and Market Power in the United States *(cont.)*

Figure B4.1.1. Sector Markup versus Sector Importance in the United States

A. Leontief multiplier versus sector markup



B. Sector average market share versus sector markup



Source: IDB staff calculations, based on data from U.S. Bureau of Labor Statistics input-output tables. Markups from authors' calculations, based on Compustat microdata.

Note: Leontief multipliers, calculated using U.S. Bureau of Labor Statistics input-output tables, represent the increase in total output resulting from a rise of one U.S. dollar in the sector's final demand. Sector average market shares indicate the overall market power of a sector within the supply chain. Asterisks indicate levels of statistical significance. $p < 0.05$ is denoted by *, $p < 0.01$ by **, and $p < 0.001$ by ***.

Telecommunications is a case in point. Given its central role in most economies, the sector typically warrants regulatory intervention (see Box 4.2). One of the most effective procompetitive reforms in this area has been the introduction of cell phone number portability. As documented by Clavijo (2025), number portability lowers switching costs by allowing users to retain their phone numbers when changing providers. This reduces customer lock-in and enhances contestability (the ability of new firms to enter) in markets often characterized by high concentration and strong network effects. Experience across Latin America and the Caribbean suggests that number portability generates direct benefits for those who switch, indirect benefits for those who do not, and downward pressure on prices. In response to more mobile subscribers, firms have offered better plans, improved service quality, and introduced new technologies, benefiting all consumers.

Box 4.2. Telecommunications in Latin America and the Caribbean

Products of the telecommunications industry illustrate the effects of government actions on competition in the market. Governments determine how rights to use the radio frequency spectrum are allocated to mobile operators, which forms the basis for the operators' activities. They also have often been involved in determining the prices that ensure an adequate return on investment. Interestingly, studies also find a strong empirical relationship between the number of mobile phone service operators and market outcomes such as prices and investment (Genakos, Valletti, and Verboven 2018; Elliott et al. 2025). This suggests that, at least to some extent, the presence of more competitors is associated with lower prices.

By releasing sufficient mobile spectrum to allow competition and overseeing markets in a way that provides incentives for it, regulators can influence competitive forces in their economies. But while their active and consumer-focused role is essential to this relationship, regulators have an equal need to ensure adequate returns on investment. Those that operate with only a short-term consumer interest may tend to take actions that unduly lower prices. Over the long run, the balancing of consumer and operator interests is crucial to the outcome of competitive dynamics.

Many countries in Latin America and the Caribbean have experienced substantial declines in real prices for mobile telephone plans, sometimes disguised by increases in the amount of data included within the plans. These declines in prices, particularly for lower-usage plans, have generated substantial benefits for the poor, for whom telecom services can exceed 5 percent of income (Cave and Mariscal 2020). The benefits lie not only in the lower prices but in, for example, the greater understanding citizens gain of market devel-

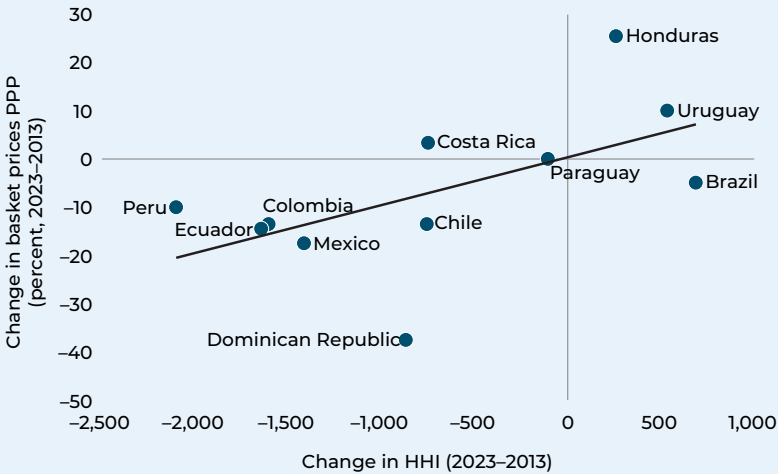
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Box 4.2. Telecommunications in Latin America and the Caribbean *(cont.)*

opments through their ability to gather information and conduct transactions more easily. Thus, data have been a particularly important addition to the standard mobile offering.

Although using simple concentration measures like the HHI to explain price levels has well-known limitations, examining how changes in concentration relate to changes in prices is likely less prone to such issues.^a Figure B4.2.1 presents an assessment of whether a relationship exists between concentration and prices in Latin America and the Caribbean. Including only those economies with well-developed regulatory regimes, it compares changes in HHI and low-consumption basket prices from 2013 to 2023.^b While these measures are not fully exogenous—that is, they may be influenced by other market factors—they can still offer a basic indication of whether an association

Figure B4.2.1. HHI and Low-Consumption Basket Prices for Data and Voice



Source: IDB staff calculations, based on data from the International Telecommunications Union (ITU), Ente Nacional de Comunicaciones (Argentina), Agência Nacional de Telecomunicações (Brazil), Ministerio de Transporte y Telecomunicaciones (Chile), Comisión de Regulación de Comunicaciones (Colombia), Superintendencia de Telecomunicaciones (Costa Rica), Instituto Dominicano de las Telecomunicaciones (Dominican Republic), Agencia de Regulación y Control de las Telecomunicaciones (Ecuador), Comisión Nacional de Telecomunicaciones (Honduras), Instituto Federal de Telecomunicaciones (Mexico), Comisión Nacional de Telecomunicaciones (Paraguay), Organismo Supervisor de la Inversión Privada en Telecomunicaciones (Peru), and Unidad Reguladora de Servicios de Comunicaciones (Uruguay).

Note: The figure displays the correlation between changes in market concentration and changes in mobile service prices (adjusted for purchasing power parity) from 2013 to 2023. Market concentration is measured by the change in the Herfindahl-Hirschman Index (HHI) for the telecommunications sector over the period. Price changes refer to the cost variation of a low-consumption mobile basket (70 minutes, 20 SMS, 500 MB). Due to data limitations, 2014 is used as the baseline year for Honduras and 2015 for Paraguay.

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Box 4.2. Telecommunications in Latin America and the Caribbean *(cont.)*

exists. Consistent with prior work, the figure indicates that lower prices are correlated with decreased concentration, which is suggestive of the value of competition in the region's telecommunications sector.

^a HHI is one valuable indicator for adjusting for market share. Other indicators, such as number of competitors, may also be valuable.

^b "Basket price" refers to the cost of a standardized set of goods or services commonly purchased by consumers, which is used to keep track of changes in inflation over a period of time.

Uruguay's recent adoption of cell phone number portability illustrates the potential of such reforms. Despite political resistance and concerns about weakening the dominant incumbent, the policy was successfully implemented in 2022. Gandelman et al. (2025a) find that it led to a 40–60 percent drop in mobile data prices and a surge in new subscribers. Firms reacted by promoting postpaid contracts; while these can reintroduce switching frictions, the overall effect was a more competitive and dynamic market.

Uruguay's experience shows that, even in highly concentrated markets, governments can implement technically complex reforms that promote contestability and consumer choice. The broader lesson is that promoting interoperability, whenever technically feasible, is a powerful tool to enhance competition. Number portability in telecom, bank account portability in financial services, and data interoperability in digital markets are all examples of reforms that reduce frictions and empower users. Governments can actively pursue such policies as part of broader efforts to regulate market power in systemic sectors.

The financial sector offers a parallel example. As discussed in Chapter 5, it is regulated not only to curb excessive market power—sometimes also through interoperability mandates—but to safeguard macroeconomic stability during shocks. A similar rationale applies to other highly interconnected sectors. In sum, addressing market power in central nodes of the production network is not only about promoting competition but about reinforcing the resilience and stability of supply chains and the broader economy.

Buyer Market Power in the Supply Chain

A lack of market competition can affect links of the value chain that range from producers to manufacturers to retailers. Understanding these distortions is important; a price increase at some step along the way affects the cost of the next step and, eventually, the price paid by consumers. And, as explained before, the effect could be larger if the sector has many linkages

with others. In addition, if one stage in the value chain is not receiving a competitive price (or is experiencing less demand), this affects its profits and incentives to produce, which ultimately leads to a misallocation of resources that affects productivity.

The difference between the price paid by buyers with market power and the price they would have paid in a competitive market is the markdown.⁴ Markdowns affect suppliers because they do not receive a competitive price. An important question is whether the markdown also results in a lower price for consumers. As this chapter shows, the evidence suggests that, in most cases, this does not occur.

Buyer market power refers to a buyer's ability to influence market conditions—such as prices, quantity bought, and contractual terms—through its relative size or the absence of alternative buyers. It is important to distinguish buyer market power from bargaining power. A firm has buyer market power if it can profitably reduce the price paid below competitive levels by withholding demand.

Industries with buyer market power have distinct characteristics. One is asymmetric bargaining power, with few large buyers and many small suppliers. These asymmetries can be exacerbated by the types of products involved. Homogeneous products,⁵ perishable products, or products with high transportation costs increase buyer market power. Barriers to entry, such as prohibitively high transportation costs, can even create local monopsony, in which producers are captive to one local buyer. High storage costs, credit constraints, or the need to repay debt can further deepen market asymmetries. In certain markets, a minimum scale of production must be reached for the initial investment to be profitable, serving as a natural barrier to entry by new companies.

Finally, barriers that may exacerbate buyer market power can result from government regulations—such as those that reduce external competition and food safety and quality standards—that prevent potential competitors from entering a market.

The Effects of Buyer Market Power

Buyer market power affects efficiency and income distribution in the supply chain. Dominant buyers face a supply of inputs with upward slope—that

⁴ In this chapter, markdowns refer to the price of inputs, other than labor, which is presented in Chapter 3.

⁵ A homogeneous product is a type of product—such as raw milk—that consumers (or firms buying it as an input) perceive as being no different than the same product provided by other producers.

is, the larger the quantity of an input they need to buy, the higher the price they must pay to suppliers—which prompts them to reduce intentionally their purchase of inputs to reduce the price. This has three effects. First, an efficiency loss results from a lower level of production, relative to the competitive quantity that is the efficient level. Second, some suppliers that have higher costs decide not to enter the market at lower prices. Although they have lower productivity than the ones that do enter, they, too, would have entered in a competitive market and, therefore, this is another misallocation of resources. Finally, a welfare transfer takes place from the suppliers to the buyer, who captures a larger share of the profits at the suppliers' expense. The more inelastic the supply of inputs is, the stronger are the quantity and price effects. On the other hand, a buyer who negotiates different prices with different suppliers (the ability to do which is referred to as “perfect price discrimination”) will purchase the optimal quantity from each, avoiding efficiency losses and the exclusion of some suppliers. Still, the price each supplier receives will depend on its bargaining power with the buyer.

Some industries, such as agriculture, are more prone to displaying buyer market power, with important consequences for productivity. In the Brazilian beef industry, for example, 75 percent of cattle in the core beef-producing regions are processed by just 2 percent of the largest slaughterhouses, which significantly reduces the prices paid to ranchers and discourages production. Barrozo (2024) finds that markdowns in the less competitive core regions are 29 percent, much higher than the 7 percent markdown in the less concentrated markets outside the core. The effect on productivity in this case goes beyond efficiency losses, however, because the large markdowns in the core regions create incentives for less productive ranchers and smaller slaughterhouses in frontier zones to increase their production. This, in turn, has negative environmental consequences. As Barrozo (2024) shows, producers in frontier regions, who account for 10 percent of beef production, produce 40 percent of carbon emissions through deforestation. The geographical differences in market power suggest that policy incentives to shift production back from the frontier to core areas may reduce emissions while maintaining production levels. This negative impact on productivity has also been documented in other regions; for example, a significant reduction in productivity caused by buyer market power occurred after the consolidation of the tobacco industry in China. Rubens (2023) found that manufacturing productivity dropped by 5 percent on average, mainly due to input misallocation, and aggregate productivity fell by 42 percent in provinces affected by the consolidation compared to unaffected provinces.

Meanwhile, the price effect harms suppliers, as they receive lower prices than they would in a competitive market. As shown by Bartkus et al. (2022),

for example, middlemen in the Amazon fishing sector (the buyers) capture most of the value of pirarucu fish, forcing fishermen (the suppliers) to accept low prices. The study reveals that fostering competition by helping the fishermen reach other markets directly—for example, by providing community boats—increases their revenue by 27 percent. The effect on suppliers of the lower prices paid by firms with buyer market power has also been well documented in the agricultural value chain in Ecuador. Zavala (2023) finds that dominant agricultural exporters pay farmers only 24 percent of the final export value of their crops, amounting to just half of what the farmers contribute in terms of revenue generation. Comparing two policies—fair trade and a universal minimum price—Zavala finds that fair trade can increase farm incomes by 26 percent. While universal minimum prices can also increase farm income, they have a negative indirect effect, increasing the market power of large export firms by crowding out smaller players. In yet another study, this one outside of the region, Chatterjee (2023) shows how competition among intermediaries increases the income of farmers in India by 18 percent—raising average farmer prices and farm production by 11 percent and 7 percent, respectively.

Down on the Farm

The agriculture and food industries are of great importance in Latin America and the Caribbean. Between 2012 and 2022, the region's agricultural sector contributed 5 percent of gross domestic product (GDP), 15 percent of employment, and 15 percent of global agriculture exports. When upstream and downstream activities are added to primary production, the sector accounts for more than 20 percent of GDP in most economies in the region (IDB 2024a). In the less developed countries, it is even more relevant. While in Chile and Mexico the agricultural sector accounts for less than 4 percent of GDP, it exceeds 15 percent in Belize and Nicaragua and amounts to roughly 20 percent in Paraguay. In Haiti, the sector accounts for 21 percent of GDP and is the main source of employment for half the population (IDB 2024a).

In addition to its relevance for the region, it is important to take a close look at the sector because it has many of the characteristics described above that are conducive to the concentration of buyer market power.

Moreover, the agribusiness sector is also greatly affected by external factors, including weather and international price fluctuations (Mérel and Sexton 2017; OECD 2024a), and it is highly regulated. Producers are required to meet strict health and safety standards for food and minimize the risk of harmful outcomes. Many countries have policies designed to protect the sector from external competition, such as tariffs, importation quotas, subsidies to producers, and price regulations (IDB 2024b).

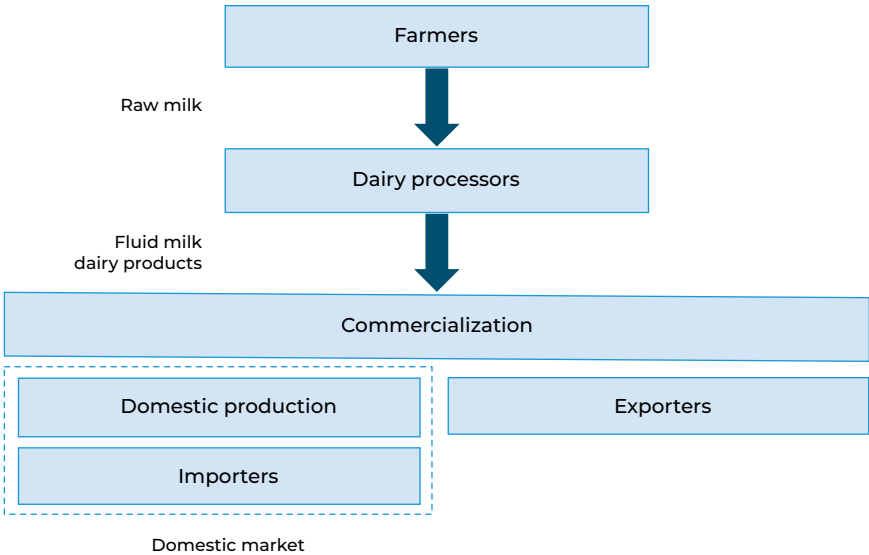
This section highlights cases of buyer market power in the agribusiness sector, focusing on the dairy, beef, sugar, and poultry industries.⁶ These were selected because of their economic relevance and market structure and because they have been analyzed in the academic literature or by the competition authorities in the region.

Dairy Industry

As shown in Figure 4.4, the dairy industry has an asymmetric vertical structure that is divided into three main stages. The first stage is primary production, in which many raw milk producers (livestock farmers) generate the raw material. The second is transformation and processing, where a few dairy processors convert raw milk into intermediate and finished products, and the third is commercialization, when wholesalers and retailers sell or export dairy products to final consumers.

In addition to the asymmetries between its first and the second stages, the industry deals in a product with many of the characteristics (for example,

Figure 4.4. Dairy Value Chain



Source: IDB staff elaboration.

⁶ This section relies mainly on market concentration measures. While concentration does not necessarily indicate market power (as Chapter 2 highlights), direct measures such as markups are unavailable due to data limitations. Other indicators of market power for these sectors are also presented.

perishability and high transportation costs) that could give dairy processors buyer market power. Table 4.1 compares the characteristics of the dairy industry across four Latin American countries. As a benchmark, the comparison also includes France, as buyer market power has been clearly demonstrated there (Avignon and Guigue 2023). As the table shows, the industry in Latin America seems to be even more concentrated than in France. The share of sales of the top five firms (C5 in the table) in Argentina, Chile, Colombia, and Ecuador are 75 percent, 83 percent, 82 percent, and 72 percent, respectively. In France, the top four firms account for 59 percent of sales.⁷

Large firms also account for a significant portion of the milk purchased from farmers. In Chile, for example, the top four buyers purchase 81.2 percent of the raw milk. As discussed before, one consequence of buyer market power is that suppliers receive lower prices; and, as Figure 4.5 shows, this could be happening in the dairy industry in Latin America. The price of raw milk in the four countries is around US\$0.46 per liter, slightly below the US\$0.50 observed in France, where, again, evidence of buyer market power exists (Avignon and Guigue 2023). On average, raw milk accounts for 40 percent of

Table 4.1. Buyer Market Power in the Dairy Industry, Selected Countries

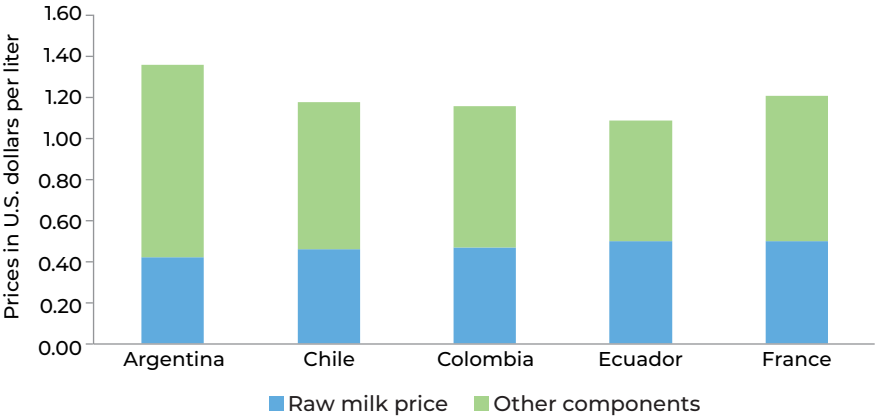
	Argentina	Chile	Colombia	Ecuador	France
Number of farmers	9,407 (2024)	2,411 (2022)	380,000 (2018)	279,489 (2019)	54,000 (2018)
Number of dairy processors	971 (2020)	136 (2022)	679 (2014)	1,159 (2018)	300 (2018)
Concentration in the purchase of raw milk, in percent	C4 = 33 (2024)	C5 = 81.2 (2022)	C3 = 48.6 (2014)	C5 = 61.3 C4 = 52.06 (2018)	C4 = 58 (2018)
Concentration in the sale of fluid milk, in percent (C5: market share of top 5)	75	83	82	72	59 (C4, 2018)
Export (X) Import (M)	X = 303 (2023) M = 2.8 (2016)	X = 79 M = 127 (2023)	X = 5 M = 72 (2023)	X = 0.41 M = 2.86 (2022)	X = 3,016 M = 1,626 (2023)

Source: IDB staff calculations, based on Mannarino et al. (2025).

Note: Ck is the share of total sales made by the largest k firms. Data reporting is based on available statistics for each country. Exports and imports are in thousands of tons. The information in each cell corresponds to the years shown in parentheses.

⁷ While it would be better to calculate the concentration of the top five firms (C5) in all countries, that number could not be determined for France.

Figure 4.5. Final Milk Prices for Consumers



Source: IDB staff calculations, based on Mannarino et al. (2025).

the final price in Latin America, with the lowest share in Chile at 39 percent and the highest in Ecuador at 46 percent. Although this is a signal of buyer market power, it is important to note that other factors, such as taxes, transportation costs, and other structural differences, should be considered and require an in-depth analysis.

The low price received by farmers has led some countries in Latin America and the Caribbean to regulate the prices farmers receive. Ecuador, for instance, has a minimum price of US\$0.42 per liter of raw milk, indexed to the market price of milk and other factors, such as good hygiene and quality standards. In practice, though, the prices paid to producers are sometimes below the minimum.⁸ In other countries, there is no minimum price for raw milk, and government intervention in the dairy industry has been more market oriented. In Argentina, for instance, to reduce buyers' market power and allow dairy farmers to make price comparisons, the government in 2016 created the Integrated Management System of the Argentine Dairy Industry. This institution registers the transactions between farmers and dairy processors and publishes a reference price.

Cattle and Beef Industry

In some Latin American and Caribbean countries, the cattle and beef industry also has characteristics that give market power to buyers. In Paraguay and Uruguay, for example, the competition authorities have had to intervene

⁸ Intendencia Nacional de Abogacía de la Competencia (2021).

in mergers involving slaughterhouse companies that could have increased sector concentration and buyer power over cattle producers.

While the beef supply chain is unique in each country, certain features are common to the industry across the region. The first stage is cattle production, which includes everything from breeding and genetics to feeding livestock. In this stage, at which the quality of the final product is determined, there are many producers. In the second stage, slaughterhouse companies acquire cattle directly from producers or intermediaries; they slaughter the cattle and cut, process, and package the meat to transform it into products suitable for consumption for local or international markets. In this stage, a few large slaughterhouses concentrate the demand for cattle and have buyer power over the producers, who have limited options to sell their production at prices that adequately reflect their costs. This imbalance gives the buyers an advantage that allows them to impose favorable contractual conditions and push down purchase prices. The final stage is retail marketing, when processed and packaged meat finally reaches consumers.

According to the Comisión Nacional de la Competencia (2020), the cattle and beef industry in Paraguay includes more than 150,000 producers. Of these, 2 percent (about 2,500) own 55 percent of the cattle, while nearly 90 percent own fewer than 100 head. The fragmentation of the smaller producers at the base contrasts with the concentration of sales among a few exporters. In its sales, the beef industry shows moderate concentration, with a Herfindahl-Hirschman Index (HHI) of around 1,500 points in 2019. On the purchasing side, market concentration is high according to international thresholds, with an HHI of more than 2,000 points.

In Uruguay, four large slaughterhouses control 70 percent of the market (Ministerio de Economía y Finanzas 2024), giving them significant buyer market power to influence live cattle price, which directly affects ranchers. With an HHI of 2,260 points, the cattle slaughter market is highly concentrated.

In both Paraguay and Uruguay, competition authorities have evaluated requests for mergers of slaughterhouse companies. In 2020 in Paraguay, two of the country's main slaughterhouse companies requested authorization to merge. Both companies competed directly in slaughtering, processing, and marketing meat for local and foreign markets and had various overlapping activities. The competition authority assessed the potential market concentration, reinforcement of dominant positions, and impact on the entry of new competitors and rejected the merger (Comisión Nacional de la Competencia 2020).

Similarly, in Uruguay in 2023, two of the largest slaughterhouse firms in the country submitted an acquisition request that would affect both the

buying and selling of live cattle and the sale of beef (Ministerio de Economía y Finanzas 2024). As part of a larger regionwide deal, one of the firms wanted to buy three meatpacking plants in Uruguay from the other firm, which would expand its control to seven plants, further consolidating its position in an already concentrated market. As in Paraguay, the acquisition was blocked, marking the first time the Uruguayan antitrust authority fully rejected a transaction in the country.

Sugar Industry

Historically, the sugar sector has been considered one of the most subsidized and distorted markets in the world (OECD 2007). High levels of protectionism and regulation are conditioned by interests observed worldwide. The sector is characterized by many independent sugarcane producers who sell their production to a small group of processors (sugar mills).

It has also been investigated, and in some cases penalized, by competition authorities because of cartelization. Asker and Hemphill (2020), for example, document two cases of cartelization in the sector in Canada and the United States. Competition authorities have been active in Latin America and the Caribbean, too. In 2015 in Colombia, the Ministerio de Comercio, Industria y Turismo, and Superintendencia de Industria y Comercio (2015) fined three producer associations, twelve sugar mills, and fourteen individuals for colluding to block sugar imports. In Mexico, the antitrust authority, Comisión Federal de Competencia Económica (COFECE), sanctioned a group of companies, the National Chamber of the Sugar and Alcohol Industry, and ten individuals with fines for engaging in cartel activities. COFECE determined that they had coordinated to inflate artificially the prices of standard and refined sugar while restricting sales volumes (COFECE 2016).

Concerns about competition in the sugar industry go beyond cartel sanctions. In 2024, Peru's competition authority, the Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (INDECOPI), rejected an industrial conglomerate's acquisition of a national sugar producer because the acquiring group would be able to purchase more than 80 percent of the sugar cane in the region. At the national level, the acquisition would allow the acquirer to exceed 50 percent market share in the domestic wholesale sugar market (INDECOPI 2024).

Meanwhile, in the Dominican Republic, the National Commission for the Defense of Competition actively monitors market conditions to detect risks and anticompetitive behavior. In 2016, it launched the Observatory of Competitive Conditions in Markets, which gives a "red flag" to sectors based on a set of competition-related indicators. In its July–December 2023 report,

the sugar sector is among the seven flagged sectors, ranking second during the period and showing an HHI well above 2,500 points (Comisión Nacional de Defensa de la Competencia—PRO-COMPETENCIA 2024). More recently (July–December 2024), the sector is not flagged, but its HHI is still well above 2,500 points (Comisión Nacional de Defensa de la Competencia—PRO-COMPETENCIA 2025).

Finally, in Costa Rica, the sugar industry itself operates as a production cartel as a result of the Organic Law of Agriculture and Sugar Industry (Law No. 7818), which establishes a closed, horizontally and vertically integrated system that coordinates all industry players. This system includes coordination among sugar mills and the allocation of production under a National Sugar Production Quota. The institution in charge of managing these quotas has been found guilty of exclusionary anticompetitive behavior by the country's competition authority (COPROCOM), as importers have been excluded from the market. According to Vicens (2024), the structure leads to higher consumer prices and dynamic inefficiencies that distort resource allocation, discourage investment, and limit innovation.

The effect of these distortions in the sugar industry can go beyond the effects on productivity and welfare described above. A major concern is that current price distortions may be hindering investment in ethanol production, which could have significant environmental benefits.

Poultry Industry

The production of poultry for consumption (or “broilers”) encompasses various stages, including hatcheries, grow-out farms, feed mills, slaughterhouses, and processing plants. In vertically integrated systems, companies typically own and manage hatcheries, feed mills, and processing facilities, while collaborating with farmers under contract to raise broilers during the grow-out phase. Feed is a critical component, accounting for approximately 65 percent of total production costs (OECD 2018). Large-scale operations in hatcheries, feed mills, and slaughterhouses contribute to industry concentration, as these facilities are strategically located near production areas to reduce transportation expenses (MacDonald and Key 2012). As a result, broiler markets tend to be regional or local and may provide buyers with market power.

As shown in Table 4.2, concentration of the buyer market varies across countries. Jamaica has a highly concentrated market, with only two processors controlling all domestic production in 2024. In addition, the industry is highly protected from external competition, and the government supports the sector through Market Price Support. These policies have led to high domestic prices (Shik, Boyce, and De Salvo 2017).

Table 4.2. Buyer Market Power in the Poultry Sector, Selected Countries

	Argentina	Chile	Mexico	Jamaica	Panama
Number of farmers	4,452 (2019)	118 (2021)	25,000 (2022)		466 (2021)
Number of processors	97 (2022)	20 (2024)	159 (2016)	2 (2024)	13 (2008)
Concentration in chicken production in percent	C5 = 46 (2017)	C3 = 92 (2022)	C3 = 70 (2016)	C2 = 100 (2024)	C3 = 71 (2008)
Export (X) Import (M)	X = 183 M = 10 (2023)	X = 110.8 M = 107.1 (2023)	X = 4 M = 690 (2023)	X = 1.3 M = 16.37 (2023)	X = 0 M = 14.18 (2023)

Source: Mannarino et al. 2025.

Note: Ck is the share of total sales made by the largest k firms. Data reporting is based on available statistics for each country. Exports and imports are in thousands of tons. The information in each cell corresponds to the year shown in parentheses.

Chile also shows a high degree of vertical integration, with three companies controlling 92 percent of production (LYD 2011). The industry has been subject to antitrust investigations, resulting in the sanctioning of three producers and three supermarket chains for price fixing in 2011 (LYD 2011). Similarly, in Panama in 2020, the Authority for Consumer Protection and Defense of Competition (Acodeco) reached an agreement with eight poultry companies that had been investigated since 2010 for alleged price fixing.

Mexico has one of the largest poultry industries in Latin America and the Caribbean, with 25,000 producers and three companies controlling 70 percent of production. Between 2005 and 2010, COFECE sanctioned 13 regional cartels in the industry.

In contrast, while buyer market power in Argentina is somewhat concentrated, a study conducted by the Comisión Nacional de Defensa de la Competencia (2023) concludes that the evidence was insufficient to sanction coordinated practices in the supply of poultry.

Policies to Reduce Buyers' Market Power

The implications of sectoral market power, particularly when analyzed through input–output relationships, provide important insights into how economic shocks propagate and affect economic resilience. Understanding how specific sectors interact within the economy helps to identify vulnerabilities and informs effective policy responses.

Sectors with significant market power can amplify shocks throughout the economy. The lack of competition in certain sectors, for example,

can magnify the effects of disruptions, as price changes in one sector can cascade through the entire production network, possibly leading to inflationary pressures across several industries (Baqaei 2018). The position of a sector in the production network—whether as a key supplier or consumer—influences how shocks propagate. Additionally, traditional indicators like sales may underestimate a sector's systemic importance, as network effects and market structures create feedback loops that can amplify disruptions across industries.

Market power also influences resource allocation, as firms with greater market power tend to raise markups in response to demand or cost shocks, potentially increasing misallocation (Balasundharam 2020). This can stifle growth in less powerful sectors and reduce overall productivity gains from reforms. Furthermore, the resilience of an economy to shocks is closely tied to its sectoral composition and the distribution of market power. Overreliance on sectors with high market power can make the economy particularly vulnerable to sector-specific shocks. Studies also emphasize how diversity in business models can enhance resilience, particularly in market-based systems (Marques and Alves 2024). Furthermore, product or sectoral characteristics are crucial to supply chain resilience. Firms dealing with differentiated or complex products are more likely to maintain supplier relationships during disruptions, suggesting that sectors that produce specialized goods may be more resilient to shocks (Khanna, Morales, and Pandalai-Nayar 2022). There are three lines of action for policymakers.

First, institute antitrust policies. Given the significant welfare implications of market power, competition authorities use various instruments to mitigate its adverse effects.⁹ Although most interventions focus on seller market power, attention to buyer market power is increasing. As suggested in the discussion of specific industries above, proposed mergers and acquisitions involving firms with substantial market power must be reviewed in most countries by competition authorities to prevent excessive market concentration. Recent revisions to the guidelines on mergers and acquisitions in the United States explicitly address not only labor market power but broader input markets, highlighting a growing recognition of market power in upstream and downstream sectors alike. In Latin America and the Caribbean, competition authorities have blocked mergers in the cattle and

⁹ Alvarez et al. (2025) show that buyer market power influences prices in the United States, while Juárez (2024) provides similar evidence for Colombia. There seems to be no research to date, however, that goes on to assess the quantitative effects of buyer market power on consumer welfare. More research is needed in this direction.

beef industry out of concern about increased buyer power. Competition legislation, including laws providing for the autonomy of competition authorities to conduct the necessary analyses and then apply the appropriate sanctions, is thus a powerful tool to prevent the expansion of market power (see Chapter 10).

Second, reduce market fragmentation. Promoting policies that improve competition is another approach to counteracting buyer market power. Since barriers to competition arise from a variety of factors, such as regulations, logistics costs, and information asymmetries, effective policies must be tailored to address these issues. Chatterjee (2023), for instance, demonstrates that reforming legislation prohibiting the sale of primary products across state lines in India reduced the power of intermediaries and benefited farmers. Similarly, Bartkus et al. (2022) finds that reducing transportation costs improved competition in isolated fishing communities in the Amazon, allowing primary producers to compete more effectively in the market. This resonates with findings presented in Chapter 3 on labor markets, which showed that poor transportation infrastructure exacerbates markdowns by limiting workers' access to alternative employers. A similar logic applies to product markets; market size and geographical segmentation can reinforce buyer power, suggesting that infrastructure and trade connectivity are essential to reducing concentration.

Additionally, improving transparency can reduce buyer market power. In 2016, Argentina introduced the Integrated Management System for the Argentine Dairy Industry (SIGLeA), which requires all agents involved in the primary purchase or industrialization of raw milk to report daily transactions. This system helps establish reference milk prices, allowing producers to compare milk quality and providing a benchmark for raw milk prices (OECD 2024a). Given the relevance of information asymmetries in many sectors, especially those with fragmented producers and concentrated buyers, expanding the scope of information policies represents a promising direction for future policy.

Third, foster smart regulation. Policies to enhance market competition tend to be more effective than those that target the consequences of market distortions, such as minimum pricing policies. Setting minimum prices can be challenging because those set too high can attract inefficient producers, reduce productivity, and generate excess supply. Furthermore, producers may have incentive to violate minimum price policies by selling a portion of their production at lower prices to capture greater demand, potentially compromising health standards if these informal sales do not comply with regulations. Finally, minimum prices could reduce consumer welfare by increasing the price of final goods.

As emphasized throughout this volume, blanket price controls—whether minimum or maximum—often introduce distortions without effectively addressing the root causes of market power. At the sectoral level, policies should instead seek to reshape market conditions through regulation, market design, and infrastructure improvements, particularly in sectors identified as structurally prone to concentration because of network effects or economies of scale.

In cases where buyer market power exists, policies to support small producers, such as subsidies, may also be less effective than in competitive environments, or even counterproductive. Avignon and Guigue (2023), for instance, show that direct subsidies to dairy farmers were partially absorbed by processors, failing to improve significantly the income of primary producers. This is also the case with innovation policies, as discussed in Chapter 7.

Moving ahead, it is essential for policymakers to focus on enhancing competition by addressing the underlying factors that contribute to market power. The promotion of policies that reduce entry barriers, improve transparency, and facilitate cross-border trade can effectively mitigate the negative effects of concentrated market power. Additionally, strengthening the capacity and autonomy of competition authorities to monitor and address both buyer and seller market power is essential to ensuring fair market practices.

Finally, policy interventions should be designed to consider the specific characteristics of sectors, particularly those with significant market power or those that play a crucial role in input–output networks. Rather than relying solely on subsidies or minimum price policies, efforts should seek to improve market structures through better infrastructure, transparent information systems, and regulatory frameworks. Future research should continue to refine the understanding of these dynamics and translate these insights into practical, context-specific policies that enhance economic resilience, stability, and growth.

Why Bank Competition Matters

The financial system plays an essential role in economies. Banks and other financial intermediaries, in particular, channel funds from savers—families and firms—to individuals, businesses, and governments in need of resources for purchasing durable goods and making investments. Borrowing allows individuals and firms to spend beyond their immediate financial capacity and drives investment, business growth, and job creation (Nobel Prize Committee 2022). Banks also facilitate secure and timely transactions by issuing debit and credit cards, which increases economic efficiency, shares risk, and improves overall welfare.

In acting as intermediaries of resources between borrowers and lenders, banks perform several crucial functions. By screening and monitoring borrowers, they ensure credit is allocated efficiently. By converting short-term deposits from savers into long-term loans for borrowers, they allow savers access to their funds when needed while providing borrowers with the stability of longer repayment periods. By aggregating small deposits from many individuals, they can transform the size of credit operations and fund larger loans. Finally, banks diversify risk by spreading investments across borrowers and sectors, minimizing the impact of individual defaults. As the economist Ben Bernanke states, “Healthy financial conditions help a modern economy realize its full potential. For this reason, one of the critical priorities of developing economies is establishing a modern, well-functioning financial system” (Bernanke 2007).

The mismatch of maturity, size, and risk between banks’ assets and liabilities may create vulnerabilities. Greater borrowing and lending increase the chances of bank runs and financial crises, with severe economic consequences. While regulations, including capital requirements, can mitigate these risks, bankers often lobby against them, claiming they have “unintended consequences” that hinder lending and harm job creation and growth (Admati and Hellwig 2014).

Confronted by the large and persistent economic downturns caused by financial crises (Cerra and Saxena 2008), governments and central banks frequently intervene to bail out troubled banks. Such actions stem from the belief that certain banks are “too big to fail”—that their collapse could destabilize the financial system and the economy. This stance can foster moral hazard, with large banks taking greater risks on the assumption they will be rescued by the government during crises.

In a noncompetitive environment where banks have significant market power¹ and the industry is dominated by a few large players, these risks are exacerbated. This scenario often arises as a result of economies of scale in different bank activities, such as monitoring and screening, and network externalities, where the value and convenience of banking services increase with the number of users. Dominant banks may engage in riskier behavior, confident in their indispensable role and the likelihood of government support in distress. Requiring banks to hold more equity is vital to counteract these tendencies and reduce the risks of being “too big to fail.”

A lack of competition in banking can also reduce the availability of credit and raise interest rates, dampening investment, job creation, business dynamism, and economic growth. This assertion aligns with findings on economic stagnation in Latin America and the Caribbean. Unlike East Asia and Europe, which have significantly improved their labor productivity relative to the United States, Latin American and Caribbean countries have seen little progress over the past few decades. Competitive barriers, more pervasive in the region, are a key reason (Cole et al. 2006). Among them may be underdeveloped credit markets. With limited access to finance, small and medium enterprises are unable to grow, and new firms are prevented from entering the market. The resulting constraint on competition and innovation may give incumbent and large enterprises a vested interest in maintaining underdeveloped capital markets, and, as pointed out by Parente and Prescott (2000) and Rajan and Zingales (2003), they may lobby for regulations that protect their monopoly rights. Empirical evidence shows that important productivity improvements in the region result from removing the competitive barriers that inhibit business dynamism and innovation in this manner.

Furthermore, misallocation of resources and lower output frequently result from asymmetric information and weak contract enforcement in credit markets, which can lead to credit rationing and high interest rates

¹ That is, the ability of banks to set higher interest rates on loans or offer lower rates on deposits than they would in a more competitive market, allowing them to earn excess profits at the expense of consumers and businesses.

(Antunes, Cavalcanti, and Villamil 2008; Banerjee and Duflo 2010; Buera, Kaboski, and Shin 2011).² While preferential interest rate policies for certain sectors or businesses and government ownership of banks are often used to address such problems, their implications for entrepreneurship and development are not always clear (Antunes, Cavalcanti, and Villamil 2015; Buera, Kaboski, and Shin 2021; Cavalcanti and Vaz 2017; La Porta, Lopez-De-Silanes, and Shleifer 2002). In some cases, such policies may even reduce competition in banking and other sectors.

Trends in Bank Concentration

The chapter begins by examining the evolution of bank concentration in Latin America and the Caribbean over the past two decades.³ While concentration can be measured in several ways, the focus here is on the share of assets held by the five largest commercial banks as a proportion of total commercial banking assets. The main conclusions remain unchanged when an alternative measure, such as the asset share of the three largest banks, is used.

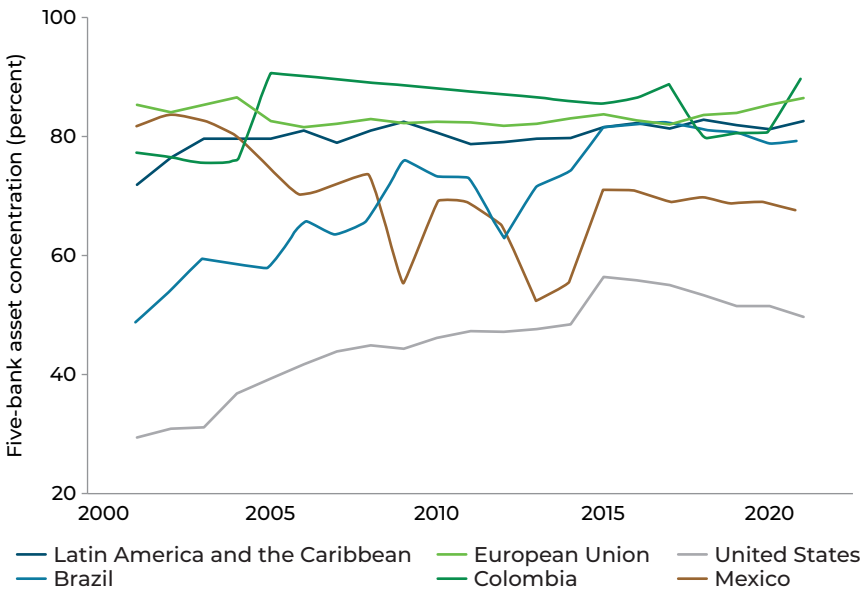
Figure 5.1 illustrates the credit market share from 2001 to 2021 of the five largest banks in, respectively, Latin America and the Caribbean, the European Union, and the United States and the three most populous Latin American countries: Brazil, Colombia, and Mexico. The data reveal that bank concentration in Latin America and the Caribbean and the European Union is roughly twice that in the United States. Over time, it has increased in Brazil, decreased in Mexico, and remained relatively stable in Colombia.

Figure 5.2 presents the same measure of bank concentration for 2019, just before the COVID-19 pandemic, for the seven most populous Latin American countries, the European Union, and the United States. The seven Latin American countries are ordered by per capita gross domestic product (GDP), adjusted for purchasing power parity. The figure confirms that bank concentration in the United States is significantly lower than in both the European Union and the Latin American countries.

² Although some researchers have shown that, in the presence of adverse selection, more competition can induce lenders to monitor less and increase interest rates (Yannelis and Zhang 2023).

³ As Chapter 2 explains, concentration does not necessarily imply market power. As discussed later in this chapter, measuring market power in the banking sector is particularly challenging because there is no clear way to compute bank markups. Later sections review recent research that estimates the degree of market power in the region's banking sector.

Figure 5.1. Share of Assets of the Largest Banks by Region and Selected Countries, 2001–21

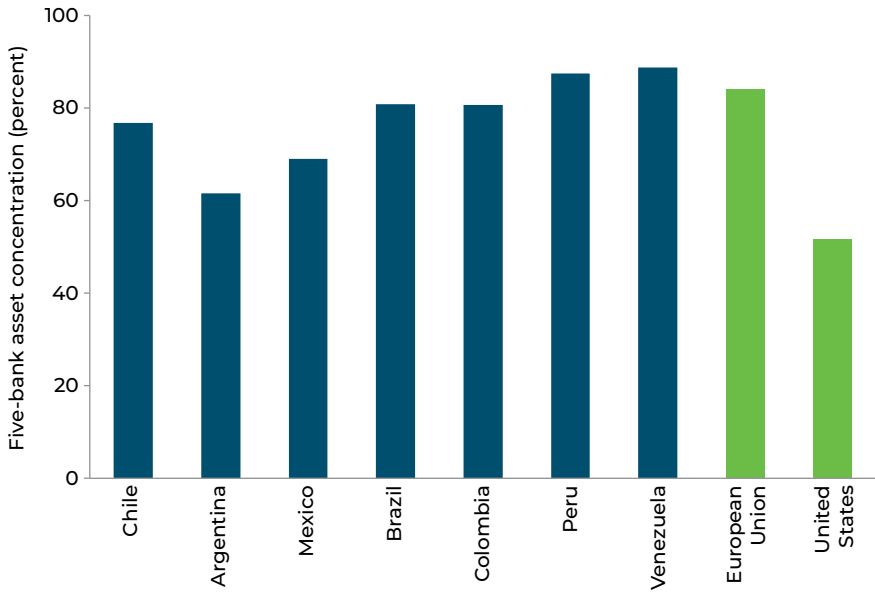


Source: IDB staff calculations, based on World Bank Global Financial Development data.
Note: The figure shows the assets of the five largest commercial banks as a share of total commercial banking assets in Latin America and the Caribbean, the European Union, and the United States and for selected Latin American countries. For Latin America and the Caribbean, the value represents the unweighted average across all countries in the region, with each country-year serving as one observation. The European Union values reflect the unweighted average across member states; the United Kingdom was not included in the calculation.

In 2019, for example, the five-bank concentration index in Peru was approximately 87 percent, or 36 percentage points higher than in the United States. Even in Argentina, with the lowest concentration among the Latin American countries in the sample, the index was 20 percent higher than in the United States. In Mexico, which has the second-lowest concentration index among the seven Latin American countries, bank concentration was approximately 33 percent higher than in the United States.

Together, the two figures reveal a clear picture: Bank concentration in the United States has historically been much lower than in many countries in Latin America and the Caribbean and in Europe. With respect to the United States, this difference stems, in part, from regulatory frameworks that, historically, fragmented and restricted banking scope and growth across states. The McFadden Act of 1927 prohibited national banks from branching across state lines, fostering a decentralized system of small, independent banks confined to individual states. The Glass-Steagall Act of 1933 further limited concentration by separating commercial and investment banking,

Figure 5.2. Share of Assets of the Largest Banks in Latin American Countries, the European Union, and the United States, 2019



Source: IDB staff calculations, based on World Bank Global Financial Development data.

Note: The figure shows the assets of the five largest commercial banks as a share of total commercial banking assets for the seven most populated Latin American countries, the European Union, and the United States. The European Union value reflects the unweighted average across member states; the United Kingdom was not included in the calculation. The Latin American countries are ordered by the level of GDP per capita, adjusted by purchasing power parity.

which prevented banks from expanding through a variety of financial services (Kroszner and Rajan 1994). Not until the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 were banks allowed to facilitate interstate banking by merging and operating across state lines (Berger, Demsetz, and Strahan 1999). By then, however, the U.S. banking landscape was deeply decentralized. In contrast, many Latin American countries permitted cross-regional operations and encouraged national bank consolidation, resulting in greater bank concentration across the region.

Zooming in on the Banking Sector in Two Countries: Brazil and Mexico

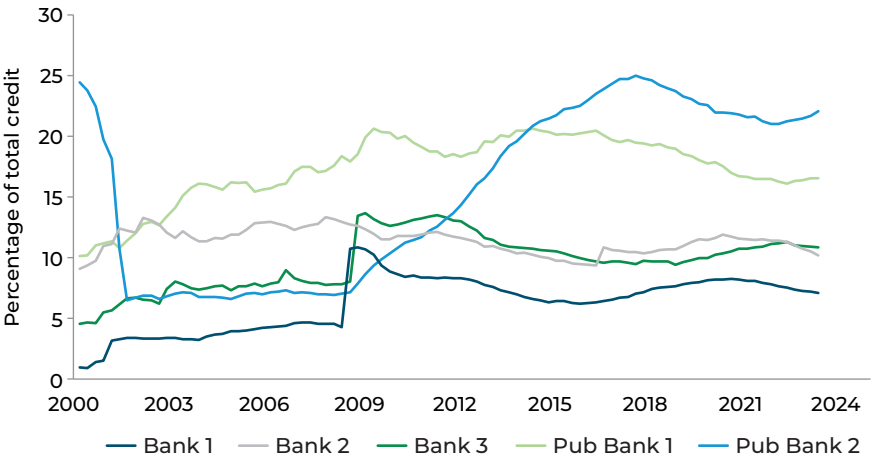
Country-level data can obscure important facts about asset concentration in the banking sector, such as whether market shares are well distributed among the five largest banks and their types of ownership. An analysis of bank concentration in Brazil and Mexico—two of the largest economies

in Latin America and the Caribbean—uncovers these subtleties by exploring heterogeneity in the evolution of their banking sectors. In these two countries, bank-level data reveal notable differences in the composition of bank ownership.

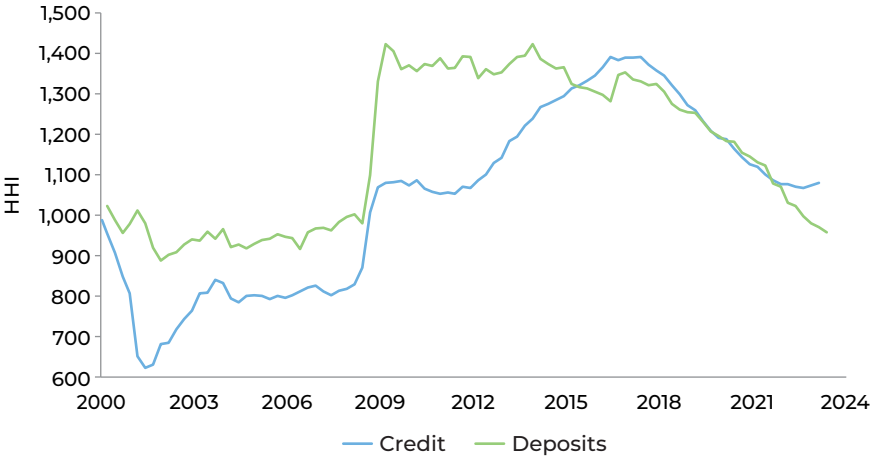
Panel A of Figure 5.3 zooms in on the Brazilian banking sector, showing the share of total credit held by the country's five largest banking institutions. The two largest banks in the country, Pub Bank 1 and Pub Bank 2 in the figure, are both government controlled. Pub Bank 1, the nation's oldest bank, is publicly listed on the Brazilian stock exchange, while Pub Bank 2 is

Figure 5.3. Changes in Bank Concentration in Brazil, 2000Q1–2023Q2

A. Changes in market share of each of the five largest banks



B. Changes in market concentration of credit and deposits



Source: Lluberas (2025), using balance sheet information from Banco Central do Brasil.

a state-owned financial institution and not publicly traded. Together, they account for 40 percent of the total credit in Brazil, with their market share growing significantly from 2002 to 2016.

Among private banks, Bank 2 and Bank 3 each holds approximately 12 percent of the total credit market in Brazil. In late 2008, Bank 3 merged with another major private bank, leading to a sharp increase of 7 percentage points that nearly doubled its share. Around the same period, Bank 1, the fifth-largest institution in Brazil, experienced a similar rise in credit market share. Bank 1's growth resulted from its acquisition of another private bank in Brazil, as well as the Brazilian operations of a foreign-owned bank that ceased activity in the country. As discussed in greater detail later in this chapter, these mergers and acquisitions significantly affected local credit markets, interest rate spreads, and economic activity (Joaquim, Van Doornik, and Ornelas 2019).

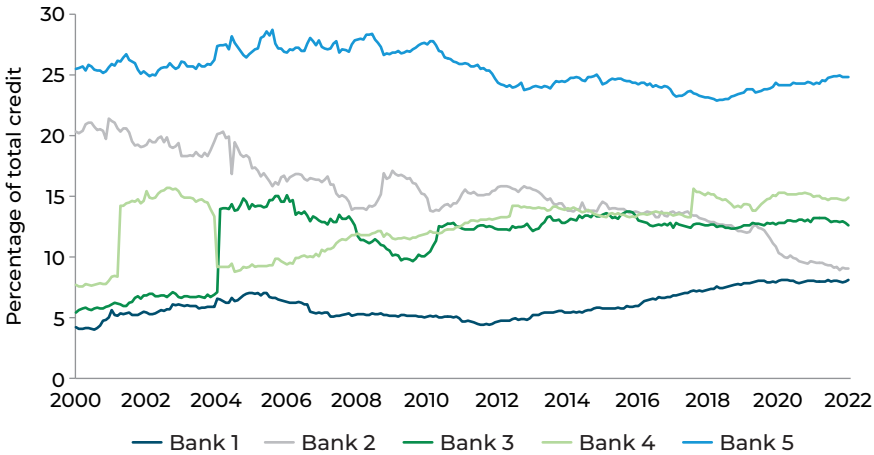
Figure 5.3, Panel B, presents the Herfindahl-Hirschman Index (HHI),⁴ a commonly used measure of market concentration, for credit and deposits in Brazil. The data show a substantial increase in HHI levels in 2007 following the mergers and acquisitions previously discussed. The HHI for credit rose by more than 200 points and that for deposits by approximately 400 points. For context, DiSalvo (2023) reports that the HHI for deposits in the United States is approximately 400, meaning Brazil's deposit concentration is more than twice as high. In the past decade, however, Brazil's HHI trend has shown a decline, indicating a gradual reduction in market concentration.

Figure 5.4 looks at Mexico's banking sector. As shown in Panel A, Bank 5 is the country's largest financial institution, consistently issuing around 25 percent of total credit since 2000. Bank 2, previously the second-largest bank with a 20 percent market share in 2000, has seen its share decline significantly to less than 10 percent. In contrast, Bank 4 has steadily increased its share of total credit since 2005, from 7 percent to approximately 15 percent. Bank 3 has also grown its market share since 2000, with a notable expansion in 2004 following a merger with another important Mexican bank. Additionally, Bank 1 has significantly increased its share of total credit over the past decade.

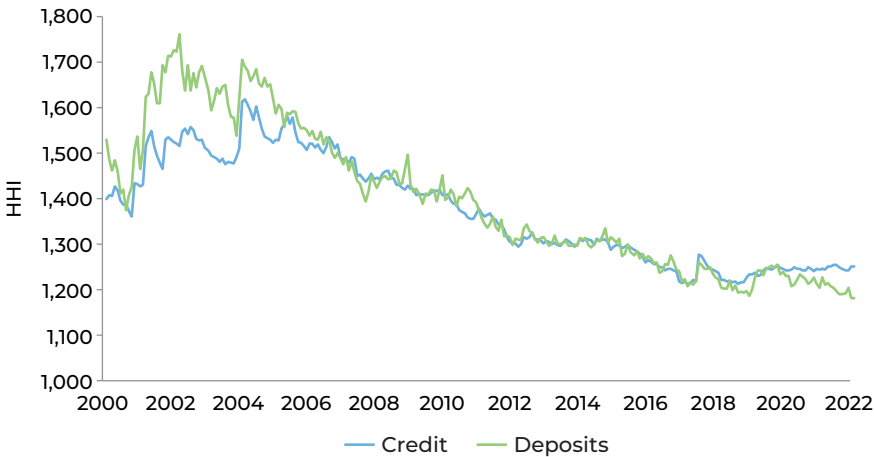
⁴ The HHI is calculated by summing the squares of the market shares of all banks in the market. In a monopolistic market, the index equals 10,000, whereas in a highly competitive one, it approaches 0. According to the guidelines of the U.S. Department of Justice, an HHI below 1,000 indicates a "not concentrated" market, values between 1,000 and 1,800 signify a "moderately concentrated" market, and values above 1,800 indicate a "highly concentrated" market. HHI is a particularly effective measure for assessing market concentration in banking, as local banks have largely disappeared over the past few decades. While some regional or specialized institutions remain, their influence on the overall market structure has diminished, further supporting the HHI's suitability as a reliable tool for evaluating competition in the sector.

Figure 5.4. Changes in Bank Concentration in Mexico, 2001M1–2022M12

A. Changes in market share of each of the five largest banks



B. Changes in market concentration of credit and deposits



Source: Lluberas (2025), using balance sheet information from Comisión Nacional Bancaria y de Valores.

Figure 5.4, Panel B, shows that bank market concentration as measured by the HHI has continuously decreased in Mexico since 2005. The only exception was in 2004, when a discontinuous rise in the HHI for credit and deposits followed the merger of two important banks operating in Mexico. Overall, Mexico’s HHI dynamics contrast sharply with those of Brazil, reflecting distinct trends in market concentration between the two countries.

A key difference between the banking sectors of Brazil and Mexico lies in the ownership and control of major banks and the degree of market concentration among top institutions. In Brazil, the two largest banks are state

owned and federally controlled, together accounting for approximately 40 percent of the total banking sector. This significant public ownership shapes Brazil's banking landscape, with government-controlled banks playing a central role in credit allocation, credit policies, and transmission of policies.

In contrast, Mexico's banking sector is dominated by private institutions. The five largest banks, all privately owned—some as subsidiaries of foreign financial groups—hold the majority market share. The two largest collectively control about 40 percent of total credit in the country. These structural differences in ownership influence the range of financial products and lending priorities of each banking system, as well as its overall responsiveness to economic conditions.

The analysis of bank concentration in Latin America and the Caribbean yields a few main conclusions. First, concentration levels are higher in the region than in the United States but are comparable to the average observed in the European Union. Second, concentration levels vary considerably, both over time⁵ and across the three largest Latin American countries.⁶ Third, as exemplified by Brazil and Mexico, the ownership structure of the dominant banks differs significantly, with different shares held by the state as opposed to private institutions. Finally, mergers and acquisitions can drive sharp changes in bank concentration over short periods of time.

What Does Bank Concentration Do?

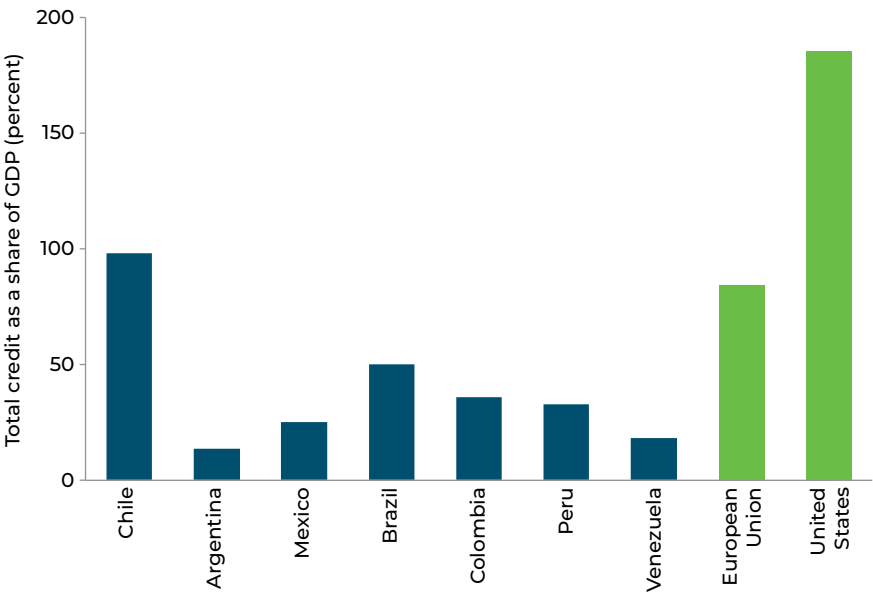
Bank concentration can affect bank profitability, credit volume, and loan interest rates. Credit volumes and interest rates can, in turn, affect investment decisions and capital allocation (Beck, Demirguc-Kunt, and Maksimovic 2004). But are the relationships between bank concentration and credit variables important in the data? Does bank concentration affect economic growth and investment?

Figure 5.5 illustrates the average size of the credit market as a share of GDP from 2001 to 2021 for the seven most populous Latin American countries and compares them to the European Union and the United States. The data show that total credit as a share of GDP in the United States was approximately 1.9 times larger than in Chile and 3.7 times larger than in Brazil—Latin America's two largest credit markets. For Mexico, the average

⁵ In Brazil, for instance, asset concentration of the five largest banks increased by approximately 30 percentage points from 2001 to 2021.

⁶ Graphs that show the asset concentrations of the three largest banks in the same regions and countries lead to similar conclusions.

Figure 5.5. Credit Market Size for Latin American Countries, the European Union, and the United States, 2001–21



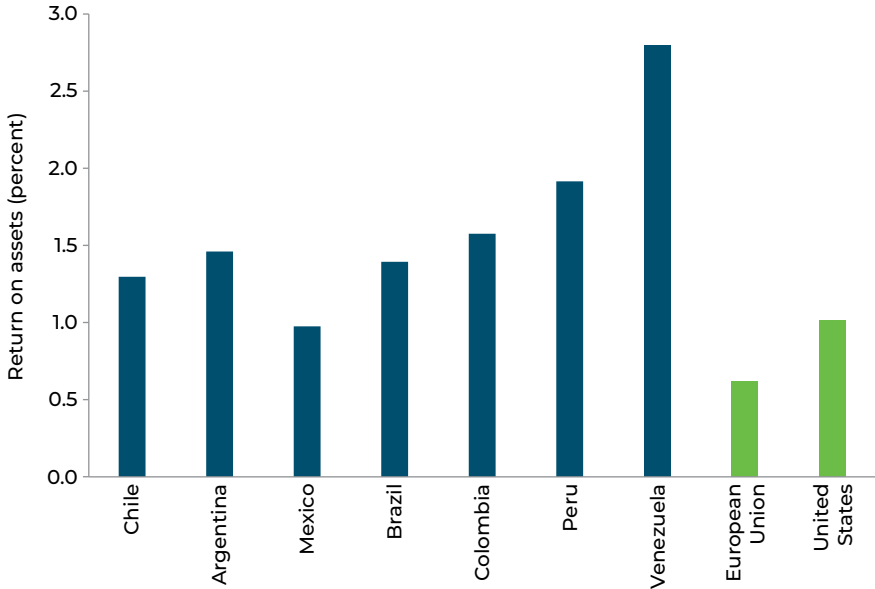
Source: IDB staff calculations, based on World Bank Global Financial Development data.
Note: The Latin American countries are the most populated in the region. The European Union value reflects the unweighted average across member states; the United Kingdom was not included in the calculation. The Latin American countries are ordered by the level of GDP per capita, adjusted by purchasing power parity.

credit market was about 7.4 times smaller than in the United States, while in Argentina it was 13 times smaller. In the European Union during the same period, the credit-to-GDP ratio was slightly below Chile’s level and about half that of the United States. These comparisons highlight not only the differences in bank concentration but the significant disparities in credit market size relative to GDP within Latin America and across regions.

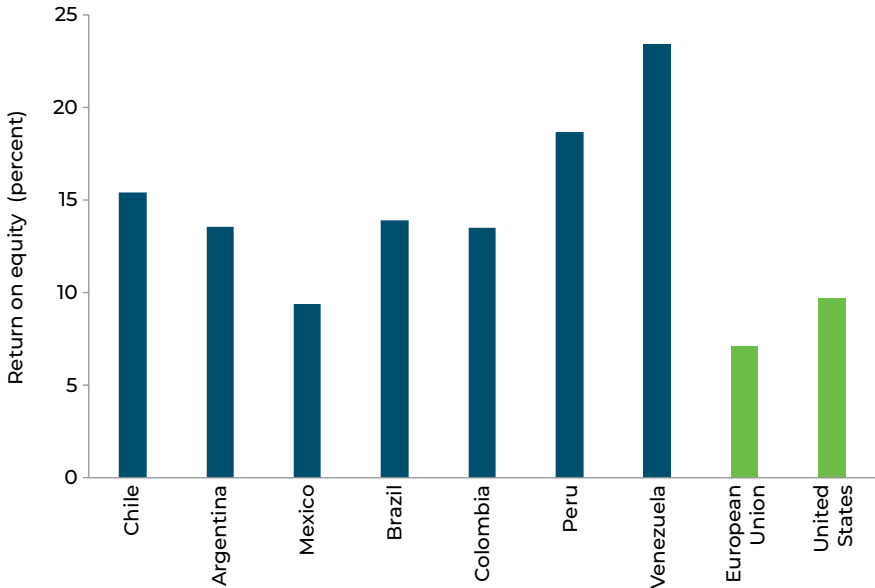
Panels A and B of Figure 5.6 display the average bank return on assets (ROA) and return on equity (ROE), respectively, from 2001 to 2021 for the same countries and regions shown in Figure 5.5. These indicators are widely used to evaluate bank profitability and efficiency. ROA measures profitability relative to total assets, accounting for revenue from interest-bearing assets, costs of interest-bearing liabilities, and other income and expenses, including losses from nonperforming loans. It reflects a bank’s risk management and asset quality. ROE, on the other hand, assesses profitability relative to shareholder equity, offering a perspective on how effectively a bank utilizes equity to generate profits. Together, ROA and ROE provide a comprehensive picture of banking sector performance.

Figure 5.6. Bank Profitability for Latin American Countries, the European Union, and the United States, 2001–21

A. Bank return on assets (ROA) as a share of total assets



B. Bank return on equity (ROE) as a share of total assets



Source: IDB staff calculations, based on World Bank Global Financial Development data.

Note: The Latin American countries are the most populated in the region. The European Union values reflect the unweighted average across member states; the United Kingdom was not included in the calculation. The Latin American countries are ordered by the level of GDP per capita, adjusted by purchasing power parity.

Some notable points emerge from the figures. First, average ROA and ROE are generally higher in most Latin American countries than in the European Union and the United States. The exception is Mexico, where ROA and ROE from 2001 to 2021 were comparable to U.S. levels but still higher than in the European Union.

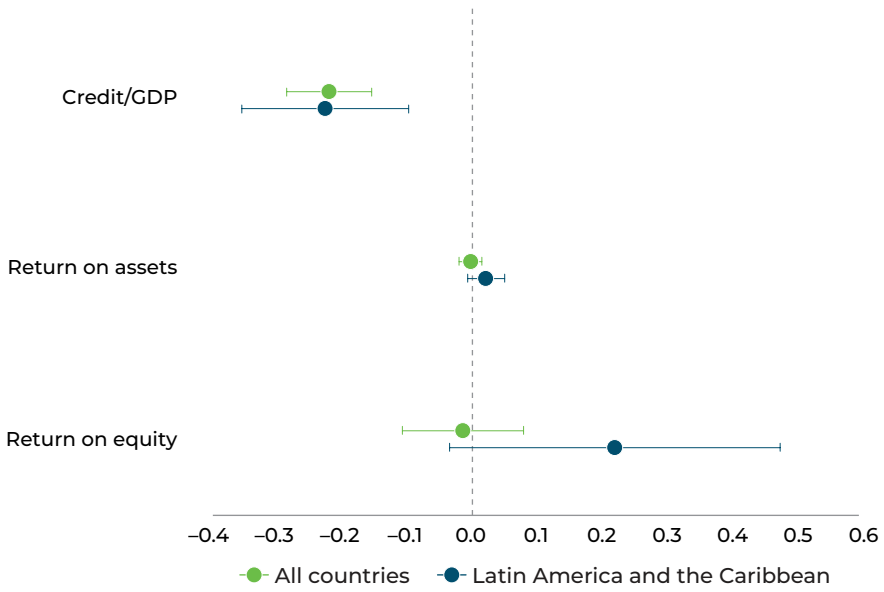
Figure 5.6, Panel A, for example, shows that the average ROA in Peru was approximately 92 percent higher than in the United States, while Colombia's was 57 percent higher. Similarly, Figure 5.6, Panel B, reports that the average ROE was about 43 percent higher in Brazil and 92 percent higher in Peru than in the United States. Consequently, bank profitability appears to be higher in most Latin American countries than in the United States (and higher than in the European Union, as well). Another important takeaway from Figure 5.6 is the consistent disparity between ROE and ROA across all countries. ROE is significantly higher than ROA, reflecting the leveraged nature of banks and their reliance on debt relative to equity. The average ROE, for example, is approximately 10 times higher than ROA in Brazil, Mexico, and the United States. In Chile, this ratio rises to 12, while in the European Union, it averages around 11. The relative stability of the ROE/ROA ratio in the range of 10–13 across countries can be explained with reference to regulatory frameworks, especially the Basel III accord, a set of agreements on banking regulations concerning capital, market, and operational risk that shape banks' capital structure and risk-taking behavior.

The analysis so far reveals that the U.S. credit market is larger and less concentrated than those in Latin America, while bank concentration in the European Union aligns more closely with the latter. Additionally, banks in Latin America are more profitable, as measured by ROA and ROE, than their counterparts in the European Union and the United States. Bank leverage, however, is broadly similar across the European Union, the United States, and most Latin American countries. It is important, though, to understand the evidence on how bank concentration correlates with the credit market and bank profitability across a larger sample of countries and in a more systematic way.

Figure 5.7 displays the relationship between bank concentration, as measured by the share of total assets held by the five largest banks, and key credit market variables: credit-to-GDP ratio, ROA, and ROE. The figure reports the elasticity of bank concentration for each of these three variables separately. It also reports the 95 percent confidence interval for each estimated elasticity from 2001 to 2022.

The analysis is conducted using two samples. The first, "all countries," includes 152 countries with available data from the World Bank Global Financial Development database. The second looks exclusively at Latin

Figure 5.7. Bank Concentration, Credit Market, and Bank Profitability, 2001–21



Source: IDB staff calculations, based on World Bank Global Financial Development data.

Note: "All countries" includes 152 countries with available data.

American and Caribbean countries. The analysis controls for country fixed effects, accounting for time-invariant factors such as legal origin, geography, and pre-2001 historical influences, as well as year indicators to adjust for global factors like economic growth, trade, and financial liberalization. These controls ensure the estimates reflect within-country elasticities by isolating how changes in bank concentration affect credit market variables within a single country over time.

The size of the private credit market, measured as a share of GDP, is negatively correlated with bank concentration. For the "all countries" sample, a 100 percent increase in concentration corresponds to a 22 percent reduction in the credit-to-GDP ratio. This negative relationship is virtually the same in the sample for Latin America and the Caribbean, although less precisely estimated because of the smaller sample size.

Bank ROA and ROE appear to show no significant correlation with bank concentration in the "all countries" sample; the point estimates are near zero. In the Latin America and Caribbean sample, however, these correlations are slightly positive (though imprecisely estimated for ROE), suggesting that bank profitability increases with higher concentration in the region. Bank concentration therefore correlates negatively with the size

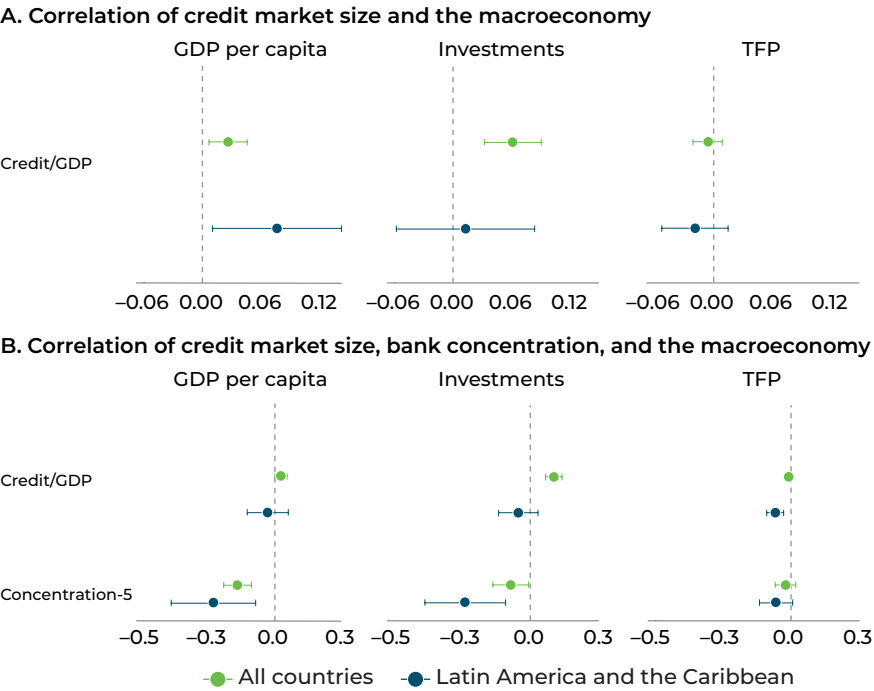
of the credit market and somewhat positively with bank profitability for the Latin American and Caribbean countries.

Figure 5.8 examines how the macroeconomy correlates with the size of the credit market and bank concentration. Once again, controlling for country time-invariant variables and year fixed effects ensures the estimates reflect within-country changes.

Panel A of Figure 5.8 shows a positive relationship between the size of the credit market and per capita income in both samples. This correlation is stronger in Latin America and the Caribbean than in the broader “all countries” sample. Expanded credit availability supports greater firm investment, thereby boosting aggregate output. Additionally, the credit market size is positively correlated with the investment rate across the broader sample, while its correlation with total factor productivity (TFP) is almost zero.

Figure 5.8, Panel B, adds bank concentration to the analysis, examining how credit market size varies with per capita income, the investment

Figure 5.8. Credit Market, Bank Concentration, and the Macroeconomy, 2001–21



Source: IDB staff calculations, based on World Bank Global Financial Development data and the Penn World Tables.
Note: “All countries” includes 152 countries with available data. TFP = total factor productivity.

rate, and TFP. For the “all countries” sample, the positive association persists between credit market size and both per capita income and the investment rate, while correlations for Latin American and Caribbean countries are not statistically significant. Notably, in the latter sample, the five-bank concentration index is negatively correlated with per capita income, the investment rate, and TFP. This suggests higher bank concentration may negatively affect not just the credit market but broader macroeconomic indicators in the region.

These relationships, however, should not be interpreted as causal. Changes in credit market size, bank profitability, and concentration are influenced by a range of factors, such as policy reforms, improvements in judicial systems, and macroeconomic conditions, that simultaneously affect economic growth and financial markets. Additionally, country-specific policies—such as earmarked credit programs, monetary policy, and macroprudential regulations—play significant roles in shaping the credit market, complicating the ability to isolate the effects of bank concentration and market power on macroeconomic outcomes.

How Much Competition?

The inefficiency caused by market concentration is often observed when firms collaborate to block new competitors and maintain high prices. This type of collusive behavior results in higher prices and profits than would be seen under more competitive conditions. While concentration in the banking sector is often associated with inefficiencies such as higher loan rates, limited credit availability, and greater bank profits, it is not a definitive indicator of noncompetitive behavior. Concentration can also result from economies of scale, innovation, and better management practices (Demsetz 1973). Thus, it is essential to examine this sector more closely.

Do banks in Latin America and the Caribbean have excessive market power resulting from a lack of competition? While evidence of bank concentration across countries is important and indicative, it does not necessarily imply competition is missing from the region’s credit markets, as evidenced by the data for the European Union. Fortunately, various studies have examined regulatory changes and bank mergers and acquisitions to gain an understanding of how shifts in competition affect credit markets in Latin America and the Caribbean, with significant implications for business dynamism, household decisions, and overall welfare.

A common approach in economics to estimating the degree of competition in markets involves calculating markups and markdowns using a production approach developed by De Loecker and Warzynski (2012), as

discussed in Chapter 2. Markups measure the extent to which prices exceed firms' marginal costs, while markdowns assess how much firms pay for inputs relative to their marginal productivities. Lluberá (2025) applies this approach using bank-level data from seven Latin American countries—Brazil, Chile, Colombia, Ecuador, Mexico, Peru, and Uruguay—and finds that markups and markdowns for banks in the region are generally close to one, suggesting they have limited market power. His analysis also shows that international banks tend to have lower markups and markdowns than domestic banks, indicating different competitive dynamics.

This direct approach has challenges, however, particularly in the banking sector, where clearly defining the production function of banks is difficult. Workers, for instance, can be needed to process loans as well as enforce financial contracts, and these labor costs are usually reported separately on banks' balance sheets. Another usual approach to investigating market power is to estimate a bank's pass-through, or how banks pass changes in their costs on to borrowers (Weyl and Fabinger 2013). In a competitive market, banks would increase loan interest rates in direct proportion to any rise in their cost of intermediation. If banks have market power, however, the pass-through would be incomplete; interest rates would increase by less than the rise in intermediation costs, leading to a smaller decrease in credit volume.

Exploring this idea, Brugués and De Simone (2024) investigate the impact of a loan tax, known as the SOLCA⁷ tax, which was introduced unexpectedly in Ecuador in 2014. Proposed in September and in effect by October of that year, the SOLCA tax was implemented to fund public cancer treatment and applied as a 0.5 percent surcharge on the value of new commercial loans at the point of approval. If credit markets were perfectly competitive, banks would pass the introduction of this new tax on to borrowers by increasing interest rates by 0.5 percent. In a noncompetitive setting, interest rates would rise by less than 0.5 percent, or banks' pretax interest rates would fall.

Brugués and De Simone's empirical evidence shows that approximately 50 percent of the burden of the SOLCA tax is passed on to borrowers, with banks absorbing the rest by reducing their pretax interest rates (Brugués and De Simone 2024). This incomplete pass-through indicates the banking market in Ecuador is not perfectly competitive, which suggests banks have some degree of market power and can, consequently, influence loan pricing. The findings also highlight the importance of accounting for the

⁷ SOLCA stands for Sociedad de Lucha Contra el Cáncer, or Society for the Fight against Cancer in English.

degree of competition in the banking sector when evaluating the effects of a loan tax. Assuming perfect competition exists can lead to significantly underestimating the impact of such a tax on government revenues and overestimating its distortionary effects on borrowers.

Crucial to promoting competition in the banking sector are regulatory reforms. A prime example is Brazil's loan portability reform (Resolution No. 4292), introduced by the country's central bank in December 2013 and implemented in May 2014. This reform established a regulatory framework to enhance credit portability for consumer loans, allowing individuals to transfer their credit arrangements from one financial institution to another under more favorable terms.

Between 2014 and 2016, payroll loans dominated the loan portability market in Brazil, accounting for approximately 98 percent of the total amount transferred between institutions. In contrast, personal loans constituted only a small fraction of portability activity. Certain types of consumer loans, such as overdrafts and revolving credit, were not included in this reform, highlighting areas where further regulatory improvement may be necessary.

The new rules introduced transparency and standardization to the process by mandating the use of an electronic platform developed by the Central Bank of Brazil for exchanging credit transaction information between banks. The rules also imposed timelines and penalties for financial institutions that fail to provide timely credit information, while ensuring consumers are not burdened with any costs related to credit portability. Although the original bank cannot deny a portability request, it retains the right to match the competitor's offer.

A study by Bonomo et al. (2023) explores the spatial concentration of local banking in Brazil to assess the impact of this portability reform on local credit markets. Many municipalities in Brazil have only one bank branch, while others have none and rely instead on public offices, such as post offices and lottery shops, to provide financial services that are typically intermediated by public banks. The hypothesis of this study is that the loan portability reform had a greater impact on credit markets in municipalities with more than one bank than those with only one or no banks. In municipalities with more than one bank, their availability should have strengthened the effects of the portability reform.

Supporting the evidence that many credit markets are noncompetitive in Brazil, the study finds that the loan portability reform led to reduced interest rates and increased credit volumes for the two types of loans most affected by the reform (Bonomo et al. 2023). For payroll loans, the introduction of the policy decreased loan interest rates by 1 percentage point and

increased loan volumes by 4.6 percent in municipalities with more than one bank relative to those with up to one bank. Between 2014 and 2016, this resulted in a reduction in the average spread of payroll loans by approximately 5 percent. For personal loans, the policy reduced interest rates by about 10 percentage points (resulting in a reduction in the spread of personal loans by about 9 percent) and increased credit volume by 7 percent.

To sum up, recent research provides compelling evidence of widespread market power in the banking sector in several countries in Latin America and the Caribbean. Government-led reforms can improve competition in this sector and lead to changes in the overall economy.

The Economic Effects of More Competition in Finance

How do procompetitive financial reforms affect business dynamism, productivity, and consumer welfare? To begin with, reductions in loan interest rates and increases in credit supply can reduce individuals' need for precautionary savings and improve their welfare by enabling them to smooth their consumption over time, particularly in the face of idiosyncratic income and expense shocks. Bonomo et al. (2024), for example, find that Brazil's loan portability reform significantly increased consumer welfare in the country, and these gains were highest and particularly concentrated among low-income individuals. This is significant, considering the resolution had negligible fiscal costs to the government and is merely an institutional reform that allows consumers to transfer their debt to other banks. The authors of the study show that, although relatively large, the gain corresponds to only about one-tenth of the benefits that could be achieved by completely removing distortions affecting loan interest rate spreads in Brazil. This finding suggests further credit market reforms could yield even greater benefits for consumers (Bonomo et al. 2024).

Second, governments often promote financial inclusion and economic growth by offering incentives to banks to open branches in unbanked localities. Proximity to bank branches reduces the transaction costs of mobilizing savings from many agents and can also decrease asymmetries in information about potential borrowers. In 2020, the Mexican government launched a plan to expand the branch network of the state-owned Banco del Bienestar from 433 to over 2,700 offices nationwide, with the goal of establishing at least one branch in every municipality by October 2024. The expansion prioritized rural areas and gradually extended to more developed ones. This approach sought to introduce competition in previously monopolistic markets, transforming them into duopolies and beyond, while also providing banking services to previously unbanked regions.

Ares de Parga-Regalado (2023) investigates the impact of expanded banking services on financial inclusion and economic outcomes in Mexico, using the Banco del Bienestar initiative as a case study. The findings reveal that, while the new bank branches significantly improved access to financial services and led to a sustained increase in debit card use in affected areas, the expansion also prompted a reduction in the presence of commercial banks, as many closed their branches in response to the growth of the public bank. Although an interesting experiment, Banco del Bienestar mainly promotes financial inclusion by providing basic services, such as savings accounts, remittances, and payment services, without offering personal or commercial loans, which limits the policy's impact on the local economy.

Similar to Mexico, the Brazilian federal government in 2004 introduced the “Banco para Todos” (Bank for All) program to provide financial services and products to Brazil's unbanked population through the expansion of public banks. As shown in Figure 5.3, Panel A (above), this expansion has been reflected in the increased share of total credit held by these public banks. Unlike in Mexico, they offer both commercial and consumer loans. Fonseca and Matray (2024) show that, by effectively increasing the number of bank branches and deposits and the amount of lending in targeted cities, the policy resulted in significant economic benefits, including higher levels of entrepreneurship, increased employment, and wage growth, especially in cities that previously lacked access to banking services. These gains were, however, unevenly distributed, with more educated workers benefiting disproportionately. In areas with a low initial supply of skilled workers, the result was a rise in wage inequality.

In a study that uses credit registry data to explore a rise in lending by Brazilian state-owned banks in 2012, Joaquim, Netto, and Ornelas (2023) show that, while credit expansion by state-owned banks lowered interest rates, it had little impact on the credit supply of private banks. Firms reliant on government banks, especially those already highly leveraged, increased their debt but faced higher default rates. At the firm level, employment effects were modest, and regional economic benefits were limited. The study highlights that, while public credit interventions can influence market conditions, their effectiveness in boosting economic activity is questionable, with potential risks of financial instability.

Finally, the merger of national banks can have a significant impact on local bank concentration and competition, especially in regions where some banks are more dominant than others. Mergers often reduce local competition, resulting in higher lending spreads and a decrease in the overall volume of loans available. As shown in Figure 5.3, Panel B, for instance, the HHI in Brazil increased by approximately 40 percent around 2008, following

a period of market consolidation driven by significant mergers and acquisitions. Joaquim et al. (2019) examine how the mergers and acquisitions of large banks in Brazil affected local credit markets and economic activities. Using detailed data on loans and businesses across various municipalities, they compare areas affected by bank mergers with those that were not. Their findings indicate reduced competition among banks raises borrowing costs and restricts access to credit, which adversely affects businesses and economic growth. Specifically, this impact is driven by a reduction in the number of loans issued rather than a decrease in loan size.

The studies cited here show that bank competition and market power can affect interest rate spreads and credit volumes. But what is the impact of these higher interest rate spreads in the economy? Cavalcanti et al. (2023) quantify the aggregate impact of credit spreads on firm growth and productivity in Brazil. Using a comprehensive loan-level credit registry matched with firm-level data, they document both high levels and significant dispersion in default-adjusted credit spreads among Brazilian firms. Their findings reveal that young and small firms pay higher interest rates, even after controlling for observable loan and firm characteristics, as well as default probabilities. The study also finds that the high spreads encountered by firms in Brazil lead to reductions of approximately 40 percent and 30 percent, respectively, in output and productivity (Cavalcanti et al. 2023).

Payment Systems, Interoperability, and Digitalization

Banks do more than just mediate between borrowers and lenders; they facilitate payments by issuing debit and credit cards and offering efficient and timely bank transfers. New payment technologies that enable secure and efficient transactions between individuals and firms enhance economic efficiency, promote risk sharing, and improve overall welfare. In recent decades, credit and debit cards, along with instant payment systems, have become increasingly important in retail transactions as substitutes for cash.

A study by Sean Higgins (2024) examines how the adoption of financial technologies can result in important side effects, affecting portions of the population besides those the policy has targeted. Higgins looks at the Mexican government's rollout of one million debit cards to low-income households from 2009 to 2012 to analyze the effects on the economy of going cashless. On the supply side, the number of small retail firms adopting point-of-sale (POS) terminals to enable them to accept debit cards increased by 18 percent. On the demand side, the number of consumers using debit cards other than those who received them from the government rose by 21 percent. The adoption of debit cards by retailers benefited both low-income and

high-income consumers, the latter of whom shifted 13 percent of their supermarket spending to small businesses, which increased the sales and profits of those businesses (Higgins 2024). The study highlights that network externalities and coordination failures among market participants are key barriers to financial technology adoption in markets. It suggests policy interventions targeting one side of the market (like the new users of debit cards in Mexico) can lead to broader, market-driven adoption that benefits everyone.

In addition to coordination failures, market power in the payment system can prevent the use of credit and debit cards. In a typical card transaction, one side involves the merchant who accepts the card as a means of payment, while the other side involves the consumer who holds a card issued by a bank or a non-banking financial institution. Generally, an additional intermediary called an acquirer is responsible for providing the mechanism to process payments for the merchant. The arrangement is based on a contractual agreement between the merchant and the acquirer, in which the acquirer acts as a payment facilitator who enables the completion of payments, assumes responsibility for them, and manages settlements with the merchants. To compensate for their services, all of the parties involved—acquirers, banks, and card networks—charge fees. Using Spanish data, Carbó Valverde, Chakravorti, and Rodríguez Fernández (2016) find that, as these fees decrease, merchant acceptance of payment cards increases, which in turn boosts the adoption and use of payment cards by consumers.

Due to network externalities and vertical integration, the acquirer market has been highly concentrated. Until recently, in several countries in Latin America and the Caribbean, each acquirer exclusively handled only one credit card brand. As a result, a merchant who wished to accept more than one brand had to establish contracts with more than one acquirer. The lack of interoperability among acquirers created complexities and additional costs for the merchants managing multiple agreements. This was the case in Uruguay until September 2022, when regulations simplified this process by enabling many acquirers to support multiple card networks, allowing merchants to accept a wide range of payment cards through a single contract. In their investigation of this policy change in Uruguay, Gandelman, Roldán, and Viera (2025a) provide evidence of significant effects on market dynamics following the introduction of multi-acquiring. Existing acquirers expanded their offerings, and new ones began entering the market. They also observe a decrease in market concentration across all payment segments. In addition, merchant fees showed some reductions, though these did not fully align with the intended agreements, as they predated the policy change.

Another development that has the potential to affect the credit and debit card market and enhance bank competition is the advent of instant

electronic payment. An important example is Pix, launched by the Central Bank of Brazil in November 2020. Sarkisyan (2024) finds that the introduction of Pix increased deposit competition by making small banks more attractive to depositors. Pix allowed small banks to make payment more convenient, leveling the playing field with the larger banks that traditionally dominate the credit and debit card market. As a result, deposits at small banks increased relative to those at large banks, reducing deposit market concentration. The study also finds that small banks could afford to charge lower deposit rates than large banks, as their improved payment convenience attracted more customers (Sarkisyan 2024).

An important question is whether new payment technologies will replace or complement existing methods. On the one hand, a system like Pix acts as a substitute for other forms of payment; on the other, it could lead to greater financial inclusion and, consequently, increase the use of other financial technologies and banking services. Sampaio and Ornelas (2024) demonstrate that Pix has increased the number of active users and facilitated the use of informal insurance through remittances, similar to findings by Jack and Suri (2014) on mobile money in Kenya. Using data related to floods as an instrument to study transfers, Sampaio and Ornelas (2024) observe growth in other payment methods and a 4 percent increase in actively used bank accounts, indicating that, overall, Pix complements rather than replaces existing banking services in Brazil. This type of experience has materialized in other countries, as well. Ancalle and Garcia (2024), for instance, examine how the 2022 regulatory-driven interoperability in Peru increased the adoption of digital payments and reduced cash dependence, particularly in financially inclusive regions. Box 5.1 discusses the spread of digital payments in the region.

Box 5.1. The Dawn of Digital Payments in Latin America and the Caribbean

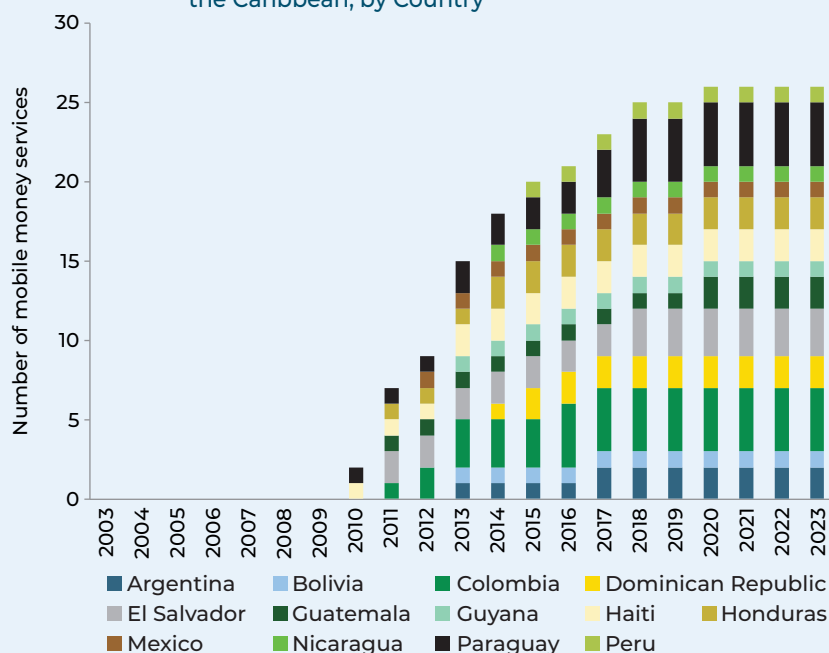
As digital tools become widespread, a wide variety of digital financial products are gaining traction. Some of these products serve traditional savings and credit needs, but several provide access to a relatively new type of service: instant payments.

The rapid spread of digital instant payment methods around the world has piqued the interest of governments, banks, and other traditional intermediary financial institutions. Digital payments promise to increase the efficiency of transactions and provide an entry point to the financial system for millions

(continued on next page)

Box 5.1. The Dawn of Digital Payments in Latin America and the Caribbean *(continued)*

Figure B5.1.1. Growth of Mobile Money Services in Latin America and the Caribbean, by Country



Source: IDB staff calculations, based on GSMA, Mobile Money Metrics (2003–23) data.

Note: Includes information on new services launched and services closed or merged each year.

of individuals. This great potential has, however, also generated incentives for new providers outside the banking system to disrupt the market of digital payments and compete with traditional financial institutions.

Latin America and the Caribbean has not been an exception. The number of mobile money services, for example, has increased substantially in the region in the past 10 years (see Figure B5.1.1). Today residents can, at least in theory, make different types of transactions from their phones, often without connection to the internet.

As FinTech (financial technology) companies increasingly enter the market of instant payment platforms, governments face a crucial challenge of fostering a competitive environment that delivers attractive and affordable services to the millions of individuals still marginalized from the financial sector.

The challenge is twofold. First, there is a governance issue. By the very nature of their business, banks and other intermediary financial institutions collect deposits from the public and are subject to regulations to ensure

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Box 5.1. The Dawn of Digital Payments in Latin America and the Caribbean *(continued)*

individuals can gain access to their funds on demand. On the other hand, the FinTech companies that provide payment platforms are often not subject to these regulations. Addressing this challenge involves leveling the playing field across providers with new kinds of business models while maintaining the incentives for innovation. Evidence on how regulations affect the interplay between banks and non-bank providers exists in the context of mortgage lending in the United States (Buchak et al. 2018), but it is needed on other markets, like instant payments, and for countries in the region, to guide their next steps in policymaking.

The second challenge emerges from the existence of network economies in the market of instant payments. Users are better off when most of their business partners are connected to the same payment platform. This has been extremely hard to achieve by market forces themselves. Several countries have multiple payment services or digital wallets that are not seamlessly interconnected, requiring users to be connected to several platforms to conduct most of their transactions.

Ironically, although digital payment tools promise lower transaction costs, the lack of compatibility across platforms increases them. This feature of the industry matters for how policymakers think about competition: Without compatibility, the provider's incentive is to compete *for the whole market*, not for market share. Without policies to make the services compatible across platforms—that is, interoperable—competition for the whole market can lead to more market power and the emergence of one dominant platform, with financial consumers losing out (Katz and Shapiro 1985).

Increasingly, Latin American and Caribbean countries are working on ways to ensure interoperability. The approaches range from government-provided platforms like Pix in Brazil to interoperability mandates for providers in Peru. These innovations give a sense of where the future knowledge agenda should be heading; and both the evidence of and theory on the impacts, advantages, and disadvantages of the different approaches can contribute substantially to the policy debate in the region.

Concentration and Financial Stability

Because of the risks and potentially catastrophic economic consequences of financial crises, banks are subject to capital requirements and other regulations that restrict their scope and activities. These requirements and regulations can also act as barriers to entry, though, reducing competition and increasing market power for established banks. On the other hand, troubled banks, especially large ones, are often rescued with taxpayer

money, leading to the perception that they are “too big to fail.” This status can result in moral hazard, with large banks taking on greater risks in the belief they will be rescued during crises. As a result, stricter regulations can inadvertently lead to greater market concentration and, rather than reducing financial instability, may increase it (Admati and Hellwig 2014).

Research has shown that systemic risk can play a significant role in the relationship between concentration and the exercise of market power. Tovar, Jaramillo, and Hernández (2007) highlight that in Colombia, high systemic risk allowed banks to shift more of their risk onto customers through higher intermediation margins, effectively enabling market power to become more pronounced during periods of economic stress. This finding indicates that, while high concentration alone may not lead to collusion, it exacerbates its impact when combined with systemic risks. Yeyati and Micco (2007) observe that, while increased foreign penetration in Latin American banking systems brought efficiency gains, it also led to heightened market power and less competition, which, when coupled with risk, made these systems more fragile.

In general, no consensus exists on the empirical relationship between competition and financial stability, as reported in a meta-analysis by Zigràiova and Havranek (2016). Tabak, Fazio, and Cajueiro (2012) show that competition affected risk-taking behavior in ten Latin American countries between 2003 and 2008 in a nonlinear way because both high and low levels of competition inhibit bank risk-taking for different reasons. Capitalization enhances the stability of larger banks only under high and average competition and is not the case when bank competition is low. The findings underscore that, while regulatory measures are essential for stability, their interaction with concentration and systemic risk should be carefully evaluated to avoid unintended outcomes that could amplify financial vulnerabilities.

New Payment Technologies and Their Impact

Crypto- and digital currencies—virtual forms of media of exchange that can be used in lieu of physical cash—have brought transformative innovation to global finance, reshaping market competition and financial inclusivity. Blockchain technology, the foundational system behind cryptocurrencies, records transactions across multiple computers to ensure data security and transparency, supporting decentralized finance and facilitating greater access to financial services and international transfers and payments.

Practical challenges remain, however, for cryptocurrencies to be widely accepted, as high fees and slow processing times restrict their utility as a reliable medium of exchange (Prasad 2023). Additionally, although crypto

technology supposedly democratizes finance, centralization trends are apparent in the use of stablecoins, which rely on centralized issuers for stability and governance. Technology can, of course, change to overcome some of these challenges.

Central Bank Digital Currencies (CBDCs) present another transformative, yet complex, path. They have the potential to enhance financial services and improve transaction efficiency by providing a secure alternative to traditional payment methods that require several intermediaries. For some, CBDCs can address inherent vulnerabilities in the traditional banking system. Eeckhout (2023) argues that they could eliminate the risk of bank runs by allowing individuals and businesses to hold interest-bearing deposits of digital currency directly with central banks, thus removing the dependence on commercial banks for deposits. Most of the time banks, especially large ones, charge a markdown on deposits. Eeckhout suggests CBDCs could enhance financial stability and efficiency by streamlining payment systems and reducing transaction costs.

CBDCs also carry risks, however, including the possibility of deposit shifts from commercial banks to digital wallets controlled by central banks. This could affect credit creation, investment, and overall financial stability by crowding out bank deposits and increasing funding costs for banks (Prasad 2023; Keister and Sanches 2023), which can pass these costs on to consumers. Additionally, the global adoption of CBDCs might reshape international currency dynamics and challenge the dominance of established fiat currencies, like the U.S. dollar. More research is needed, therefore, to gain an understanding of CBDCs' effects on banks, credit, payment efficiency, and financial stability.

Policy Reverberations

The discussion so far has addressed the lack of competition in the banking sector. But, as previous chapters have shown, market power is evident in different sectors of the economies in Latin America and the Caribbean. Barriers to competition can significantly affect long-term development, as they can undermine business dynamism, restrict technology adoption, and hinder innovation (Parente and Prescott 2000; Cole et al. 2006; Eeckhout 2021). Underdeveloped capital markets may be among these barriers. Without access to finance, smaller firms and entrepreneurs are unable to grow, which limits competition and innovation (Rajan and Zingales 2003). Consequently, incumbent enterprises may have a vested interest in maintaining an underdeveloped capital market and may lobby for regulations that protect their monopoly rights.

The competitive structure of markets is also crucial for the transmission of macroeconomic shocks and, thus, for the ability of monetary authorities to manage business cycle fluctuations, control inflation, and smooth the shocks. Research by Mongey (2021) demonstrates that a lack of competition in product markets can make inflation less responsive to changes in monetary policy while amplifying GDP responses. Following an expansionary monetary policy episode, for instance, firms with high markups (that is, whose selling prices are substantially above their marginal costs) may have less incentive to raise prices. This, in turn, affects the pricing responses of low-markup firms. Bardóczy et al. (2024) also show that inflation adjusts more slowly as a result of wage rigidity when competition is lacking in labor markets.

In the banking sector, reduced competition similarly influences the effects of monetary policy. When a few large banks dominate the market, they can absorb part of an interest rate increase, reducing the effects of the increase on loan interest rates (Wang et al. 2022).

The Bottom Line on Competition in Banking

The financial sector worldwide is being transformed by new technologies that are reshaping the infrastructure and data processing of financial services, including payment systems and data management. To maximize the benefits of FinTech innovations, new regulations should reduce barriers to competition between innovative startups and established firms. This involves enhancing information sharing among financial institutions, improving the portability of banking services, and tailoring prudential policies to the size and scope of different banks to encourage new entrants and foster innovation.

This chapter highlights that the banking sector in Latin America and the Caribbean is more concentrated than in the United States, and banks in the region hold considerable market power. Recently, the region's countries have implemented various policy initiatives, institutional reforms, and innovations to promote competition in credit markets and payment systems. These measures have, in general, had positive impacts on business dynamism, consumer welfare, and risk sharing among individuals and firms, illustrating the significant potential of procompetitive reforms in the banking sector to enhance economic and social outcomes. To promote financial stability and competition further and improve financial and economic development, regulators and central banks should focus on adaptive policies that support innovation, enhance transparency, embrace changes in technology, and maintain a balanced regulatory environment that accommodates both established and new financial institutions.

Creative Destruction: Business Dynamism and Competition

Business dynamism is a fundamental driver of long-term economic growth. If the economy were a sports league, business dynamism would be the constant recruitment, training, and rivalry that keep it exciting and competitive. New players (or entrants) would be drafted into the league, bringing fresh talent and energy. Veteran players (established businesses) would continually refine their skills and strategies to stay at the top of their games, while underperforming ones (the least productive firms) would be traded, benched, or retired to make way for new talent. This ongoing cycle of entry, growth, and exit would be what keeps the league vibrant and engaging. Without new players joining, the league would stagnate, lacking the innovation and excitement of fresh talent. Similarly, without replacing or retraining players who aren't performing, the quality of play would decline, diminishing the overall experience.

A competitive environment is vital for fostering business dynamism. In this sports league, the prospect of reward motivates players to join and improve their skills. If they can't compete on equal footing with established stars—such as when referees and coaches favor the latter—they will have little incentive to strive for excellence and may not even join the league. Likewise, older players won't push themselves to excel if they don't face genuine competition.

Just as a sports league thrives on the constant renewal of talent and rivalry, the economy relies on business dynamism and competition to remain vibrant, adaptable, and ready to meet new challenges. It is the playbook for economic success, with continuous improvement and fresh energy driving long-term prosperity.

An Engine of Economic Growth

Business dynamism encompasses the ongoing cycle of firm entry, expansion, and exit that fuels innovation, sharpens competition, and reallocates

resources toward more productive uses. New firms introduce fresh ideas, technologies, and business models. Some challenge incumbents, disrupt established industries, or create entirely new markets. Others introduce new products that enrich consumer experiences and push the boundaries of what consumers can have access to or enjoy. When successful, new firms scale up, generate jobs, and attract investment, setting off ripple effects across the economy. In response, incumbent firms are pushed to innovate, boost efficiency, and improve their offerings to stay competitive.

This competitive dynamic ensures that labor and capital are constantly reallocated toward their most efficient uses. Firms that fail to keep pace—as a result either of low productivity or a lack of innovation—shrink or exit, opening up space for more dynamic firms to expand. As in the Schumpeterian framework of Klette and Kortum (2004), this process of creative destruction raises aggregate productivity and accelerates the spread of new technologies and better business practices.¹ At the same time, competitive pressure amplifies the economy-wide returns to innovation, bringing lower prices, higher quality, and broader knowledge spillovers. In this sense, business dynamism is not merely about firm turnover; it is the conduit through which innovation and competition fuel sustained economic progress.

When competitive pressures weaken, however, this virtuous cycle can stall. Recent research by Akcigit and Ates (2021, 2023) shows that rising market concentration accompanied by declining knowledge diffusion can erode firms' incentives to innovate. With fewer challengers entering the market and laggard firms less able to learn from the frontier innovators, incumbent leaders become more entrenched, leading to less experimentation and lower productivity growth. This slowdown in business dynamism is not merely a firm-level issue; it undermines the economy's capacity to adapt, grow, and create widely shared prosperity. Ensuring a competitive environment is, thus, essential to keeping the engine of business dynamism—and, by extension, economic growth—running at full speed.

The analysis of business dynamism in Latin America and the Caribbean centers on the three core pillars of a healthy dynamic economy: the entry of new productive firms, the growth of successful incumbents, and the exit of the least productive firms. These forces are essential for efficient resource allocation and sustained productivity growth. Yet economies in the region

¹ Economist Joseph Schumpeter described *creative destruction* as the fundamental force of capitalism, driven by the emergence of new goods, production methods, and markets that continuously create new economic structures while destroying old ones.

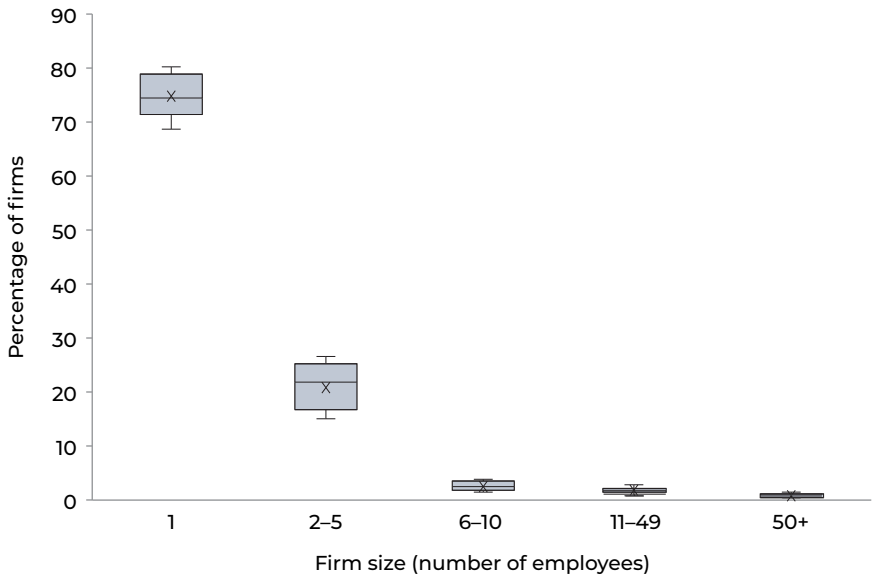
remain far from this ideal. While firm entry rates are relatively high, many new firms are informal, low-productivity ventures that do not grow, contributing little to job creation or productivity gains. At the same time, market forces often fail to weed out the least productive firms, leading to stagnant aggregate performance. Moreover, recent evidence suggests dynamism in the region is declining, mirroring global trends. In this context, revitalizing business dynamism—particularly by strengthening competition—should be a policy priority.

The Missing Middle

The weak competitive environment of Latin America and the Caribbean has undermined its business dynamism, resulting in economies dominated by small enterprises, many of them informal and run by self-employed individuals. Figure 6.1 shows the distribution of firms and employees across firms of different sizes in ten of the region's economies. Firms with one to five employees—in the figure, groups 1 and 2–5 combined—account for 95 percent of all businesses and employ 57 percent of the workforce. In contrast, firms with over 50 employees represent just 1 percent of all firms but employ about 20 percent of workers.

Figure 6.1. Distribution of Firms and Employees across Firm Size Groups

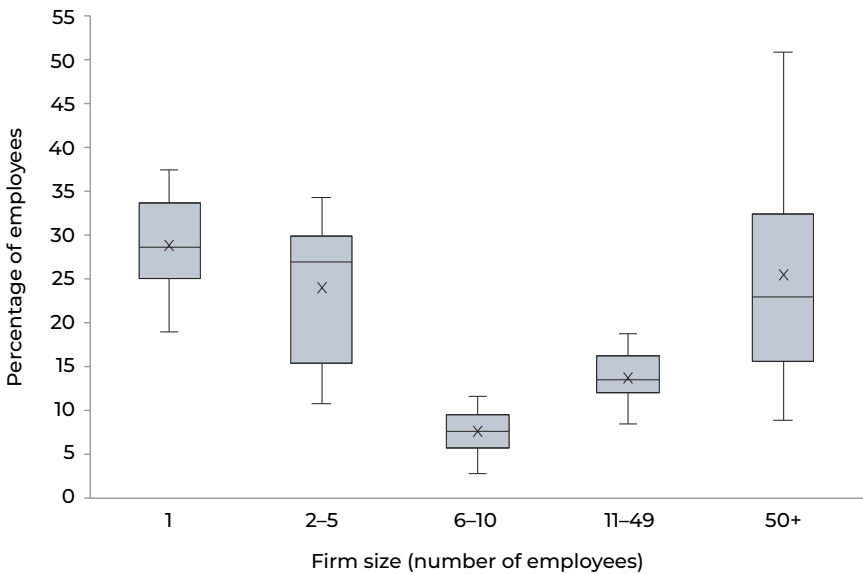
A. Share of firms across firm size



(continued on next page)

Figure 6.1. Distribution of Firms and Employees across Firm Size Groups
(continued)

B. Share of employees across firm size



Source: IDB staff calculations, based on household and labor force survey data from Argentina, Chile, Colombia, Costa Rica, Ecuador, Mexico, Paraguay, and Peru (Q1-2025) and Bolivia and Uruguay (Q4-2024). Note: The figure reports the distribution of firms (Panel A) and employees (Panel B) by firm size, including formal and informal firms and self-employed individuals. The brackets above and below each bar indicate the maximum and minimum values of the distribution for each size group, while the bars themselves represent the central 50 percent of the distributions. The horizontal line inside each bar indicates the median of the distribution and the X the mean. The share of employees is computed using the working-age population living in urban areas and employed in the private sector at the time of the surveys. Calculation of the number of firms uses the midpoint of each bracket based on the raw data for each country and divides the total number of workers in each bracket by the midpoint of that bracket. The firm size brackets for each country are as follows: Argentina: 1 to 5 (continuous), 6–10, 11–25, 26–40, 41–100, 101–200, 201–500, 501+; Bolivia: continuous variable; Chile: 1 to 10 (continuous), 11–49, 50–199, 200+; Colombia: 1, 2–3, 4–5, 6–10, 11–19, 20–30, 31–50, 51–100, 101–200, 201+; Costa Rica: 1 to 9 (continuous), 10–19, 20–29, 30–99, 100+; Ecuador: 1 to 100 (continuous), 101+; Mexico: 1, 2–5, 6–10, 11–15, 16–50, 51+; Paraguay: 1, 2–5, 6–10, 11–20, 21–30, 31–50, 51–100, 101–500, 501+; Peru: continuous variable; Uruguay: 1, 2–4, 5–9, 10–19, 20–49, 50–99, 100–199, 200+. For the last bracket’s midpoint a value of 1.5 times the minimum value of the bracket is used.

To put this into perspective, over half of the labor force in Latin America and the Caribbean is either self-employed or employed by firms with fewer than five workers. In contrast, in the United States, such small firms account for less than 5 percent of total employment. Similarly, while large firms—typically the most productive—employ less than a quarter of workers in Latin America and the Caribbean, they account for about two-thirds in the United States.² These patterns are consistent with the findings of Hsieh and

² Data for the United States are based on the 2019 SUSB Annual Data Tables by Establishment Industry published by the U.S. Census Bureau. Firms with 100 or more workers employ 67 percent of the labor force.

Klenow (2014), who document the dominance of small establishments in the manufacturing sectors in India and Mexico, in stark contrast to the prevalence of medium-sized and large establishments in the United States.

The extreme concentration of employment in microfirms—and, to a lesser extent, in large firms—in Latin America and the Caribbean, combined with the limited presence of medium-sized firms, reflects a fragmented economic structure often described as the “missing middle.” While the firms decline in number as they increase in size, the distribution of employment across them is clearly polarized, following a U-shaped pattern (as suggested by Figure 6.1, Panel B). As Hsieh and Olken (2014) emphasize, this pattern—common across many developing economies—does not reflect a missing segment in the firm size distribution per se but, rather, a striking absence of employment in mid-sized firms.

The dominance of microenterprises and the scarcity of medium and large competitive firms in Latin America and the Caribbean distort market dynamics. With too few firms scaling up and competing effectively, prices remain high, innovation slows, and productivity gains stall, creating a vicious cycle of low dynamism and limited growth.³ The lack of competitive pressure also allows some large firms to exercise monopsony power in input markets. A clear example is in the labor market, where insufficient competition enables dominant firms to suppress wages and restrict employment opportunities (see Chapter 3).

Breaking In

The entry of new productive firms is a vital aspect of business dynamism and an important driver of a competitive economy. New businesses stimulate investment, job creation, and innovation by introducing new products, services, and management practices. The innovations can lead to significant firm growth and broader economic benefits if they spread throughout the economy. As a result, policymakers often seek strategies to increase firm entry rates.

When firms enter a market, competition should intensify, potentially leading to lower prices and improved quality. Busso and Galiani (2019), for example, study the causal effect of competition on prices and quality using a field experiment in the Dominican Republic. The experiment was part of an effort to improve the operations of a conditional cash transfer (CCT) program that provided monetary transfers to low-income families by means of a debit card they could use only in grocery stores affiliated with the program.

³ Alfaro et al. (2009) argue that differences in the allocation of resources across plants are a significant determinant of cross-country variation in income per worker.

The experiment consisted of an induced increase in the number of retailers affiliated with the CCT program. It found that entry led to price reductions of 2–6 percent and improvements in service quality, without significant changes in product variety or brand offerings. It also found that the prices dropped more in areas that had more entrants.

Entry can affect competition and welfare through a series of mechanisms, including the strategic response of incumbent firms, the exit of incumbents, the loss of product variety and amenities offered by incumbents that exited, the gains in variety and amenities provided by the entrants, the loss of jobs from the exiting of incumbents, and the new jobs offered by the entrants.⁴ Atkin, Faber, and Gonzalez-Navarro (2018) introduce and estimate a model that includes all these mechanisms to analyze the entry of foreign supermarkets in Mexico. They find significant welfare gains for the average household, driven primarily by reduced prices in incumbent supermarkets, and direct consumer gains from the entry of foreign supermarkets, including greater variety, more amenities, and lower prices.

Entry can also substantially affect incumbents in other respects than prices by, for example, motivating them to increase productivity and innovation. Bao and Chen (2018) study how domestic firms react to the threat of foreign competition. They quantify the threat to multinational competition by making use of tens of thousands of media releases across 200 countries to identify potential investments by multinational firms that could threaten incumbents. They find that domestic firms upgrade productivity when faced with the threat of foreign entry, raising innovation, investment, and wage rates, and the upgrades increase with the size of the threat. The findings suggest that foreign direct investment threats account for 5 percent of productivity growth in the overall sample of countries and 10 percent of productivity growth for developing countries.

The entry of more productive firms can also reduce the entry of less productive ones. Talamas Marcos (2025) shows that, in Mexico, an increase in the number of convenience chain outlets from no stores to the neighborhood average of 6.7 stores reduces the number of neighborhood shops (*tienditas*) by 15 percent. This effect is not, however, being driven by an increase in the number of neighborhood shops exiting; instead, there is a decline in the number that enter. The entry of more productive firms, therefore, may have compounding effects that shift the productivity distribution of firms in the industry in a positive direction. Not only does it add firms to

⁴ Firms may also adapt to the entry of larger competitors by adjusting their mixture of products. Bondi et al. (2025) explore this phenomenon in Mexico's retail sector, developing a theoretical framework and providing empirical evidence on "defensive specialization."

the more productive end of the distribution, give incumbent firms incentive to become more productive, and drive the exit of the least productive firms; it reduces the entry of low-productivity ones.

Even without actual firm entry, the potential for entry disciplines the behavior of incumbent firms by limiting markups—the difference between selling prices and marginal costs—and pushing the firms to innovate. This relates to the concept of “contestable markets,” in which incumbent firms understand that if they raise their prices or markups too much, they risk encouraging entrepreneurs to enter the market, undercut them, and take away their market share.⁵ The mere threat of entry from another firm can encourage competitive behavior. In addition to the evidence already discussed by Bao and Chen (2018) in their study of how domestic firms respond to the threat of foreign competition, Goolsbee and Syverson (2008) provide an insightful example based on the evolution of Southwest Airlines’ route network. They find that Southwest’s competitors cut fares significantly when threatened by its entry. Interestingly, over half of Southwest’s total impact on incumbent prices occurred before the actual entry. The evidence was mixed, however, on whether these preentry price reductions sought to deter or accommodate entry.

It’s Not about Quantity, but Quality

At first glance, business entry in Latin America and the Caribbean appears strong compared to more advanced economies. Data from the Organisation for Economic Co-operation and Development’s DynEmp Project,⁶ for example, as reported by Calvino, Criscuolo, and Verlhac (2020), show that entry rates in Brazil and Costa Rica exceeded 9 percent in the periods studied—among the highest in the sample (see Figure 6.2).⁷ As discussed later in the chapter, this is not necessarily due to an environment that fosters the entry of productive firms but, rather, to the faster growth of the labor force in these economies.

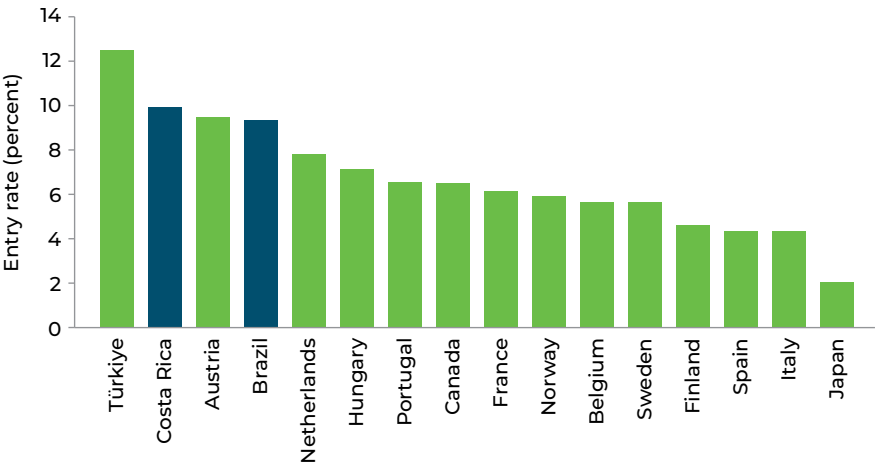
In this sense, the core challenge for the region is not the number of new firms but their quality. Entrants typically start at smaller scales and with lower productivity than their counterparts in more advanced economies. While this pattern is in part a reflection of the region’s lower levels of human capital, another important driver is the widespread prevalence of informality.

⁵ See Baumol, Panzar, and Willig (1982) and Brock (1983).

⁶ The DynEmp Project is an OECD initiative that provides evidence on the employment dynamics of startup and incumbent firms using firm-level data from over 20 OECD and non-OECD economies since 1998.

⁷ Firm entry rates are roughly computed as the number of new firms divided by the number of existing firms. See Calvino, Criscuolo, and Verlhac (2020) for a detailed description of this calculation.

Figure 6.2. Firm Entry Rates across Countries



Source: IDB staff calculations, based on OECD and OECD DynEmp Project data.
Note: The data for the countries in the graph are from the following time periods: France, 2000–2012; Japan, New Zealand, and Norway, 2000–2014; Austria, Belgium, Brazil, Canada, Finland, and Hungary, 2000–2015; Denmark and Italy, 2001–2015; Portugal, Spain, and Sweden, 2002–2015; Costa Rica, 2006–2015; Türkiye, 2007–2015. Latin American and Caribbean countries are in red. Figure 6.2 reports the average firm entry rates across the years for which data are available in each country.

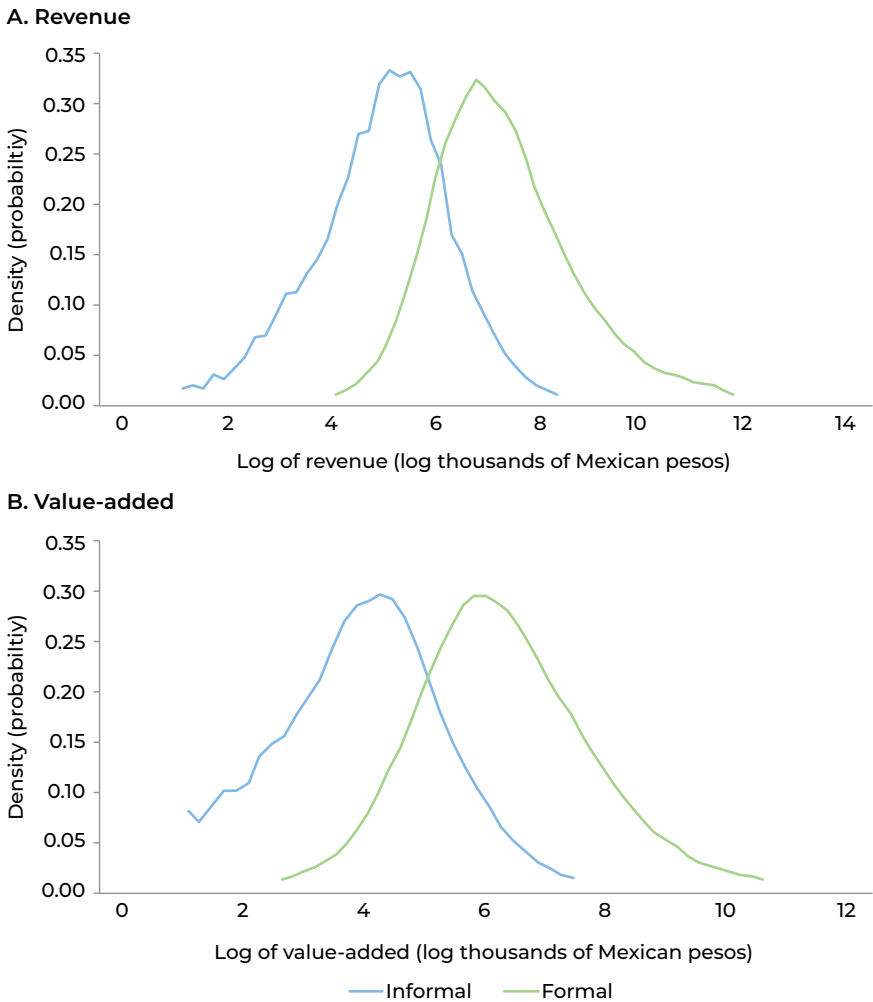
Evidence from Mexico illustrates this clearly. Figure 6.3 shows that informal entrants—defined as firms not paying social security contributions—are significantly smaller in terms of revenue (Panel A) and value-added (Panel B) than formal ones, despite enjoying tax advantages. Informality, therefore, shapes the nature of business entry in the region, skewing it toward smaller, lower-productivity firms. The skewing is significant because most firms that enter are informal—in fact, more than 95 percent of those a year old or less.⁸

This pattern is not unique to Mexico. Ulyssea (2018) finds similar patterns for Brazil and offers a framework to explain them. In his model, firms have a belief about their productivity before entry and then observe their actual productivity afterward. They must decide whether to operate formally or informally before entering the market. Formal firms incur an upfront entry cost and higher variable costs (such as taxes), while informal ones avoid these but risk being fined for evading social security contribution and taxes if caught, which is more likely the bigger they are. Because the more productive firms expect to be larger, they are more likely to choose formality to avoid the size-related costs of informality.

This framework underscores an important insight: Informality reduces barriers to entry but changes the profile of entrants. By lowering the

⁸ IDB staff calculation, based on 2019 Mexican Economic Census Microdata.

Figure 6.3. Entrants and Informality



Source: IDB staff calculations, based on 2019 Mexican Economic Census Microdata.
 Note: The figure displays the distribution of log revenue and the log value-added of firms that were less than five years old at the time of the 2019 Mexican Economic Census. A firm is considered formal if it has any expenditure on social security contributions for 2018. The plotted distributions are restricted to the support having a density above .01. The microdata were accessed through the INEGI microdata laboratory.

threshold for market participation, it allows smaller, less productive firms to enter, many of which may never grow. In principle, informality could also act as a stepping stone, helping capital-constrained but high-potential firms enter, save, and eventually formalize.⁹ This is likely the exception, however,

⁹ Imbert and Ulyssea (2024) discuss the role of informality as a stepping stone for rural-to-urban migrants in Brazil.

not the rule. In practice, informality in Latin America and the Caribbean often results in the excessive entry of firms with little potential for growth.¹⁰

While exceptions exist—such as high-growth startups and unicorns (see Box 6.1)—the typical pattern in Latin America and the Caribbean is one of small, informal firms that enter the market but struggle to scale up. As a result, high entry rates in the region may signal churn and fragmentation rather than dynamism and innovation.

Box 6.1. Unicorn Firms

Unicorn firms—startups valued at more than US\$1 billion—are important drivers of business dynamism, influencing entry, growth, and exit. These disruptive companies take advantage of technology to challenge incumbents, stimulate competition, and reallocate resources more efficiently. Their rapid expansion forces established firms to innovate or exit, ultimately benefiting consumers with improved products, services, and accessibility.

In regions like Latin America and the Caribbean where business dynamism is low, unicorns are reshaping stagnant industries, particularly in financial services, e-commerce, and logistics. A report by Finnovista, Inter-American Development Bank, and IDB Invest (2022) notes a 47 percent growth in financial technology (FinTech) startups, reflecting the region's growing potential for financial innovation. Companies such as digital banks have expanded financial inclusion by offering innovative services, competitive rates, and modern digital banking solutions, pressuring traditional banks to modernize and lower their fees (see Chapter 5 for details).

This trend manifests itself in the transportation sector as well, with new digital freight platforms connecting shippers and carriers more efficiently. Supported by equity investment from IDB Invest, one such platform in Brazil has introduced stricter safety protocols, reduced truck idle time, and developed real-time data systems to monitor greenhouse gas emissions. By cutting waste in the trucking industry, the platform not only raises truckers' incomes and lowers freight costs for firms but reduces the environmental footprint of this sector.

Despite their benefits, unicorns often operate in lightly regulated environments, creating concerns about an uneven playing field. Digital banks,

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¹⁰ According to Mankiw and Whinston (1986), free entry may result in entry beyond what a social planner would consider optimal. While the social planner tries to maximize welfare and profits in the entire economy subject to the available resources, in the free-entry case entrants only care about the profits they make and not about the business they take away from incumbents. This leads to waste of resources in fixed setup costs because too many firms want to enter, but their resource use in setting up is not compensated by an increase in overall profits or welfare in the economy.

Box 6.1. Unicorn Firms *(continued)*

for instance, can provide financial services under FinTech regulations while avoiding stricter banking laws. Similarly, rideshare apps and vacation rental platforms bypass many of the costs incurred by traditional taxis and hotels. While this regulatory flexibility may initially encourage innovation and competition, long-term market efficiency requires fair and consistent regulations to prevent distortions in resource allocation and ensure sustainable competition.

Reducing Barriers to Foster Entry

A range of barriers—from regulatory hurdles to financial constraints—can deter productive firms from entering the market. Most policy efforts to promote firm entry fall into four areas: reducing regulatory burdens, improving access to finance, lowering entry costs, and strengthening competition and market access.

Regulatory barriers, which are discussed in more detail in Chapter 9, are among the most significant obstacles to firm entry. Streamlining business registration by reducing the time, cost, and complexity of the process can encourage entrepreneurship significantly. Entry can be promoted further by easing licensing and permitting requirements.¹¹ Regulations need to protect consumers but without presenting unnecessary obstacles to new firms. Improving transparency and efficiency in the approval process is equally important, as corruption and bureaucratic inefficiencies often affect new businesses disproportionately. Implementing digitalized approval systems for permits and inspections can help, by ensuring a more predictable and accessible regulatory environment.

Limited access to finance is another barrier to firm entry and growth, particularly for new entrepreneurs, who often lack collateral. Many struggle to secure funding, and even when loans are available, prohibitively high interest rates can discourage them from starting their businesses. This challenge is further compounded in financial markets with low competition, where restricted lending options drive up borrowing costs and limit credit availability. As discussed in Chapter 5, greater competition in the banking sector can help alleviate this constraint by increasing loan availability and improving lending terms, ultimately facilitating firm entry across industries. In addition to fostering competition in the financial sector,

¹¹ Alfaro and Chari (2014), for example, provide evidence suggesting that deregulation of compulsory industrial licensing in India increased entry by small firms.

government-backed loans and grants can help bridge this financing gap, providing essential capital to entrepreneurs who might otherwise be unable to secure private investment. (See Box 6.2 for a discussion on venture capital and the role governments and multilateral banks can play.)

Beyond regulatory and financial barriers, the high costs of starting a business can discourage new firms from entering the market. Policies to reduce these costs can significantly stimulate business formation. Investments

Box 6.2. Venture Capital and Firm Growth

Venture capital firms excel at identifying and financing high-potential startup and early-stage companies and, thus, are most likely to allocate financing where it will have the highest return. These firms also provide technical assistance that helps companies grow, linking entrepreneurs with new market opportunities and strategic advice.

An Established Public Policy for Growth and Innovation

Venture capital is an effective instrument for promoting firm performance and employment growth (Puri and Zarutskie 2012; Catalini, Guzman, and Stern 2019; Pantea and Tkacik 2024; Croce, Marti, and Murtinu 2013) and financial performance (Ritter 2015). It can also improve the internationalization of companies (Weik, Achleitner, and Braun 2024) and promote the adoption of new technologies and patenting (Kortum and Lerner 2000; Colombo, D'Adda, and Pirelli 2016; Corsi and Prencipe 2019). All of these elements are important to improving business dynamism. Data from developed markets show that, when comparing companies that are otherwise observationally equivalent, venture capital-backed firms grow about six times as fast as those not backed. Venture capital-backed companies also generate about twice as many jobs and are three times as likely to generate patents.

As a result of these outcomes, governments have actively promoted venture capital as a vehicle to promote growth and innovation (Alperovych, Groh, and Quas 2020; Bertoni, Marti, and Reverte 2019). Since public agencies are vulnerable to short-sightedness and shifts in policy, public policies that support enabling conditions and provide finance for venture capital have been shown to be more effective than setting up state-backed funds (Cumming and Johan 2019; Cumming, Grilli, and Murtinu 2017). Venture capital funds sponsored by multilateral development banks have also enjoyed a good track record, including in Latin America and the Caribbean (Dams, Sarria Allende, and Murcia 2021). One prominent example is IDB Lab, the innovation and entrepreneurship laboratory of the Inter-American Development Bank Group. Its mission is to finance early-stage innovation in the region by finding new ways to drive social inclusion, environmental action, and productivity growth.

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Box 6.2. Venture Capital and Firm Growth *(continued)***Still Small, But Growing Rapidly**

Although as a share of gross domestic product venture capital is five times larger in developed economies than in Latin America and the Caribbean, it is an emergent industry in the region. That said, the venture capital market in Latin America and the Caribbean has developed significantly over the past decade, increasing from less than US\$1 billion in deals in 2014 to US\$4.5 billion in 2024. Likewise, the number of new firms financed has also boomed, from approximately 250 to 750 (LAVCA 2025). Today, venture capital-backed firms account for a large share of the region's initial public offerings and are becoming dominant in certain sectors, such as financial services (through FinTech) and marketplace platforms. Companies financed by recent or current rounds of venture capital have become key market players in payment, credit, and other financial services and are among the most innovative and fastest growing companies in the region.

In addition to the dominant sectors, venture capital in Latin America and the Caribbean stands out in that it is increasingly financing younger firms in new sectors, such as agriculture, health, mobility, and climate and the environment. In health, for instance, the third largest sector (behind FinTech and e-commerce), companies are innovating in service provision models, financing solutions, diagnostic services and testing, prescription services, and digitalization.

in infrastructure—such as expanded broadband, improved transportation networks, and energy development—are equally vital, as they lower operational costs and enhance firms' ability to compete. Additionally, reducing tariffs on essential machinery and technology can help businesses afford the equipment they need for production, facilitating scalability and improving their competitiveness in both domestic and international markets.

Finally, strengthening the pool of capable entrepreneurs is essential. Improving the quality of education and expanding access to technical and business training can boost the productivity of potential entrants, better preparing them to innovate, scale up, and compete in the market.

Scaling Up Firm Growth

Firm growth may be even more important than entry in driving investment, productivity, and employment. While Asturias et al. (2023) emphasize the contribution of new firm entry to productivity during the Republic of South Korea's economic miracle, recent work by Choi et al. (2024) highlights the

outsized influence of a small number of large, high-performing firms. These “superstar” firms—the top three by gross output within each manufacturing sector in Korea—rose sharply over time, capturing an increasing proportion of employment, output, and value-added. Between 1972 and 2011, their share of total manufacturing output grew from 10.1 to 28.5 percent. Importantly, this expansion was not driven by market power alone but by superior performance. In 1972, superstar firms were 2.6 times more productive than other firms; by 2011, they were 10.9 times more productive. These findings suggest growth—particularly among the most productive firms—can be a powerful engine of aggregate productivity gains and capital accumulation.

This dual nature of market concentration has important implications for interpreting firm dynamics and designing policy responses. On one hand, high concentration can signal low business dynamism, particularly when incumbent firms are protected from competition by regulatory barriers, subsidies, or political connections. In such environments, dominant firms may extract rents despite poor performance.¹² This form of concentration reflects market power, not efficiency, and can hinder resource reallocation and productivity growth.

On the other hand, market concentration can also be the outcome of exceptionally productive and innovative firms gaining market share through superior performance, sustained investment, and technological leadership.

Distinguishing between these two forms of concentration is increasingly complex. The exceptionally productive firms can engage in noncompetitive practices that entrench dominance, such as horizontal mergers, killer acquisitions to neutralize future rivals, or dumping practices that drive competitors out of the market. When unchecked, these strategies can transform healthy competition into entrenched market power, dampening innovation and firm turnover (see Chapter 10).

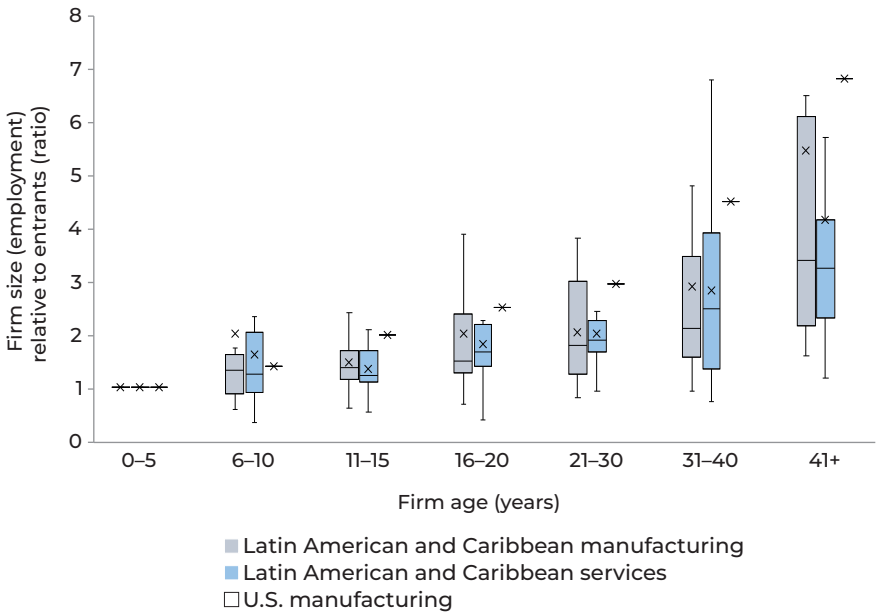
Understanding the source of market concentration is, therefore, essential for sound policymaking. While some forms stifle competition, others reflect an efficient market where the best firms rise. To maintain a balance, policymakers must go beyond headline concentration metrics by strengthening antitrust research and enforcement, rigorously scrutinizing mergers and acquisitions, and updating regulatory frameworks to ensure market contestability and transparency. Well-targeted competition policy should ensure concentration is the result of competitive success—not of its suppression.

¹² Economic rent is an amount of income that exceeds what is economically or socially necessary.

Struggling to Scale Up

Firms in Latin America and the Caribbean tend to grow more slowly than their counterparts in more developed economies. Using data from the World Bank Enterprise Surveys (WBES), Figure 6.4 compares the growth trajectories of firms in the region with those in the United States. A striking pattern emerges: While the U.S. manufacturing firms exhibit steady and substantial growth, their Latin American and Caribbean counterparts—both in manufacturing and services—expand much more slowly. In particular, older firms

Figure 6.4. Firm Growth



Source: IDB staff calculations, based on World Bank Enterprise Surveys (WBES) for Latin America and the Caribbean and Hsieh and Klenow (2014) for the United States.

Note: The figure shows the average firm size, measured by number of employees by firm age in the region, as compared with that in the United States. To focus solely on growth and avoid incorporating differences in entrant size, the series are normalized, showing the size of firms relative to that of entrants in each category. For example, reaching 3 on the y-axis means that the average firm size in this age group is three times that of entrants. The estimates for the United States are from Hsieh and Klenow (2014). For Latin America and the Caribbean the source is WBES, and the estimates include non-public establishments that are not part of large firms. The countries have at least 30 firms in each age group. They are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Peru, and Uruguay. The services series for the region includes establishments in retail and other services, while manufacturing includes all establishments with ISIC codes Rev 4 ranging between 10 and 33. The firm size is winsorized 10 percent on each tail within country, industry, and age bin. WBES median eligibility weights are used to aggregate at the country level. The brackets above and below each bar indicate the maximum and minimum values of the distribution in each age group, while the bars themselves represent the central 50 percent of the distributions. The horizontal line inside each bar indicates the median of the distribution and the X the mean.

(41+ years) in U.S. manufacturing reach an employment size nearly seven times that of entrants. In contrast, Latin American and Caribbean manufacturing and services firms remain significantly smaller, often struggling to scale up beyond a factor of three or four.

A closer look at younger firms (6–20 years old) reveals that those in Latin America and the Caribbean initially exhibit some growth but at a much slower rate than those in the United States. Moreover, they eventually stagnate. The observed patterns from the region are consistent with those documented in existing literature using alternative data sources for Colombia (Eslava, Haltiwanger, and Pinzón 2022) and Mexico (Hsieh and Klenow 2014). The failure to scale up strongly suggests the presence of structural barriers, such as weak financial access, inefficient regulatory environments, and limited incentives for innovation.

A Growth–Informality Trap

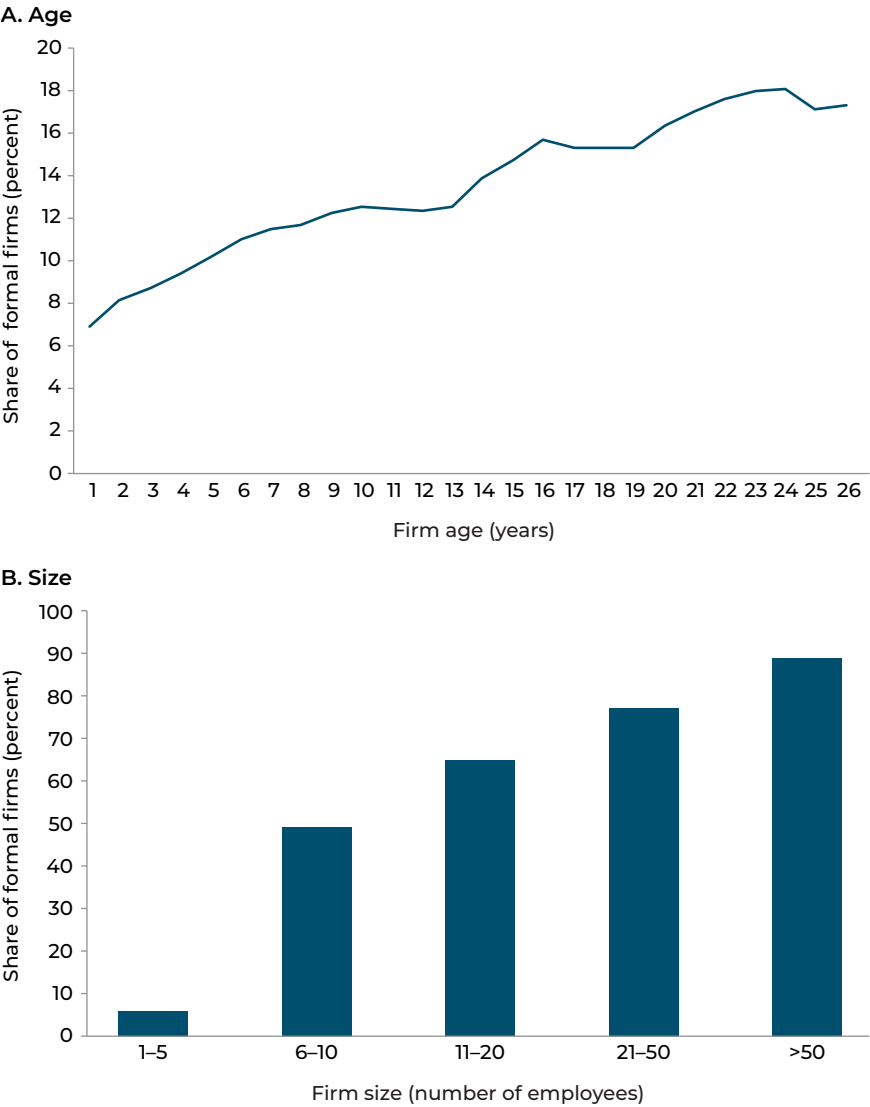
As already mentioned, informal firms have a disincentive to grow because increasing their size may also increase their chances of being audited. If they become formal, they must pay the associated fixed and variable costs (taxes and social security contributions). Informality, however, limits access to credit, reduces worker protection, and discourages investment in productivity-enhancing measures, such as technology adoption and workforce training. These incentives lead to a vicious cycle of low growth and informality.

In Mexico, more than 80 percent of firms are informal (see Figure 6.5, Panel A). The main driver of this high informality rate is the large fraction of small firms in every age group. If these small informal firms were growing and becoming formal, formality could be expected to increase sharply with the firm's age. Yet this does not happen. While older firms are less likely to be informal, the share of informality only decreases from 90 percent for entrants to close to 80 percent for firms established for more than 25 years.

Stagnant firm growth is a key factor underlying persistent informality. In Mexico, informality rates decline sharply as firms grow in size. As shown in Panel B of Figure 6.5, the share of informal firms drops from 95 percent among those with up to five employees to just 50 percent for firms with six to ten employees. The decline continues steadily with firm size; for firms with more than twenty employees, the informality rate falls below 25 percent, and among those with over fifty workers, it drops to just 10 percent.

Not only does informality lead to the entry of smaller firms; these firms grow more slowly. While the entrance of smaller firms to the market

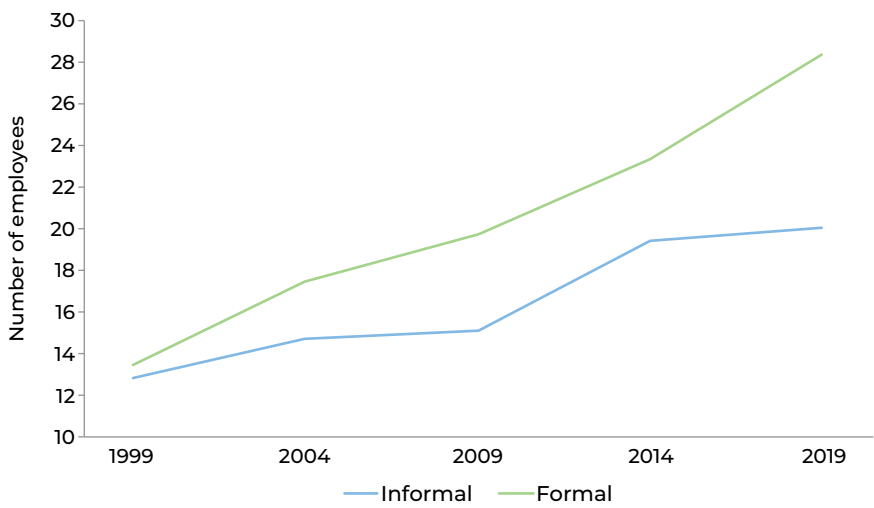
Figure 6.5. Firm Size, Age, and Formality in Mexico



Source: IDB staff calculations, based on 2019 Mexican Economic Census Microdata.
Note: The figure displays the share of formal firms by age (Panel A) and size (Panel B), based on the 2019 Mexican Economic Census. Panel A presents the moving average (current age group and two leads and two lags) of the share of formal firms. A firm is considered formal if it had any expenditure on social security contributions for 2018. The microdata were accessed through the INEGI microdata laboratory.

does not entail a problem per se, it is, indeed, an issue if they do not grow. Figure 6.6 shows the growth of firms in Mexico that, in 1999, were less than five years old and had between ten and twenty employees. The formal firms

Figure 6.6. Growth of Formal versus Informal Firms in Mexico, 1999–2019



Source: IDB staff calculations, based on 1999, 2004, 2009, 2014, and 2019 Mexican Economic Census Microdata.

Note: The figure displays the firm growth of formal and informal firms in Mexico. The sample includes all formal and informal firms that were less than five years old in 1999 and had between 10 and 20 employees. A firm is considered formal if it had any expenditure on social security contributions for 2018. The microdata were accessed through the INEGI microdata laboratory. The linkage of firms is based on INEGI firm identifiers and those from Busso, Fentanes, and Levy (2018).

among these more than doubled their size by 2019, while the informal ones grew less than 50 percent.

Ultimately, formalization and growth must go hand in hand. Without addressing the barriers that keep firms small and informal, business dynamism in Latin America and the Caribbean will remain constrained, limiting the region’s economic potential and its ability to compete globally. Facilitating firm growth is, therefore, a key strategy for reducing informality. Policies that increase the returns to formality can help break this cycle.

Barriers to Growth

The growth and productivity of firms in Latin America and the Caribbean are constrained by persistent barriers that reinforce low competition and further discourage expansion. These obstacles include poor management practices, low rates of technology adoption, limited access to finance, skill mismatches in labor markets, and restricted market access. Collectively, they undermine competitive pressure and hinder firm dynamism. While numerous policies have been enacted to overcome these challenges, their effectiveness has varied widely depending on their design, implementation, and local context.

Recent evidence underscores the need to understand not only which interventions work but for whom they work and under what conditions.

One explanation for low firm performance is weak managerial capacity. Evidence from across countries shows that management practices account for a significant share of productivity differences (Bloom and Van Reenen 2010). Programs intended to improve business practices have, however, yielded mixed results. The effects on profits and productivity of standard training for small firms have been limited—between 5 and 10 percent, on average (McKenzie 2021). Tailored consulting services have produced much larger impacts. Bloom et al. (2013) report that textile firms in India that received free consulting improved their management and raised profits substantially, and they maintained about half of the acquired management practices nine years later (Bloom et al. 2020). Group-based consulting in Colombia (Iacovone, Maloney, and McKenzie 2022) and peer learning programs in China (Cai and Szeidl 2018) have shown that more scalable alternatives can also improve performance.

Another barrier is the lack of technology adoption. Despite having access to global innovation, firms in developing countries often fail to adopt existing technologies. Atkin et al. (2017), for example, show that an incentive misalignment within firms caused Pakistani soccer ball producers to be slow to adopt a waste-reducing technology. Moreover, technology adoption is often not free, and it can be hindered by a lack of competition in the financial markets that can lead to less availability of credit and higher interest rates.

Access to skilled labor is another important but often underemphasized factor shaping firm growth. Even when firms are willing to improve management practices or adopt new technologies, the availability of adequately trained workers can be a binding constraint. In many Latin American and Caribbean countries, education systems and vocational training programs are poorly aligned with the needs of productive firms, leading to mismatches between available skills and job requirements. Difficulties in hiring workers with the right mixture of technical and soft skills hamper firms' ability to scale up operations or implement productivity-enhancing innovations. Strengthening the link between workforce development programs and the demands of firms—through apprenticeships, industry partnerships, or certification schemes—can help.

Additionally, firms often operate in thin or fragmented markets and lack timely access to information that would allow them to price competitively or reach new customers. Jensen (2007) shows that fishermen in Kerala, India, who gained access to mobile phones could check prices across coastal markets and reduce price dispersion, waste, and income volatility. Jensen and Miller (2018), who also use mobile phones as a natural experiment in

the boat-building industry, find that consumers' access to information about nonlocal boat builders led to higher-quality builders gaining market share and growing, while low-quality producers were more likely to exit. Interventions that connect firms to buyers—such as export facilitation (Atkin, Khandelwal, and Osman 2017) or integration into a multinational supply chain (Alfaro-Ureña, Manelici, and Vasquez 2022)—can unlock productivity gains.

Finally, some policies remove incentive for firm growth, such as size-dependent policies under which smaller firms receive preferential treatment. Azuara et al. (2019) study simplified tax regimes that lower tax rates and compliance costs for small firms in Brazil, Mexico, and Peru. In Brazil, the introduction of a special regime for the self-employed appears to have encouraged more workers to register as entrepreneurs. In Mexico, the 2014 launch of a new, simplified regime coincided with increases in both employer contributions to social security and voluntary contributions by the self-employed. In Peru, firms tend to bunch just below the eligibility thresholds for special regimes, suggesting they misreport or intentionally limit their size to retain benefits. Zanoni et al. (2024) document that self-employed taxpayers in Ecuador strategically reported income just below the threshold that would shift them from a simple to a complex tax regime requiring a public accountant.

In sum, because firm growth in Latin America and the Caribbean is constrained by a range of interlinked barriers, no single intervention is sufficient on its own, and evidence supports the effectiveness of multifaceted strategies. These include enhancing competition, improving managerial capabilities through consulting and peer learning programs, bundling technology adoption with training and access to finance, offering more flexible credit instruments, aligning workforce training with firm-specific needs, and expanding market access through better information and digital connectivity.

Exit and Renewal

Efficient firm exit is a cornerstone of business dynamism, enabling the reallocation of resources from underperforming firms to more productive ones. Yet institutional and policy distortions hinder this process in many economies, including those in Latin America and the Caribbean. Government protectionist measures can artificially sustain low-productivity firms by insulating them from competitive pressures. At the same time, well-functioning bankruptcy laws enable timely and orderly exit, allowing capital and labor to flow to more dynamic firms. In many countries in the region, however, insolvency procedures are slow or ineffective, delaying exit and locking up resources in unviable businesses.

Several factors shape firm exit rates. One is the firm life cycle: Newer and smaller firms generally exit at a higher rate as a result of their limited resources and the inherent uncertainty of early-stage operations. Over time, market selection favors more resilient firms, reducing exit rates as they mature.

Macroeconomic conditions also contribute. Ayres and Raveendranathan (2023) show that economic downturns typically raise exit rates as demand contracts and credit tightens. Importantly, recessions lead to less selective exit, with even productive firms shutting down; the result may be a reduction in aggregate productivity.

Geographical location influences firm survival, as well. Busso and Fentanes (2024) highlight that exit rates are significantly lower among firms in areas with better infrastructure and stronger local business support services. Using data from Mexico, they find that improved access to transportation, electricity, broadband, and complementary services reduces the likelihood of firm closure.

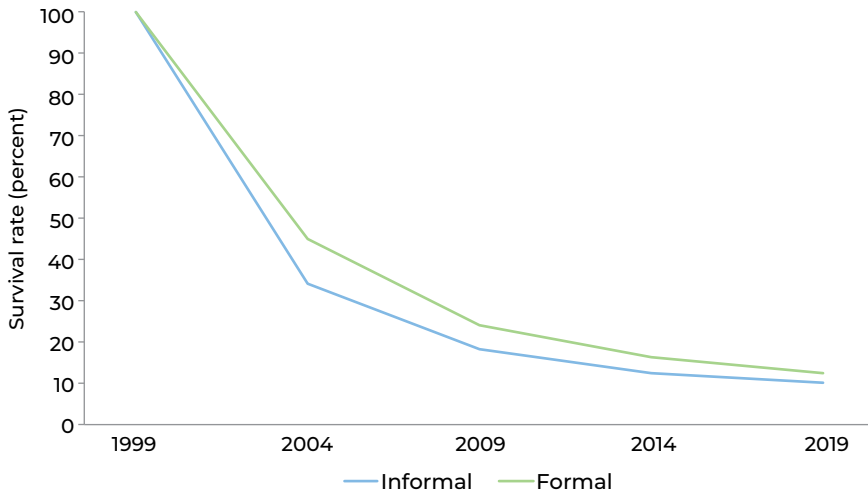
Finally, exit dynamics are affected by ownership structure and managerial experience. Family-owned firms and those led by experienced managers tend to be more resilient, benefiting from deeper commitment and better decision making.¹³ Opportunity costs also influence exit decisions, particularly among micro- and small enterprises in developing countries. When business owners and their families lack access to good alternative employment opportunities, they may continue operating low-productivity firms simply because they offer the best available option. In such cases, unproductive firms persist not because they are competitive but because better alternatives are out of reach.

Why Informality May Lead to Inefficient Exit

Along with its other consequences, informality also affects the exit process. Operating outside legal and financial oversight, informal firms are difficult to monitor, regulate, or close through formal mechanisms. They often persist in the market despite low productivity and minimal contributions to innovation. In Latin America and the Caribbean, informality enables inefficient firms to survive by avoiding tax and regulatory obligations, effectively reducing their cost disadvantage. This creates space for “parasite” firms—low-productivity businesses that would likely exit if held to formal standards—to linger and tie up scarce resources that could be used more efficiently elsewhere (Ulyssea 2018).

As previously discussed, informality shapes firm entry and growth; informal firms tend to start smaller and grow more slowly than formal ones.

¹³ See Shleifer and Vishny (1986).

Figure 6.7. Inefficient Exit Limits Resource Reallocation

Source: IDB staff calculations, based on 1999, 2004, 2009, 2014, and 2019 Mexican Economic Census Microdata.

Note: The figure displays the survival rate of formal and informal firms in Mexico. The sample includes all formal and informal firms that were less than five years old in 1999 and had between 10 and 20 employees. A firm is considered formal if it has any expenditure on social security contributions for 2018. The microdata were accessed through the INEGI microdata laboratory. The linkage of firms is based on INEGI firm identifiers and those from Busso, Fentanes, and Levy (2018).

Surprisingly, however, their exit rates are not consistently higher, despite their lower productivity. Figure 6.7 illustrates this pattern in Mexico by comparing the survival probabilities of formal and informal firms that started operations between 1995 and 1999. To ensure the starting average firm size is similar across groups, it only includes firms that had between 10 and 20 employees. Two decades later, by 2019, the informal firms were just as likely to have survived as the formal ones, even though they grew only half as much. This points to a fundamental inefficiency in the reallocation process: Informal firms not only enter with low productivity levels and fail to grow; they persist in the market despite this underperformance, impeding the overall dynamism of the business environment.

Turning the Page on Unproductive Firms

Encouraging the timely exit of unproductive firms is essential for freeing up resources—capital, labor, and market space—that can be reallocated to more dynamic and efficient businesses, and strengthening market competition is an important lever in this process. Eslava et al. (2013), for example, show that trade liberalization in Colombia increased the likelihood that

exiting firms were the least productive, demonstrating how exposure to competition can sharpen the allocation of resources. Policymakers can build on this by further reducing barriers to entry and phasing out protectionist measures that shield inefficient incumbents.

Yet many economies—particularly in Latin America and the Caribbean—struggle with the persistence of “zombie firms”—unproductive businesses that remain in operation despite weak performance (see Gouveia and Osterhold 2018). These firms often survive because of poorly targeted government subsidies, preferential access to credit, or informality, which enables them to avoid taxes and regulatory obligations. This problem can be addressed by reassessing subsidy programs that support persistently underperforming firms. Similarly, enforcement to reduce informal operations can foster fair competition.

While firm exit is a necessary component of business dynamism, it also entails real costs, including job losses, income disruption, and the risk of systemic spillovers. For this reason, effective bankruptcy and insolvency frameworks are essential. Corbae and D’Erasmus (2021) highlight that well-designed bankruptcy laws help facilitate the orderly exit of failing firms, protect creditors’ rights, and prevent the clogging of financial markets with nonperforming loans. Streamlining insolvency procedures, reducing court delays, and promoting out-of-court settlements can enable faster and more predictable exit processes.

From a welfare perspective, replacing low-productivity firms with more efficient ones generally raises aggregate productivity and consumer welfare. This process can, however, also generate unintended distributional effects. Talamas Marcos (2025), for example, shows that when large retail chains displace neighborhood stores, high-income households benefit from greater convenience, while low-income households—who rely more on personal relationships with and proximity to businesses—may be adversely affected. This underscores the need for complementary policies, such as targeted social safety nets, local entrepreneurship support, and tailored consumer subsidies, to mitigate adverse impacts on vulnerable populations.

Fostering a healthy exit environment is just as important as promoting firm entry and growth. Areas of opportunity include reforms to encourage competition, more effective bankruptcy regimes, and better targeting of public support to avoid sustaining unviable firms. Complementary policies—such as worker retraining programs, formal employment facilitation, and localized support for displaced entrepreneurs—can ensure that firm turnover contributes to economic efficiency and inclusive and sustainable development.

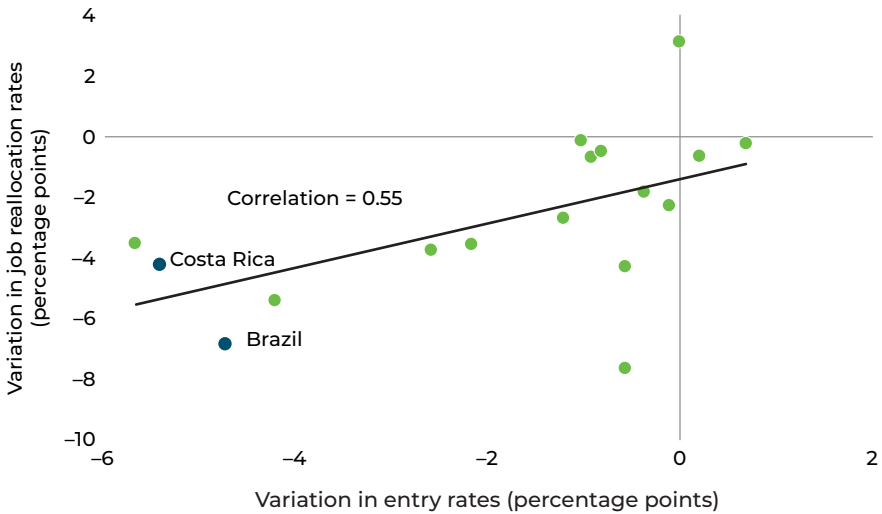
From Lagging to Falling Further

Recent studies—such as those by Decker et al. (2014) and Biondi et al. (2024)—document a broad-based decline in business dynamism across a wide range of economies. This global trend has raised alarms among policymakers and sparked renewed efforts to reinvigorate firm dynamics, particularly by strengthening market competition. In Latin America and the Caribbean, the challenge is even more pressing. The region not only suffers from historically low levels of business dynamism and weak productivity growth but now faces the added risk of falling further behind amid worsening global trends.

Although initial evidence on declining firm dynamics came from advanced economies like the United States, more recent research finds similar developments in emerging markets, including those in Latin America and the Caribbean. Calvino, Criscuolo, and Verlhac (2020), for example, use data from the OECD DynEmp Project to show that, from 2000 to 2015, Brazil and Costa Rica experienced sharp declines in firm entry rates—by 4.7 and 5.4 percentage points, respectively—accompanied by drops in job reallocation rates of 6.9 and 4.3 percentage points (see Figure 6.8).¹⁴ These patterns are part of a broader trend. Most economies saw declines in both entry and reallocation, and larger drops in entry rates were typically associated with steeper reductions in reallocation. Together, these findings signal a weakening in some of the firm-level dynamics most crucial to productivity gains and long-term economic growth.

In addition, Akcigit and Ates (2021) show that declining business dynamism has coincided with a number of troubling macroeconomic trends: slower productivity growth, rising market concentration, increasing markups and wage markdowns, falling labor shares, and widening productivity differences between firms. These developments have triggered active debate over their root causes—especially the growing market power of dominant firms—and the types of policies needed to reignite productivity growth and firm dynamism. While several explanations have been proposed, researchers increasingly favor those that account for several trends at once. The remainder of this section examines some of the leading hypotheses, with a particular focus on the role of rising market power, while acknowledging that the full picture remains contested.

¹⁴ Job reallocation rates are roughly computed as the sum of gross job creation and gross job destruction across establishments, divided by the total number of employees. See Calvino, Criscuolo, and Verlhac (2020) for a detailed description of the calculation.

Figure 6.8. Slowdown in Firm Entry and Job Reallocation Rates

Source: IDB staff calculations, based on OECD and OECD DynEmp Project data.

Note: The data for the countries in the graph are from the following time periods: France, 2000–2012; Japan, New Zealand, and Norway, 2000–2014; Austria, Belgium, Brazil, Canada, Finland, and Hungary, 2000–2015; Denmark and Italy, 2001–2015; Portugal and Sweden, 2002–2015; Spain, 2002–2015; Costa Rica, 2006–2015; Türkiye, 2007–2015.

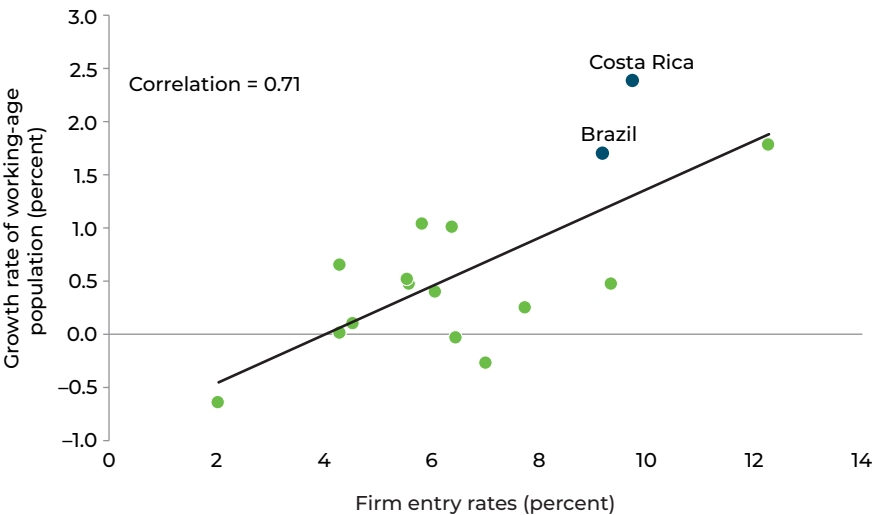
One factor that has emerged in discussions about business dynamism is demographic change. Research by Hopenhayn, Neira, and Singhania (2022) and by Karahan, Pugsley, and Şahin (2024) suggests it could account for up to 60 percent of the decline in firm entry in the United States since the 1970s, underscoring the potential macroeconomic impact of slower population growth.

When the working-age population grows, the economy must expand its productive capacity to accommodate the additional labor supply, either by creating more firms or by allowing existing firms to grow larger. Because firm size is shaped by other factors, however—such as technological constraints, regulatory burdens, and management capabilities—that are not directly tied to the size of the workforce, changes in the labor supply are more likely to be reflected in the number of firms operating in the economy. In other words, one would expect more variation at the extensive margin (the number of firms) than at the intensive margin (firm size).

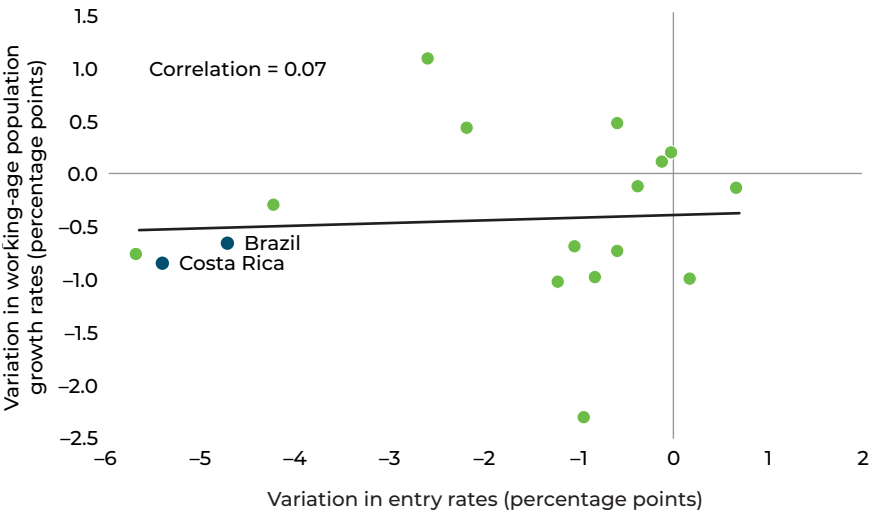
Changes in the number of firms, in turn, can result from shifts in either entry or exit rates. Panel A in Figure 6.9 shows that, across countries, firm entry rates are tightly correlated with the growth rate of the working-age population. Brazil and Costa Rica, for example, exhibit both relatively high labor force growth and some of the highest firm entry rates in the

Figure 6.9. Firm Entry and Demographics

A. Entry rates and growth rates of the working-age population



B. Changes in firm entry rates and working-age population growth rates



Source: IDB staff calculations, based on OECD and OECD DynEmp Project data.
Note: The data for the countries in the graph are from the following time periods: France, 2000–2012; Japan, New Zealand, and Norway, 2000–2014; Austria, Belgium, Brazil, Canada, Finland, and Hungary, 2000–2015; Denmark and Italy, 2001–2015; Portugal and Sweden, 2002–2015; Spain, 2002–2015; Costa Rica, 2006–2015; Türkiye, 2007–2015.

sample—above 9 percent, according to OECD DynEmp data (which exclude self-employed individuals).
This connection makes the global slowdown in population growth particularly concerning. Panel B in Figure 6.9 illustrates this trend, showing

widespread declines in labor force growth across advanced and developing economies alike. In Brazil and Costa Rica, working-age population growth has fallen by 0.7 and 0.9 percentage points, respectively. The relationship between demographics and entry is not, however, mechanically one-to-one. While Panel A highlights a strong cross-country association between population growth and entry rates, Panel B shows that changes in the former over time explain less than 1 percent of the observed variation in the latter across countries. This suggests other forces—such as policy frameworks, informality, or barriers to firm growth—also play a vital role in shaping business dynamism beyond demographic pressures.

The reallocation of economic activity across sectors and the nature of recent technological advances are also significant contributors to the recent trends in business dynamism. As analyzed by Dent et al. (2016), economic sectors differ in business dynamics as a result of differences in market structures and technologies, and many economies have undergone substantial structural transformations in recent decades, with a rapid rise in the service sector. While this shift can initially increase business dynamism, as more economic activity is linked to higher entry rates, it may contribute to the decline in business dynamism as the transformation slows.

Decker et al. (2020) provide empirical evidence, however, of declining business dynamism even within narrowly defined industries. Moreover, the slowdown has been more pronounced in traditionally dynamic, fast-growing sectors, such as high-tech industries and those that are intensive in terms of intangible assets, particularly in the United States. As suggested by De Ridder (2024), the widespread adoption of technologies, like software, can account for both increased business concentration and reduced dynamism, as they allow larger, more productive firms to expand at the expense of smaller, less productive ones.

Globalization presents yet another possible explanation. As the costs of expanding across markets decrease, either through exports or foreign direct investment, more productive businesses have incentive to expand, potentially pushing smaller, less productive firms out of the market and reducing incentives for smaller firms to enter. The relationship between business dynamism and globalization is complex, though. Increased global competition could make markets more dynamic, depending on market structures and the input–output linkages of international firms. In this sense, the recent slowdown in globalization trends, partly because of rising geopolitical risks, could also result in declining business dynamism.

Akcigit and Ates (2023) link declining knowledge diffusion to higher market concentration, increased markups, and reduced innovation and business dynamism. This decline often stems from increased market power.

Regulatory frameworks, for instance, can have a significant impact on knowledge diffusion. Weakened antitrust enforcement has allowed large firms to consolidate their market positions, making it more difficult for smaller companies to compete. The concentration limits opportunities for smaller firms to learn from industry leaders, reducing their chances of catching up. Furthermore, lobbying and political rent-seeking by large firms have intensified these challenges. Regulations such as occupational licensing and noncompete clauses also restrict job mobility and reallocation, impeding the efficient flow of knowledge throughout the economy. These barriers ultimately hinder both knowledge diffusion and innovation.

Moreover, as discussed by Schäfer and Sapi (2020), established firms, especially those controlling vast amounts of proprietary data, can protect their data-driven processes, making it harder for competitors to challenge them. Data-network effects enable large firms to enhance their services continuously, attract more customers, and generate even more data, creating a cycle that further solidifies their market positions. This restricted data sharing limits the flow of knowledge to smaller or new entrant firms, thereby stifling competition.

Also hindering knowledge diffusion is the strategic use of patent protection by large firms through the creation of “patent thickets,” which are complex networks of overlapping intellectual property rights that are frequently employed as a defensive tactic to block competitors from bringing new technologies to market. Evidence presented by Hall, von Graevenitz, and Helmers (2021) indicates that such patent strategies act as barriers to entry, especially in technology-related industries. Additionally, large firms often purchase patents from competitors before the associated knowledge can be fully utilized, further limiting the spread of innovation.

Rethinking Firm Support

Declining business dynamism across economies is a complex issue influenced by demographic changes, structural shifts, technological advancements, trends in international trade, knowledge diffusion, and regulatory frameworks. The impact on productivity growth, market concentration, and competition highlights the need for policymakers to address these trends thoughtfully. Implementing strategies that foster knowledge diffusion, enhance competition, and adapt to the evolving economic landscape will be essential for revitalizing business dynamism, particularly in regions like Latin America and the Caribbean, where the challenge is already considerable.

A key area of reform is the removal of size-dependent policies—such as tax breaks, labor rules, or credit programs that apply only to small firms.

These policies, which aim to support entrepreneurship, create thresholds that penalize growth and inadvertently discourage firms from expanding. The result is a “missing middle” in Latin America and the Caribbean: too many small, low-productivity firms and too few medium-sized, dynamic enterprises. Addressing this challenge requires rethinking the design of policies that provide firm support. Governments should replace size-based thresholds with other tools that encourage productivity, innovation, and gradual scaling.

At the same time, removing size-dependent policies may lead to a dynamic of firm exit that generates a complex tension. On the one hand, many small and unproductive firms persist not because they are competitive but because they provide livelihoods in the absence of better opportunities. In that sense, they play a social role, even if they act as a drag on aggregate productivity. On the other hand, sustained productivity growth requires that such firms eventually exit, especially as more productive ones enter the market. Breaking the vicious cycle of low productivity, limited formal employment, and weak incentives for human capital investment demands policies that go beyond competition alone. A well-designed system of social protection is essential to manage the transition, cushioning workers who may “fall through the cracks” as low-productivity firms disappear.

The Competitive Edge of Innovation

Understanding why Latin America and the Caribbean lags other economies requires taking a closer look at one of the main drivers of productivity: innovation.¹ For firms, the decision to innovate is based on an analysis of costs and benefits, both of which are shaped by market failures. Asymmetric information in financial markets, for instance, affects access to financing for innovation and increases costs, and the lack of appropriability—the ability to profit from an innovation—reduces incentives to invest in it. Innovation is also risky, with highly uncertain outcomes. These market failures create a wedge between the social and private rates of return, leading to underinvestment in innovation. While in advanced economies the median social rate of return on investments in research and development (R&D) is about 56 percent—almost twice the median private rate (Hall, Mairesse, and Pierre Mohnen 2010)—in Latin America and the Caribbean it is estimated to be even larger, reaching approximately 60 percent in countries like Chile and Mexico and 100 percent in Nicaragua (Goñi and Maloney 2017; Lederman and Maloney 2003).

Firms are motivated to innovate by market competition. A firm can gain an advantage over its competitors by implementing new processes or techniques that cut costs or introducing new products or varieties of existing ones that open niche markets where it can have some degree of market power—at least for a time. The relationship between competition and innovation is a two-way street, however, since innovation can itself influence the level of competition. An extreme case is when innovation is so radical that the innovator captures the entire market and becomes a monopoly. This complex relationship between competition and innovation

¹ A large literature examines the effects of innovation on productivity. See, for example, Romer (1990); Griffith, Redding, and Van Reenen (2004); Hall and Mairesse (2006); Griffith et al. (2006); Syverson (2011); Doraszelski and Jaumandreu (2013); Aghion et al. (2017); Akcigit, Grigsby, and Nicholas (2017); and Bell et al. (2019).

has generated abundant empirical research, mostly in advanced countries (Aghion, Antonin, and Bunel 2021; Cohen 2010).

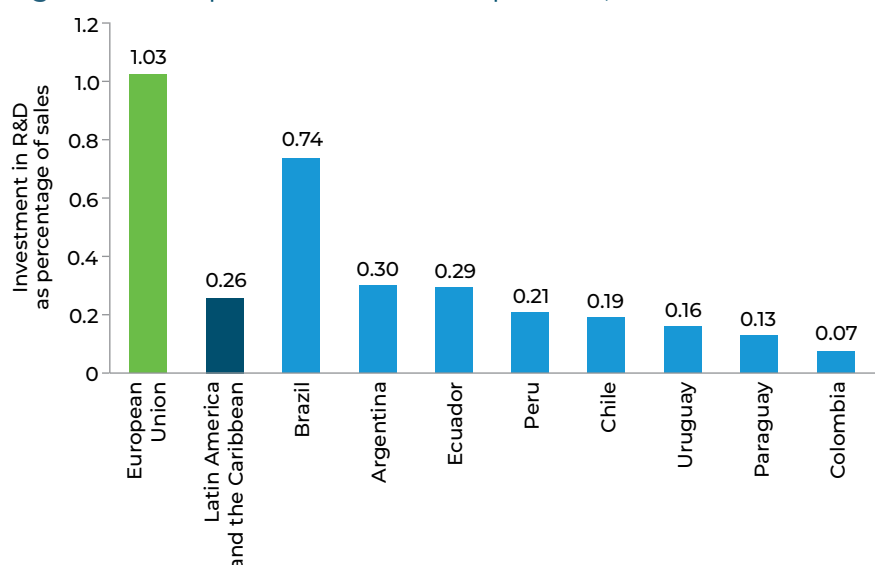
This analysis highlights how market competition could increase innovation in Latin America and the Caribbean, in particular among firms close to the technological frontier. It also provides insights on the need to consider market competition in the design of innovation policies.

A Region of Low Innovation and Technology Adoption

Innovation can take many forms. Defined as a new or significantly improved product or process relative to a firm's previous offerings or practices (OECD/Eurostat 2018), it may include adopting technologies or products already in use elsewhere. Innovations can transform industries, or they may achieve incremental changes. As a result of this variation, the impacts of innovation on firms and markets can also vary substantially. Innovation strategies reflect these differences; while some firms conduct in-house R&D, others rely on external providers or purchase ready-made technologies (Cassiman and Veugelers 2006). The type of innovation pursued also determines the means by which firms protect their innovations, such as through applying for patents, imposing nondisclosure agreements, or other such practices.

The level of investment in innovation activities—including R&D expenditure, licensing, training, machinery acquisition, knowledge transfer, engineering, design, and market research—is lower in Latin America and the Caribbean than in other regions. While the average firm in an advanced economy spends almost 4 percent of sales on innovation activities, the typical firm in Latin America and the Caribbean spends around 2.5 percent (Crespi et al. 2014). Figure 7.1 highlights the large difference in R&D investment between the European Union and countries in Latin America and the Caribbean; for the average EU firm, the investment is 1.03 percent of sales, while in Latin America and the Caribbean as a whole it only reaches 0.26 percent. In addition, the types of innovation activities in the region differ from those in more advanced economies; the main source of innovation is not investment in R&D but, rather, in the adoption of technology, mostly in the form of imported machinery (Figure 7.2). The average firm in the region spends only 20 percent of its innovation investment on R&D, compared to 50 percent in Organisation for Economic Co-operation and Development (OECD) countries not in the region.

An analysis of firm characteristics in Caribbean countries reveals that the majority are small (57.6 percent) or medium-sized (32 percent), based on a sample of 1,979 firms from 13 Caribbean economies (Beuermann et al. 2024). Innovation patterns in the Caribbean broadly mirror those observed

Figure 7.1. Comparative Levels of R&D Expenditure, circa 2016

Source: IDB staff calculations, based on LAIS and Eurostat.

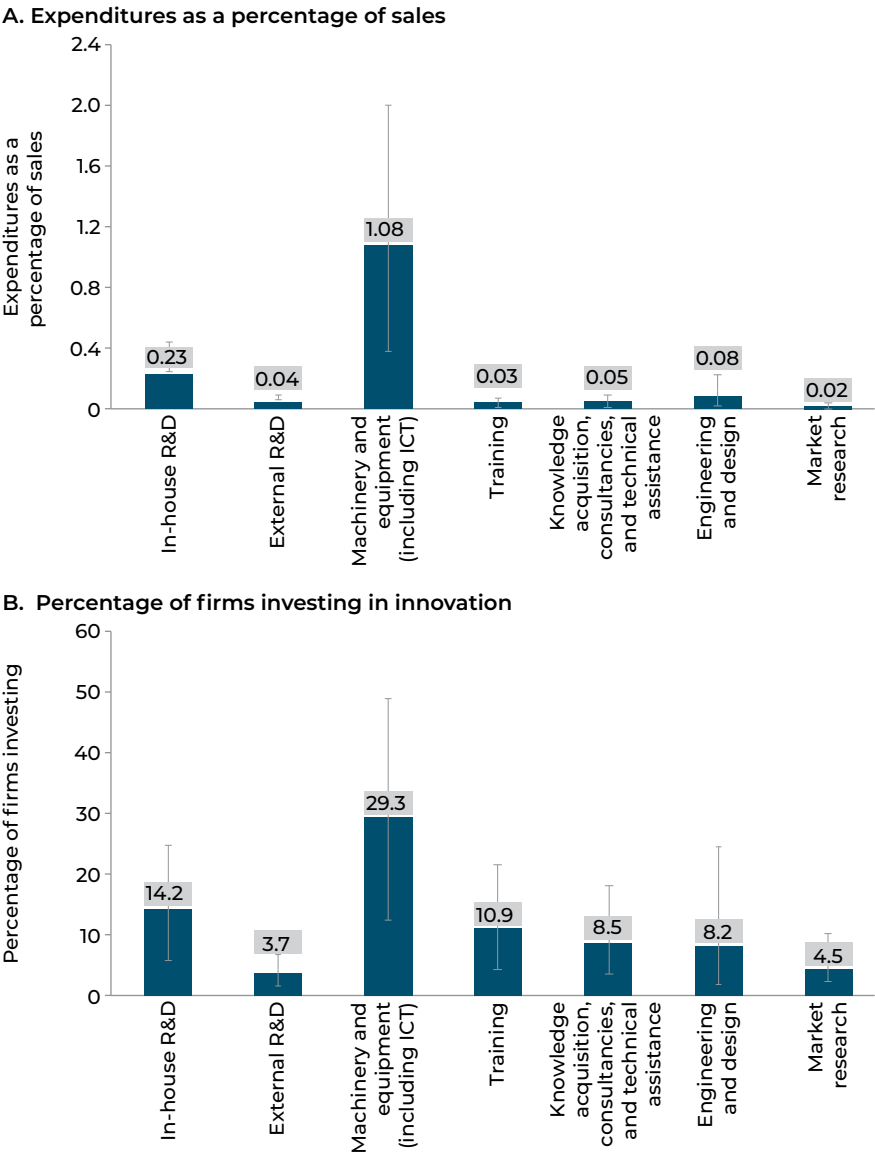
Note: The bars represent the percentage of investment in R&D relative to sales. For the EU, the data are from 2018 and, for the countries in Latin America and the Caribbean, from the most recent survey available in the database (Argentina 2017, Chile 2017, Colombia 2017, Ecuador 2015, Peru 2015, Paraguay 2016, and Uruguay 2016). The value for the region is based on those for the individual countries.

in Latin America. Overall, 40.5 percent of Caribbean firms are classified as innovative. At the sectoral level, 41.6 percent of service-sector firms report engaging in innovation, compared to 34.5 percent of firms in the manufacturing sector. Regarding firm size, large enterprises exhibit the highest propensity to innovate (79 percent), although a substantial share of medium-sized firms also undertake innovative activities (62.6 percent).

Firm-level data from the Inter-American Development Bank's Harmonized Latin America Innovation Surveys Database (LAIS, c. 2016)² and Pesquisa de Inovação (PINTEC 2017) also highlight the low level of investment in innovation in the region, where only 33 percent of firms invested in any such activity. The countries differed significantly in this respect. Argentina had the highest firm investment in innovation at 61 percent, followed by Peru at 58 percent and Ecuador at 40 percent. In Paraguay and Uruguay, about one-third of firms invested in innovation. In Brazil, only the 29 percent invested, while Chile 26 percent did. Colombia had the lowest rate at just 16 percent.

² LAIS includes firm-level data from Argentina, Chile, Colombia, Ecuador, Paraguay, Peru, and Uruguay from the period 2009–16 for twenty-four manufacturing industries, based on the International Standard Industrial Classification (ISIC Rev. 4).

Figure 7.2. Innovation Investment in Latin America and the Caribbean, by Innovation Type, circa 2016

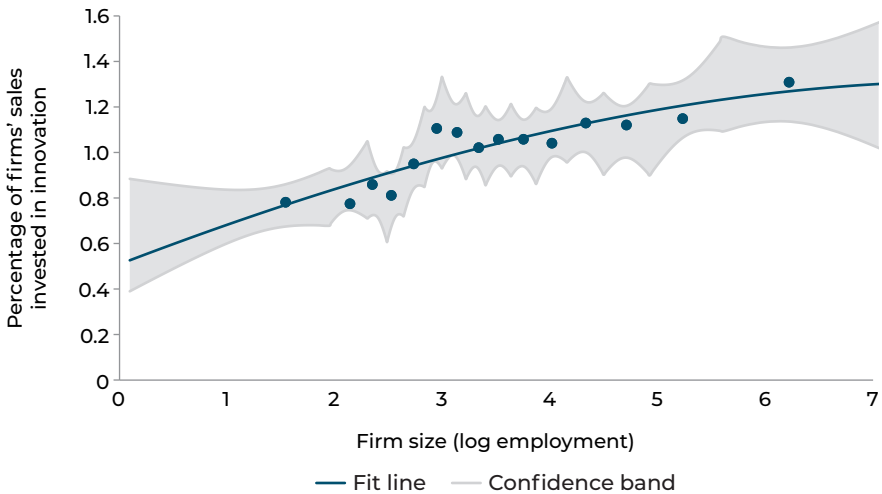


Source: IDB staff calculations, based on LAIS.
Note: The bars in the figure show the average, while the bracketed vertical lines indicate the range overall. Panel A shows the range of expenditures on innovation activities and Panel B the range of the share of innovators across countries. Data are from the most recent survey available in the database (Argentina 2017, Chile 2017, Colombia 2017, Ecuador 2015, Paraguay 2016, Peru 2015, and Uruguay 2016). Data are not available for Argentina in the market research category or for Chile or Peru in the knowledge acquisition, consultancies, and technical assistance category.

Who Are the Innovators?

Investments in innovation vary significantly by firm size and age, with larger and more mature firms more likely to invest. In Latin America and the Caribbean, 63 percent of large firms overall invest in innovation activities, compared to 43 percent of medium-sized firms, 28 percent of small firms, and only 10 percent of micro firms.³ This is clearly observable in Figure 7.3, which shows the relationship between firm size, measured as the logarithm of employment, and innovation effort, measured as the percentage of firm sales invested in innovation. The type of innovation investment also differs by firm size: Small firms mostly invest in information and communications technology (ICT) machinery, while large ones invest more in in-house R&D. Similarly, age and investment in innovation are positively related. While 36 percent of young firms (5 years of age or less) invest in innovation, this figure rises to 42 percent among firms older than 15 years.

Figure 7.3. Firm Size and Innovation Effort, circa 2016



Source: IDB staff calculations, based on LAIS.

Note: The figure displays a binned scatter plot showing the relationship between the share of innovation investment (as a percentage of sales) and firm size, measured as the logarithm of employment. The analysis controls for export status and includes fixed effects for the country, year, and sector. Sector classification follows the ISIC Rev. 4 system, using the most detailed level available (two-, three-, or four-digit) for each firm. The binning methodology is based on Cattaneo et al. (2024; 2025). The fitted line represents a polynomial regression estimated on the binned data, and the shaded areas denote 95 percent confidence intervals.

³ Firms are classified by size according to the number of employees. Micro firms have fewer than 10, small firms between 10 and 49, medium-sized firms from 50 to 199, and large firms more than 200.

Taken together, the relationship among size, age, and innovation activity shows that innovation investment is related to firm growth. Among large firms in the region, 66 percent of those more than 15 years of age invest in innovation, compared to 47 percent of younger ones. Interestingly, the opposite is observed among small firms; 36 percent of young small firms invest in innovation, compared to only 28 percent of mature ones. Moreover, the innovation effort is greater among young small firms, which invest an average of 2.2 percent of their sales.

An important reason larger and more mature firms innovate more than smaller and younger ones is access to finance. For smaller firms, limited access to credit is a significant barrier to adopting new technologies. Chapter 5 shows how competition in the financial sector affects access to credit in the region. Innovation investments also vary considerably by sector. Computer, electronic, and optical products have the most firms investing in innovation (53 percent), followed by chemical products (46 percent), motor vehicles (45 percent), and pharmaceuticals (43 percent). In line with levels in advanced countries, the industries spending the most on innovation as a proportion of sales are those producing computer, electronic, and optical products (1.9 percent), other transportation equipment and nonmetallic minerals (1.6 percent), and pharmaceuticals and basic metals (1.5 percent). In contrast, firms in the apparel and furniture sectors are the least likely to innovate (18 percent), spending an average of 0.4 percent and 0.5 percent, respectively, of sales on innovation.

As shown in Table 7.1, exporters in Latin America and the Caribbean invest significantly more in innovation, particularly in R&D, than the average firm in the region,⁴ with 50.9 percent reporting having introduced a product or process innovation. The close link between firm innovation and exports is most likely bidirectional, with innovation making firms more productive and more productive firms more likely to export (Melitz 2003). At the same time, exporters face more competition in the global market than local firms do in the local market, especially if they export differentiated products, which places them under constant pressure to innovate. Interaction with foreign customers, competitors, or intermediaries also makes the exporters more innovative, as they gain access to frontier technologies and knowledge that may not be available locally (Akcigit and Melitz 2022). The ability to incorporate these technologies to improve production processes further is, therefore, crucial.

⁴ The average firm in LAIS in the countries analyzed in this chapter is larger than the average firm in Latin America and the Caribbean. The average number of employees in this sample is 98.9.

Table 7.1. Innovation Inputs and Outputs, by Exporter Status, circa 2016

	Total firms (99,323)		Exporters (29,456)		Multinationals (4,602)	
	Mean	SD	Mean	SD	Mean	SD
1. Innovation inputs						
Innovation expenditures (proportion of sales)	0.01	0.03	0.02	0.03	0.02	0.05
R&D expenditures (proportion of sales)	0.00	0.01	0.00	0.01	0.00	0.02
Other innovation expenditures (proportion of sales)	0.01	0.04	0.01	0.04	0.02	0.05
2. Innovation outcomes						
Innovators (proportion of firms)	0.33	0.47	0.51	0.49	0.52	0.49
Valid patent (proportion of firms)	0.04	0.18	0.06	0.23	0.16	0.37
Product innovation (proportion of firms)	0.28	0.44	0.42	0.49	0.44	0.49
Process innovation (proportion of firms)	0.29	0.45	0.41	0.49	0.46	0.49
3. Firm characteristics						
Age	23.00	18.12	28.14	20.73	26.00	20.77
Small (proportion of total)	0.65	0.47	0.38	0.48	0.34	0.47
Medium-sized (proportion of total)	0.24	0.42	0.37	0.48	0.31	0.46
Large (proportion of total)	0.10	0.30	0.25	0.43	0.35	0.47
Employees	99	313	212	519	346	813

Source: IDB staff calculations, based on LAIS.

Note: LAIS includes firm-level data from Argentina, Chile, Colombia, Ecuador, Paraguay, Peru, and Uruguay for 2009–16. Multinationals are those firms that have more than 10 percent foreign capital. "Valid patent" refers to whether the firm has at least one valid patent at the time of the survey. SD = standard deviation.

Multinational firms innovate even more than exporters. In fact, 52 percent of multinational firms in Latin America and the Caribbean report a process or product innovation. Interestingly, multinationals are much more likely to use patents to protect their intellectual property (16 percent) than exporters (5.6 percent) and firms in the sample overall (3.6 percent). Multinationals also play a catalytic role in local markets by helping spread innovation and improve local firm performance. These spillovers can occur through the diffusion of processes and technology or labor turnover. Alfaro-Ureña, Manelici, and Vásquez (2022), for example, find that domestic firms in Costa Rica

experience strong and persistent gains in performance after supplying their first multinational buyers. After four years of selling to a multinational for the first time, domestic firms have 33 percent more sales, 26 percent more employees, 22 percent more net assets, and 23 percent more total input costs. In addition, the increase in total factor productivity ranges between 4 percent and 9 percent. This is mainly the result of companies' adopting better management and organizational practices, developing higher-quality products, and improving their reputations. The next chapter further discusses the role of multinationals in shaping product markets in the region.

Competition-Driven Innovation

Competition can be a powerful driver of innovation. In a competitive environment, firms are under constant pressure to improve their products, lower costs, and adopt more efficient technologies to survive and grow. This pressure acts as a stimulus for innovation to “*escape from competition*” (Aghion et al. 2005). When firms are neck-and-neck with rivals, innovation offers a way to leap ahead, stand out, and earn higher profits. These incentives to innovate are especially strong among firms with similar productivity levels.

The incentives are also stronger among firms in competitive markets because the opportunity cost of introducing innovation is lower than in non-competitive ones. Arrow (1967) describes a “replacement effect,” in which monopolistic firms are less inclined to innovate if new products would displace their existing profitable ones. In competitive markets profits are zero, and this opportunity cost is lower.

In addition, competition creates incentives to reduce costs through innovation. According to Raith (2003), when demand is more responsive to price changes, firms can capture market share by finding ways to become more efficient. The most efficient firms benefit the most, which encourages innovation in technologies and organizational practices. While competitors may respond by lowering prices (which could diminish the gains), Raith finds the positive incentive to reduce costs tends to dominate.

Further fuel for innovation, productivity, and economic growth is provided by competition from new market entrants and disruptors (Acemoglu and Cao 2015).⁵ Entrants challenge incumbents by introducing new products, technologies, or business models, often with radical innovations. This process of *creative destruction* (discussed in depth in Chapter 6) sometimes

⁵ A market disruptor is a company, usually a new one, that disrupts or takes over an existing market by introducing a new product or idea.

forces established firms to exit the market but can often give them incentive to innovate in response (Aghion et al. 2008).

Increasingly, empirical evidence documents these effects. Criscuolo, Haskel, and Martin (2004) find that competition in manufacturing in the United Kingdom leads to productivity gains through organizational improvements, while Correa and Ornaghi (2014) and Hashmi (2013) find it increases innovation in U.S. manufacturing. Griffith, Harrison, and Simpson (2010) show that procompetitive reforms under the EU's Single Market Program led to higher R&D spending, and Qian (2008) shows how Chinese firms improved the quality of their products after the entry of firms that produced counterfeits.

Competition does not always lead to more innovation among incumbent firms, however. The relationship between competition and innovation is usually more subtle. Competition can reduce the profits expected from the investment in innovation and, therefore, the incentives to innovate (Schumpeter 1943); this possibility is at the core of innovation policy (discussed in the next section, below). Aghion et al. (2005) propose a model to reconcile both the positive and negative effects of competition on innovation incentives. In it, the relationship between competition and innovation is nonlinear; in less competitive settings, more competition boosts innovation but, beyond a certain threshold, may reduce it. This is because competition affects leaders and followers in different ways. In industries where some firms are much more productive than others, the laggards may lack incentive to invest in costly innovation, since they have little hope of catching up. The leaders, facing no real threat, may also reduce their innovation efforts. The result is an inverted U-shape: Innovation increases with competition up to a point, then declines.

While evidence for Latin America is limited, recent studies suggest that competition there can foster innovation, particularly among mid- to high-productivity firms. Ponce and Roldán (2015), using data from Uruguay for 2004–12, find that higher domestic competition increased the likelihood of firms pursuing innovative activities. Similarly, according to Benavente and Zúñiga (2022), reforms improving competition law and its enforcement boosted firm investment in innovation in Chile. Crespi et al. (2017) find an inverted-U relationship between competition and innovation in Caribbean countries. They also show, however, that existing levels of competition in the Caribbean remain below this threshold and, therefore, more competition can increase innovation. Evidence indicates competition may also discourage innovation, especially among lagging firms. Cusolito, Garcia-Marin, and Maloney (2023) find that increased foreign competition from China reduced innovation among less productive Chilean firms, with only the 10 percent most productive firms

maintaining or increasing innovation efforts. Benavente and Zúñiga (2022) find an inverted-U-shaped relationship between competition and innovation in Colombia, with competition encouraging innovation primarily among firms with medium productivity levels. De Elejalde, Ponce, and Roldán (2022) find foreign competition associated with lower innovation investment in Uruguay, especially among less productive firms.

These apparently inconclusive results on the effect of competition in Latin America and the Caribbean, which echo global findings, are explained by the theory (and its supporting evidence) that competition increases incentives for leaders to innovate and decreases incentives for firms far from the frontier (Aghion, Antonin, and Bunel 2021). This could be driving the findings by both Cusulito, Garcia-Marin, and Maloney (2023) in Chile and De Elejalde, Ponce, and Roldán (2022) in Uruguay. If firms face strong competition from Chinese imports, for instance, and they perceive the increase in productivity needed to compete as too high, they might decide investing in innovation is not worth it. These types of results are standard in firm dynamics literature, where only the most productive firms survive and grow. They could also be amplified if firms are financially constrained (Aghion, Fally, and Scarpetta 2007).

Evidence from Trade Liberalization

Episodes of trade liberalization provide important evidence on the effects of competition on innovation. These episodes tend to be somewhat exogenous to firms' decisions to innovate and, at the same time, they tend to put competitive pressure on domestic firms. They also create opportunities, however. Bernard, Redding, and Schott (2007) show how an exogenous reduction in trade costs simultaneously generates employment expansion and productivity improvements in sectors in which a country has a comparative advantage and an intense turnover of firms within each sector. They find that less productive firms exit the market, while the more efficient ones expand their scale and export capacity. This mechanism of creative destruction raises the productivity threshold necessary for survival and contributes to aggregate efficiency gains. Similarly, Pavcnik (2002) finds empirical evidence of this phenomenon in Chile, where trade liberalization in the 1970s resulted in significant productivity gains at the plant level, especially in sectors exposed to external competition. Thus, increased international competition caused by trade policy raises the efficiency standards required to compete, which, in turn, influences decisions by firms to innovate.

Trade liberalization also alters technological conditions and access to materials and other inputs, transforming firms' incentives to acquire new

technologies and introduce new products to the market. A central channel in this relationship is the availability of imported intermediate inputs, which can affect both the costs and technological possibilities of domestic firms. In a study of India during a process of trade liberalization in the 1990s that was centered on a sharp reduction of tariffs on intermediate inputs, Goldberg et al. (2010) find that the sectors most exposed to liberalization registered a significant expansion in the variety of manufactured products, suggesting a direct link between access to inputs and the creation of new products. This dynamic is not only explained by a reduction in the prices of existing inputs but by the incorporation of new inputs that were previously inaccessible, allowing firms to overcome technological restrictions and expand their production frontiers. In fact, it is estimated that access to new imported varieties of inputs reduced the input price index by an additional 4.7 percent per year, compared to the price effect on those already available. These findings indicate that openness to trade in intermediate inputs not only improves efficiency in static terms; it operates as a dynamic growth engine by facilitating product innovation, especially in developing economies with preexisting technological constraints.

As well as doing so by generating competitive pressures, trade liberalization can act as a trigger for innovation within firms by expanding the space for technological reorganization and strategic redefinition of the products the firms supply. This innovation can manifest itself in different ways, such as through the adoption of more skill-intensive technologies that modify the structure of the labor force or a reallocation of productive effort toward more profitable and competitive products. Along these lines, Bustos (2011) shows that the regional opening induced by the Southern Common Market (MERCOSUR for its Spanish initials) trade bloc led the most productive Argentine manufacturing firms to adopt more skill-intensive technologies. This translated into a sustained increase in the demand for skills and a reorganization of productive processes intended to reap the benefits of exporting. In this case, innovation took the form of skill upgrading, driven by the crossing of a scale threshold that enabled the incorporation of the new technologies.

Bernard, Redding, and Schott (2010) point out that the reduction in international trade costs also affects product innovation and the supply of products. When faced with fixed costs for each variety of product exported, firms adjust their portfolios by abandoning less successful products and concentrating on those that perform better in international markets. Thus, trade encourages a process of selective innovation, where the rationalization of the portfolio implies not only a reduction in the variety of products but an improvement in the average quality of the export supply. Taken together, both studies show that trade liberalization both allows access

to new markets and induces internal transformations that push firms to innovate, through either investments in human capital or a strategic reconfiguration of their production. Chapter 8 further studies how international trade affects competition in the domestic market.

The Role of Finance

Commercial banks play a vital role as intermediaries that allocate resources to projects with innovation potential. A more competitive and developed banking system reduces intermediation margins, increases the availability of credit, and improves the allocation of resources. This is crucial for fostering innovation, particularly for small firms that rely heavily on external financing.

Amore, Schneider, and Žaldokas (2013) take advantage of a common shock—the staggered deregulation of banking activities across the United States during the 1980s and 1990s—and show that this reform allowed the geographical expansion of banks and promoted innovation among publicly traded manufacturing firms. They argue that greater geographical diversification reduced aggregate risk and fostered banks' willingness to take risks, expanding access to credit and facilitating bolder innovation policy. Deregulation served to relax financial constraints for firms with risky and ambitious projects.

Similarly, Benfratello, Schiantarelli, and Sembenelli (2008) show that the development of the banking system in Italy during the 1990s had a positive effect on innovative activities by firms. They find that banking development affected the probability of process innovation, particularly for firms in high-tech sectors and sectors more dependent on external finance and for small firms. They also find some evidence that banking development reduced the cash flow sensitivity of fixed investment spending, particularly for small firms, and that it increased the probability these firms would engage in R&D. Chapter 5 further discusses the effects of competition in financial markets.

Beyond the structure of financial markets, the ownership structure of firms can affect innovative outcomes. The rise of common ownership—where institutional investors hold significant shares in competing firms—has prompted growing interest in its implications for market dynamics and innovation. While improved access to credit can relax financial constraints and foster innovation, as shown in the evidence above, common ownership may influence firm behavior through different channels. By internalizing the effects of competition across firms, common owners may either dilute or reinforce incentives to innovate, depending on the nature of technological spillovers and product market rivalry. These complex dynamics are further explored in Box 7.1.

Box 7.1. Common Ownership and Innovation

The phenomenon of common ownership has resulted from the increasing concentration of corporate-share ownership in the hands of large institutional investors, who now have significant stakes in competing companies. This trend has raised concerns about diminished competition, as companies can soften their competitive behavior by internalizing the impact of their decisions on the earnings of their competitors (Gilje, Gormley, and Levit 2020).

In one study, Ederer and Pellegrino (2024) model how this concentration of common ownership in the United States affects economic welfare. In their analysis, firms are interconnected through two networks, one representing ownership overlap and the other reflecting product market rivalry. They find that common ownership generates unilateral incentives to reduce competition, and that the magnitude of this effect depends on the degree to which the two networks coincide. The results show that the welfare cost of common ownership increased almost ninefold between 1995 and 2021.

Although this analysis focuses on a single mechanism—the generation of incentives to reduce competition—common ownership could have broader implications, such as effects on innovation. The relationship between common ownership and innovation is multifaceted, shaped by technological spillovers and product market competition. On the one hand, common ownership can mitigate the appropriability problem, because innovation benefits spill over to other firms from the same conglomerate. On the other, it may dampen incentives to innovate in competitive markets, where an innovator's gains from capturing market share come at the expense of rivals owned by the same investors. These opposing forces mean that the effects of common ownership on innovation depend on the relative importance of technological and product market spillovers.

Further research by Antón et al. (2025) elaborates on this link, revealing that, in firms with high technological spillovers, common ownership may provide incentive for innovation because the owners benefit not just from one company's success but from the positive effects it has on the other. In markets where competition among products is high, however, the result may be the opposite, as incentives to gain market share decrease. Moreover, these effects vary significantly by type of institutional ownership and market structure. In general, the study finds that common ownership and corporate innovation are positively related when technology spillovers are large relative to the effect in the product market, and negatively related otherwise.

In sum, while common ownership appears to have both bright and dark sides for innovation, further research is essential to disentangle these effects and inform policies to balance competition and innovation.

Competition and the Effectiveness of Innovation Policy

Many countries around the region have established programs and policies to promote innovation by firms, including the provision of R&D subsidies, matching grants, R&D tax incentives, and the protection of intellectual property rights (IPRs). These policies are justified by the idea that innovation tends to benefit more than just the innovator. Given that knowledge is a non-rival and only partially excludable good (Arrow 1962; Nelson 1959),⁶ a discovery by one firm can trigger new avenues of research, inspire new research projects, lead to new applications, or simply be imitated by other firms (Hall and Lerner 2010). These knowledge spillovers create a wedge between private and social returns and generate disincentives for private investment in innovation.

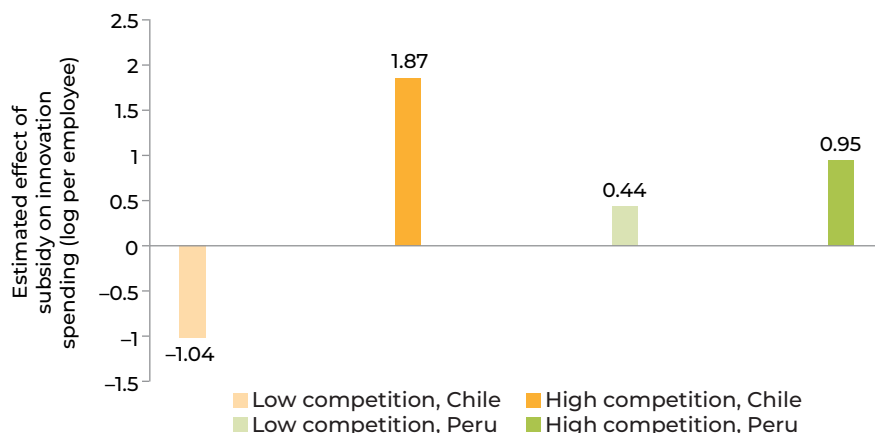
Although literature on the effectiveness of programs promoting innovation is ample,⁷ much less is known about how competition may affect it. Given the close relationship between competition and incentives to innovate, the degree of market competition should be an important consideration when using R&D subsidies as a policy instrument. A firm that has no rivals that would benefit from its investments in innovation activities should not be subsidized. Firms that operate in competitive markets, on the other hand, who may be willing to innovate to “escape from competition,” may be reluctant to do so if they have concerns about their innovations being appropriated by others. In these cases, innovation subsidies could correct market failures by increasing the private returns on innovation investment. Meanwhile, a firm operating in a market without credible rivals might be unwilling to invest in innovation even in the absence of appropriability concerns because it has no competition to escape from. In this situation, policy intervention could lead to the complete replacement of private investment (that is, it could produce a *crowding-out effect*).

One of the few studies to explore this issue is by Aghion et al. (2015), who find that industrial policies used in China—subsidies, loans, tariffs, and tax incentives—over the period 1998–2007 were only effective in promoting productivity growth in medium and large firms if policy instruments were allocated to competitive sectors, and in a way that preserved or increased competition—for example, by spreading the subsidies among firms instead of concentrating them in a particular “champion”; by fostering entry; or by focusing on new firms.

⁶ That is, “non-rival” because one firm can use knowledge without preventing others from using it, too, and “partially excludable” because it is difficult to fully prevent others from benefiting from it, even with mechanisms like patents.

⁷ See, for example, Hall and Maffioli (2008) and Crespi et al. (2024).

Figure 7.4. Subsidies and Competition in Chile and Peru
(Effects on Innovation Spending)



Source: IDB staff calculations, based on Benavente and Zuniga (2021).

Note: The outcome variable is the investment in innovation net of public subsidy per employee (in natural logarithm). Investment in innovation follows exactly the definition in the *Oslo Manual* (OECD/Eurostat 2018) and covers all forms of firm activity dedicated to innovation, including all expenses related to internal and external R&D activities; technology acquisition (for example, payments of royalties or fees concerning technology licensing and other forms of technology purchasing); royalty payments concerning the licensing of intellectual property or know-how; the acquisition of new machinery and equipment related to R&D and innovation activities; the acquisition of software or hardware supporting R&D and innovation activities; and training associated with innovation or technology adoption activities. The explanatory variables used to estimate the propensity score are pretreatment firm and industry characteristics. Estimation uses Nearest Neighbor matching with five neighbors and with matching restricted to firms in the same industry-year. Coefficients for high competition in Chile and Peru are statistically significant at 5 percent and 1 percent, respectively.

In Latin America and the Caribbean, evidence is also scant. Benavente and Zúñiga (2021) study the impact of innovation subsidies, in the form of matching grants,⁸ on firm-level investment in innovation in Chile and Peru, considering the degree of competition in the product markets. Figure 7.4 summarizes their results. As the figure shows, subsidies had a significant impact in Chile in terms of innovation investment only in highly competitive industries, as measured by the Boone indicator.⁹ Similarly, firms in Peru receiving subsidies increased investment in innovation in highly competitive industries, with no significant effects for less competitive ones.

These results highlight the importance of examining market context—which is usually not considered by the region's innovation agencies—in the

⁸ Matching grants are a form of public subsidy that require cofinancing from the beneficiaries. This policy instrument is a common feature of government funding programs worldwide (Hall and Maffioli 2008).

⁹ The Boone indicator captures the intensity of competition by measuring how profits change as a result of changes in the marginal cost.

design and implementation of innovation policies. They also signal the need to improve the relationship between innovation and competition policies. Moreover, Aghion, Howitt, and Prantl (2015) show that the effect of pro-competitive reforms induced by the European Union in 1992 enhanced, on average, innovation investments in manufacturing industries only in those countries with strong patent rights, and they find that the positive response to procompetitive reform is more pronounced in industries in which innovators tend to value patent protection more than in other industries.

How Innovation Transforms Markets

Thus far, this chapter has been about the ways in which competition can affect innovation. This last section explores how innovation can both foster and restrict competition. To begin, innovation (and innovation policy) can increase competition by, for example, reducing firm entry costs or improving firms' access to information. The introduction of technologies that give producers better access to information can strengthen competition and improve market efficiency. In an analysis of mobile phone adoption in Kerala, India, Jensen (2007) shows that real-time access to information facilitated by ICTs drastically reduced price dispersion, eliminated product waste, and improved efficiency by enhancing competition. This change not only increased producers' profits by an average of 8 percent; it reduced consumer prices and raised consumer surplus. Similarly, Goyal (2010) examines the impact of technological intervention in soybean markets in Madhya Pradesh, India, through the installation of rural kiosks that provide access to price information. Goyal finds this innovation reduced the market power of intermediaries, increased the prices received by farmers by 1–3 percent, lowered price dispersion across *mandis* (regulated markets for agricultural produce), and led to a significant 19 percent increase in the area cultivated with soybeans.

The effect of innovation policy on competition is not always positive, however. In some cases, poorly designed innovation policies may reinforce the market power of incumbent firms. If innovation subsidies are concentrated among large firms, for example, they may limit entry and reduce aggregate innovation. This negative effect is more likely in the case of tax incentives than direct subsidies, because tax incentives are conditional on firm profits (Crespi et al. 2014).

Another dimension to consider is the role of intellectual property rights, which could restrict competition. The tradeoff is even clearer than with subsidies and tax incentives. By design, an IPR stimulates innovation by giving a firm the right to exclude others temporarily from using a new idea commercially so the originator can reap the returns on its investment in developing it.

In exchange, the owner must disclose the invention so anyone can improve upon it. IPRs can also generate unintended consequences, however, as they cause a static market distortion in the form of monopoly power for the originator and slower diffusion of the protected technology to other producers, who must pay a higher cost for access to it. In other words, IPRs solve the market failure associated with the public nature of much of the technological knowledge but at the cost of creating market distortions, for which the increased incentives to innovate may or may not compensate (Boldrin et al. 2011).

These considerations are valid for both advanced and developing countries, and they call for careful coordination between IPR protection and competition policy. Indeed, research in the United States suggests that the reduction in business dynamism and innovation performance in the economy in recent years is strongly related to reforms that have led to patent concentration in established firms and an increase in patent litigation—outcomes that have harmed technology diffusion from frontier to laggard firms and reduced the innovation incentives for startups (Akcigit and Ates 2023). In a related study, Argente et al. (2023) find that large firms focus on patents that protect their current positions without generating real technological advances. They find that such “strategic patents” account for 61.6 percent of patent applications by average firms and 83.5 percent by the largest, leading to 2.5 percent less “creative destruction” in the economy compared to a scenario without them. Similarly, Akcigit, Pearce, and Prato (2025) show that politically connected firms often innovate less, using their influence to block competitors rather than develop new products. This deters entry and reduces sector-wide innovation and productivity. In short, in some cases, patents do not foster innovation but can instead hinder competition and economic growth.

To the same extent a strong but badly designed IPR system could stifle competition and innovation, a weak but equally badly designed one could strangle it. In a study of the shortcomings of the patent system in China and their implications for innovation and economic growth, Branstetter, Hanley, and Zhang (2023) find that although the country is the world’s largest generator of patents, weak penalties for infringement and the prevalence of incremental patents discourage investment in substantive inventions. Using a theoretical model of endogenous growth, they show that these weaknesses constrain technological progress and welfare, favoring an equilibrium where firms pursue smaller, less risky, and less transformative innovations. In response to these problems, the authors propose several reforms to improve the patent system, such as increasing application and renewal fees, improving the quality of patent evaluations, and creating a post-grant review system to clean up low-quality patents. The policy implications of these proposals are of global relevance, especially for developing

economies facing challenges in their intellectual property systems similar to those of China.

A final source of concern relates to “killer acquisitions,” where dominant firms acquire innovative startups only to shut them down, thereby eliminating potential competition. This strategy helps incumbents preserve their market power but reduces future innovation (Cunningham, Ederer, and Ma, 2021), reflecting the classic monopolist disincentive to innovate. While the risks of this happening should be considered in policy design, banning acquisitions altogether may also reduce startup incentives, as acquisition often serves as an exit strategy. Letina, Schmutzler, and Seibel (2024) argue that overly restrictive policies may unintentionally reduce innovation, particularly in markets where acquisition is the primary path to profitability.

Harnessing Competition for Innovation

More competitive markets can play a central role in fostering innovation in Latin America and the Caribbean. By pressuring firms to improve efficiency, upgrade technologies, and introduce new products, competition creates incentives to innovate that are stronger than in more protected environments. Firms closer to the technological frontier are the most likely to respond, driving productivity growth and, in turn, broader economic development. Conversely, markets with weak competition carry the risk of entrenching incumbents, lowering incentives to innovate, and slowing technological diffusion.

For policy, the implication is clear: Innovation strategies cannot be designed in isolation from market structure. Subsidies, tax incentives, and intellectual property protection can only be effective if they are aligned with a competitive environment. Otherwise, they risk reinforcing the market power of dominant firms, discouraging entry, and undermining dynamism. Integrating competition policy into the design of innovation policy would not only make support more effective; it would reduce the likelihood of creating distortions that limit the benefits of innovation for the wider economy.

The bottom line is that policies to stimulate innovation should be explicitly conditioned on, and complemented by, efforts to strengthen competition. This requires coordination between innovation agencies and competition authorities, careful attention to market concentration, and mechanisms to ensure that support reaches firms that have both the incentive and the capability to innovate. Only by embedding innovation policy within a competitive framework can the region unlock its potential for productivity growth and ensure that innovation contributes to more dynamic and inclusive development.

Regional Integration and Market Power

Cross-border trade and the global reach of firms have changed who competes with whom. A refrigerator assembled in Mexico may use steel from Brazil, compressors from the United States, and electronic components from Costa Rica. A car built in Argentina may rely on leather seats from Uruguay and design services from Brazil. These connections link domestic markets to regional and global production networks. When foreign products enter more easily, or when multinational companies stretch production across borders, the pressure on local firms shifts. Prices may fall. Some producers gain ground, while others exit. Whether competition intensifies—and who benefits—depends on how global markets interact with local ones. This chapter explores that interaction: how cross-border integration affects competition, how firms respond, and what it all means for prices, productivity, and economic power.

Global trade has undergone major transformations in recent years. Supply chains are being reshaped, new technologies are redefining how firms compete, and geopolitical tensions are pushing countries to rethink their economic strategies. For Latin America and the Caribbean, these changes present both opportunities and challenges.

At the heart of these shifts lies an often overlooked factor: market power. As firms have grown larger, more integrated, and increasingly dominant, their ability to set prices, shape markets, and influence policy has grown, too. This concern extends beyond advanced economies. High levels of market power already shape many industries in the region, and rising protectionism and geopolitical tensions risk making competition even weaker. The stakes are high. As seen in previous chapters, when firms can raise prices above competitive levels, consumers pay more, innovation slows, and investment declines. The outcome includes higher prices, weaker growth, less dynamism, and greater inequality. These effects are magnified in Latin America and the Caribbean, where many markets are already fragmented, institutions are weaker, and access to finance and infrastructure is uneven.

Understanding how international trade and cross-border investment interact with product market power is particularly relevant for Latin America and the Caribbean. Several questions emerge: To what extent has greater openness influenced market concentration and competition in the region? How do changes in competitive pressure shape firms' decisions around pricing, investment, and innovation? And what role can policy play in ensuring integration supports more dynamic and inclusive markets?

The link between openness and competition is not always straightforward. While trade and foreign investment often raise competitive pressure—encouraging firms to innovate and improve efficiency—these effects are not guaranteed. In markets that are already concentrated, or where global supply chains are dominated by large multinational corporations, openness can sometimes reinforce existing market power. Rather than leveling the playing field, it may tilt it further in favor of stronger players. Recent evidence shows that when scale economies and markups are large, trade policy alone may fall short of correcting misallocation or boosting productivity (Lashkaripour and Lugovskyy 2023).

Evidence from recent studies points to a mixed picture on how trade liberalization affects competition and productivity. In some settings, tariff reductions and trade agreements have helped lower markups and raise productivity (Crowley, Han, and Prayer 2024; Edmond, Midrigan, and Xu 2015). In other cases, increased international exposure has tended to reinforce the position of dominant firms, with limited gains for smaller producers or consumers (Amiti and Heise 2025).¹ The regional picture shows a similar mixture of outcomes. In some countries, liberalization episodes have coincided with higher markups in specific sectors, reflecting weak domestic competition and limited transmission of trade savings into consumer prices (Bracco et al. 2025; Córdoba Solano, Gomez-Trejos, and Quesada 2025). Yet firm-level evidence also shows that trade reforms can deliver sizable efficiency gains. Studies for Chile (Pavcnik 2002) and Colombia (Eslava et al. 2004) find that deep tariff cuts led to strong improvements in plant-level productivity. Foreign direct investment adds to this complexity, bringing new capabilities but also raising concerns about limited spillovers and growing dominance by global firms (Amiti et al. 2024; Garetto et al. 2025).

¹ These studies differ in focus and approach. In an analysis of eleven low- and middle-income countries between 2000 and 2015, Crowley, Han, and Prayer (2024) find procompetitive effects of trade agreements. Edmond, Midrigan, and Xu (2015) use Taiwanese manufacturing data from the early 2000s to model how trade can generate productivity gains when markups are endogenous. Amiti and Heise (2025) study U.S. manufacturing from 1992 to 2012 and show that greater international exposure often reinforced dominant firms' market positions.

Firm-level evidence assembled for this book helps clarify how trade and cross-border investment influence market power in Latin America and the Caribbean. The data shed light on how firms respond to foreign competition, how markups evolve, and how these changes relate to productivity, scale, and growth, highlighting the mechanisms through which integration reshapes competitive dynamics in the region.

As the global economy fragments, the risk is growing that competition will weaken, both within countries and across borders. For Latin America and the Caribbean, the challenge is to ensure regional integration acts as a force for disciplining market power, not concentrating it. That requires more than openness. It calls for strategic policy, capable institutions, and attention to how markets are structured and how they function.

How Regional Integration Reshapes Market Power

Competition shapes prices, margins, and firm performance. In open economies, trade influences all three. It affects how firms set prices, how much market power they hold, and whether they gain or lose ground in global markets.

Trade affects market power through two main channels. First, foreign competition can erode the margins firms charge over production costs, weakening pricing power. How firms respond in practice depends on their productivity, their market position, and the level of domestic competition. More productive firms tend to absorb the pressure, while less productive ones scale back or exit. Some, instead, escape competition by innovating, upgrading products and processes to improve quality, attract consumers, and reduce costs.

Second, trade improves access to cheaper and higher-quality inputs. This can lower production costs, not only for firms that import directly but for those that rely on imported intermediates through domestic supply chains. The resulting cost savings can boost competitiveness and help offset pressure from foreign rivals. Through both mechanisms—competitive pressure and supply chain integration—international trade reshapes the structure of domestic markets. Surely, these dynamics are not automatic. Prices do not always fall. Power does not always shift. Ultimately, the structure of exposure—and how firms respond to it—determines who gains and who is left behind.

When Trade Lowers Costs, Do Prices Follow?

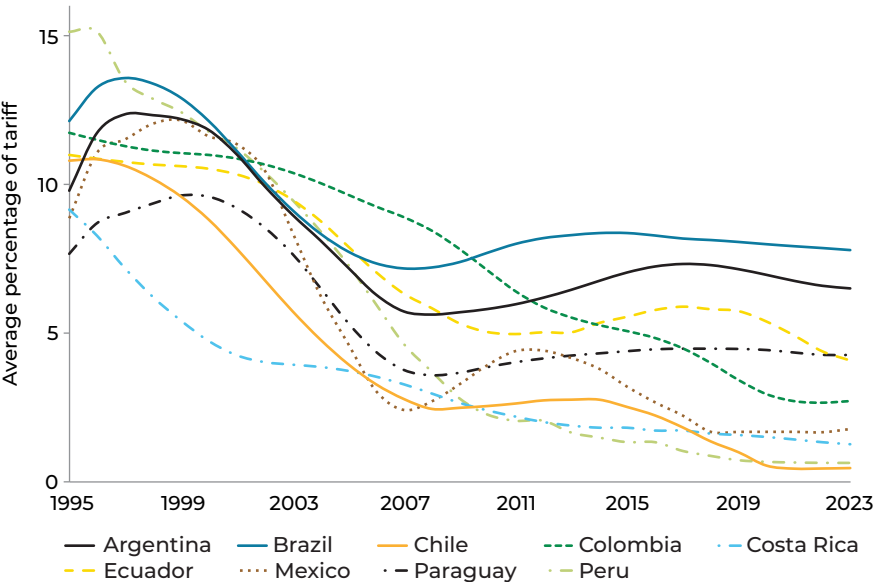
Trade can reshape markets by exposing firms to tougher competition and by giving them access to cheaper, often higher-quality, inputs.

This section looks at how those forces play out in practice, and what the data reveal about prices, market power, and the role of competition across the region.

Trade Liberalization: A Shock to the System

Latin America and the Caribbean underwent a major liberalization wave starting in the late 1980s and early 1990s, as many countries abandoned import-substitution regimes and implemented broad tariff cuts, along with removing import licenses and quotas. Average tariffs fell steeply—often from 40–50 percent to below 15 percent within a decade—and these reductions were reinforced as several countries joined or deepened regional agreements, such as the Southern Common Market (MERCOSUR, 1991), the North American Free Trade Agreement (NAFTA, 1994), and the Andean Community (1996). Figure 8.1 highlights how, from the mid-1990s through the early 2000s, tariff liberalization not only continued but intensified, with many countries moving from moderate to sweeping cuts. Mexico’s tariffs fell below 5 percent, Chile liberalized early and remained open, and even

Figure 8.1. Weighted Average Import Tariffs by Country



Source: IDB staff calculations, based on data from the World Integrated Trade Solution (WITS).
Note: Weighted average—applied tariffs are calculated using effectively applied rates, weighted by each product’s share in total imports. Lines are smoothed using a three-year mobile average to reduce short-term volatility.

countries such as Brazil and Ecuador, which had started with much higher tariffs, moved steadily toward greater openness.²

Trade liberalization spread across the region through a wave of national reforms and preferential trade agreements that, while independently designed, moved in a common direction. The effects were substantial. Foreign goods entered more easily. Domestic producers faced new rivals. Firms had to adapt quickly or lose ground. Liberalization reshaped incentives, rewrote market conditions, and altered the balance of power between incumbents and new entrants. When tariffs fell, incumbents expanded their exports by selling more of what they already produced (the intensive margin), while new entrants began exporting more slowly or hesitantly (the extensive margin), underscoring how liberalization shifted incentives and strengthened the position of established firms (Morales, Pierola, and Volpe Martincus 2019).

What Happened to Prices? Evidence from across the Region

As tariffs fell across Latin America and the Caribbean the central question became, did prices fall, too?

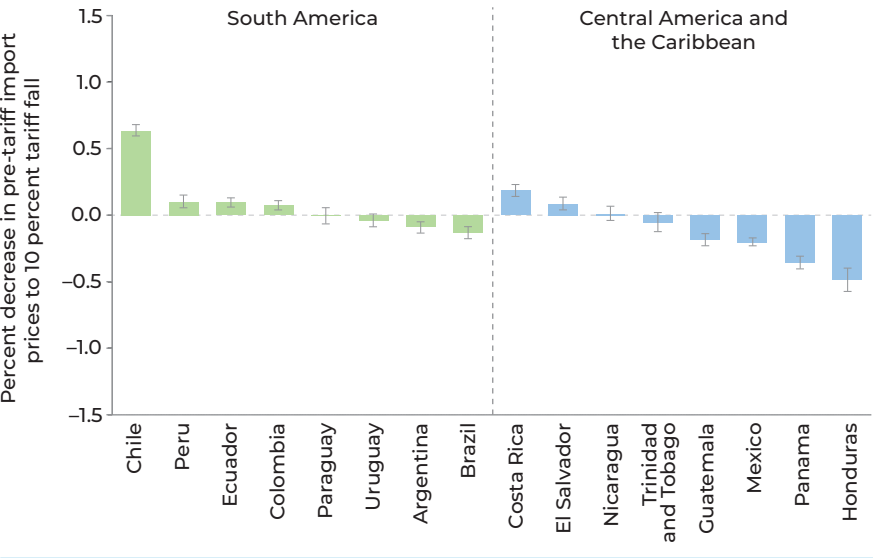
In theory, reducing trade restrictions should bring cheaper imports and more pressure on domestic firms. How much of that promise is delivered depends on how firms respond—and whether competition is strong enough to force prices down. Cheaper inputs can lower production costs across supply chains, but whether those savings are passed on to consumers depends on market structure: Without strong competition, firms benefiting from cheaper inputs may capture the gains through higher markups instead of passing them on as lower prices.

A way to measure pass-through is to track import prices before tariffs are applied. These are the prices of imports upon arrival at the border, before any duties are added. The price ultimately paid by consumers is the sum of the border price and the tariff. Thus, if the border price remains unchanged after a tariff cut, the consumer price falls by the exact amount of the tariff reduction. If border prices rise, the gains are shared; some of the savings reach buyers, but exporters retain a portion as well. When border prices fall, the price adjustment exceeds the tariff cut, leading to even greater gains for buyers.

Figure 8.2 tells a clear story: Tariff cuts are passed through to consumers almost in full. Across countries, there are differences in how border prices adjust, but these movements are modest. A 10 percent tariff cut typically

² Figure 8.1 begins in the mid-1990s, reflecting the fact that comparable tariff data at the country-product-year level only become consistently available from that period onward in the World Integrated Trade Solution (WITS) database. For most Latin American and Caribbean economies, reliable coverage starts in 1993.

Figure 8.2. Estimated Aggregate Pass-Through from Tariff Liberalization, 2000–2019



Source: IDB staff calculations, based on data from the UN Comtrade Database and the World Integrated Trade Solution (WITS).

Note: Each bar shows the coefficient from a country-specific regression of the log of pre-tariff import prices—measured as unit values (CIF value/weight in kg)—on the log of (1 + applied tariff), where the CIF, or cost, insurance, and freight, price is the value of a good delivered at the importing country’s border—or a service delivered to a resident—before any import duties, taxes, or domestic trade and transportation margins are applied. The analysis uses country-product-year as the unit of observation. It controls additively for product, destination country, and year fixed effects. Product effects capture persistent differences across goods (such as average protection levels or tradability); destination effects absorb structural characteristics of importing markets (like size or long-run openness); and year effects reflect global shocks and trends that affect all countries simultaneously. These controls ensure the estimated patterns are not driven by cross-product heterogeneity, structural differences across markets, or common global dynamics. Robust standard errors are used to correct for heteroskedasticity.

shifts border prices by less than 0.6 percent, whether up or down. In every case, the bulk of the benefit accrues to buyers, confirming that tariff reductions are strongly reflected in lower consumer prices.

The way this adjustment is shared varies slightly across countries. In several cases, supplier prices hold steady, and the full value of the tariff cut is passed through to consumers. This is what is seen in Nicaragua, Paraguay, and Uruguay, where border prices barely move after tariffs are reduced.

In a few cases, exporters go further by cutting their own prices in addition to the tariff reduction, so buyers receive more than the policy change alone would imply. In Colombia, for example, a 10 percent tariff reduction coincides with a 0.1 percent decline in supplier prices. While small in magnitude, this behavior illustrates how tariff changes can serve as coordination points, moments when firms take the opportunity to adjust prices that otherwise remain rigid (Minton and Somale 2025). In other cases, exporters

capture a small part of the gain for themselves. Border prices rise slightly when tariffs fall, so consumers still benefit, but the drop in final prices is marginally less than the tariff cut alone would suggest.³

Overall, the differences are modest yet telling. They suggest tariff pass-through is essentially complete, but competitive conditions may shape whether exporters share in the gains or consumers capture more than the full value of the tariff reduction.

Tariff Cuts Meet Market Structure: The Role of Concentration

So far, the evidence suggests that most of the savings from tariff cuts are passed on to consumers, with relatively modest variation across countries. But even when the average pass-through is high, market structure may influence how prices respond. Figure 8.3 explores this by comparing more and less concentrated sectors within the same country.

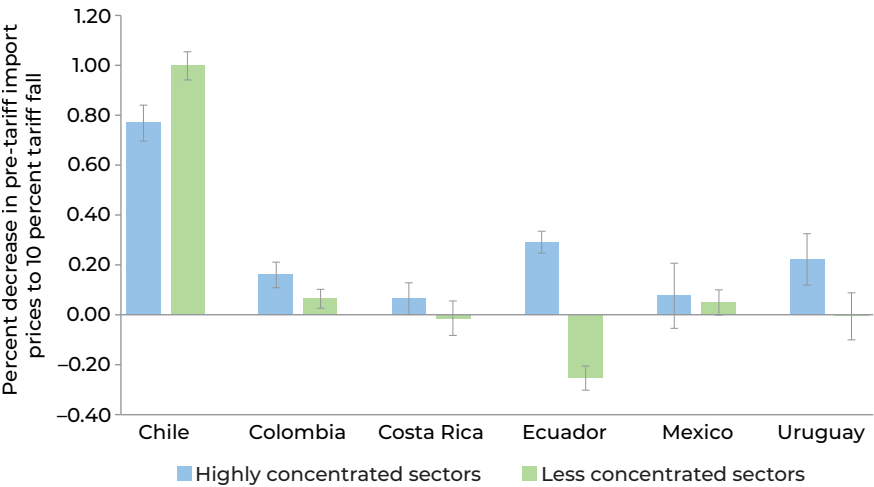
Industries are classified using the Herfindahl-Hirschman Index (HHI), a widely used measure of market concentration. Following the U.S. Department of Justice threshold, sectors with an HHI above 1,800 are considered highly concentrated.⁴ The results show a consistent pattern: In several countries—including Chile, Ecuador, and Mexico—tariff cuts lead to larger pre-tariff price reductions in concentrated sectors than in less concentrated ones. For Uruguay, estimates in Figure 8.2 are close to zero and not statistically significant, while Figure 8.3 reveals a small but measurable effect in highly concentrated industries.

This does not contradict the earlier finding of broad pass-through. In both types of sectors, most of the tariff savings reach buyers. But concentrated sectors may give firms more room to adjust prices, perhaps because they start from higher markups, or because the pressure from new competition is felt more directly when only a few firms dominate the market.

³ These results are consistent with estimates from other settings. Cavallo et al. (2021), analyzing U.S. import prices during recent tariff increases, find that a 10 percent tariff was associated with only a 0.6 percent drop in supplier prices, implying that most of the cost was passed through to consumers. Fajgelbaum et al. (2020) reach a similar conclusion: that the burden of U.S. tariff hikes fell largely on domestic buyers rather than foreign exporters. While the context differs, the pattern of limited adjustment in supplier prices echoes what is observed across countries in this region.

⁴ The threshold is applied uniformly across sectors, following U.S. Department of Justice guidelines. While some sectors may be structurally more concentrated than others, the analysis includes product fixed effects, which absorb any persistent cross-sector differences in concentration. As a result, the identification leverages within-product variation across countries and over time, making the use of a common threshold appropriate for the purposes of this analysis.

Figure 8.3. Estimated Pass-Through, 2000–2019, by Country and Industry Concentration Level (Manufacturing)



Source: IDB staff calculations, based on data from the UN Comtrade Database, the World Integrated Trade Solution (WITS), and CompeteLAC.

Note: Each bar shows the coefficient from a country-specific regression of the log of pre-tariff import prices—measured as unit values (CIF value divided by weight in kg)—on the log of (1 + applied tariff), interacted with a dummy equal to one if the product belonged to a highly concentrated industry, with a Herfindahl-Hirschman Index (HHI) greater than 1,800. The analysis is restricted to manufacturing industries, and it controls for product, destination country, and year fixed effects to capture global trends affecting all markets. Robust standard errors correct for heteroskedasticity. The sample periods for each country are as follows: Chile (2000–2012), Colombia (2000–2019), Costa Rica (2005–2019), Ecuador (2001–2019), Mexico (2009–2019), and Uruguay (2007–2019).

In short, trade policy interacts with market structure. The way tariff cuts affect prices depends on who holds power in a given industry and how much pressure firms face to adjust.

When Liberalization Cuts Deep

Some trade reforms unfold gradually, making their effects harder to isolate. In Colombia and Peru, however, liberalization came as a sharp and well-defined shift in policy. The reforms were bold and far-reaching, marking a clear break in how both economies connected to the world. That timing allows a different kind of analysis than in earlier sections. Instead of relating price changes to tariff changes across products, this exercise compares firms whose products were subject to the reform with otherwise similar firms that were not. The structure of the episode offers a clearer window into how trade policy changes affect firm behavior.

In Colombia, liberalization came in two waves, which were close in time and jointly transformative. The first arrived in 2011, with a structural overhaul

of the tariff system. More than 4,000 tariff lines—roughly 40 percent of imports—saw rates slashed, especially on capital goods and raw materials vital to domestic production. Just one year later, in 2012, Colombia implemented a trade agreement with the United States. Over 80 percent of U.S. industrial and consumer goods entered duty-free status overnight, and the rest were set on a fast phaseout track. In practice, these reforms hit the economy like a single, powerful shock.⁵

Panel A in Figure 8.4 illustrates that the average firm experienced only a small and statistically insignificant decline in border prices, suggesting consumers captured the bulk of the gains from lower tariffs following trade liberalization. The effect varied considerably, however, by firm size. Small and mid-sized firms (below the 50th percentile) saw sharp price reductions, often around 6 percent. In these cases, pass-through was more than complete; consumers paid prices even lower than the tariff reduction, suggesting these firms absorbed additional cost pressures or faced stronger competitive forces.

Larger importers experienced more muted declines, and, for the very largest firms, producer prices were actually higher than before liberalization, by as much as 6 to 9 percent. This suggests these firms retained a greater share of the tariff cuts, likely due to stronger market power or more resilient supply chains. Consumers still paid lower prices, but the pass-through was incomplete, with the difference captured by producers in the form of higher margins. The liberalization shock filtered through the system, but how much it reached each firm depended on the firm's size, market position, and flexibility.

Peru followed a similar path, though with its own set of tools. Between 2015 and 2017, the country's average tariff fell from 1.8 percent to 0.8 percent, a decline driven by a mixture of national reforms and trade agreements. Specific duties on key food imports were capped. Tariffs on hundreds of manufactured goods—such as auto parts, appliances, and tools—were cut. The Pacific Alliance agreement eliminated tariffs on over 90 percent of regional trade. Meanwhile, the U.S.–Peru trade agreement completed its final stage, making virtually all U.S. consumer and industrial goods duty free.

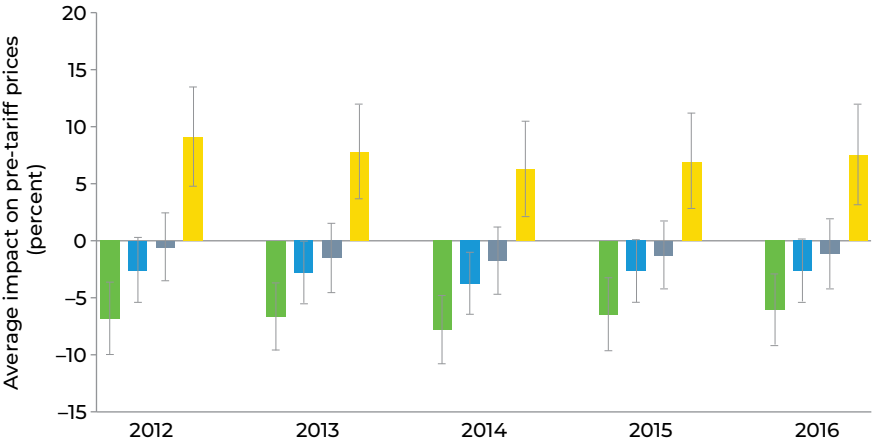
These reforms had visible effects. As shown in Panel B of Figure 8.4, large firms in Peru kept producer prices unchanged, passing the full benefit

⁵ In 2012, Colombia implemented the U.S.–Colombia Trade Promotion Agreement, with most of the remainder set to phase out within a decade. The deal also slashed duties on key agricultural imports and opened the markets for services. As a result, Colombia's average tariff on U.S. goods fell from 5.9 to 3.9 percent, with the United States representing a quarter of Colombia's total imports. Given the scale and scope of this reform, it offers a strong test case for evaluating how trade agreements affect import prices, sourcing decisions, and market dynamics.

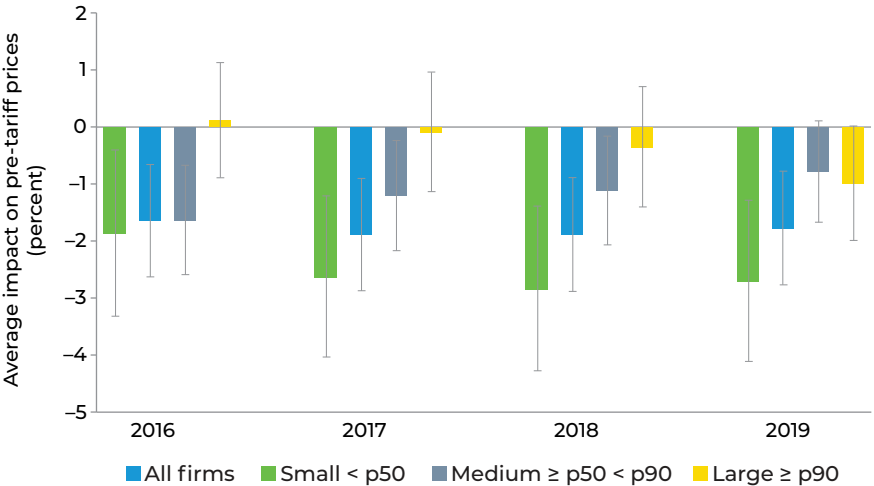
of tariff reductions to final consumers. For small and medium firms, producer prices declined steadily, translating into consumer price drops that exceeded the tariff cuts themselves.

Figure 8.4. Effects of Trade Liberalization on Pre-Tariff Import Prices

A. Colombia



B. Peru



Source: IDB staff calculations, based on data from Bill of Lading and the World Integrated Trade Solution (WITS).

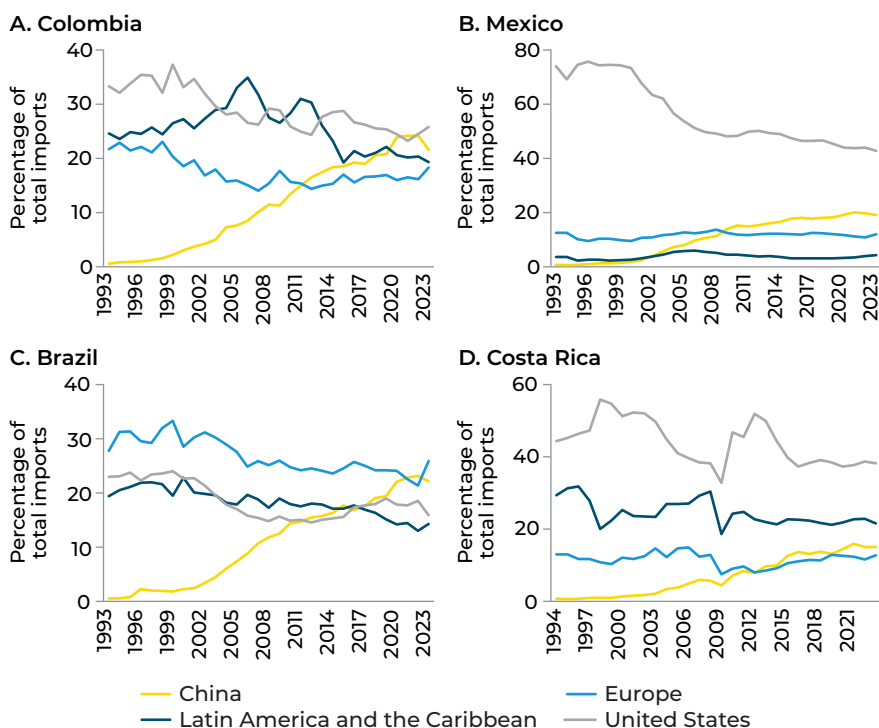
Note: The figure shows the estimated cumulative percentage change in pre-tariff import prices—measured as unit values (CIF value divided by weight in kg)—due to tariff reductions. Panel A corresponds to Colombia’s 2011–12 liberalization; Panel B reflects Peru’s 2015–17 tariff reform. Estimates are based on $\log(\text{price}_{iht}) = \alpha + \beta[\log(1 + \text{tariff}_{hc}^{\text{post}}) - \log(1 + \text{tariff}_{hc}^{\text{pre}})] \cdot t + \text{controls} + \epsilon_{iht}$, where i is the importing firm, h the product (HS6), c the country of origin, and t the year. The analysis controls for firm size, product, and trading partner time-invariant characteristics and includes year effects to capture global trends affecting all markets. Standard errors are clustered at the product level. The bars show estimated effects by firm size, defined by each firm’s position in the pre-liberalization import value distribution: small (below the median), medium (median to 75th percentile), large (75th to 90th), and very large (above the 90th percentile).

Together, the experiences of Colombia and Peru illustrate the power of decisive liberalization. When tariffs are reduced rapidly and transparently, firms respond: They reassess sourcing, adjust prices, and reposition themselves in more competitive markets. Liberalization, in turn, reshapes the nature of competition.

The Markup Channel: Trade Exposure and Market Discipline

Trade can discipline firms, or it can shield them. Whether increased openness reduces market power depends on how intense the competition is and how firms respond. A striking episode unfolded in the early 2000s, when global trade patterns shifted significantly following the accession of a major economy—China—to the World Trade Organization in 2001. The resulting expansion in manufacturing exports from Asia introduced a powerful new source of competition across global markets. In some countries in

Figure 8.5. Share of Total Imports by Region, Selected Countries



Source: IDB staff calculations, based on data from UN Comtrade.

Note: Each panel of the figure shows the share of total imports by source region over time. Country-specific trade agreements and structural breaks may affect trends and are not shown in the graphs. Other regions are included in the total but not separately identified in the figure.

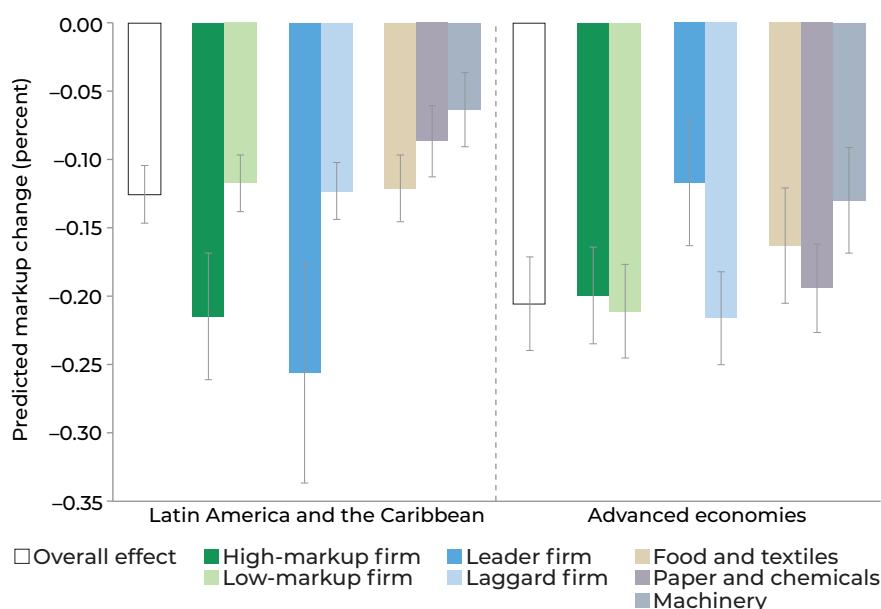
Latin America and the Caribbean, this shift had a visible impact: Figure 8.5 shows the evolution of import shares by source region for Brazil, Costa Rica, Colombia, and Mexico over the past three decades. In each case, imports from Asia—particularly from China—rose steadily and reached around 20 percent of total imports by 2023. This transformation introduced a new global benchmark for cost and scale, posing sharp questions: When domestic firms are exposed to leaner, more efficient rivals, do they lose pricing power? Do dominant players adjust? And are the effects different in emerging markets, where domestic industries are often smaller and more concentrated?

The Price of Pressure: Effects of Import Competition

Along with cheaper goods, global trade brings tougher rivals. Over the past two decades, rising import competition—driven in large part by the rapid expansion of manufacturing exports from Asia—has reshaped global markets. Figure 8.6 compares how, between 2001 and 2015, firms in the sample of Latin American and Caribbean countries considered in this analysis responded to greater import competition, relative to their peers in advanced economies. In both groups, rising exposure was associated with lower markups overall. But the distributional pattern varied. In advanced economies, the largest reductions tended to occur among lower-markup firms and productivity leaders—suggesting that even efficient producers came under pressure. In the selected group of Latin American countries in the sample, by contrast, the largest declines were observed among high-productivity firms, while laggards were less affected. This pattern points to meaningful pressure at the top of the domestic market, where firms previously enjoyed greater pricing power.⁶

The sectoral breakdown highlights important differences. For the group of Latin American and Caribbean countries examined here, the largest reductions in markups are concentrated in food and textiles—sectors with high exposure to import competition. In advanced economies, the

⁶ Holmes and Stevens (2014) propose a different perspective on the effects of Chinese import competition, finding that rising imports disproportionately affect large plants producing standardized (“primary segment”) goods, rather than smaller firms. The findings from this analysis are not necessarily at odds with theirs. Here, firms are classified based on markup levels, total factor productivity (TFP), and sector, not by firm size (as measured by, for example, output or employment). It is not assumed that higher markups imply larger firms. Instead, this analysis focuses on how import competition affects firms with different levels of pricing power and efficiency.

Figure 8.6. Estimated Markup Effects of Import Competition

Source: Alvarez and Morales (forthcoming).

Note: Firm-level markups are estimated with data from 2001–15, using a second-order Translog production function with two inputs: capital and costs of goods sold. “Overall effect” shows the predicted change in markups for the full sample of firms; “high-markup firms” are those whose average markup lay above the cross-firm median prior to 2000; and “leader firms” denotes the top decile of firms by total-factor productivity before 2000. Finally, the sector labels identify broad industry groups: “Food and textiles” covers firms in food processing and textile manufacturing, “machinery” covers industrial machinery and equipment producers, and “paper and chemicals” covers firms in pulp and paper and basic chemical manufacturing. Advanced countries include Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Italy, the Netherlands, Portugal, Slovenia, Spain, Sweden, and the United Kingdom. Latin American countries include Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

strongest declines occur in paper and chemicals. These patterns reflect variation in industrial structure and exposure across regions, rather than a uniform response to trade pressure.

Put simply, trade is a disciplinary device. But how that discipline plays out—who adjusts, who gains, and who gets squeezed—depends on the depth of domestic capabilities. The same shock that trims excess in advanced markets can cut closer to the bone in Latin America and the Caribbean.

Import Competition and Market Concentration: Evidence from CompeteLAC

The rise of Chinese imports in global markets has triggered profound shifts in competition, but how that pressure plays out depends heavily on the

structure and responsiveness of local markets.⁷ In selected Latin American and Caribbean countries, the effects of this shock are visible, and uneven. Using the new CompeteLAC dataset,⁸ which covers seven countries at a detailed sectoral level, the analysis next traces how increased exposure to Chinese imports altered firm behavior. The findings span three dimensions: pricing power, market structure, and labor dynamics.

On average, markups in the seven countries fell as Chinese imports rose. As Panel A in Figure 8.7 shows, sectors more exposed to competition from Chinese imports experienced a measurable decline in average markups. Across the countries covered in the region, the effect was negative, with an increase of ten percentage points in Chinese penetration associated with a 0.18 percent drop in sector-level markups. This is direct evidence that competition from abroad curbed firms' ability to charge above cost. But behind this average for the countries analyzed lies a story of divergence. In countries like Costa Rica and Mexico, the effect was particularly strong, with exposed firms seeing steep declines in markups, consistent with significant competitive pressure.

In contrast, the response in countries like Ecuador was muted, or even reversed. There, increased imports from China coincided with rising markups, possibly reflecting limited domestic competition, segmentation in supply chains, or the ability of leading firms to insulate themselves from pressure. What emerged was a striking asymmetry, in which foreign competition disciplined where local markets were contestable, but had little effect where domestic conditions protected incumbents.⁹

Concentration measures fell, too, as dominant firms lost ground. As Panel B of Figure 8.7 makes clear, stronger import competition didn't just compress markups; it eroded market dominance. The CR4 index—the share of sales held by the top four firms in a sector—declined notably, suggesting that competition pushed even leading firms to cede space. The CR10 also declined, though much more modestly, implying that while the very top firms lost ground, most of the market power remained within the broader leading group. This pattern contrasts with the “superstar firm” hypothesis (Autor, Dorn, Katz, et al. 2020), according to which tougher competition often results in a few large firms pulling further ahead. In Latin America and

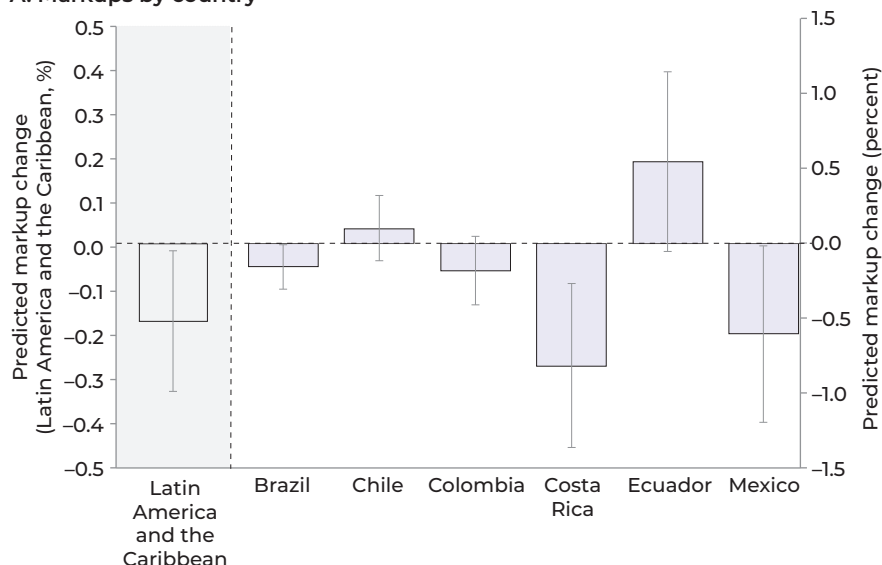
⁷ Chinese import effects in global markets have been studied intensively. Several papers analyze these effects on local economies. See, for example, studies by Autor, Dorn and Hanson (2013); Pierce and Schott (2016); Autor, Dorn, Hanson, and Majlesi (2020); Autor, Dorn, Katz, et al. (2020); and Aghion et al. (2024).

⁸ Details on the construction and scope of the dataset are provided in Chapter 2.

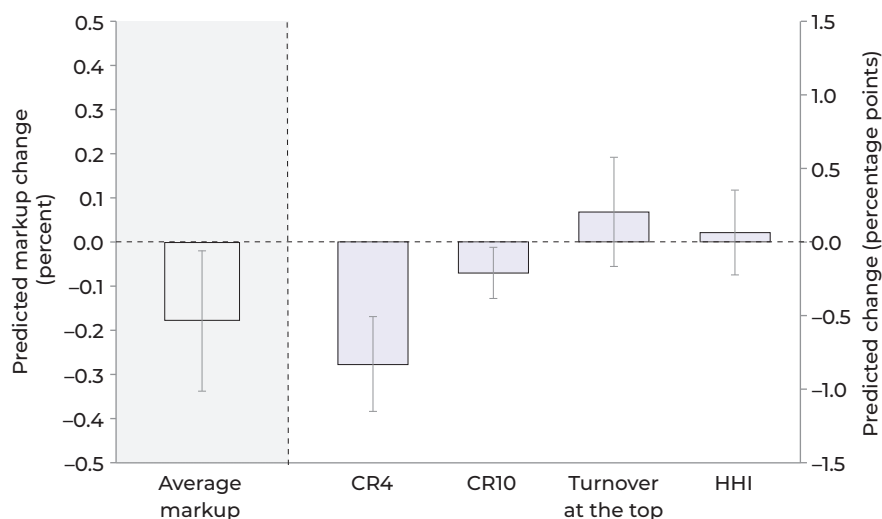
⁹ These results are in line with those of Bracco et al. (2025) and Cusolito, García-Marín, and Maloney (2023), who study the cases of Colombia and Chile, respectively.

Figure 8.7. Estimated Effects of Import Competition on Markups and Market Concentration

A. Markups by country



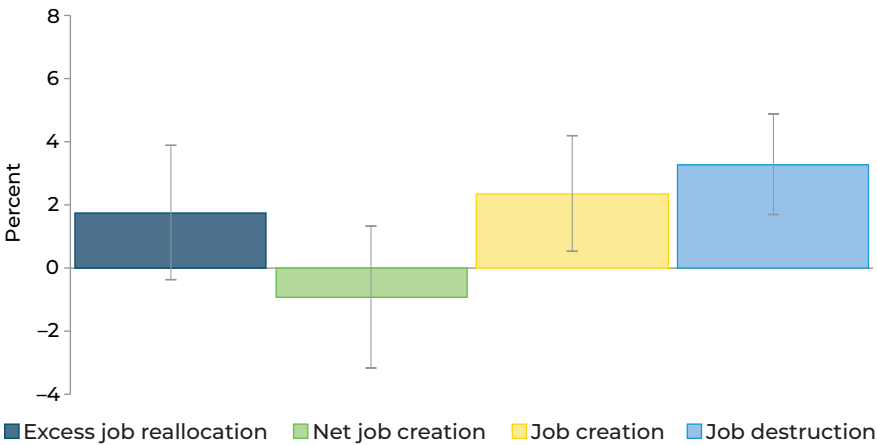
B. Concentration effects



Source: Alvarez, and Morales (forthcoming).

Note: Firm-level markups are estimated with data from 2001–15 using a second-order Translog production function, with capital and cost of goods sold as inputs. Estimates are aggregated using gross output weights (CompeteLAC). Import penetration is defined as Chinese imports divided by total imports in 1994, by country–sector–year, and is instrumented using the Chinese import share from Autor et al. (2013) countries. Panel A shows average markup effects by country group, with regressions including country interactions, export controls, and sector and year fixed effects. Panel B reports changes in market concentration of the top 4 and top 10 firms, turnover at the top, and HHI index as the dependent variable, with country, sector, and year fixed effects. Markups are shown on the left vertical axis; all other variables are measured on the right vertical axis. All regressions use robust standard errors.

Figure 8.8. Estimated Effects of Import Competition on Job Creation



Source: IDB staff calculations based on sector-level data from seven Latin American countries, using the CompeteLAC dataset.
Note: Each bar shows the estimated effect of a one-percentage-point increase in Chinese import penetration on key labor market indicators: job creation, job destruction, net employment change (creation minus destruction), and total reallocation (creation plus destruction). The “excess reallocation” measure captures churn beyond what would be expected from net employment changes, highlighting how competition triggers internal shifts in the labor market. All regressions include country, sector, and year fixed effects, and standard errors are robust to heteroskedasticity. Coefficients are interpreted as percentage point changes in each outcome.

the Caribbean examined here, at least in this case, the pressure broke up dominance instead of reinforcing it.

Even the top firms were not immune to pressure. Indeed, there was a mild increase in turnover at the top. The set of leading firms became more fluid, with new entrants or challengers displacing incumbents. Global competition lowered prices and reshuffled the pecking order and left markets slightly less concentrated in the process.

Competitive pressure affected more than prices and concentration. It reached employment, as well. As Figure 8.8 shows, net job gains were modest—but the movement beneath the surface was far from quiet: Both job destruction and job creation increased. Firms restructured, and workers were reallocated. Trade pressure set off a chain reaction, shifting incentives, reshuffling production, and testing how fast economies could adapt. When firms pivot and workers move, the promise of openness depends on how smoothly, and how swiftly, resources can follow.

Export and Import Status: Linking Trade and Markups

To complement the analysis of trade liberalization and pass-through, this section explores the characteristics of firms that participate in international

trade and how these traits relate to pricing power. These descriptive insights provide critical context for understanding how global integration may reinforce or erode market power.

Using detailed customs data from countries at varying stages of development, Fernandes, Freund, and Pierola (2016) document a high degree of turnover in both exports and imports. Many firms enter and exit international markets, but only a small number persist. One-year survival rates for exporters, for example, range between 19 and 38 percent, while importers show slightly higher persistence. Despite this dynamism, a few large firms dominate trade. Concentration metrics reveal that the top 5 percent often account for the majority of trade volumes, suggesting that market power is concentrated among a relatively small group of established players.

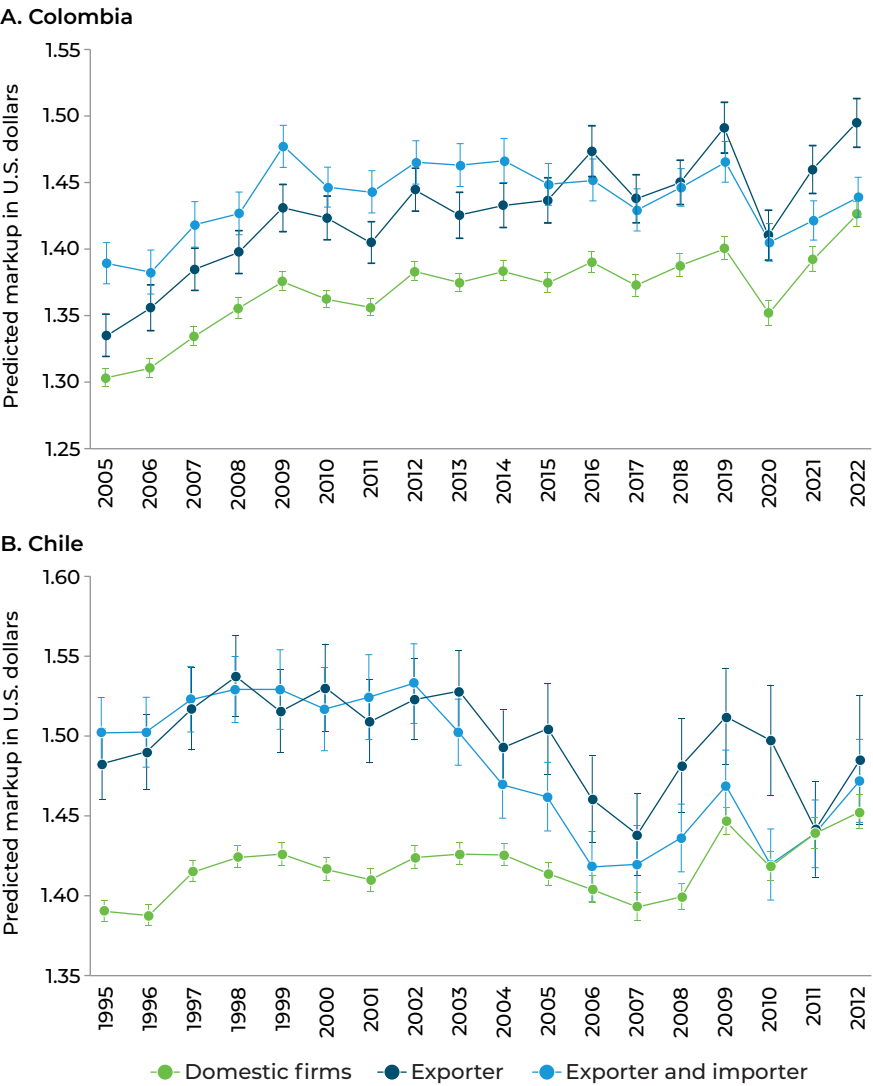
Moreover, exporters differ systematically from non-exporters; they are typically larger, more productive, and more capital intensive than domestic firms. These patterns underscore the dual nature of trade concentration—both across firms within exporting sectors and between exporting and non-exporting firms in the broader economy—and echo global trends, in which a small set of “superstar” firms increasingly shape international trade flows.

Firm-level data provide insights into how markups evolve across exporters, importers, both, or neither in Chile and Colombia, where firms can be classified by trade status. Figure 8.9 shows the evolution of average markups for domestic firms, exporters, and firms that both export and import, using firm-level data from Colombia (Panel A) and Chile (Panel B). In Colombia, exporters—especially those that also import—consistently exhibit higher markups than purely domestic firms. This pattern suggests that firms integrated into global markets may have access to advantages such as scale, better inputs, or differentiated products that support greater pricing power.¹⁰ In Chile, the pattern is less consistent. While exporters often display higher markups, the difference from domestic firms is smaller and fluctuates over time. In some years, domestic firms even appear to narrow the gap. These contrasting patterns suggest that while export participation is often associated with higher markups, the strength and stability of this relationship can vary significantly across countries and over time (Amiti et al. 2024).

This heterogeneity is crucial for interpreting the earlier results on pass-through and trade liberalization. If firms gaining market share under liberalization are those with inherently higher markups, average markups may rise, even as competitive pressure increases. This pattern, documented in the literature on reallocation and selection effects, suggests that rising markups

¹⁰ Similarly, Hong and Luparello (2025) show that *exposure* to foreign markets has spurred productivity gains for exporting firms in Colombia.

Figure 8.9. Export Status and Markups in Colombia and Chile



Source: IDB staff calculations, based on firm-level data from EAM (Colombia) and ENIA (Chile).
Note: Firm-level markups are computed using a second-order Translog production function with three inputs: capital, labor, and intermediate inputs. All regressions include two-digit ISIC sector fixed effects. The figure plots the average predicted markup for three mutually exclusive groups: domestic firms, exporters, and firms that both export and import. Domestic firms are those that engage in neither exporting nor importing, while exporters are firms that sell abroad but do not source inputs from abroad.

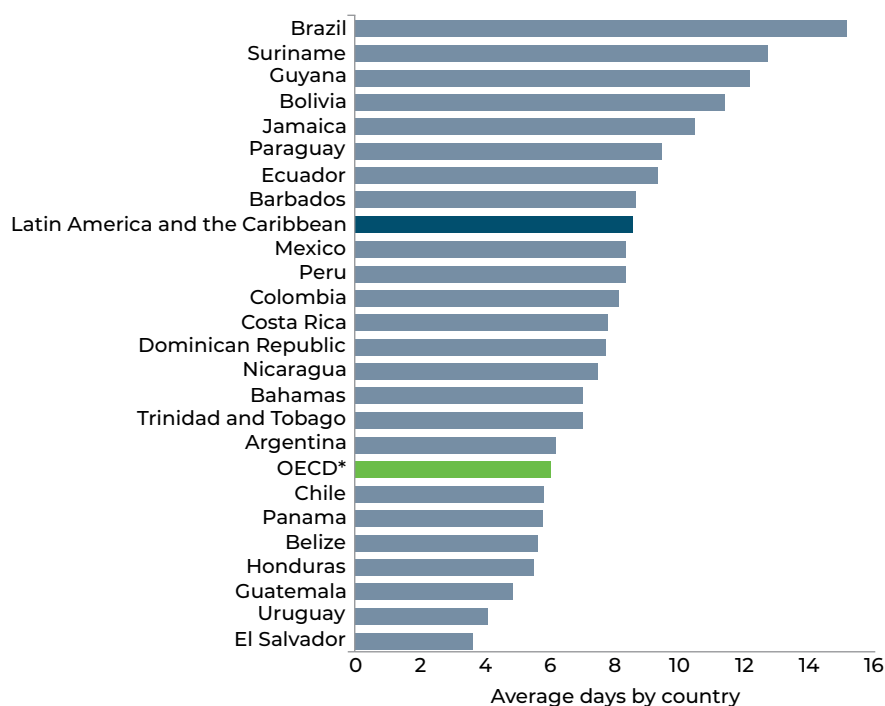
are not necessarily a sign of weaker competition but may reflect shifts in firm composition (De Loecker and Van Biesebroeck 2018). Recent work by Arkolakis, Costinot, Donaldson, and Rodriguez-Clare (2019) shows that when firms differ in their pricing power—as is often the case in real markets—trade

liberalization does not necessarily lead to lower markups, even under stronger competition. Recognizing this complexity helps explain why integration does not uniformly reduce market power and why firm heterogeneity matters when designing trade and competition policy.

Why Faster Borders Matter for Trade and Competition

Beyond tariffs, non-tariff barriers, such as customs delays, can significantly affect trade competitiveness, ultimately influencing market dynamics, pricing behavior, and firm markups. Figure 8.10 shows the average number of

Figure 8.10. Average Days to Clear Customs for Direct Exports



Source: IDB staff calculations, using all available waves of the World Bank Enterprise Surveys (WBES, 2006–2023) and PROTEqIN (Productivity, Technology, and Innovation in the Caribbean, 2014) from Compete Caribbean.

Note: This figure shows country-level averages using all available survey waves for Latin American and Caribbean countries and OECD comparator economies with at least 20 manufacturing observations. For WBES, only manufacturing firms are included. For PROTEqIN, both manufacturing and services are included, due to smaller sample sizes. The Latin American and Caribbean average includes all countries displayed in the figure. The OECD average (excluding Latin America and the Caribbean) includes the following countries: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, the Netherlands, New Zealand, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, and Türkiye. The figure shows the average number of calendar days it takes for a shipment—once it arrives at the final domestic point of exit (for example, port, airport, or border crossing)—to clear customs and be ready for international shipment.

*Excluding Latin American and Caribbean countries.

days required for direct exports to clear customs after arriving at the point of exit, using data from Latin America and the Caribbean for the period 2006–23. This indicator captures procedural delays and the administrative efficiency of export processing. Longer clearance times can act as non-tariff barriers to trade, raising costs, disrupting delivery schedules, and reducing competitiveness, especially for time-sensitive goods.

While countries like El Salvador, Guatemala, and Uruguay clear exports in under five days, others, such as Brazil, Guyana, and Suriname, face delays exceeding ten days. These persistent logistical frictions increase the cost of exporting, particularly for smaller and less connected firms, and can effectively shield domestic producers from international competition. Such insulation weakens competitive pressure, sustains higher prices, and allows firms to maintain elevated markups, even in environments where tariffs have been liberalized.

In contrast, streamlined border procedures—such as single windows, risk-based inspections, and expedited transit arrangements—can reduce shipping times and reinforce the procompetitive effects of trade openness. As shown by Volpe Martincus (2016), trade facilitation initiatives implemented across the region have measurably expanded trade flows, primarily by increasing shipment frequency. These measures help turn borders from costly bottlenecks into efficient gateways, with important implications not only for export growth but for the degree of pricing discipline firms face. Reducing procedural barriers is, therefore, not just a matter of efficiency—it is central to fostering vibrant, contestable markets across the region.

The Hidden Cost of Moving Goods

So far, this chapter has shown that international trade can promote competition and reduce market power, but the costs associated with Latin American and Caribbean trade flows are high relative to other regions. While domestic logistics and internal cost structures also shape trade outcomes, this section focuses on one key component of external trade costs: international transportation. The objective is to show to what extent the international transportation costs associated with trade flows of Latin American and Caribbean countries are high relative to those in other regions and to examine what role competition in the international shipping industry plays in these differences.

A Costly Detour: Why Latin America and the Caribbean Pays More to Move Goods

This section compares average freight rates, expressed as a share of the value of the goods shipped (*ad valorem*), between countries in Latin

America and the Caribbean and those in the Organisation for Economic Co-operation and Development (OECD), excluding the region itself. The data come from two sources: the OECD, whose International Transport and Insurance Cost of Merchandise Trade (ITIC) database covers bilateral transportation costs among more than 180 countries, and the U.S. Census Bureau, which provides ocean freight rates associated with U.S. imports from more than 80 countries.¹¹ These data enable comparison of the transportation costs associated with Latin American and Caribbean imports with those of OECD imports, and of the transportation costs of Latin American and Caribbean exports to the United States with those of OECD exports to the United States.

Column 1 of Table 8.1 shows the average ad valorem freight rate associated with Latin American and Caribbean imports, along with that of the OECD countries. To enrich the comparison, three individual countries from the OECD are also included. On average, the transportation costs associated with Latin American and Caribbean imports are 17.8 percent higher than those for the OECD (see Column 2). Differences from OECD countries vary, with Latin America and the Caribbean's difference from the United States among the largest.

But the region's transportation costs may be higher as a result of, for instance, differences in the composition of product baskets. Differences in distances between countries may also play a role. To account for these factors, the analysis includes estimates that control for differences in distance and product characteristics.¹² Even after controlling for these characteristics, the differences in transportation costs between Latin America and the Caribbean and the OECD do not disappear completely. The former's

¹¹ The OECD ITIC database combines explicit data reported by some countries on transportation and insurance costs, based on CIF-FOB margins associated with their imports, with CIF-FOB margin estimations for countries that do not report explicit data on imports in both CIF and FOB valuations (see Miao and Wegner 2022). The data cover the period from 2018 to 2020. The U.S. Census Bureau data report the transportation costs associated with U.S. maritime imports, based on information on freight and insurance costs. This analysis employs data from 2018 to 2020.

¹² The econometric model is based on a regression in which the dependent variable is the natural log of the ad valorem freight rate between the importing and the exporting country at the product level, and the explanatory variables are the natural log of the bilateral distance and product- and year-level fixed effects. Also included are binary indicators for each region, in particular, Latin America and the Caribbean; the OECD (excluding Latin American and Caribbean countries); East Asia and the Pacific; Central and South Asia; the Middle East and Africa; and others. In the comparison with the OECD, the omitted region is the OECD. In the comparison with each individual OECD country, the OECD binary indicator is added but the value of this indicator is replaced with zero for the specific OECD country selected as comparator.

Table 8.1. Transportation Costs Associated with Trade Flows, Selected Regions

	Imports		Exports to the United States			
	Ad valorem rate (%)	Difference from Latin America and the Caribbean (%)	Difference from Latin America and the Caribbean, with controls (%)	Ad valorem rate (%)	Difference from Latin America and the Caribbean (%)	Difference from Latin America and the Caribbean, with controls (%)
	(1)	(2)	(3)	(4)	(5)	(6)
Latin America and the Caribbean	7.3	—	—	7.9	—	—
OECD (excluding Latin America and the Caribbean)	6.2	17.8	10	5.8	36.3	18.4
Australia	6.4	14.7	34	6.7	18.4	2.8
Netherlands	6	22.8	9.4	6.4	23.4	12.7
United States	5.2	40.8	63	—	—	—

Source: IDB staff calculations, using ITC and United States Census trade data for 2018–20.
Note: “Ad valorem rate” refers to ad valorem freight rates—that is, transportation costs as a share of shipment value. Columns marked “with controls” account for differences in partner countries and mixture of products. The Latin American and Caribbean countries used in the comparison of columns 1 to 3 and their respective average ad valorem freight rates for imports are Argentina (5.8 percent), the Bahamas (6.8 percent), Barbados (6.9 percent), Belize (7.4 percent), Bolivia (8.0 percent), Brazil (5.8 percent), Chile (7.6 percent), Colombia (6.5 percent), Costa Rica (7.4 percent), the Dominican Republic (8.6 percent), Ecuador (6.4 percent), El Salvador (7.8 percent), Guatemala (7.8 percent), Guyana (7.5 percent), Honduras (6.3 percent), Jamaica (7.6 percent), Mexico (7.8 percent), Nicaragua (10.0 percent), Panama (7.3 percent), Paraguay (7.9 percent), Peru (6.4 percent), Suriname (7.8 percent), Trinidad and Tobago (7.1 percent), Uruguay (6.8 percent), and Venezuela (8.2 percent). The Latin American and Caribbean countries used in the comparison of columns 4 to 6 and their respective average ad valorem freight rates for exports to the United States are Argentina (7.9 percent), the Bahamas (13.4 percent), Barbados (11.4 percent), Belize (11.3 percent), Bolivia (6.7 percent), Brazil (7.3 percent), Chile (7.9 percent), Colombia (7.1 percent), Costa Rica (8.3 percent), Dominican Republic (8.1 percent), Ecuador (7.9 percent), El Salvador (7.0 percent), Guatemala (9.4 percent), Guyana (9.9 percent), Haiti (7.7 percent), Honduras (8.9 percent), Jamaica (10.2 percent), Mexico (7.1 percent), Nicaragua (7.9 percent), Panama (9.3 percent), Paraguay (8.9 percent), Peru (6.7 percent), Suriname (5.8 percent), Trinidad and Tobago (10.3 percent), Uruguay (7.3 percent), and Venezuela (11.9 percent).

ad valorem freight rates, for example, are still 10 percent higher, on average, than those of the latter (see Column 3 of the table).¹³ The last three columns of Table 8.1 compare freight rates for exports to the United States from Latin America and the Caribbean with those from OECD countries. As before, transportation costs for Latin American and Caribbean exports are consistently higher than those observed in other regions. The average freight rate of 7.9 percent for exports from Latin America and the Caribbean to the United States, for instance, is 36 percent higher than that of 5.8 percent for OECD exports to the United States (see Column 5). Similar to the case of imports, controlling for differences in distances between partners and in product baskets reduces but does not eliminate the transportation cost differences between the two (see Column 6).

Shipping Isn't a Commodity; It's a Market with Power

Differences in shipping prices can reflect differences in the degree of market power exercised by shipping companies. Since freight rates associated with Latin America and the Caribbean's trade tend to be high relative to those of other regions, a valid question is to what extent these disparities are the result of differences in the levels of competition in the shipping industry. An insightful analysis for the context is offered by Hummels, Lugovskyy, and Skiba (2009). The authors examine the transportation costs behind U.S. imports and those of eight Latin American and Caribbean countries.¹⁴ In particular, the analysis explores what drives variation in ad valorem transportation costs. It considers factors such as product weight, import tariffs, import demand elasticity, and distance between trading partners. It also includes a measure of competition in the shipping industry, based on the number of ocean carriers operating between the importing and exporting countries.¹⁵

¹³ Controlling for partner and product characteristics can reduce or expand the differences in transportation costs between Latin America and the Caribbean and other regions. If, for example, the distances to partners and the composition of product baskets of U.S. imports were the same as those of Latin American and Caribbean imports, on average, the differences in transportation costs between Latin America and the Caribbean and the United States would be even greater (see Column 3 of Table 8.1).

¹⁴ The Latin American and Caribbean countries are Argentina, Bolivia, Brazil, Chile, Ecuador, Paraguay, Peru, and Uruguay.

¹⁵ Product weight is included as the ratio of the weight to the value of the product. Holding value constant, ad valorem shipping prices are normally higher for heavier products. Accordingly, a positive relationship is expected between weight-to-value ratios and ad valorem freight rates. Another determinant is the elasticity of import demand. The prices shippers charge in excess of the marginal cost of shipping might be larger on goods whose import demand is not very sensitive to price changes.

Using the resulting estimates, the authors calculate how much each of these variables contributes to the differences in transportation costs between the United States and Latin America and the Caribbean. They find that 29 percent of the larger transportation costs in the region are the result of the smaller number of carriers operating on its routes. Accordingly, lack of competition in the shipping industry partly explains why the region's transportation costs are large relative to those of the United States. Interestingly, the authors also find that 44 percent of the transportation cost difference between the two stems from the imposition of higher import tariffs by Latin American and Caribbean countries. Shipping companies typically charge markups proportional to the value of the goods shipped, so when tariffs raise product prices, transportation costs rise, as well. This finding highlights an important indirect channel through which trade protection increases the cost of imports: not only through the tariff itself but by amplifying transportation costs.

To complement the analysis by Hummels, Lugovskyy, and Skiba (2009), a similar exercise is conducted here but with the data employed in the last three columns of Table 8.1. This enables examination of the role of transportation cost determinants in explaining differences in ad valorem freight rates between Latin American and Caribbean and OECD countries when they export to the United States. A similar set of explanatory variables is also employed, including the tariff rate in the United States, the elasticity of import demand, the distance between the United States and the exporting country, the number of ocean carriers between the United States and the exporting country, and the weight of the product relative to its value. The purpose of the last variable is to examine one determinant of transportation costs: the transportability of the good.¹⁶

In other words, larger markups are expected on goods with relatively inelastic import demands. Thus, the smaller the elasticity of import demand, the larger the expected freight rate. According to the authors, the rationale for including the tariff rate is that the optimal markup charged by a shipping firm is likely to increase with product prices. In essence, the effect of a given markup on the delivered price of a good is lower the larger the price of the good. This is the case because the higher the price of the good, the smaller the share of the shipping cost in the delivered price. Accordingly, anything that raises the price of a good, like a tariff, lowers the percentage impact of a given transportation charge on the delivered price and, therefore, increases the optimal shipping markup. It follows that, everything else constant, one should expect higher shipping charges on goods with larger tariff rates. Geography is another determinant of transportation costs. In particular, freight charges are expected to increase with the distance between the two markets. Finally, the greater the degree of competition in the shipping industry, the lower the shipping price to be expected.

¹⁶ Data on weight and import values at the product level come from the U.S. Census Bureau database. This database also includes information on import duties. Accordingly, the ad valorem tariff rates are calculated as the ratio of import duties divided by import values. For the elasticity of import demand, estimates from

The primary factor behind the transportation cost disparity between Latin American and Caribbean and OECD countries lies in differences in their export baskets, particularly in the weight-to-value ratio of goods. As discussed earlier, for a given value, heavier products typically incur higher ad valorem shipping costs. Latin American and Caribbean exports to the United States tend to be significantly heavier, on average, than those from OECD countries, which contributes to higher freight rates. Limited competition among ocean carriers also plays a role. Also as discussed, fewer shipping lines operate on the region's routes, which accounts for roughly 6 percent of the region's cost disadvantage. Interestingly, other structural factors work in the region's favor. Tariff rates on U.S. imports are typically lower as a result of the greater number of free trade agreements between the United States and Latin American and Caribbean countries compared to OECD partners. In addition, shipments from the region tend to cover shorter distances, on average, than those from OECD countries. These factors partially offset—but do not eliminate—the overall cost gap.

The results of this analysis regarding the contribution of competition in the shipping industry are similar in magnitude to those found by Mesquita Moreira, Volpe Martincus, and Blyde (2008) in a comparison of the transportation costs of Latin American and Caribbean exports to the United States with those of the Netherlands. The latter analysis finds that the fewer ocean carriers on the region's routes explains around 5 percent of the higher freight costs of its exports relative to the European country.

When Freight Distorts the Price Signal

Another important consideration concerns how transportation charges affect the interpretation of tariff pass-through. Trade unit values often include not just the price of the goods but charges such as freight, insurance, and handling—especially when reported on a cost, insurance, and freight (CIF) basis. These components matter in two ways. First, they can confound the measurement of tariff pass-through: Shipping costs may adjust after a tariff shock due to changes in trade routes, shipment sizes, or pricing strategies by logistics providers. As a result, observed changes in unit values may reflect both producer pricing and transportation margins, complicating efforts to isolate tariff effects.

Broda and Weinstein (2006) are used. Data on bilateral distances come from the CEPII Gravity Database (Conte, Cotterlaz, and Mayer 2022). Finally, the numbers of ocean carriers operating between U.S. ports and ports around the world come from BlueWater Reporting. These port-to-port data are aggregated at the country level (resulting in the number of ocean carriers between each exporting country and the United States) to match the level of aggregation in transportation costs in the U.S. Census Bureau database.

Second, and more important, transportation charges also represent an independent channel through which market dynamics operate. Freight and logistics services are themselves subject to competitive pressures, capacity constraints, and potential market power—all of which shape price formation in traded goods. This means transportation margins do not merely distort the price signal; they are part of the signal. Understanding how these margins respond to shocks and structure trade costs is, therefore, crucial for analyzing pass-through and broader trade price dynamics.

Overall, the lack of competition in the international shipping industry explains part of Latin America and the Caribbean's high transportation costs relative to those of other regions. The evidence is particularly relevant in terms of import flows, but there is also an indication that the lack of competition contributes in part to the higher freight costs associated with the region's exports. Finally, it is worth highlighting the finding by Hummels, Lugovsky, and Skiba (2009) of a positive relationship between shipping prices and tariff rates. This suggests that further reducing tariff rates in the region would yield a double impact on import costs, with a direct impact from lowering the tax on imports and an indirect one from inducing lower shipping prices.

Multinational Firms and the Reallocation of Competitive Pressure

Far from simply crossing borders, multinational firms reshape competition in the economies where they operate. Their entry shifts the geography of market pressure, reallocating who competes, which sectors adapt, and where productivity gains are realized. While much of the literature focuses on spillovers and integration, this perspective understates the strategic role of multinationals in shaping domestic market dynamics. In many cases, they enter not where domestic firms are strongest, but where they are weakest—not to amplify comparative advantage, but to suppress comparative disadvantage (Alviarez 2019). The result is higher productivity alongside a reshuffling of market power and survival.

Strategic Production, Not Passive Trade

In today's global economy, production decisions reflect more than just costs or endowments; increasingly, they are driven by firm strategies responding to geopolitical, logistical, and policy shocks. Recent evidence shows how these shocks are reshaping trade patterns. Alfaro and Chor (2023) document how they altered sourcing patterns between 2017 and 2022, as U.S. firms reduced direct imports from China and redirected flows toward countries like Mexico

and Vietnam. At the same time, imports became more upstream, reflecting broader changes in the geographical organization of production. Alviarez and Blyde (2025) show that higher tariffs and freight costs have reshaped firm-to-firm trade networks, changing how buyer–seller relationships form and persist. Latin American and Caribbean exporters have found it harder to reposition within these shifting global supply chains—likely because of persistent disadvantages in trade costs and connectivity—which has limited their participation in emerging trade networks.

The reshaping of global trade extended to investment decisions. During the U.S.–China trade tensions, Chinese affiliates expanded operations in Latin America and the Caribbean, especially in sectors directly affected by tariffs (Graziano, Sztajerowska, and Volpe Martincus 2024). These were not the most dynamic sectors, but they were strategically positioned to absorb redirected production. At the same time, investment announcements in China fell sharply, while countries like Mexico saw large increases. The shift was not just a rebalancing of trade flows—it was a deliberate reallocation of global production that changed where competitive pressure landed and how firms and markets responded (Utar, Zurita, and Torres 2025). As production moved, so did the structure of competition, sometimes into places unprepared for the intensity it brought.

Moreover, these investment relocations can have broader effects beyond the directly affected sectors. Local spillovers—particularly through input–output linkages—may influence market structure and competitive dynamics in related upstream and downstream industries, amplifying the impact of global shifts in production.

When Entry Rewrites the Rules

Governments across the world, including in Latin America and the Caribbean, actively pursue foreign direct investment (FDI) through investment promotion agencies (IPAs), aiming to attract multinational firms by reducing information frictions and showcasing domestic opportunities (Volve et al. 2021). These efforts are often justified by the expectation of productivity-enhancing spillovers, including higher standards, technology diffusion, and supply chain upgrading. While such effects do occur, they are not the primary drivers of productivity gains. As Alfaro and Chen (2018) show, the bulk of productivity gains from multinational entry do not come from improvements within firms, but from reallocation across them: More productive firms expand, while less efficient ones shrink or exit.

This reallocation reshapes market structure. Revenue and employment become more concentrated among top performers, narrowing the space

for others to survive. As a result, domestic competition intensifies, and the margin for survival becomes tighter.

Where this pressure lands is not random. Alviarez (2019) shows that multinationals often enter sectors where domestic producers face comparative disadvantage, where local firms are smaller, less productive, or higher-cost. Foreign affiliates bring capabilities that effectively flatten those disadvantages, raising average performance through direct competition. Comparative advantage becomes less deterministic, not because locals improve organically, but because the bar for participation rises.

Multinational firms can bring capital, scale, and access to global markets, but their presence does not guarantee wider gains. Much depends on how they interact with domestic firms and how far those connections reach. In Costa Rica, Alfaro-Urena, Manelici, and Vasquez (2022) find that productivity gains and upgrading are concentrated among the direct suppliers of multinationals, with limited effects beyond that first tier. Méndez and Van Patten (2022) further show that most of the value remains within the multinationals themselves, with weak diffusion to surrounding firms or labor markets. Recent evidence from Uruguay (Carballo, de Artiñano, and Volpe Martincus 2019) shows that supplying to multinationals increases the probability domestic firms will begin exporting, underscoring a link between trade and investment through firm-to-firm connections. These patterns illustrate how global firms shape the structure of competition within domestic economies.

Consolidation in the Wake of Competition

Over time, the entry of multinational firms and the exit of smaller, less competitive players can reshape market structure in ways that carry long-term risks, especially in the absence of complementary policies. While initial entry may boost efficiency—especially through selection and scale—it can also lead to consolidation. Surviving firms grow larger, while others disappear. This coexistence of lower prices and higher concentration illustrates how competitive pressure can raise efficiency but still narrow the space for smaller players. Mergers reinforce the pattern. Levonyan and Mengano (2025) show that recent increases in global markups are largely driven by mergers and acquisitions, not organic growth. Horizontal mergers, in particular, have concentrated market power in high-stakes sectors. In Latin America and the Caribbean, the beverage industry illustrates this dynamic starkly. Alviarez, Head, and Mayer (2025) show that multinational firms in the industry absorbed local brands from competitors and consolidated control over national markets. Simulations suggest that if regulators

in the region had applied U.S.- or EU-style merger controls, prices could have been 8–9 percent lower.

In global markets, it is not just revenues that matter; it is who keeps the rents. Ding, Lashkaripour, and Lugovskyy (2024) find that cross-border monopoly rents operate like a hidden tariff on developing economies. Latin American and Caribbean countries, specializing in low-markup exports, often import high-markup goods controlled by foreign firms. The result is a one-way flow of profits. The authors estimate that this implicit burden can reach 8.2 percent—a figure larger than what many countries gain from trade preferences.

This redistribution of value is not incidental. It reflects the ownership structures of the firms that dominate global trade. Ensuring that openness delivers domestic benefits depends on the broader policy environment. What shapes outcomes is not only integration but who controls production, sets the terms of competition, and retains the gains.

Beyond Attraction: Competing on Strategic Terms

To benefit from multinational activity, countries must go beyond simply attracting investment. They must shape it. That means coupling openness with a rigorous competition policy, especially around mergers and dominance. It means strengthening institutions that can monitor, regulate, and channel competitive pressure in ways that foster domestic upgrading rather than foreign consolidation.

It also requires acknowledging that comparative disadvantage is not destiny. Multinational firms have shown they are willing to enter sectors where locals are least competitive, and to make those sectors productive. The question is whether domestic firms can grow in the space created, or whether multinationals will eventually own the gains.

Policy Priorities: Turning Openness into Opportunity

While this chapter has emphasized how deeper integration shapes market power through trade openness and cross-border production, the broader policy and institutional context in Latin America and the Caribbean is crucial to determining outcomes. Structural gaps in regional integration and connectivity often limit the region's ability to turn greater openness into stronger competition and productivity gains.

One of the region's persistent challenges is its low level of intraregional trade. Unlike Asia or the European Union—where regional trade accounts for a large share of total commerce—Latin American and Caribbean economies

remain relatively disconnected from one another. Despite numerous trade agreements, intraregional trade has stagnated over the past two decades.¹⁷ This fragmentation reduces the scope for regional specialization, limits economies of scale, and sustains concentrated market structures.

Enhancing intraregional trade could increase competitive pressure by expanding the pool of firms that operate across borders, especially in smaller economies. It would also offer a path to more balanced growth by giving productive firms access to new markets and inputs without their having to rely solely on distant global partners. As emphasized by Mesquita Moreira and Stein (2019), however, boosting intraregional trade and gaining access to new markets requires tackling persistent non-tariff barriers, including customs inefficiencies, inconsistent technical regulations, and lack of regulatory coordination.

Infrastructure continues to be one of the main obstacles to trade in Latin America and the Caribbean (Mesquita Moreira and Stein 2019; Mesquita Moreira et al. 2013). The region lags global benchmarks in transportation, energy, and digital connectivity. This not only raises trade costs but reinforces market power by deterring entry and limiting firm growth. Research by Mesquita Moreira, Volpe Martincus, and Blyde (2008) shows that improving infrastructure—particularly in terms of logistics and border processes—can yield substantial trade and gains in gross domestic product, with especially large effects in the Caribbean, where transportation costs are among the highest globally.

Digitalization is also influencing trade and competition dynamics. Consumers are increasingly purchasing directly from foreign suppliers, bypassing traditional intermediaries (Volpe Martincus, Sztajerowska, and Santi 2024). At the same time, digital trade procedures—such as electronic customs and single windows—can reduce entry barriers, particularly for smaller firms, and may have an impact on market concentration. These shifts interact with broader changes in multinational production, potentially altering how firms compete and connect across borders.

Better connectivity—both physical and digital—can unlock competition by opening new markets, reducing reliance on dominant logistics providers, and enabling firm expansion. When combined with deeper regional integration and regulatory harmonization, reforms in these areas can lower markups, increase firm dynamism, and make the gains from trade and foreign direct investment more inclusive.

¹⁷ Although these agreements first boosted trade by about 60 percent, they split into a patchwork of small deals that kept trade from growing any further (Mesquita Moreira et al. 2013, Mesquita Moreira 2018).

In short, trade policy must go beyond tariff reform. Deepening regional integration, addressing non-tariff measures, and investing in infrastructure are essential steps toward building a more competitive, resilient, and equitable trade architecture for Latin America and the Caribbean.

The Regulation Conundrum

Why is competition weak in Latin America and the Caribbean? Three suspects are geography, poor infrastructure, and trade barriers, all of which shrink markets and make them more susceptible to the dominance of one or two firms. Another is financial market imperfections, which deny credit access to potential competitors, allowing incumbents to raise their prices. This chapter, though, focuses on barriers to competition introduced by the public sector through its regulatory decisions.

In the pursuit of laudable objectives, regulation can impose high economic costs on society by, for example, suppressing competition. A wealth of research shows that regulation places an exceptional burden on firms in Latin America and the Caribbean. It not only increases costs but, especially in the service sector, raises barriers to entry. Just like geography, poor infrastructure, trade barriers, and financial market imperfections, regulatory barriers to entry allow incumbents to charge prices significantly above those that would prevail in more competitive markets.

Modern societies use regulation to solve difficult problems. One is market failure. Individuals in society engage in billions of social and economic interactions. When markets function well, these interactions leave all participants better off. The markets sometimes fail, however: Firms and individuals may not consider the social costs of the pollution they emit and pollute too much; banks may downplay the consequences of their own risky lending for the stability of the entire financial system and take on excessive risk; firms may sell low-quality products for high prices when consumers are uninformed about quality differences; firms may not compensate their employees for workplace hazards because the employees are unaware of them. Regulations can correct such market failures and raise social welfare.

Redistributive motives and a desire to level the playing field also prompt societies to regulate. These are the objectives of minimum wages and

guaranteed parental leave, which are meant to provide benefits to employees that (presumably more prosperous) employers would not otherwise offer. Such regulations also respond to situations in which employees have less bargaining power than employers. Regulatory exemptions for small businesses reflect similar motives.¹

To achieve their objectives, regulations necessarily raise firm costs. To discourage firms from excessive pollution, for example, regulations oblige them to internalize the social costs of that pollution. Firms raise their prices to offset these cost increases so that households, too, must internalize the social costs of their consumption decisions, paying more for and consuming less of the regulated sector's products. In the case of regulations aimed at redistribution, the explicit goal is to increase the costs or reduce the revenues of some groups to finance transfers to other groups (firm costs increase to pay higher minimum wages to workers; landlords receive lower rents).

An important question is whether regulatory institutions ensure that the social benefits of the regulations they promulgate exceed their social costs. They may not. Regulations may, for example, create barriers to entry that are high enough to give regulated firms significant market power. If regulatory capital requirements exclude competitive entrants from the market, incumbent firms may raise prices above the level needed to offset their higher costs of capital. As rent controls suppress the supply of housing, they increase the market power of landlords and their ability to reduce costs (by, for example, not maintaining the quality of their rental units) and more than offset lower rents.

All regulations potentially create barriers to entry. Any regulation that increases firm costs can drive lower-productivity firms out of the market, reducing the competitive threat to higher-productivity firms. Capital requirements for banks protect banks that can meet these requirements from competition from smaller banks; minimum qualifications for lawyers or opticians limit competition from those who cannot afford to obtain the qualifications or who would like to offer lower-quality services

¹ A third regulatory objective is to address market power itself, the subject of the next chapter. Market power is reflected in a company's ability to increase the price of its product above its marginal cost. Competition policy is the response of societies to anticompetitive behavior by firms seeking to increase their markups. Increasing returns to scale also generate market power, as in the electricity or water sectors. Increasing returns preclude competition among multiple firms, each of which would have higher costs than a single large firm, and regulators attempt to bring prices to their competitive level. Utility regulation, though, is beyond the scope of this book.

at lower prices; zoning requirements for hotels explicitly exclude competitors; safety regulations for restaurants limit entry by cheaper restaurants, since the costs of the regulations force them to raise the prices of their meals by a larger percentage than the more expensive ones. Prospective entrants into an industry may find that regulatory compliance increases their capital costs; prevents them from deploying innovative technologies that lower the costs of production; or precludes them from offering new products that compete with those of incumbents. The higher the entry costs, the less the competitive pressure confronting incumbents. Incumbents can then raise prices by more than regulation increases their costs of production.

Countries in Latin America and the Caribbean struggle to balance the positive effects of regulation with its negative effects on competition and the costs borne by firms and individuals. Research from around the world demonstrates that these negative effects can be substantial. The chapter also presents evidence that regulatory institutions in the region are less likely than those in other parts of the world to take economic effects into account. Regulations are usually more restrictive; regulatory institutions are usually weaker and permit more arbitrary decision making; and firm managers spend more time dealing with regulation. Analysis of firm-level data from the Organisation for Economic Co-operation and Development (OECD) and Latin America and the Caribbean points to sharp differences between the two regions in the consequences of encounters with regulators for firms' economic performance.

Regulation's Economic Consequences

A wealth of evidence indicates that the effects of regulation on firm costs, prices, productivity, and competition can be substantial and should not be ignored when designing regulations to curb market failures or achieve redistributive goals. One indication that regulation slows entry comes from U.S. data from the period 1998–2011 and from OECD data covering a large sample of European firms. These data indicate that regulated industries experience fewer firm births and slower employment growth (Bailey and Thomas 2017; Klapper, Laeven, and Rajan 2006). In an analysis of 18 OECD countries, Nicoletti and Scarpetta (2003) conclude that regulatory reforms that favor competition increase productivity. Diverse regulatory reforms in Europe and the United Kingdom have prompted the entry of new foreign firms into the UK, with productivity growth and patenting among incumbent firms rising in response (Aghion et al. 2009). Based on their review of the literature, Loayza and Servén (2010) conclude that regulation reduces

firm entry and turnover, making the economy less efficient and suppressing per capita output growth.²

Singla (2023) uses machine learning to examine the evolution of the costs of *all* federal regulations in the United States from 1970 to 2018. He estimates that, over the period, regulatory costs rose by US\$1 trillion. These cost increases would have naturally created upward pressure on prices. However, Singla finds in addition that more regulation accounted for around 35 percent of the rise in market power in the United States during that time; it allowed larger firms to charge higher markups—higher selling prices relative to their marginal costs (in competitive markets, these should be the same). Meanwhile, the markups of smaller firms declined.

Trebbi, Zhang, and Simkovic (2023) examine the regulatory costs of firms by attempting instead to quantify the labor costs of compliance. They use detailed establishment-level occupational microdata that allow them to classify employees according to whether they are assigned to regulatory compliance. Their estimate of regulatory costs amounts to between 1.34 and 3.33 percent of firms' wage bills. Medium-sized firms bear by far the largest costs—40 percent higher than small or large firms. This is because they enjoy neither the regulatory exemptions of small firms nor the economies of scale in regulatory compliance that large firms enjoy.

More than 500 studies have examined the price effects of regulation and deregulation in OECD countries over the years 1932–2011. Ennis and Thanacoody (2024) rigorously review these studies to examine the effects of regulatory reform on prices. They find that deregulation intended explicitly to remove obstacles to competition, such as restrictions on firm entry into certain markets, lowered prices by about 24 percent on average. Reforms that relaxed regulatory requirements targeting market failures or redistribution lowered them by about 20 percent.

Evidence from single industries and regulations also points to the significant consequences of regulation for competition. Ryan (2012) shows that the fixed costs of meeting the requirements of the Clean Air Act in the cement industry had anticompetitive effects that yielded consumer losses of approximately US\$1 billion to US\$3 billion. These economic costs may even have outweighed the substantial health benefits of the regulation.

² Technically, they conclude that regulation reduces total factor productivity, the amount of output that economies generate from their inputs (capital, labor, and so on). A broader and older literature focuses on the effects of regulation on productivity, without investigating the extent to which these effects operate through competition. For example, Christainsen and Haveman (1981), Gray (1987), Link (1982), Guasch and Hahn (1999), and Égert (2016) all find negative effects of regulation on productivity and/or innovation.

List et al. (2003) also study the Clean Air Act and find that across all pollution-intensive sectors, its passage reduced the number of plant openings by between .7 and 1.3 plants per county in counties that were out of compliance with the act compared to compliant counties. This is because firms in noncompliant counties had to change their behavior to come into compliance; firms in already compliant counties did not.³

A growing regulatory concern for governments is digital privacy. To limit the potential abuse of their data, governments often require firms to obtain customers' consent before they use them. Despite the intuitive appeal of consent-based regulations, however, they can exact a high price from customers. Such requirements benefit firms that offer a larger scope of services at the expense of small and new firms, with negative effects on competition (Campbell, Goldfarb, and Tucker 2015).

Many of the adverse economic effects of environmental and privacy regulations result from barriers to entry imposed on smaller firms to the benefit of larger incumbents. Pervasive zoning regulations, in contrast, often create barriers to entry by large firms to the benefit of small incumbents. In France, retail employment would have been 10 percentage points higher in the absence of regulations requiring regional zoning boards to approve the creation or expansion of any large retail store (Bertrand and Kramarz 2002). In Italy, restrictions on the entry of large retail stores raised consumer prices and the profits of incumbent firms but lowered their productivity. When these were liberalized, investment in information and communications technology and employment increased (Schivardi and Viviano 2011). In Japan, the number of retail outlets would have risen by 12–17 percent in the absence of zoning rules that prohibited commercial outlets in certain residential and industrial areas and required permission from local governments to develop them in specified areas (Nishida 2014). In the United Kingdom, Town Centre First policies reduced output by forcing stores onto less productive sites. Local authorities that more strictly enforced these policies had fewer stores, and chain stores within their areas reported lower sales; an increase of one standard deviation in restrictiveness increased household commuting distances by 6.1 percent (Cheshire, Hilber, and Kaplanis 2015).

Evidence from the United States also shows significant negative effects of land-use regulations on the productivity of residential construction.

³ Greenstone, List, and Syverson (2012) undertake a similar exercise, this time focused on productivity. Using 1.2 million plant observations from the period 1972–93, they compare the evolution of total factor productivity in U.S. counties that were, respectively, in and out of compliance with air standards. The enforcement of air quality regulations in out-of-compliance counties reduced total factor productivity by at least 2.6 percent and as much as 4.8 percent compared to compliant counties.

The growing stringency of regulations has led to a persistent decline in the size both of projects and of the residential construction firms that built them. D'Amico et al. (2024) show that if regulations had been relaxed, the residential construction industry would have been as much as 60 percent more productive.

The competitive consequences of regulation extend to workers, as well. Regulatory reforms that increased product market competition in Europe in the 1980s and 1990s raised wages and reduced unemployment (Griffith, Harrison, and Macartney 2007). Returns to skill also increase with competition, according to studies by Guadalupe (2007), based on worker data from the United Kingdom, and Fernandes, Ferreira, and Winters (2014), based on data from Portugal.⁴ Bassanini and Brunello (2011) find that competition induced by deregulation also increases firm incentives to train workers.⁵ Like Fernandes, Ferreira, and Winters (2014), Cooke, Fernandes, and Ferreira (2021) exploit the deregulatory episode in Portugal to examine whether wage inequality increases as a result of the higher returns to skilled workers driven by deregulation-induced competition. Instead, they find that competition flattens firms' hierarchies and significantly reduces within-firm wage inequality.

Developing countries exhibit significantly more restrictive regulation of labor and product markets than developed ones (Loayza and Servén 2010). This suggests deregulation in developing countries should have large economic effects. In Mexico, in fact, simplified business entry regulation increased the number of registered businesses by 5 percent and wage employment by 2.2 percent, while competition from new entrants reduced the income of incumbent businesses by 3 percent (Bruhn 2011).⁶ In Peru, the deregulation of municipal barriers to entry significantly increased productivity (Schiffbauer, Sampi, and Coronado 2025).⁷ Outside of Latin America,

⁴ Fernandes et al. (2014) can discount explanations other than competition for increasing returns to skill, including changes in employment composition, skill-based technical change, and workers who change skill levels after deregulation.

⁵ In principle, competition induced by deregulation has ambiguous effects on training. It may reduce firm profits per trained worker, reducing incentives, or it may increase firm productivity and the value of trained workers, increasing incentives to train. They show that the latter effect dominates.

⁶ Kaplan, Piedra, and Seira (2011) also find significant increases in registration, of 5 percent per month, but conclude that the effect was temporary.

⁷ Schiffbauer, Sampi, and Coronado (2025) use data from 1,800 Peruvian municipalities to analyze the effects of decisions by Indecopi, the Peruvian competition authority, to overturn anticompetitive municipal regulations. Revenue productivity (sales divided by inputs) rose in establishments operating in reform municipalities and sectors relative to establishments in nonreform municipalities and sectors. Markups remained constant, leading them to conclude that deregulation also increases physical productivity.

Arnold et al. (2016) estimate the impact of service sector regulation in India on the performance of their customers, manufacturing firms. They develop an index that measures the extent of reforms that encouraged private sector entry and competition in banking, telecommunications, insurance, and transportation. A one standard deviation increase in the index is associated with an increase in manufacturing firm productivity of more than 9 percent.

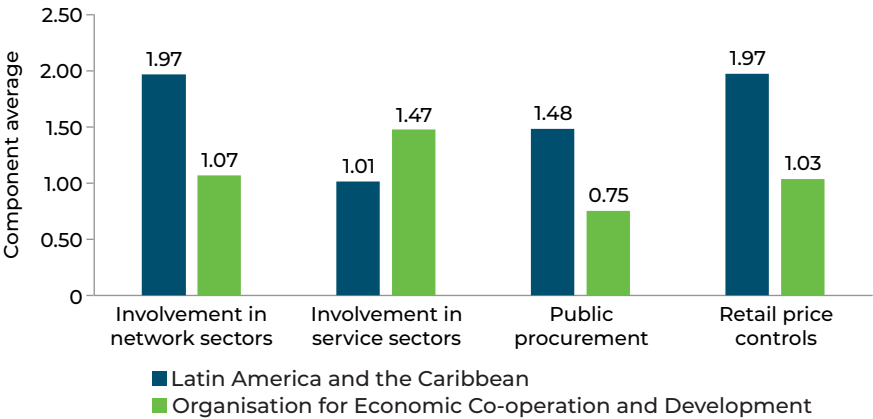
Higher Hurdles in Latin America and the Caribbean

If the higher markups in Latin America and the Caribbean can be attributed in part to regulatory obstacles to competition, those obstacles should be greater in the region than in countries with lower markups. In fact, data from several sources confirm that countries in the region impose a heavier regulatory burden on firms. The regulation indicator of the 2024 Economic Freedom of the World survey summarizes information from many sources to capture the overall regulatory situation, the regulation of financial and labor markets, and the impartiality of the public administration (Gwartney et al. 2022). Out of 164 countries this indicator covers, the average country in Latin America and the Caribbean is ranked approximately 91st (Jamaica is the highest ranking country, in 19th place, and Venezuela the lowest, at 164).⁸

The Product Market Regulation (PMR) database of the OECD contains the most detailed information on the laws and regulations of participating countries. It includes all OECD countries, some countries outside of the OECD, and six Latin American countries. One key summary indicator is the degree of government involvement in how firms conduct their operations, with higher scores indicating more involvement and lower scores a less intrusive regulatory environment. The maximum score received by any

⁸ The regulation measure summarizes, in the financial sector, the share of bank deposits in private banks; government borrowing relative to private sector borrowing; and interest rate controls. It also summarizes multiple labor market regulations: contract lengths; minimum wages; hiring and firing; the flexibility of wage determination; regulation of hours worked; costs of dismissing workers; military conscription; and restrictions on hiring foreign labor. It incorporates the V-Dem dataset measure of impartial public administration; costs of tax compliance, based on data from the Economist Intelligence Unit (EIU); costs of starting a new business and freedom of existing businesses to compete; day and money costs of permitting; price controls; and state control indicators from EIU. It also includes the World Economic Forum indicator of the burden of government regulation. The rankings of all countries in the region are as follows: the Bahamas, 30; Peru, 40; Belize, 48; Uruguay, 65; Costa Rica, 69; Guatemala, 71; Colombia, 72; Panama, 73; Guyana, 78; Paraguay, 80; Chile, 81; Mexico, 84; Honduras, 90; Trinidad and Tobago, 92; Barbados, 94; Ecuador, 98; Dominican Republic, 102; Suriname, 116; El Salvador, 118; Nicaragua, 119; Haiti, 121; Brazil, 137; Argentina, 147; and Bolivia, 148 (Gwartney et al. 2022).

Figure 9.1. Government Involvement in Business Operations in Latin America and the Caribbean



Source: IDB staff calculations, based on data from the OECD's 2023 Product Market Regulation Indicators.
Note: OECD averages exclude Latin American and Caribbean countries.

country in 2023 was 2.4.⁹ In Latin America and the Caribbean, the indicator was 1.61—much greater than the average of 1.08 received by OECD countries, excluding the Latin American countries in the OECD (unless otherwise stated, all subsequent references to OECD averages in this chapter exclude those OECD countries from Latin America and the Caribbean). The level of involvement of governments in the region was more than one standard deviation (approximately .42) greater than of OECD governments.

Figure 9.1 disaggregates the four components of the government involvement indicator. Retail price regulations are more common in the region than in the OECD; the former scored 1.97 in 2023, versus 1.03 for the latter, compared to a maximum score of 4.0. Likewise, government is

⁹ The OECD applies an elaborate scoring algorithm to generate aggregate scores from more than 1,000 individual qualitative and quantitative questions. In principle, the indicators all vary from 0 to 6, with higher scores indicating greater restrictions imposed by the regulatory framework on competition. Even apparently moderate scores of 3 or 4, however, can indicate the presence of significant obstacles to competition. For many indicators, the maximum score any country receives is around 2, and, for most, the maximum score does not exceed 4. Among the countries analyzed below, for example, the maximum score on how well they assess the impact of regulations on competition is 2.675. But this value represents the aggregation of many yes-no questions, where “no” (unfriendly to competition) is assigned a value of 6, and competition-friendly “yes” is assigned a value of 0. Hence, an aggregate score of 2.675 implies that the country that received the maximum score of 2.675 in fact replied “no” to approximately 45 percent of the questions.

more deeply involved in network sectors (1.97 versus 1.07, maximum 2.98), and public procurement rules are more likely to create an uneven playing field by not requiring tenders for procurement or by making it difficult for all bidders to participate (1.48 versus .75, maximum 3). Only in the component “involvement in services” (maximum 3.25), which tracks constraints in professional services, the retail sale of medicines, and retail distribution, do Latin American and Caribbean countries surpass OECD countries (1.01 versus 1.47).

An example of heavier retail price regulation in Latin America and the Caribbean is gas tariffs. All of the region's countries in the database impose some level of price regulation on gas, while 65 percent of OECD countries do not. Similarly, 66 percent of OECD countries do not regulate retail tariffs for fixed-line services, while 83 percent of the region's countries regulate at least some fixed-line tariffs. Among Latin American and Caribbean countries in the sample, 67 percent place some limits on the fees that accountants can charge, compared to 6 percent of OECD countries.

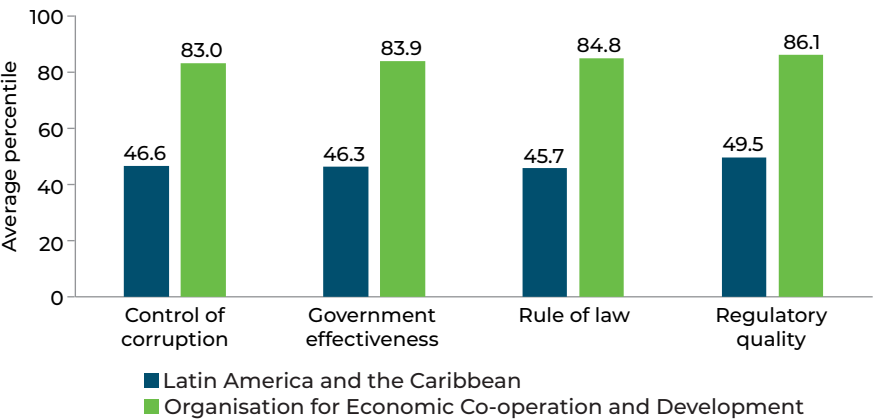
In procurement, as well, OECD countries do much more to promote competition than Latin American and Caribbean countries. Nearly all OECD countries—85 percent—require that the entry requirements firms must meet to participate in a tender be proportional to the value or complexity of the tender; only 33 percent of Latin American and Caribbean countries do the same. To facilitate entry and competition, it is sometimes useful to divide procurement contracts into lots. Again, 85 percent of OECD countries require this, compared to only 25 percent of the region's countries.

Regulations emerge from the institutions of a country. Institutional weakness could therefore account for exceptionally burdensome regulations or significant limits to competition. Countries of the region exhibit weaker institutions than those of the OECD. Four variables that demonstrate this relationship are from the World Bank's Worldwide Governance Indicators: *Control of Corruption*, *Government Effectiveness*, *Rule of Law*, and *Regulatory Quality* (see Figure 9.2). The average high-income OECD country ranks above the 80th percentile of all countries in the world. In contrast, the average Latin American and Caribbean country ranks below the 50th percentile.¹⁰

The PMR data complement the broad and qualitative WGI with more direct and granular measures of the strength of regulatory institutions. These reveal that regulatory processes in Latin America and the Caribbean have less regard for the impact of regulations on competition. The summary

¹⁰ See the Worldwide Governance Indicators at <https://www.worldbank.org/en/publication/worldwide-governance-indicators>.

Figure 9.2. Worldwide Governance Indicators, Latin America and the Caribbean versus the OECD



Source: IDB staff calculations, based on data from the 2023 World Bank's Worldwide Governance Indicators.

Note: The average percentile is the percentage of countries that have lower ratings on the different governance indicators than either the regional average of Latin America and the Caribbean or the OECD average. OECD averages exclude Latin American and Caribbean countries.

variable, *Assessment of Impact on Competition*, indicates whether governments perform impact assessments on new regulations, the scope of the impacts they investigate, the extent to which they give detailed guidance on how to conduct them, and whether they engage in competition advocacy. While no region is a stellar performer in assessing effects on competition, OECD countries have an average score of .96, compared to 1.30 for the six countries in Latin America and the Caribbean. Another important practice for regulators to follow is collecting information on potential regulatory impacts from market participants. The PMR reports on whether regulators must consider all comments by stakeholders before finalizing primary laws and subordinate regulations. Most Latin American countries respond that they do not require this.

Parsing the Performance Effects

To estimate the effects of regulation on productivity, competition, or prices, analysts require information on the types of regulations to which firms are exposed and the degree to which they are enforced, as well as information on firms' performance, including their prices, input choices, productivity, sales, and exit and entry into their sectors. No single estimate would suffice, since regulatory effects on firms vary by type of regulation and according to whether the country's regulatory institutions are strong or weak. These

data are generally unavailable. Perhaps ironically, countries around the world, including those in the region, keep close track of the tax burdens they place on firms. They do not pay such attention to regulatory burdens, even though fiscal and regulatory policies are equal partners in government efforts to improve social welfare.

Data from the World Bank Enterprise Survey help to fill this gap, however. The WBES contains a wealth of information on firms from around the world for the period 2006–24. This includes data on the fraction of management time spent on regulation, which, Tamkoc and Ventura (2024) show, can have adverse effects on economic development. The WBES uses nationally representative samples of manufacturing and service firms, allowing the different experiences of these two sectors to be rigorously compared.

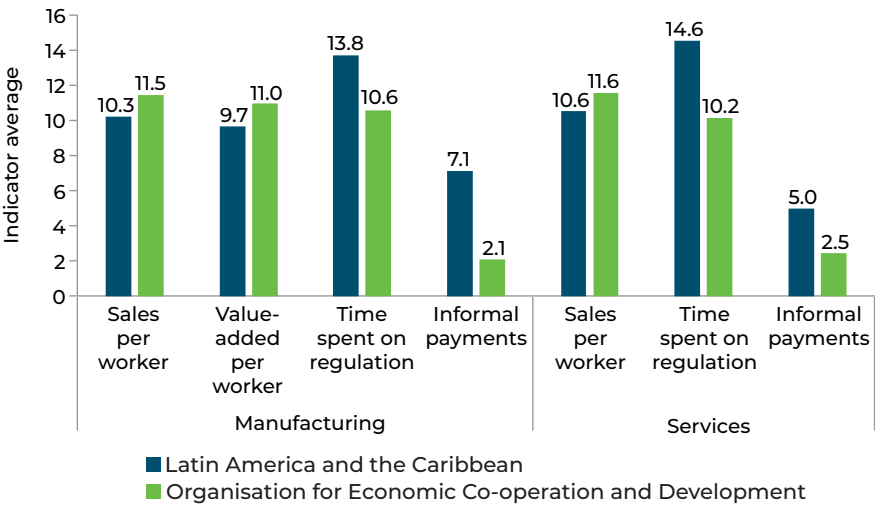
The database contains over 10,000 observations of manufacturing firms from OECD countries not in Latin America and the Caribbean and nearly 13,000 from the region. The median number of employees—30—is the same in the two sets of countries, although the Latin American and Caribbean sample includes more large firms. The region’s manufacturing firms report lower sales and are younger, with a median age of 21 years, as compared to 23 years in the sample of OECD countries not in the region. Latin American and Caribbean manufacturers are half as likely to export: 20.4 percent of respondents from the region report exports, compared to 45.5 percent of OECD respondents.¹¹

The database also contains about 9,500 observations from service firms in Latin America and the Caribbean and about another 9,500 from the OECD. Approximately half of the total (10,885) are in the wholesale and retail trade sector; 2,666 are in construction; 2,505 in accommodation and food services; 1,366 in transportation and storage; and 1,153 in information and communications technology. The remainder are in six other service sectors. As in manufacturing, Latin American and Caribbean service firms have more employees on average than those in the OECD, with a median of 21 employees compared to 15. Sales in the region are lower, and service-sector firms are younger, with a median age of 18 years, compared to 20 among OECD firms not in Latin America and the Caribbean.

The information elicited by the WBES survey on firm respondents’ sales and costs makes it possible to construct several measures of firm performance: sales per worker, value-added per worker, and two measures of total

¹¹ Strictly speaking, nearly all firms (99 percent) in the manufacturing sample are in manufacturing, but a few are in water supply, sewage and waste management, and information and communications technology. All estimations control for whether firms are in these subsectors.

Figure 9.3. Regional and Sectoral Averages of Firm Performance and Regulatory Experiences



Source: IDB staff calculations based on 2006–24 waves of the World Bank Enterprise Surveys (WBES). OECD averages exclude firms in Latin America and the Caribbean.
Note: Productivity measures are the means of log-transformed total annual sales and value added per full-time employee. Time spent on regulation is average firm-reported share of senior management time spent on regulatory compliance. Informal payments is the share of firms reporting informal payments to public officials greater than 1% of total annual sales.

factor productivity. Figure 9.3 summarizes the data for manufacturing and service firms. It also illustrates that the fraction of manager time spent on regulatory matters is significantly larger in Latin America and the Caribbean than in the OECD: 13.8 percent versus 10.6 percent in manufacturing firms and 14.6 versus 10.2 percent in services.

One intuitive interpretation of the time-spent variable is that it captures the regulatory compliance costs of firms. Those whose managers spend a higher fraction of their time on regulation are also likely to dedicate other resources to regulatory compliance and to make greater changes in their production processes to achieve compliance. All of this implies that firms in which managers spend more time on regulation need more workers and other inputs to generate the same amount of output and sales.

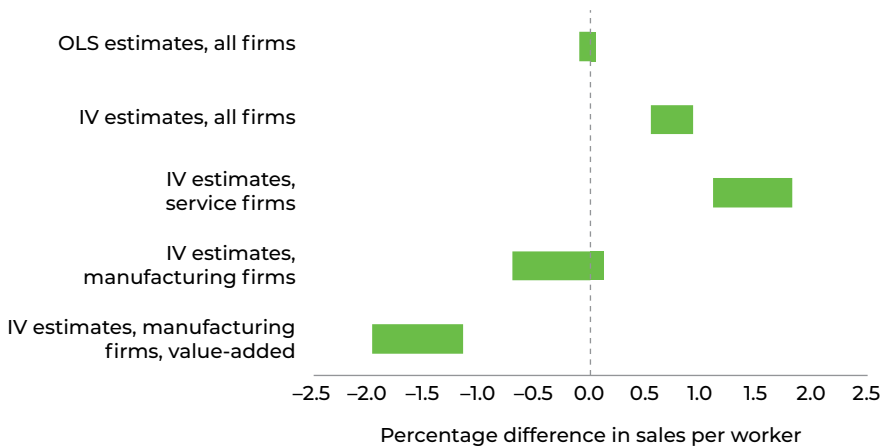
The effect of regulations on value-added or sales per worker depends on whether the regulations limit entry. If they have little effect, firms raise their prices to offset regulatory costs, but regulation does not reduce competition and allow them to raise their prices by more than their costs increase. In this case, firms in which managers spend more time on regulations should exhibit lower sales and value-added per worker. The price increases imposed by more regulated firms do not keep pace with their higher input

costs. Hence, the ratio of their sales to their inputs falls relative to the ratio in unregulated firms. Moreover, firm profits decline, and less productive firms tend to exit the market as regulatory costs push their profits below zero.

If, on the other hand, regulations restrict entry, they increase the market power of the regulated incumbent firms. Increased market power potentially allows regulated incumbents to increase their prices by more than their costs have increased. In this case, firms that spend more time on regulation may report *higher* sales and value-added per worker. The least productive firms, able to charge higher prices, remain in the market.

Regulation, therefore, has opposite effects on sales and value-added per worker depending on whether it blocks entry or not. The first row of Figure 9.4 demonstrates that these opposing effects are visible in the data. Among all OECD and Latin America and Caribbean firms in the WBES database, the correlation of manager time spent with the (log of) sales per worker is small and insignificant. Firms in which managers report spending 1 percentage point more of their time on regulation also report sales per

Figure 9.4. Impact of Regulation on Sales per Worker



Source: IDB staff calculations based, on data from the 2006–24 waves of the World Bank Enterprise Surveys (WBES).

Note: This figure plots the range of estimates of change in sales per worker or value-added per worker when firm managers spend 1 percentage point more of their time on regulation. The rows indicate the estimation method (OLS = ordinary least squares; IV = instrumental variables) and the sample (manufacturing, services, or both). Three specifications are estimated for each row, and the minimum and maximum estimates of the variable of interest are plotted within these three regressions. The specifications vary in the list of controls included; the first controls only for the country's gross domestic product (GDP) per capita, manager's experience and gender, perceptions of the fairness of the judiciary, and country, industry, and survey-year fixed effects. The second also controls for the firm's engagement in informal payments, and the third adds the firm's size, age, exporter status, foreign ownership, and financial stress and whether it is certified and offers training. OLS estimates use the firm's own management time. The instrumental variable estimates use as an instrument for the firm's own management time the average time spent by the managers of other firms in the same sector and region.

worker ranging from .03 percentage points higher to .05 percentage points lower, depending on the inclusion of controls for other firm characteristics. Regulation may increase costs—in this case, the number of workers needed to produce a given amount of output—but firms are able to raise their sales prices by enough to offset the cost effect.

Although the estimates summarized in the first row of Figure 9.4 provide little evidence of regulatory barriers to entry, it is possible that the true effects of regulation on firm market power are obscured by unobserved characteristics of firms, such as the skill of their managers. On the one hand, managers who are better able to secure regulatory exemptions may invest more time in dealing with regulators *and* be better able to reduce firm costs. This would create a *negative* association between time spent and sales per worker. Alternatively, managers who are more skilled may be able to achieve the same compliance results in less time while also increasing firm sales. This would create a *positive* association between time spent and sales per worker. Both effects may be present in the data, offsetting each other.

The estimates summarized in the second row of Figure 9.4 disentangle the effects of unobserved firm characteristics. They take advantage of the fact that the regulatory time spent by managers in other firms in the same sector and region is unrelated to a firm's own unobserved characteristics, such as its manager's talent. Time spent by managers in other firms does, however, describe the regulatory environment a firm's own manager confronts; when other managers spend more time on regulation, it is reasonable to infer a firm's own manager also confronts greater regulatory challenges. Hence, one can ask how a firm's sales per worker are related to the component of its own manager's time that can be explained by the time spent by other managers in the firm's sector and region.¹²

The second row of Figure 9.4 indicates that, once these unobserved firm characteristics are accounted for, more manager time spent on regulation is associated with significantly *higher* sales per worker; an increase of 1 percentage point in time spent on regulation is associated with an increase of between .55 and .80 percentage points in sales per worker. The estimates indicate regulation is associated with significant barriers to entry in the region. On average, its effects on entry and firm market power (allowing firms to increase their prices) exceeds its effects on firm costs.

¹² Strictly speaking, instrumental variables are used to estimate the effect on firm performance of time spent on regulation. The instrument for a firm's own time spent on regulation is the average of the other firms in its sector and region, and the final estimate examines the effect on firm performance of that component of the firm's own time that is correlated with this average.

Differences across sectors further illuminate the effects of regulation on competition. Sectors differ in the degree to which they are subject to regulatory barriers to entry and can take advantage of these barriers to raise their prices. Explicit entry barriers are arguably more common in services. Construction, hotels and restaurants, transportation, banking, and education often confront exceptional entry barriers that exceed those typically faced by manufacturing firms. Zoning rules explicitly restrict entry into construction, hotels, and retail, while governments often dictate the right to provide different transportation services on specific routes. Entry into professional services, such as law and medicine, is routinely limited by governments or by professional associations with government approval. Financial regulation can impose significant barriers on innovative entrants, such as financial technology (FinTech) firms (Greco and Vieceens 2020).

Services are, in addition, governed by minimum quality standards that also constitute barriers to entry. Entry barriers in regulations governing construction, hotels, and passenger transportation often impose standards to protect consumers from their inability to observe the quality of outputs in these sectors. Because consumers may be imperfectly informed about the implications of different standards of construction for their welfare, for instance, governments frequently require buildings to meet minimum electrical and plumbing standards and be adequately resistant to fire, earthquakes, or high wind. Builders who lack specialists on these standards cannot meet these requirements.

To the extent that firms in the service sector are more exposed to explicit regulatory barriers to entry, they should exhibit a stronger association between manager time spent on regulation and sales per worker. This tendency is reinforced by the fact that firms in service sectors produce nontradables. Since they are less exposed to competition from imports, they have greater scope for taking advantage of regulatory barriers to entry by raising their prices.

The third row of Figure 9.4 reports estimates that replicate those in the second row but focus only on firms in the service sector. An increase of 1 percentage point in time spent on regulation by managers of service sector firms is associated with a much larger increase in sales per worker compared to the all-firm average in the second row. Sales per worker increase by between 1.11 and 1.8 percentage points, consistent with regulatory barriers to entry allowing firms to increase their prices significantly.

In contrast, the fourth row of Figure 9.4 refers only to manufacturing firms. As producers of tradable goods, and potentially less exposed to explicit barriers to entry than service firms, they should have less scope to raise prices in response to increased regulation. Consistent with this, an

increase of 1 percentage point in manager time dedicated to regulation is associated with sales per worker that are between .12 percentage points greater and 0.58 percentage points lower.

These results may seem to indicate that manufacturers can raise their prices at least enough to offset the increased input demands of regulation. However, the appearance that manufacturing firms are unscathed by regulation could be a result of the intermediate goods manufacturers use in their production processes. Service firms do not require these. The producers of intermediate goods are also often regulated. They must pass on their higher costs to their customers, the final manufacturers. The latter then include these higher costs in the prices they charge. This inflates the value of their total sales.

To see the true effect of regulation on manufacturing firms, it is therefore appropriate to focus on value-added—that is, the firms' total sales *less* the costs of intermediate goods. If regulation increases costs by more than it increases manufacturer market power and the ability to raise prices, value-added per worker should fall. This is what the data reveal. The bottom row of Figure 9.4 summarizes estimates that uniformly reveal a significant *negative* relationship between value-added per worker and the time spent on regulation in manufacturing firms. An increase of 1 percentage point in managerial time spent on regulation is associated with a *decline* of between 1.17 and 1.97 percentage points in value-added per worker. Regulations therefore appear to raise manufacturing costs by much more than manufacturers can raise their prices to compensate.

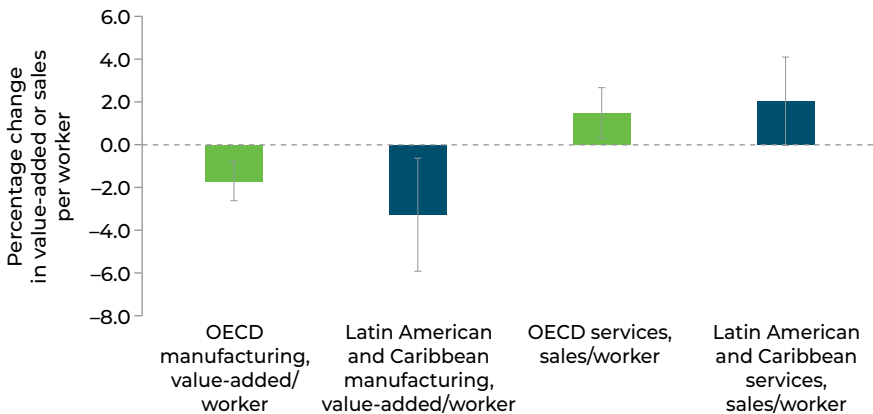
Using the OECD Product Market Regulations database, Alesina et al. (2005) also identify stronger effects of deregulation on service sector firms, consistent with the greater susceptibility of the sector to regulatory barriers to entry. Deregulation increases the number of firms and accelerates investment in the service, but not the manufacturing, sector. The costs of regulation should reduce productivity across all sectors, however; Barone and Cingano (2011) and Boursès et al. (2013), also using the OECD data, find that productivity growth among downstream manufacturing firms is significantly curbed by anticompetitive upstream regulations.

The discussion of the different estimates in Figure 9.4 has so far not touched upon the significant differences between the institutional contexts of Latin America and the Caribbean and those of the OECD. Strong regulatory institutions encourage regulators to find lower-cost approaches to correcting market failure, with smaller effects on firm costs and barriers to entry. The differences in regulatory effects between manufacturing and service firms should, therefore, narrow. Strong regulatory institutions also imply more uniform and predictable enforcement. Stronger enforcement

signifies less arbitrary and more predictable compliance costs, reducing time spent by firm managers and the compliance costs of firms. Stronger institutions and enforcement dampen the regulatory effects that raise sales per worker in services and suppress them in manufacturing. Hence, again, in countries with stronger institutions, the difference in regulatory effects between service and manufacturing firms should be narrower.¹³

The estimates summarized in Figure 9.5 indicate significantly larger effects of regulation in Latin America and the Caribbean than elsewhere. In the OECD (excluding Latin American countries) an increase of 1 percentage point in manager time spent on regulation is associated with a decline of 1.68 percentage points in manufacturing value-added per worker. The decline is twice as large among Latin American and Caribbean countries, at 3.45 percentage points. In services, an increase of a percentage point in manager time is associated with

Figure 9.5. Effects on Firm Performance When Managers Spend More Time on Regulation: Latin America and the Caribbean versus the OECD



Source: IDB staff calculations, based on data from the 2006–24 waves of the World Bank Enterprise Surveys (WBES).

Note: Bars indicate the effects on value-added or sales per worker of a 1 percentage point increase in manager time spent on regulation. The OECD sample excludes Latin American and Caribbean countries. The effects are estimated using instrumental variables, as in rows 2–5 of Figure 9.4, and control for the following variables: firm's engagement in informal payments (instrumented using the engagement of other firms in the same region and sector) and firm's size, age, exporter status, foreign ownership, and financial stress and whether it is certified and offers training. It also controls for country's GDP per capita, manager's experience and gender, perceptions of the fairness of the judiciary, and country, industry, and survey-year fixed effects.

¹³ Stronger enforcement could also imply uniformly higher compliance costs across all firms and more time spent by firm managers. This would increase the effects of regulation on firm performance and amplify the differences between service and manufacturing firms. The evidence below, however, is inconsistent with this effect.

increased regulatory restrictions on entry that allow OECD firms (excluding Latin American countries) to raise sales per worker by 1.5 percentage points. Among Latin American and Caribbean countries, sales per worker increase by 2.04 percentage points.

The difference in regulatory effects between manufacturing and service firms reinforces the importance of institutional context. Among OECD firms, an increase of 1 percentage point in manager time is associated with a 3.18 percentage point increase in the difference between service firms' sales per worker and manufacturing firms' value-added per worker. The increase is nearly 5.3 percentage points among Latin American and Caribbean firms. The relative strength of regulatory institutions in the OECD and in Latin America and the Caribbean can account for these stark differences.

When considering how institutions mediate the economic impact of regulation, the issue of corruption inevitably arises. One aspect of arbitrary and unpredictable regulatory enforcement, for example, is the possibility that regulators demand or firms successfully offer informal payments—that is, bribes—in exchange for favorable treatment. The relationship between bribes and competition is well established in, for instance, studies of public procurement. Brugués, Brugués, and Giambra (2024) analyze data from Ecuador and conclude that the misallocation of public procurement contracts to politically connected firms leads to welfare losses of between 2 and 6 percent of the procurement budget. Colonnelli and Prem (2022) examine the effects of anticorruption audits in Brazilian municipalities, which are largely targeted at municipal procurement. They find competition increases after these audits. Specifically, the number of firms rises significantly in those sectors most dependent on public procurement.

According to WBES data, 7.1 percent of manufacturing firms and 5 percent of service firms in Latin America and the Caribbean report making informal payments. Among OECD firms, the numbers are one-third to one-half as large (2.1 percent and 2.5 percent, respectively; see Figure 9.3). Corruption does not account for the results reported in Figure 9.5 and many of those in Figure 9.4, however, since these estimates control for whether firms report engaging in informal payments. This raises the issue of how corruption affects firm performance above and beyond the effects of regulation.

As with manager time spent on regulation, whether firms make informal payments can be affected by unobserved firm characteristics that also affect firm performance. It is possible, once again, to control for these effects by looking only at the component of a firm's own informal payments that can be explained by the average informal payments of all other firms in its sector and region. Using that approach, estimates reveal that corruption has a robustly *negative* effect on sales per worker among service firms

in both Latin America and the OECD, the opposite of the effects of time spent on regulation. One interpretation of the difference is that firms that successfully enter heavily regulated industries can charge higher prices, but those that pay bribes to enter benefit less.¹⁴

The discussion so far focuses on sales and value-added per worker, which are easier to measure and, in the case of sales per worker, available for all firms, both services and manufacturing. Productivity, though, is the most important indicator of firm performance, as productivity growth is essential for the growth of household incomes. Estimating regulatory effects on productivity is difficult, however.

In principle, regulation should reduce productivity; it requires firms to use additional inputs that contribute nothing to final output. This effect is, however, harder to document than in the case of sales and value-added measures because regulatory costs also drive the least productive firms out of the market. The least productive firms are more likely to become unprofitable when they incur additional regulatory costs. Their regulation-driven exit from the sector may even lead to an increase in sector productivity, even if regulation lowers the productivity of surviving firms. The WBES data reflect these offsetting effects: There is no systematic association between total factor productivity and manager time spent on regulation.

Regulation also has dynamic effects on productivity. These are mixed, as well. By raising costs in an industry and reducing its profitability, regulation suppresses the returns to innovation and the incentives for more innovative firms to enter. On the other hand, regulation can *increase* incentives for firms to find new products and production processes that are less exposed to regulatory requirements. In countries with stronger institutions, where regulatory enforcement is predictable, the two effects may offset each other. Arbitrary and unpredictable enforcement, however, lowers the returns to innovation that is aimed at complying more efficiently with or avoiding regulatory requirements. Since future regulations are unpredictable, investments to reduce regulatory costs today may have no value in the future.

Analysis of the WBES yields findings that are consistent with this logic. More regulated manufacturing firms in the OECD report significantly *more* process innovation than firms reporting less management time spent on regulation. Among manufacturing firms in Latin America and the Caribbean, the opposite occurs: They are significantly *less* likely to engage in process

¹⁴ All estimates in Figures 9.4 and 9.5 are highly robust to controlling for firm size, firm age, foreign ownership, whether firms export, access to financial markets, whether they offer on the job training, and whether their products are quality-certified. On average, in both regions and among both service and manufacturing firms, all these variables are associated with higher value-added or sales per worker.

innovation. Similar differences emerge in the service sector. More regulated OECD firms are significantly more likely to engage in process innovation than less regulated ones, while among Latin American firms, there is no difference. Latin American service firms in which managers spend more time on regulation are also significantly less likely to undertake product innovations; more- and less-regulated OECD service firms exhibit no significant differences.¹⁵

Institutional Implications

The potentially high economic costs of regulation underline the importance of regulatory institutions. These should be designed to achieve their environmental, economic, or social objectives at the least cost and with the smallest impact on competition. To do this, they should require, and empower, regulators to answer three questions: How costly is the problem that regulations are intended to address (for example, what are the extent and consequences of pollution or workplace hazards)? Is a market failure responsible for the problem? And what regulatory approach is the most efficient response to correcting the market failure, taking into account possible impacts on entry and competition?

Regulatory institutions, including those in the region, are often not designed to answer these questions. Frequently, therefore, regulators fail to identify market failures accurately; choose regulatory remedies that are ineffective in correcting a market failure; and underestimate or ignore the negative economic effects of regulatory compliance. Regulatory institutions that are not rigorously focused on answering these questions tend to be more exposed to rent-seeking—that is, efforts by firms to pursue their private interests through the manipulation of public policy. These efforts are likely to be more successful when regulators are not required to rigorously assess the public interest in regulatory decision making.

The first question requires agencies to have the data and expertise necessary to quantify the harm from individual and firm behavior that might be targeted by regulation. Staff in environmental agencies, for instance, should have data and sufficient scientific understanding to analyze the extent and consequences of pollution. Fisheries staff should have the data and analytical capability to monitor fishing stocks and establish rates of sustainable extraction. The occupational safety specialists in ministries of labor

¹⁵ Estimates are from regressions identical to those summarized in Figure 9.5, but where firm performance variables (sales, value-added) are replaced with one of the two innovation variables: whether firms report having engaged in product or process innovation.

should be well-equipped to characterize potential workplace safety hazards. Banking regulators should have sufficient expertise and data to analyze the risk profiles of bank assets.

Even if the answers to the first question reveal potential problems, however, the scope for regulation depends on the answer to the second: whether the problems are the product of market failures. Market failures encourage individuals and firms to undertake actions that impose costs on others; they pollute more than they would if they had to internalize the costs they impose on others, or they provide less safe workplaces than they would if they had to compensate workers for the risk of more hazardous ones. Regulations can oblige individuals and firms to internalize the costs of such actions and increase social welfare.

If there is no market failure or distortion, however, regulatory action is more likely to degrade rather than improve social welfare. Box 9.1 illustrates this in the case of price controls. In the absence of market failure, firms and individuals are likely to have already internalized the costs of their actions. By requiring them to make different choices, which they could have made but chose not to, regulation is more likely to reduce social welfare.

For instance, regulators could observe that some (for example, digital) transactions can give rise to significant privacy risks. However, there may or may not be an information distortion that leads consumers to surrender more personal data than they otherwise would if they were fully informed. When no distortion exists, and regulators nevertheless require firms to enact costly procedures to restrict the use of these data, they reduce social welfare. Transactions become more expensive or impossible for consumers, more than offsetting the value to them of the greater privacy they enjoy. The regulations are also likely to suppress competition, since larger firms can implement these procedures at lower cost than small firms.

Quantifying the impact of market failure and other distortions is not trivial. One frequent market failure targeted by regulators is the common pool problem. It arises when resources are collectively owned, or when no one owns them, as with clean air or fishing stocks. Individuals bear only a fraction of the costs of their consumption of these resources—for example, the costs of polluting or overfishing—and are not compensated if they choose to take the costs borne by others into account and reduce their consumption. The theory is straightforward, but, in practice, the gravity of the common pool problem varies from context to context. When considering their regulatory problem, therefore, regulators must ask, what fraction of the costs of their actions do firms and individual bear? If a firm's pollution degrades the air quality of millions of individuals, the consequences of market failure are much larger than if only the firm's owners and their families

Box 9.1. The Cost of Weak Regulatory Institutions: Price Controls

Governments periodically regulate prices. Their experience with price controls illustrates how regulation can reduce social welfare when regulators fail to identify accurately the market failures they intend to correct and to evaluate the most efficient regulatory instrument to correct them.

Governments justify price controls as the appropriate response to inflation by pointing to coordination or information failures that cause firms and individuals to have excessively high and self-perpetuating inflation expectations. They assert that these market failures, and not fiscal and monetary policy failures, are responsible for inflation. If they are right, and market failures drive inflation, it should fall and stay low after the imposition of price controls. If they are wrong, and market failures are not the cause of inflation, price controls should have only a limited effect. In fact, governments have often been wrong.

The United States introduced price controls in 1971 to control inflation. Blinder and Newton (1981) show that inflation was initially controlled, particularly in food prices, but the effects did not last. Friedman (1974) describes the similar experience of Argentina in the 1960s. Binder and Brunet (2022) study the case of the 1940s in the United States, which used price controls during World War II. The end of the price controls coincided with a significant increase in inflation.

When a market failure is correctly identified, price controls can increase welfare. Heavy alcohol consumption, for example, can have adverse effects on the people around the drinker, including domestic violence. Griffith et al. (2022) find that a price floor on alcohol prices in Scotland reduced consumption most among the heaviest drinkers.

Even if governments are correct that market failures underlie inflation, however, they must still ask whether price controls are the most effective regulatory response. Griffith et al. (2022) conclude, for example, that alcohol taxes are likely superior to price controls. Many analyses show that efforts to control prices are subject to significant evasive behavior that undermines their efficacy. In a study of price ceilings placed on certain goods in Argentina, Aparicio and Cavallo (2021) find that companies reduced their production of the regulated goods while creating new varieties that were not subject to controls. These had correspondingly little effect on aggregate inflation but incurred significant efficiency losses. Carranza et al. (2015) show that, in the long run, price-floor regulation creates barriers to entry for new firms, reducing competition and productivity. Cuesta and Sepulveda (2021) show that while interest rate caps in Chile reduced the average rate paid by borrowers, they also reduced the number of loans. The net effect was to reduce welfare.

are exposed. Similarly, if only a few families are active in a coastal fishing area, the common pool problem is small; all are likely to internalize the costs of overfishing.

Incomplete information is another important distortion that is at the heart of many regulatory problems. Uninformed workers accept lower wages than informed workers in exchange for working in hazardous workplaces. This weakens the incentive of employers to improve workplace safety. Regulators can correct this distortion by requiring employers to adopt specific safety practices. However, if the regulators do not verify that there is, in fact, an information failure, these requirements can reduce social welfare. Regulators could ban dangerous circus acts, such as the trapeze, but they would reduce the welfare of trapeze performers who are aware of the risks and receive compensation for bearing them. Instead, because of regulation, they are unemployed. On the other hand, regulatory requirements regarding the operation of coal mines may raise the welfare of miners if miners are uninformed about all the measures that contribute to mine safety and do not demand extra compensation for working in mines that lack them.

The third question regulators should answer is which regulatory approach is best to correct the market failure they have identified. Rather than carefully consider alternative regulatory approaches, however, governments more often restrict their attention to only one: command and control regulations that impose uniform requirements on the behavior of all actors. All miners are required to adopt the same safety measures; all factories to install the same scrubbers; all fishermen to refrain from fishing except on designated days; all banks to hold the same fraction of safe assets. Uniform requirements tend to achieve regulatory goals at high economic cost, however, including costs in terms of lower competition, because of substantial differences across firms and individuals in the marginal costs and benefits of regulatory compliance.

Although the cost of scrubbers is uniform across firms, for example, the social benefits of installing them vary significantly. Benefits are high for firms when the scrubbers are installed by factories located near or upwind of densely populated areas but low when the factories are far from or downwind of them. The factories also differ. Some, with newer equipment, pollute less than others even without scrubbers, while those with older equipment may have high emissions. The installation of scrubbers yields lower social benefits in the first case than the second. Similarly, to protect individuals from financial risk, regulators might restrict the use of financial products to only those groups that regulators deem sufficiently well-informed. Some members of the excluded groups, however, could derive larger benefits from the use of the products than members of the included ones and may not be less informed of the risks.

Regulatory approaches that attempt to correct rather than compensate for market failures and distortions can do a better job of matching the

Box 9.2. Command and Control versus Market-Based Regulation

Even countries with more advanced regulatory institutions struggle with lower-cost regulatory approaches to market failures. In the United States, Libecap (2024) observes, regulators have adopted command and control approaches to the problems of overfishing, air pollution, and endangered species preservation instead of the market-based approaches recommended by Coase (1960) in one of the most famous articles in economics (with more than 45,000 citations).

The policy recommendation emerging from Coase's analysis was to assign rights to the resources, allowing rights holders to bargain over them. The Clean Air Act of 1970 prohibits such bargains, however, since it bars even taking into account the costs of achieving marginal increases in air quality. The Endangered Species Act prohibits any consideration of landowner costs in its habitat preservation requirements. This creates strong disincentives to nurture these habitats. In fact, only 3 percent of the species listed in the Endangered Species Act of 1973 have recovered (Libecap 2024). A bargaining approach, on the other hand, would increase incentives for species preservation.

marginal costs and benefits of compliance while achieving the same regulatory objective (see Box 9.2). Tradable quotas can correct the common pool market failure, for example. When property rights over the quotas are well-defined and enforced, they can preserve fishing stocks and reduce emissions at lower economic cost than command and control approaches.

Similarly, governments can mitigate rather than compensate for distortions like incomplete information. Regulators are, for example, often concerned with protecting consumers from their lack of information about the hazards associated with the products and services they buy. Command and control approaches are common; regulators require manufacturers to change their products or prohibit consumers from purchasing them. Information strategies are also common, however; governments require manufacturers to provide information about product quality and/or sponsor consumer training programs (such as financial education) to ameliorate the information deficit.

Command and control requirements tend to suppress competition more than market- or information-based approaches to regulation.¹⁶ By increasing the capital requirements of all firms, they favor incumbents.

¹⁶ This does not mean market-based regulations have no effect on competition. The introduction of cap-and-trade policies increased market power in the U.S. cement industry, for example (Fowlie, Reguant, and Ryan 2016).

By imposing uniform requirements, they restrict entry by firms able to achieve regulatory goals at lower cost. As the earlier evidence suggests, command and control requirements have particularly strong effects on competition in services. When regulators adopt entry restrictions to protect consumers in the service sector (for example, by limiting the number of lawyers or banks), they explicitly endow firms with market power and allow them to raise prices.

Reforming Regulatory Institutions

Regulations that emerge from a process that answers all three questions are likely to raise social welfare much more than those that do not. Despite this, this process is uncommon in the region. Agency staffs do not have the necessary capabilities, their procedures are not suitable to obtaining the answers, or they lack access to the appropriate data. Key elements of the process are also often missing, including mandatory analyses of regulatory impact that determine both benefits and costs; the use of formal channels of communication (notice and comment processes) between regulators and parties affected by the regulation; and coordination by specialized agencies that ensure regulatory coherence across agencies and the correct implementation of analytical and consultation requirements (Farias et al. 2022).

Regulatory impact analyses seek explicitly to address questions one and two, but, ideally, they compare impacts across regulatory alternatives, question three. These analyses require information that regulators often do not have. The data they need to assess benefits and costs may be known only to individuals and firms that are subject to the regulations. Hence, agencies should have notice and comment procedures that encourage information sharing.

An oversight agency is also important. It provides a check on the natural biases a regulatory agency may have toward particular regulatory approaches. In addition, it addresses the fragmentation of regulatory authority across government agencies and levels of government. Municipalities are generally responsible for land-use regulation, which has a large influence on productivity. All levels of government, and many government agencies, make environmental and labor regulations. Oversight of the financial sector is often assigned to multiple regulators. This fragmentation underlines the importance of establishing a central agency that can at least monitor, and ideally also review, regulatory decisions of all agencies.

Regulatory processes that yield answers to the three questions do not necessarily lead to a single, optimal regulation. In fact, following the exact

same processes, opponents and proponents of regulatory initiatives are likely to arrive at different answers. Some regulators will place an exceptionally high value on the benefits of regulation and others an exceptionally low value. Officials in environmental protection agencies may naturally place an enormous value on environmental benefits compared to the average individual. Depending on the beliefs of the government in power, officials in antitrust agencies may be either suspicious or tolerant of the anticompetitive implications of mergers and acquisitions. Some regulatory officials have a high level of trust in market-based mechanisms and others very little. Such differences in preferences and beliefs affect whether regulators want to answer the questions and, if they choose to answer, the type of information they seek out to substantiate their responses.

Nevertheless, institutional processes that require regulators to collect and analyze relevant information; to be transparent; to allow for ample notice and comment; and to submit regulations for review by a coordinating agency all serve to moderate bias and the influence of incorrect assumptions on regulatory outcomes. They also make rent-seeking more difficult. The creation of a public record of the benefits and costs of regulation makes more obvious regulatory decisions that increase the costs of regulation to satisfy special interests.

The conclusion that strong regulatory institutions can improve social welfare may seem overly optimistic, given that the firms and individuals with the most at stake in regulatory undertakings are most likely to participate in the process. Does their participation yield valuable information that improves regulatory outcomes, or is it instead simply a vehicle for rent-seeking? Evidence from the United States is inconclusive, but it points to a more benign and constructive role.

First, public comments by vested interests are almost always informational and do not threaten regulators with political repercussions if they fail to adopt the commenters' preferred policy (Libgober and Rashin 2023). Second, if public comments were solely aimed at increasing the rents of the commenter, they would only benefit the commenter; however, the stocks of firms that make public comments exhibit similar returns to those of their competitors that do not. This indicates comments are likely to shift regulator decisions in a direction that benefits an entire sector, rather than increase the rents of only the commenters themselves. In contrast, the stocks of firms that have private meetings with regulators rise by more than those of their competitors (Libgober 2020). Taken together, this evidence suggests that public comments are valuable, especially since vested interests will always find a way to interact privately with regulators regardless of institutional arrangements.

Little direct evidence links specific reforms of regulatory institutions to greater competition. However, ample research from a related area, government procurement, points to likely beneficial effects on markets of regulatory reforms like notice and comment and centralized oversight. In their survey of the evidence, Fazekas and Blum (2021) find that centralized procurement and framework agreements yield cost savings of more than 50 percent; centralized regulatory oversight should similarly reduce the costs of redundant or inconsistent regulation.

Civil society supervision of procurement contracts, similar to notice and comment requirements in regulatory processes, also yields notable savings, as do other transparency reforms in procurement. In Argentina, for example, digitalization of public procurement has reduced barriers to entry in procurement and increased the number of bidders (De Michele and Pierri 2020). The Inter-American Development Bank has supported the construction in the region of *MapalInversiones*, online platforms on which members of the public can track public investment projects in their areas. They give the public access to information about project budgets and spending and require a degree of transparency from investment agencies similar to that demanded of regulators by regulatory reforms. In Costa Rica, the introduction of *MapalInversiones* significantly improved project execution (Rossi, Vázquez, and Vieyra 2020).

Latin America and the Caribbean lacks the components of strong regulatory institutions, such as regulatory impact assessments and notice and comment. Farias et al. (2022) identified only Mexico as having a well-established, centralized agency (CONAMER) responsible for regulatory coordination and supervision; regulatory impact analyses; administrative simplification; and training and dissemination. Out of eleven countries of the region, only three—Chile, El Salvador, and Mexico—systematically implemented regulatory impact assessments. In a review of regulatory institutions in Latin America, the OECD (2024b) finds that four countries out of ten surveyed had permanent mechanisms to promote regulatory coordination with subnational governments. Five of the ten required regulators to take comments from interested parties into account when drafting final regulations.

Braving Political Headwinds

The status of regulatory institutions in Latin America and the Caribbean suggests that regulatory reform is difficult. Why is this the case? One possible explanation is that the benefits of reform are slow to emerge and therefore unappealing to political decision makers and voters. Bouis, Duval,

and Eugster (2020) examine major reforms in 26 advanced economies over four decades and find that positive effects emerge after three to four years. After five years, these effects are substantial: The typical reform leads to a 10 percent increase in real value-added, a 5 percent increase in employment, and relative prices that are 8 to 10 percent lower. Five years extend beyond the horizon of most governments, however.

Another possible explanation is that voters prefer inefficient command and control regulations because they can easily observe the direct mechanism through which these regulations change behavior. Emission limits, for example, obviously reduce pollution. In contrast, market-based regulations, which allow firms to purchase the right to engage in regulated behavior, such as the generation of factory emissions, have more indirect effects on behavior that are less observable. It is also difficult for voters to observe when the market-based solutions have lower economic costs than command and control arrangements. Recent evidence indicates voters prefer policies that create direct benefits, even if these are outweighed by the costs of the indirect behavioral effects of the regulation (Dal Bó, Dal Bó, and Eyster 2018). They dislike policies that create direct costs, even if those costs are outweighed by the welfare gains resulting from the indirect effects.

A comparison of voter preferences for direct policies to address high prices (price controls) versus indirect policies (restricting the growth of the money supply) reveals similar tendencies (Keefer and Ronconi, forthcoming). Surveys of Argentines during a high-inflation episode in the country revealed that 60 percent of respondents considered price controls at least as effective at controlling inflation as reductions in money emissions. Information shifted their preferences, however. Respondents who were reminded that firm concentration in the retail food sector was not particularly high and those reminded of the high correlation between monetary emission and inflation were both significantly more likely to support monetary policy over price controls as a response to inflation.

Unlocking the Benefits of Smarter Regulation

Although regulatory reform is politically difficult, there are many examples of successful reform, under both left- and right-leaning governments. The United States deregulated its transportation markets in the 1970s and telecommunications in the 1990s, allowing nearly unfettered entry into these sectors and ushering in an era of significant innovation and lower prices. Starting in 2024, the Argentine government undertook an unprecedented deregulatory effort that spanned all areas of regulation, from environmental protection to rent control.

Still, regulatory reform is not common, and the evidence supports giving it a higher priority in Latin America and the Caribbean. Regulations governing everything from urban space to the environment to government procurement have a substantial impact on competition and productivity. In Latin America and the Caribbean, that impact is more negative than in countries of the OECD. Without reform, countries of the region will continue to reap too few benefits from regulation at too high a cost, including the cost of lower competition and slower productivity growth.

Competition Policy for Free Markets

The last chapter highlighted the effects of government decision making on competition. This chapter emphasizes the anticompetitive behavior of firms: cartelization and price fixing, the abuse of dominance, and mergers and acquisitions aimed at increasing prices more than efficiency. Together, the two chapters point to an important reform agenda for the governments of Latin America and the Caribbean to curb threats to competition that emanate from both the public and private sectors. Where the last chapter suggests governments should require new regulations to account for the effects of anticompetitive behaviors by firms, this one emphasizes antitrust reforms that deter firms from engaging in anticompetitive behaviors.

The evidence reveals persistent and widespread attempts by incumbent firms across the region to fix prices and exclude competitors. Nevertheless, efforts to enforce competition laws are weak. Specialized competition agencies are crucial for enforcement, but detailed evidence indicates that agencies in the region fall short in the legal tools they have to deter anticompetitive behavior; in their resource endowments; and in their legal autonomy. Most of the agencies also lack the authority to monitor public sector threats to competition. For example, they do not monitor regulations issued by other government agencies for their potential anticompetitive effects.

Anticompetitive Behavior: Widespread and Costly

That firms may engage in anticompetitive behavior is not surprising, since they earn higher profits when they have fewer competitors. In addition, competition can be uncomfortable, and, given a choice, most people prefer to avoid it. Flory, Leibbrandt, and List (2015) analyze the behavior of 7,000 job seekers who responded to the announcement of a vacancy and find that those who were told the job paid a flat wage were significantly more likely

to apply for it than those who were told compensation would be the same on average but determined competitively.¹

Firms can escape competition by innovating to surpass their competitors. This is socially beneficial. Other strategies to escape competition are socially costly: cartel formation, the exclusion of potential competitors from the market, or the acquisition of competitors. All of these anticompetitive actions make households worse off, sometimes substantially so. They are discussed below.

Contending with Collusion

A cartel is a group of independent businesses or organizations that collude to manipulate the price of a product or service. Cartels always reduce social welfare and are nearly always illegal. Consumers suffer directly from cartelization because market manipulation by cartels increases the prices they pay and reduces their consumption. They also suffer indirectly because cartelized firms have weaker incentives to innovate and become more productive, ultimately suppressing the growth of household incomes.

Between 1980 and 2020, competition agencies in Latin America and the Caribbean identified more than 300 cartels in the region, most of them formed between 2010 and 2020 (World Bank 2021, based on data from competition agencies). Updated information from Competition Trends and calculations by the Organisation for Economic Co-operation and Development (OECD) reveal that, from 2015 to 2022, 270 cartels were identified in the region, 61 of them in 2021–22.² Based on evidence unearthed by these cartel cases, the World Bank

¹ Upon expressing interest but before applying, some were told they would receive \$15 an hour. Others were told they would receive \$13.50 an hour if the worker with whom they were paired performed better than they did but \$16.50 if they performed better than the co-worker.

² This chapter makes extensive use of new data on the decisions and characteristics of competition agencies in the region. Agency decisions about mergers and acquisitions are from the public-facing version of the OECD's CompStats. Other variables for up to 16 Latin American and Caribbean countries, depending on data availability, were provided at three levels of aggregation by the Competition Division of the OECD for the period 2015–22, using its internal CompStats database. One level is an average across all countries (up to 16). The second is an average across the largest economies in terms of GDP (some or all of the countries in this group: Argentina, Brazil, Chile, Colombia, Mexico, and Peru). And the third is the average for the smaller economies (some or all of the countries in this group: Barbados, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Nicaragua, Panama, Paraguay, Trinidad and Tobago, and Uruguay). The data for 2021 and 2022 were obtained from the 2023 Global Competition Review (based on reports from the individual competition agencies) and from the webpages and information the individual agencies have made public.

(2021) concludes that cartels raised consumer prices by 5–20 percent and, in some cases, by 100 percent.

Reduced consumption due to cartel behavior is also detrimental to households. A recent study of bid rigging by the four largest generic insulin manufacturers in Mexico from 2003 to 2007 finds that changes in the procurement strategies of a large Mexican health care provider destabilized this cartel and induced competitive bidding. The supply of insulin to the health care provider's patients more than doubled, with correspondingly dramatic impacts on their health: Diabetes-related complications among patients fell by 25 percent, and diabetes-related deaths dropped by 3.4 percent (Barkley 2023).

Evidence from outside of Latin America and the Caribbean also shows sharp negative effects of cartels on productivity growth. Firms invest in productivity improvement so they can increase their market share by undercutting the prices of competitors. Price fixing and market-sharing arrangements reduce the incentives of cartel members to invest in these improvements, since they prohibit members from expanding their market share. This is borne out by a study of the United Kingdom's 1956 adoption of anticartel legislation, which estimates that industries subject to it subsequently experienced labor productivity growth 20–30 percent faster than those exempted from it (Symeonidis 2008).

Other research estimates the effects of cartel behavior on growth and income per capita. Early cross-country analysis demonstrates that antitrust enforcement is positively correlated with growth and incomes (Petersen 2013). A more recent study uses extensive firm-level data derived from the anticartel enforcement decisions of French authorities (Moreau and Panon 2022). It concludes that dismantling cartels in France would increase aggregate productivity in the whole economy by 2 percent—more than the annual productivity growth in the country—and social welfare by 3.5 percent.³

These various estimates of the costs of cartels are likely lower than the actual costs. Information about cartel behavior typically only emerges when competition agencies detect it, and detection is difficult. Even in OECD countries, as few as one in five cartels are detected. In countries with weaker institutions, as in Latin America and the Caribbean, authorities may detect only one in ten (World Bank 2021). Hence, in the latter region, where anticartel enforcement has generally been weaker, cartels are likely more

³ The mechanism is illuminating. Cartel members tend to be the largest and most productive firms in a sector. Since cartels exist to reduce quantities and increase prices, they *must* increase the market share of less productive firms that are outside of the cartel.

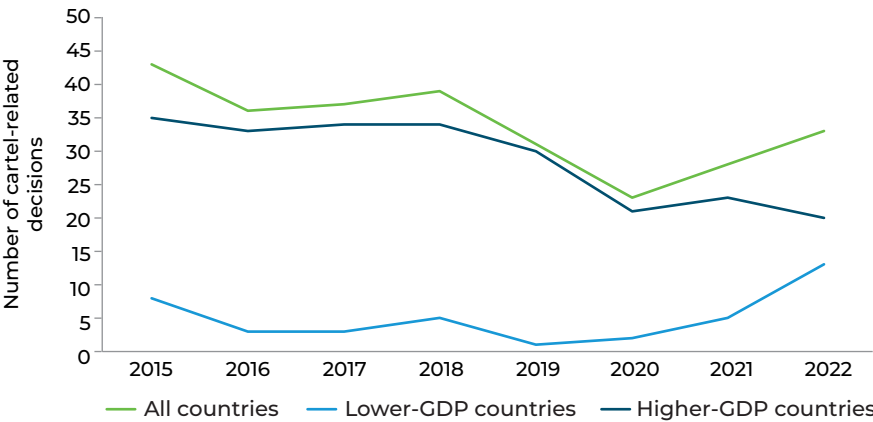
pervasive. Their welfare costs are, therefore, correspondingly greater than those estimated in OECD countries.

The intensity of anticartel enforcement in Latin America and the Caribbean has varied substantially over time. Data from 14 countries in the region show that far more cartels were detected in 2015 than in any subsequent year; the downward trend was particularly pronounced in the largest countries (Figure 10.1). In 2015, these countries issued decisions regarding 35 cartels, dropping to 20 in 2022. The smaller countries made eight cartel decisions in 2015, rising to thirteen in 2022.

Cartels can form in any sector. In Latin America and the Caribbean, they are more likely to emerge in services: 19 percent are in wholesale commerce, 10 percent in construction, 8 percent in retail, and 8 percent in transportation and storage. In addition, outside of the service sector, 25 percent are in manufacturing and 7 percent in agriculture and fishing. Box 10.1 describes one significant cartel in pharmaceutical distribution that was dissolved by Mexican authorities in 2021.

Since the public sector is a major purchaser of goods and services, ranging from pharmaceuticals to construction, the effects of cartel behavior in public procurement have been deeply studied. Analyses reveal large and pernicious effects of collusion in procurement across many dimensions of social and economic development. First, it substantially reduces the quality of services, from infrastructural to educational, that citizens receive from the government. In Brazil, Fazio and Zaldokas (2024), focusing on only one type

Figure 10.1. Cartel-Related Decisions of Competition Agencies, 2015–22



Source: IDB staff calculations, based on Competition Trends, OECD calculations.
Note: Averages are based on 14 countries in Latin America and the Caribbean. “Higher-GDP countries” refers to Argentina, Brazil, Chile, Colombia, Mexico, and Peru. “Lower-GDP countries” encompasses Barbados, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Nicaragua, Panama, and Uruguay.

Box 10.1. Prosecuting Cartel Behavior: Mexico

In 2021, the Federal Economic Competition Commission (Comisión Federal de Competencia Económica, or COFECE) in Mexico sanctioned five companies, twenty-one individuals, and the Association of Distributors of Pharmaceutical Products of the Mexican Republic for colluding over a ten-year period to restrict the supply and increase the prices of medicines. They were fined approximately US\$43 million, and ten executives were disqualified from serving as advisors, administrators, directors, managers, executives, or agents for periods ranging from six months to four years.

In October 2024, COFECE followed up with the first class action lawsuit in its history, alleging manipulation of the supply and prices of medicines by pharmaceutical companies and the Association of Distributors of Pharmaceutical Products. The lawsuit claims damages equal to the estimated harm. Since the probability of detection is likely to be low, however, even damages this high may be insufficient to deter price fixing.

Source: COFECE 2021.

of collusion, find it was present in 17 percent of public procurement auctions and increased prices by 18 percent.⁴ They find it not only undermines government finances; it raises hospital mortality and increases road accidents.

Second, like cartel behavior generally, collusion in public procurement suppresses productivity growth. While analyses from around the world indicate faster growth among firms that win public sector procurement contracts, evidence from Bulgaria shows that only competitive procurements have this effect. Fazekas et al. (2025) show that politically connected firms are 18 to 32 percent more likely to win public procurement contracts than those without connections because they have preferential access to uncompetitive tenders. Firms that win uncompetitive tenders subsequently exhibit higher profit margins, but they do not grow faster. Firms that win competitive tenders, in contrast, exhibit faster productivity and employment growth.

Corruption-free procurement processes encourage more firms to participate, further increasing competition and the positive productivity effects of procurement. Colonelli et al. (2024) report the results of randomized control trials in Uganda, where prospective suppliers express significant concerns

⁴ Their focus is “kamikaze” collusion. Under the “kamikaze” strategy, the lowest bidder withdraws after the auction concludes, allowing the second-lowest bidder to win at higher prices. Fazio and Zaldokas (2024) show this practice is most common among firms with shared ownership ties between the kamikaze and winning firms.

about corruption in procurement. They find interventions that increase firm trust in public entities make it more likely that firms would bid on and win government contracts, while, on average, mistrust and fear of corruption deter lower-cost suppliers from participating. Knack, Biletska, and Kacker (2019) use data from 34,000 firms in 90 countries, along with World Bank assessments of the quality of government procurement systems, to examine the effects of procurement transparency. Firms in countries with better public access to timely and complete procurement information are more likely to participate in public procurements. Firms also report paying less in kickbacks to officials in countries where public officials must explicitly justify exceptions to open competition in tendering and where firms have access to effective and independent complaint mechanisms.

One notorious prosecution of collusive procurement behavior was the *Lava Jato* case in Brazil (Box 10.2), but although its reverberations were global, it was hardly unique. Half of all cartel cases in Latin America and the Caribbean in 2021 and 2022 were related to public procurement, with 28 bid-rigging cases under investigation during that period.⁵ By comparison, in both years a lower proportion—36 percent—of all cartel cases in the OECD dealt with bid rigging. This is consistent with public sector institutions in the OECD being stronger and so more resistant to collusion.

Bid rigging in public procurement seems even more likely to go undetected than other types of cartel behavior. Using data on 42,000 auctions conducted by the Japanese national government to procure construction projects, Kawai and Nakabayashi (2022) conclude that 37 percent of projects

Box 10.2. The Car Wash Case: Brazil

A well-known episode in Brazil known as the “Car Wash” (*Lava Jato*) case involved collusion and bid rigging by construction companies in oil- and gas-related markets. Part of the largest corruption scheme uncovered in Latin America and the Caribbean, it reverberated throughout the region and the world. The investigations targeted corruption, money laundering, and anticompetitive behavior and required cooperation among the Brazilian Competition Authority (CADE), the Public Prosecutor’s Office, the Comptroller General’s Office, and other agencies.

In 2016, CADE announced investigations of more than 30 alleged cartels related to the “Car Wash.”

Source: Burnier 2019.

⁵ See footnote 2, above, for sources.

exhibit evidence of collusion. Looking at data on municipal procurement in Sweden, Broms, Dahlström, and Fazekas (2019) find that the longer a party is in power, the more likely it is that public tenders receive only one bid. The number of investigations into bid rigging in Japan and Sweden is likely to be at least an order of magnitude lower than the number of possible cases suggested by these analyses.⁶

Abuse of Dominance

Through innovation and entrepreneurial effort, firms may surpass their competitors and increase their market power. A principle of competitive markets, however, is that other firms, observing the high prices charged by the dominant incumbent, are encouraged to match the innovation and thereby increase their production or enter the market. Dominant firms can obstruct them, however, suppressing competitive entry with a class of anti-competitive strategies collectively labeled “abuse of dominance.”

The abuse of dominance takes many forms. One is when dominant firms deny access to facilities essential to other firms seeking to enter the market and compete. They can also engage in exclusionary business practices that make it unnecessarily difficult for customers to switch firms; these include contracts that require customers to purchase exclusively from the dominant firm. An important manifestation of abuse of dominance is the denial or degradation of interoperability of other firms’ products with the dominant firm’s products or systems. Unlike cartelization, such practices are not presumptively illegal.

Competition authorities deem exclusionary practices to be illegal if they determine that the firm has market power (that is, that customers have few other options) and that the practices have no legitimate economic purpose. Between 2015 and 2022, competition agencies in Latin America and the Caribbean issued 221 judgments against firms accused of abuse of dominance. Just as with cartel detection, these numbers steadily declined over the period, from more than 35 in 2015 to 20 in 2022. The sectoral distribution of abuse of dominance cases differs from that of cartelization. Abuse of dominance cases are much more common in the information and

⁶ Of course, procurement regulations themselves also influence the feasibility of bid rigging. Chassang and Ortner (2019), for example, argue that cartels enforce compliance by driving the future procurement payoffs of defectors down to zero. When purchasers specify *minimum* prices, this strategy is, counterintuitively, less effective, and supplier bid rigging is more difficult. Detailed procurement data from Japanese municipalities that adopted or did not adopt minimum prices provide robust support for the strategy.

telecommunications sector, where they comprise 19 percent of total cases, followed by 17 percent in transportation and storage and 11 percent in manufacturing.

Sectors differ in the types of firm actions that might constitute abuse of dominance. In telecommunications, for example, practices that limit competition include contracts that do not allow customers to use their phone numbers with different telecom providers (number portability), thereby imposing high switching costs on them. Device incompatibility across different mobile networks and early termination fees are further examples. Box 10.3 describes a Colombian case in which the antitrust authority sanctioned a telecom company for abusing its dominance with portability restrictions.

Clavijo (2025) analyzes the effects of regulations introduced throughout the region that eliminated early termination fees and required cell phones to be compatible across mobile networks. The introduction of these reforms significantly reduced market concentration, consistent with nondominant firms gaining market share and putting competitive pressure on dominant ones. In turn, consistent with the transition from oligopolistic to more competitive markets, firm profits fell after the reform. Gandelman, Roldán, and Viera (2025b) find similar effects in Uruguay after mobile phone companies were required to allow mobile phone numbers to be portable across providers. Mobile data prices fell, and the number of new subscribers increased, both signaling a significant positive impact on consumer welfare.

Payment systems in financial markets offer opportunities for abuse of dominance analogous to those in telecommunications; Box 10.4 provides an example from Argentina. Gandelman et al. (2023) look at the market for payment services, in particular. These are especially complex, two-sided markets in which issuers (typically banks) provide credit cards to cardholders (typically individuals), while other firms, known as acquirers, recruit merchants to

Box 10.3. In Defense of Number Portability: Colombia

In 2013, the Superintendency of Industry and Commerce (SIC) of Colombia sanctioned a telecommunications firm with a fine of US\$45 million for abuse of a dominant position. The investigation was initiated ex officio following complaints brought by the Comisión de Regulación de Comunicaciones (the telecom sectorial regulator), based on accounts of difficulties experienced by consumers when requesting mobile number portability. The investigation alleged that the firm obstructed and hindered number portability.

Source: OECD 2014.

Box 10.4. The Payment Market Case: Argentina

At the end of August 2016, the Argentine competition agency opened an investigation into a firm that acted as an acquirer and processor of Visa, along with fourteen banks that used and were shareholders of the firm. The agency accused the firm of abusing its dominant position and the banks of using the firm to engage in collusive behavior to coordinate commercial strategies. The investigation led to a structural remedy: The banks sold their shares in the firm, disrupting both vertical integration (between the credit card company and the banks) and horizontal integration (among the banks). The agency also advocated for several policy reforms that were implemented by the central bank.

These remedies and policy changes promoted technological change and competition. Since their adoption, digital finance firms have deployed new and better payment methods and services with important innovations.

Source: Greco and Vicens 2024.

accept the credit cards and facilitate the processing of payments made by the cardholders to the merchants through a payment network or platform. In this market, the lack of interoperability of point-of-sale terminals across credit card issuers is a significant barrier to entry. Like the nonportability of mobile phone numbers and devices, it can signal abuse of dominance. For the merchants who use these terminals to process credit card payments, lack of interoperability means that those who seek to change or add to the credit cards they accept must acquire additional POS machines.

Another form of abuse of dominance in payment markets is to require exclusive contracts between acquirers and issuers, such that a merchant who seeks to use the credit card of one issuer must negotiate with only a single acquirer. Gandelman et al. (2025a) analyze the effects of a central bank decision that allowed merchants to negotiate with multiple acquirers, each representing the same card issuer. This regulatory change reduced market concentration among acquirers by more than 30 percent. It also improved the quality of services that acquirers provided to merchants and may have reduced fees paid by the merchants.

Mergers and Acquisitions: To Block or Not to Block

Cartels are nearly always illegal, and exclusionary practices that make new entry difficult are illegal when they rise to the level of abuse of dominance. Mergers, though, are usually legal. They are the most common way in which

firms can increase their market power but are also a common strategy for firms to achieve economies of scale or scope. An essential function of competition policy is to give antitrust agencies the ability to identify and block those mergers that have no substantial purpose beyond increasing the market power of the combined entity.

The acquisition of a competitor constitutes a horizontal merger. It naturally increases a firm's market power. The acquisition of a supplier (a vertical merger) can increase opportunities for exclusionary business practices. Mergers can, however, also increase household welfare if they raise the productivity of the firms involved in them, as when a high-productivity firm acquires a low-productivity competitor. Demirel and Karaduman (2024) conclude that mergers in the energy sector increase productivity in the acquired firms by 2 percent within months of the acquisition, rising eventually to 5 percent. The acquired power plants increase their output and have fewer outages. When efficiency gains are small and market power substantial, however, mergers reduce welfare.

Because mergers are presumptively legal, antitrust agencies block them, or approve them subject to remedial actions by the merging firms, only if they can show the mergers would substantially reduce competition without achieving more than offsetting efficiency gains. This is not a trivial task; Asker and Nocke (2021) observe that efficiency gains from mergers are not well documented. One reason is the absence of consistent criteria for judging those gains. Regulators could look at effects on consumers or on consumers and producers; they could account for merger effects on upstream markets—suppliers, such as workers—or focus only on downstream markets.

Ample evidence documents the potential negative welfare effects of mergers, particularly those involving larger firms. Cunningham, Ederer, and Ma (2021), for example, document efforts by pharmaceutical companies to acquire rivals that are developing close substitutes for their products. The acquiring firms then “kill” the drug projects of the target firms.⁷ Cavenaile, Celik, and Xu Tian (2021) conclude that antitrust enforcement that blocks mergers with weak efficiency rationales generates significant welfare gains to U.S. households. Their important insight is that the dynamic gains from antitrust enforcement (those due to effects on innovation and entry, for example) are a full order of magnitude larger than the static gains (those

⁷ Their evidence is persuasive: “Killer acquisitions” (see the section on “Competition Policy in the Digital World,” below) are bunched just below the threshold for merger review by U.S. government authorities. There is no bunching among acquisitions when the drug projects of the acquiring and target companies do not compete.

due to the reallocation of resources to more productive uses). By rejecting mergers with weak efficiency rationales, antitrust authorities increase firm incentives to innovate.

Enforcement and More: The Role of Competition Agencies

Because anticompetitive behavior is prevalent and costly, the enforcement of competition laws can yield large gains in social welfare. Beyond enforcement, competition agencies can have two other roles that improve social welfare. One is to advocate for competition; the other is to monitor the effects of public policy on competition.

Enforcement is challenging. Detection of anticompetitive behavior and the calculation of its costs and potentially offsetting benefits require significant legal authority to review mergers and acquisitions and to investigate anticompetitive conduct. It also requires they have adequate financial and human resources to exercise this authority. Finally, capacity depends on agency autonomy and the ability of agencies to take action against the anticompetitive practices of influential firms.

On average, agencies in Latin America and the Caribbean struggle to match those in the OECD on all three dimensions. Available evidence indicates that this failure is costly, since economic activity thrives in the presence of agencies that meet these three conditions. Buccirossi et al. (2013) look at productivity growth across 22 sectors in 12 OECD countries from 1995 to 2005. Using an index they developed of the quality of competition agencies, they find that total factor productivity growth—increases in the ability of firms to turn fewer inputs into more and better outputs—is faster when agency quality is higher.⁸ The quality–productivity relationship is most striking, though, in countries with more robust institutions, where the costs of enforcing contracts are lower and the rule of law is stronger.

This last finding is pivotal and consistent with the observation that agency effectiveness depends on broader political and social factors. When

⁸ The dimensions summarized by the index are independence of the competition authority with respect to political or economic interests; the separation between the adjudicator and the prosecutor in a competition case; how close the rules that make the partition between legal and illegal conducts are to their effect on social welfare; the scope of the investigative powers the competition authority holds; the level of the overall loss that can be imposed on firms and their employees if they are convicted; the toughness of a competition authority, which is given by its level of activity and the size of the sanctions that are imposed on firms and their employees in the event of a conviction; and the amount and the quality of the financial and human resources a competition authority can rely on when performing its tasks.

support for competition and respect for the rule of law are low, the scope for effective interventions by competition agencies is more limited.

A recent study examines the effects of competition law on total factor productivity. It uses firm-level data from 14 countries in Latin America and the Caribbean and an index from the Comparative Competition Law initiative that describes the status of competition law in various countries (Wong and Petreski 2025). The index captures the authority of competition authorities to prosecute violations of competition law; the range of abuses covered by competition law; and the number of exemptions contained in the law.⁹ The study finds that the strengthening of competition law increases total factor productivity, with the biggest impact among larger firms in the least technologically developed countries. Stronger competition law has little effect on productivity in countries that are close to the technological frontier.¹⁰

The impact of advocacy by competition agencies is less well documented. However, the scope for competition advocacy is wide. Clavijo (2025) and Gandelman et al. (2023), for example, describe a series of extensive regulatory changes in Uruguay, some by telecommunications authorities and others by the central bank. These reforms increased competition in telecommunications and financial markets in the country and made telecom and financial services more accessible to low-income individuals and the middle class. None of them involved the prosecution of anticompetitive behavior by firms—the traditional remit of competition agencies. Hence, they demonstrated the impact that a competition agency could have when it has the authority to advocate across government for more competitive markets.

The scope for regulatory monitoring is also wide. Regulations such as those that impose capital requirements on banks, preserve worker health and safety, establish quality controls for firm inputs or outputs, or limit greenhouse gas emissions all have the potential to restrict competition. Competition agencies can bring these concerns to the attention of other agencies. They can also undertake market analyses to identify barriers to competition that are the consequence of government actions. Among these may be a lack of adequate infrastructure that prevents entry and reduces competition,

⁹ If arbitrarily applied, competition law could, like the regulations discussed in the previous chapter, discourage firms from investing in greater productivity. Hence, the authors adjust the index to account for the overarching legal environment in countries, such that the index takes on higher values when the judiciary is independent, the courts are impartial, and property rights are secure.

¹⁰ This is consistent with the idea that a country's proximity to the technological frontier is, itself, a function of laws and policies that nurture a more competitive environment; in these settings, firms already have strong incentives to become more productive. Antitrust enforcement therefore has less of an effect on productivity.

particularly in markets with poor transportation links or limited access to power, as well as regulatory barriers to entry, like those discussed in Chapter 9.

Competition Agencies in Latin America and the Caribbean

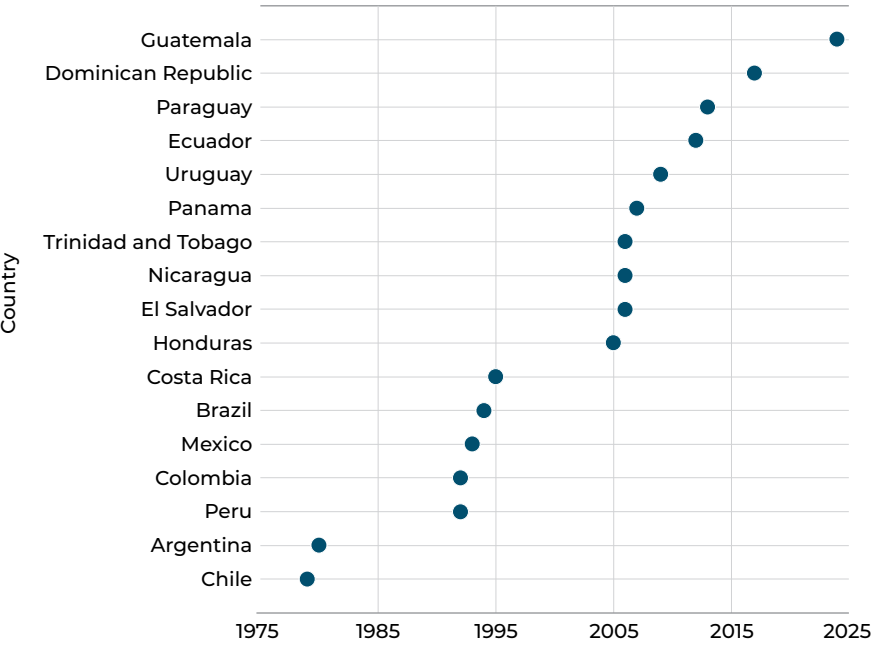
Competition laws and the agencies to enforce them are not as deeply embedded in the institutions of Latin America and the Caribbean as they are in the OECD. Apart from Argentina, where the first competition legislation was introduced more than a century ago, most competition laws are less than 30 years old (Greco, Stordeur, and Vicens 2021). The competition agencies currently operating in the region are also of recent vintage, as Figure 10.2 makes clear.¹¹ The first were established in Chile in 1979 and Argentina in 1980; the latest in Guatemala in 2024.¹² Fewer than half are more than 20 years old.

Consistent with their lower levels of institutionalization relative to their OECD counterparts, Table 10.1 suggests that Latin American and Caribbean competition agencies are also less active. The table summarizes the number of decisions regarding cartels and abuse of dominance made by competition agencies in the two regions from 2015 to 2022, along with the number of mergers and acquisitions they analyzed. In the aggregate, OECD economies are considerably larger than those in Latin America and the Caribbean,

¹¹ The following are the Latin American and Caribbean competition agencies considered in the analysis: Argentina—Comisión Nacional de Defensa de la Competencia (CNDC); Brazil—Conselho Administrativo de Defesa Econômica (CADE); Chile—Fiscalía Nacional Económica-FNE y Tribunal de Defensa de la Libre Competencia (TDLC); Colombia—Superintendencia de Industria y Comercio (SIC); Costa Rica—Comisión para Promover la Competencia (Coprocom); Dominican Republic—Comisión Nacional de Defensa de la Competencia (Procompetencia); Ecuador—Superintendencia de Competencia Económica (SCE); El Salvador—Superintendencia de Competencia (SC); Honduras—Comisión para la Defensa y Promoción de la Competencia (CDPC); Mexico—Comisión Federal de Competencia Económica (Cofece); Nicaragua—Instituto Nacional de Promoción de la Competencia (Procompetencia); Paraguay—Comisión Nacional de la Competencia (Conacom); Peru—Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (Indecopi); Trinidad and Tobago—Fair Trade Commission (TTFTC). In Mexico and Costa Rica, the telecommunications regulators (Instituto Federal de Telecomunicaciones-IFT and Superintendencia de Telecomunicaciones-Sutel, respectively) are also in charge of enforcing competition law in the sector. These agencies are not considered in the analysis presented in this chapter.

¹² Guatemala passed its first ever competition law in late November 2024 (Decreto 32-24 del Congreso de la República de Guatemala, November 20, 2024). Nicaragua changed its competition law in April 2024, modifying the institutional design. The new law (Ley No. 1202) included the former agency (Procompetencia) in a national prosecutor's office, dependent on the Procuraduría General de la República (Office of the Attorney General of the Republic).

Figure 10.2. First Year an Antitrust Agency Was Given Enforcement Powers, by Country



Source: IDB staff calculations, based on official competition agencies. See footnote 11.
Note: Argentina's first antitrust law, enacted in 1923, allowed private actors to bring judicial complaints about anticompetitive behavior (of which there were almost none). It did not create a competition agency. The agency (CNDC) was created in 1980 (Greco, Stordeur, and Vieceus 2021).

so it would be natural to expect their competition agencies to handle more cases. Yet OECD agencies are far more active than size differences alone would suggest, issuing as many as ten times more decisions. Latin American and Caribbean authorities analyzed and issued decisions on 6,721 mergers and acquisitions, rejecting 204, or 3 percent of them, for having undue anticompetitive effects.¹³ OECD authorities, in contrast, analyzed 64,726 notifications of mergers and acquisitions and rejected many fewer, only 2 percent. Similarly, the OECD made 2,482 decisions regarding cartels, versus 270 made by Latin American and Caribbean agencies.

While competition agencies in Latin America and the Caribbean were about 90 percent less active than OECD agencies with respect to merger

¹³ Remedies for horizontal mergers are usually structural and entail divestitures of subsidiaries, businesses, or assets. Complementing these, regulators may also impose behavioral remedies, such as requiring the merged firm to license its intellectual property to competitors, prohibiting certain pricing practices, or requiring the firm to maintain certain product lines or service levels.

Table 10.1. Competition Agency Activity, 2015–22

Group/Region	Decisions on anticompetitive behavior				Decisions on mergers and acquisitions		
	Total decisions	Cartels identified	Abuse of dominance judgments	Cartels identified as a share of all decisions	Total decisions	Mergers blocked or approved with remedies	Mergers blocked or approved with remedies as a share of all decisions
Latin America and the Caribbean	491	270	221	55%	6,721	204	3%
Higher-GDP Latin America and the Caribbean	352	230	122	65%	6,178	142	2%
Lower-GDP Latin America and the Caribbean	139	40	99	29%	543	62	11%
Organisation for Economic Co-operation and Development	3,130	2,482	648	79%	64,716	1,214	2%

Source: IDB staff calculations of Competition Trends, OECD calculations.

Note: With respect to both anticompetitive behavior and mergers and acquisitions data, “Higher-GDP Latin America and the Caribbean” includes Argentina, Brazil, Chile, Colombia, Mexico, and Peru. Anticompetitive behavior recorded in the category “Lower-GDP Latin America and the Caribbean” encompasses Barbados, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Nicaragua, Panama, and Uruguay. Mergers and acquisitions in that same income category are from Barbados, Costa Rica, Ecuador, El Salvador, Nicaragua, Panama, Paraguay, and Uruguay.

review and cartel decisions, they were relatively much more active in issuing abuse of dominance decisions. They issued 221 during this period, amounting to one-third of those made by agencies in the OECD (648).

The greater emphasis on abuse of dominance cases in Latin America and the Caribbean, especially relative to cartel cases, may be due to capacity and institutional constraints. Cartel agreements are more difficult to prove and generally require insider information that is more likely to be forthcoming when informants have greater confidence in the agencies. OECD agencies are more likely than those in Latin America and the Caribbean to have both the trust of informants and the necessary investigative capacity.

Limited Legal Authority to Enforce Competition Law

Differences in their legal authority are one possible explanation for the distinct enforcement practices of competition agencies in Latin America and the Caribbean and those in the OECD. Fully empowered competition agencies can investigate and apply sanctions against a wide range of anti-competitive conduct and oversee and approve mergers and acquisitions. They also have the necessary legal tools to undertake these enforcement actions. One such tool is the ability to impose sanctions that have some deterrent effect on potential offenders, including fines that exceed the expected gains from illegal activity. Another is the authority to grant clemency to participants in collusive activities who provide information that aids in the detection and punishment of cartel behavior.¹⁴

Competition agencies in Latin America and the Caribbean generally have only some of these legal authorities. Most commonly, all countries except the Dominican Republic and Panama have passed laws that require their competition agencies to undertake *ex ante* reviews of mergers and acquisitions. Chile, Guatemala, Peru, and Uruguay introduced this authority recently, in 2016, 2024, 2021, and 2020, respectively.¹⁵ Even though nearly all

¹⁴ Schneider (2025) observes that judicial interpretations of legal authority play a large role in antitrust enforcement. In its early years, courts frequently reversed or enjoined decisions by the Mexican antitrust agency, and, in 2020, the Chilean Supreme Court overturned a leniency agreement related to an important case regarding collusion in the tissue paper market.

¹⁵ All legislation in the region considers consumer welfare in merger approvals (whether the merger will increase prices to consumers). There is less consensus, inside and outside of the region, regarding other emerging criteria some authorities have begun to apply: whether mergers give monopsony power to the new firm, allowing it to pay less for inputs (for example, reducing wages or the prices offered to suppliers such as farmers), and the effects of the merger on future innovation, import substitution, or the environment.

countries grant merger review authority to their agencies, however, agency criteria for which mergers they will review vary significantly.

To reduce the often substantial costs of merger review, for both firms and government, competition agencies establish a threshold for mergers that are unlikely to have anticompetitive effects and exempt from review all those transactions that fall below it. This threshold is difficult to establish, however, and varies widely across the region.

Ideally, the threshold would be based on industry concentration, since it is precisely to avoid undue increases in market power that competition agencies review mergers in the first place (Asker and Nocke 2021). Using concentration-based criteria, agencies would then only review mergers that would increase firm concentration in an industry above some threshold. Concentration measures are contentious and difficult to apply, however, since they are highly sensitive to the definition of the market over which concentration will be measured. In fact, no country in the region applies a concentration test to merger review.

Instead, merger review criteria are based on the size of the merger or acquisition, measured in terms of turnover or asset value. Those involving firms with turnover and/or asset value below some thresholds are exempt from review. Size tests face similar difficulties, though.

Size thresholds should be calibrated to the markets in which firms operate. They would be lower in small markets, where small mergers are more likely to reduce competition, and higher in large ones. The difficulty of defining markets, however, means that such calibrated thresholds are difficult to define. Hence, most countries use a single size threshold. A high threshold means that mergers in small markets escape regulatory scrutiny altogether. A low threshold obliges agencies to undertake costly reviews of small mergers in large markets, where they pose no threat to competition.¹⁶

The merger review thresholds in Latin America and the Caribbean vary significantly as a fraction of gross domestic product, contrary to what one would expect if they were meant to balance the costs of under- and over-review of mergers. In small countries, thresholds should be lower in absolute value because smaller mergers pose a greater threat to competition. However, the thresholds of small and large countries should be similar

¹⁶ However, even in large countries, some important markets are local. Providers of specialized medical services, such as anesthesiology, for instance, operate in local markets. In the United States, mergers and acquisitions among such providers have significantly increased prices paid by consumers; see, for example, Asil et al. (2024). Revenues and merger transaction values in these markets tend to be small, though, compared to most merger review thresholds, and these consolidations have tended to escape regulatory scrutiny.

as a fraction of market size or GDP. This is not the case among the six countries responsible for 90 percent of the mergers and acquisitions reported to competition authorities in the region. The sales threshold for merger review across these countries varies from .004 percent to .05 percent of GDP.¹⁷

The threshold matters for merger enforcement. Differences in notification thresholds affect the number of mergers reviewed by competition agencies, with high thresholds reducing oversight of potentially anti-competitive deals. Controlling for the size of country economies (which naturally influences the number of relevant mergers), an increase of 1 standard deviation in the sales notification threshold is associated with a .41 standard deviation drop in the number of merger notifications received by competition agencies. An increase of US\$100 million in the sales threshold, ranging roughly from Peru's current threshold to Mexico's, reduces the number of merger notifications received by 88. This is more than half the average number of notifications (146) that were received by competition agencies over the period 2015–22.¹⁸

Merger review authority is common across Latin America and the Caribbean, albeit with substantial variation in the review thresholds. In addition, competition laws in the region commonly prohibit a wide range of anticompetitive behavior. Principal among these is cartelization—price fixing, market sharing, and bid rigging. Although authority to prosecute price fixing is nearly universal, however, not all agencies have two important legal tools they need to enforce the law.

First, they are not always able to offer leniency to participants in collusive, anticompetitive actions in exchange for evidence against the other participants. This is in part because leniency agreements necessarily entail the difficult decision to reduce or eliminate penalties for wrongdoing by cooperating firms. The absence of this authority, however, severely

¹⁷ As a fraction of GDP, the merger threshold in Peru (combined sales greater than US\$144 million) is approximately .05 percent of GDP, compared to .014 percent in Mexico (with an economy six times as large but a threshold of combined sales of US\$254 million). Colombia, with an economy 40 percent larger than Peru's, has a merger threshold of US\$13 million that is .004 percent of GDP, while Chile, slightly smaller than Colombia, has a threshold of US\$104 million, or .03 percent of GDP. Argentina's threshold of US\$76 million is .012 percent of GDP. Brazil's sales threshold applies to the largest firm in the proposed merger; if that firm's sales exceed US\$145 million, or .007 percent of GDP, the merger is reviewed.

¹⁸ The estimates are from a regression of the number of merger notifications in Argentina, Brazil, Chile, Colombia, Mexico, and Peru, every year from 2015 to 2022, on the sales notification threshold for mergers, assuming the threshold was constant over the period. The estimates hold constant GDP (in constant 2015 U.S. dollars) and control for year fixed effects.

handicaps the agencies' ability to prosecute this conduct, since collusive behavior is clandestine and frequently leaves no paper trail. Some observers have argued that leniency agreements were necessary to successful prosecutions in the Brazilian *Lava Jato*, episode described in Box 10.2. Between 2015 and 2017, the Brazilian competition authority CADE signed forty-two of them (Burnier 2019).

Second, the penalties the agencies can impose on anticompetitive behavior are often small. In the Mexican pharmaceutical case cited in Box 10.1, the penalties assessed may have been too low to deter future cartel behavior. Deterrence requires that the expected penalty exceed the profits to cartel members of price fixing, with the cost to consumers representing an upper bound of those profits. COFECE estimated that the harm incurred in the pharmaceutical case, US\$113 million (borne mostly by low-income households), was more than double the amount of the fine.

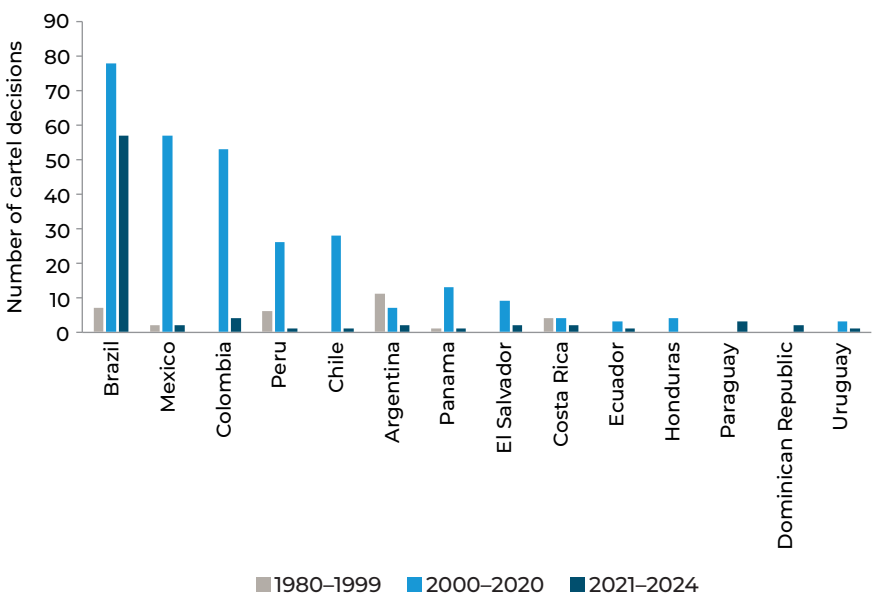
Miller (2009) demonstrates with theory and evidence that leniency enhances deterrence and detection capabilities and substantially increases the efficacy of enforcement against collusive behavior and price fixing. The World Bank (2021) reports that leniency policies reduce industry-level price–cost margins by 3 to 5 percent and the rate of cartel formation in the United States by 59 percent.

Figure 10.3 illustrates the importance of leniency. It tracks cartel detection in 14 countries in Latin America and the Caribbean and over time. Among the larger countries in the region— Brazil, Chile, Colombia, Mexico, and Peru—a total of 186 cases involved offers of leniency from 2015 to 2022. Among the smaller countries that authorize leniency, only 4 cases were reported (OECD, CompStats).¹⁹

In most countries, cartel detection was sharply higher in 2000–2020 than in 1980–1999. Changes in the law governing leniency can account for this jump. Before 2000, when no competition agency in the region had the authority to offer leniency, rates of cartel detection were low. After Brazil introduced a leniency program in 2000, and Chile, Colombia, Ecuador, El Salvador, Mexico, Panama, and Peru did so between 2006 and 2011, the rates of detection jumped by orders of magnitude. More modest increases can be observed in the countries that authorized leniency much later: Argentina (which authorized leniency in 2018 but delayed rulemaking for the law until 2024) and Honduras (2015).

¹⁹ Effective anticartel enforcement requires not only that authorities have a carrot to offer in the form of leniency but that they can use a range of investigative and prosecutorial tools, ranging from dawn raids and forensic digital labs to telephone interventions.

Figure 10.3. Cartel Decisions by Competition Agencies, by Country

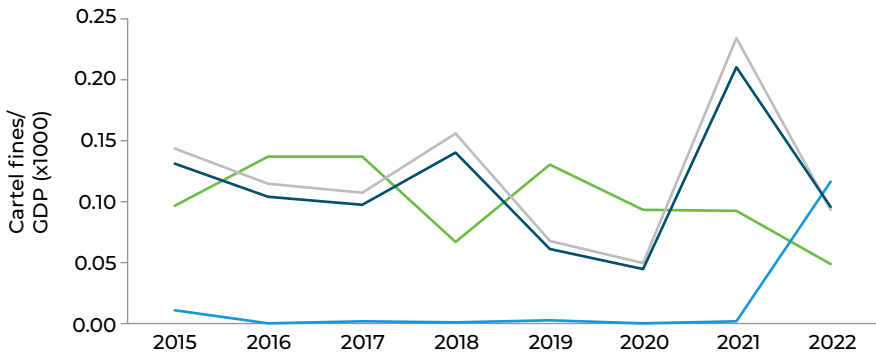
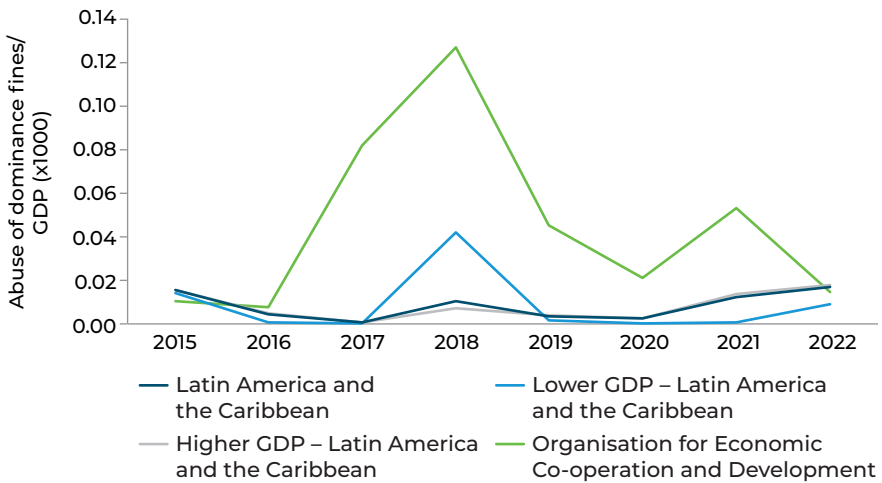


Source: IDB staff calculations, based on World Bank (2021) for 1980–2020 and agency websites for 2021–October 2024. The Dominican Republic, Guatemala, Paraguay, Trinidad and Tobago, and Uruguay have not yet introduced leniency programs.

The enforcement of competition law is further handicapped if the expected penalties for anticompetitive behavior are low. Expected penalties are a function of the size of sanctions and the probability they will be applied. The OECD countries and Latin America and the Caribbean are comparable with regard to the first. Cartel fines in Latin America and the Caribbean amounted to approximately US\$4,470 million between 2015 and 2022, with 98 percent coming from higher-GDP countries in the region, while abuse of dominance fines totaled around US\$334 million, with 90 percent from the higher-GDP countries.²⁰ Figure 10.4 shows that, as a percentage of GDP, fines from Latin America and the Caribbean and the OECD have become roughly comparable. Even small countries in the region, where fines for cartelization and abuse of dominance were historically low, now apply sanctions comparable to those in the OECD.

On the other hand, however, and despite this apparent comparability, fines in Latin America and the Caribbean have significantly less deterrence value than those in the OECD because they are much less likely to be applied. Even in well-functioning competition regimes, the probability of cartel detection is perhaps 20 percent (Ormosi 2014). Given this low risk of detection, the

²⁰ OECD, CompStats.

Figure 10.4. Cartel and Abuse of Dominance Fines over GDP (x1000)**A. Cartel****B. Abuse of dominance**

Source: IDB staff calculations, based on Competition Trends, OECD calculations.

Note: Latin America and the Caribbean includes 14 jurisdictions. "Higher GDP - Latin America and the Caribbean" includes Argentina, Brazil, Chile, Colombia, Mexico, and Peru. "Lower GDP - Latin America and the Caribbean" encompasses Barbados, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Nicaragua, Panama, and Uruguay.

expected payoffs to cartel behavior begin to turn negative only if penalties exceed 500 percent of the profits from price fixing. World Bank (2021) estimates suggest that cartels are half as likely to be detected in Latin America and the Caribbean as in the OECD. Hence, for sanctions to deter cartel behavior, they may have to be at least twice as high in Latin America and the Caribbean. Figure 10.4 indicates this is not the case.

One option for increasing penalties is to criminalize cartel behavior. Schneider (2025) reports that Mexico enacted a leniency program in 2006 but no firms applied for leniency before 2011, when a legal change allowed for crimi-

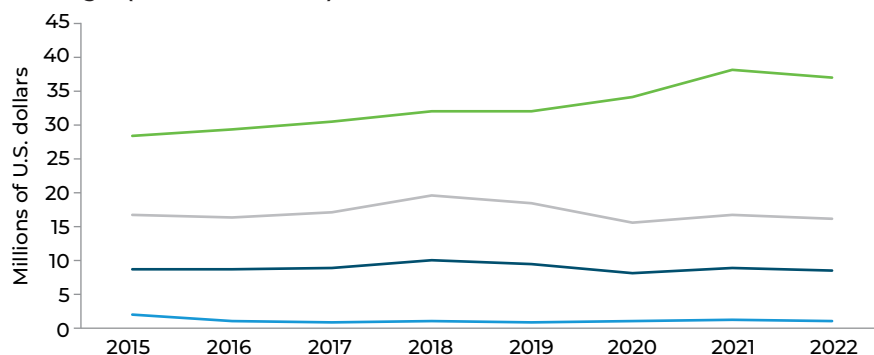
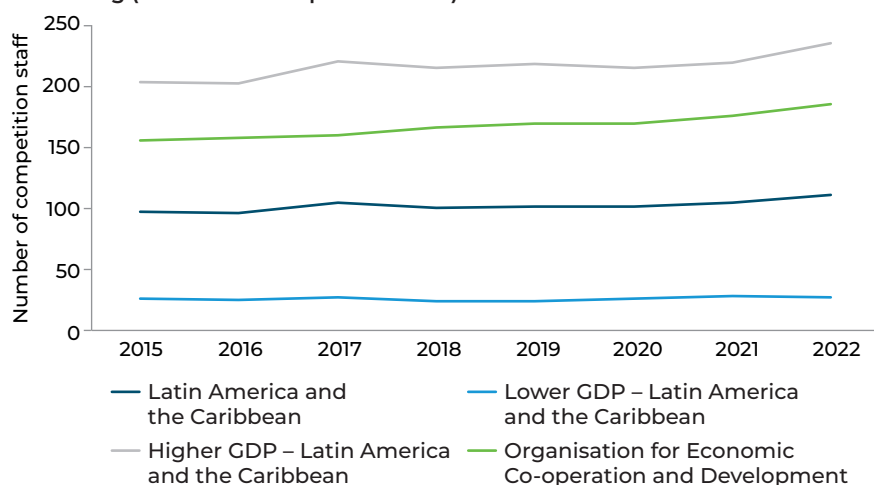
nal sanctions and increased the incentives for cooperation. Criminalization can, in principle, further discourage anticompetitive conduct, since it increases the penalties owners and managers incur if they are found to engage in it. It may also signal equity in the administration of criminal justice: Victim losses in many crimes that result in incarceration for the perpetrator are often far smaller than losses associated with price fixing. On the other hand, governments should meet a much higher burden of proof to secure criminal convictions. Hence, criminal sanctions place greater demands on regulatory authorities and may reduce cartel enforcement efforts. Brazil, Chile, Colombia (only for bid rigging), Mexico, and Peru all have criminal penalties for cartelization in their competition laws; the criminal code of the Dominican Republic also contains such penalties. Argentina, Costa Rica, Ecuador, Nicaragua, Panama, Paraguay, Trinidad and Tobago, and Uruguay do not have them.

Budgets and the Enforcement Capacity of Competition Agencies

Underresourced competition agencies cannot adequately detect cartels and abuse of dominance. In absolute terms, Panel A of Figure 10.5 demonstrates that competition agencies in Latin America and the Caribbean receive less financial support than their counterparts in the OECD.²¹ It is also true that, relative to their larger economies, agencies in OECD countries receive less funding than those in the region. The absolute level of funding provides a better indication of antitrust effort, however, since enforcement carries significant fixed costs that even small economies must incur. Furthermore, benchmarking budgets relative to GDP could exaggerate the enforcement efforts of poorer countries. These tend to have smaller markets and weaker institutions, which encourage cartel behavior and anticompetitive practices. Hence, their competition budgets relative to GDP should arguably be larger than those of richer countries.

Figure 10.5, Panel B, seems to indicate that bigger Latin American and Caribbean countries have more competition agency staff than their OECD counterparts. No data are available, however, on the quality of that staff, an essential variable to include when considering the highly technical and demanding work these agencies are required to undertake. Moreover, low budgets indicate that staff have fewer investigative and expert resources

²¹ In many countries, the fines paid by companies found to engage in anticompetitive behavior are retained by the competition agency. In 2022, for example, fines paid to the competition agencies in the region amounted to more than US\$300,000 per agency employee (OECD, CompStats). These budget numbers include revenue from fines, however, and calculating them on this basis is not a recommended practice; government decisions regarding the prosecution of wrongdoing should not be distorted by considerations of the financial payoff to the prosecuting agency.

Figure 10.5. Budgets and Staffing of Competition Agencies**A. Budget (millions of dollars)****B. Staffing (number of competition staff)**

Source: IDB staff calculations, based on Competition Trends, OECD calculations.

Note: Average agency budget for each group of jurisdictions in Latin America and the Caribbean is based on data from 13 countries. Reported values were converted from euros to U.S. dollars using annual average exchange rates from the International Monetary Fund. Staff dedicated to competition functions is based on data from 15 countries. Both for budget and staff variables, "Higher GDP – Latin America and the Caribbean" includes Argentina, Brazil, Chile, Colombia, Mexico, and Peru. "Lower GDP – Latin America and the Caribbean" encompasses Costa Rica, the Dominican Republic, Ecuador, El Salvador, Nicaragua, Panama, and Paraguay for the budget indicator. For the staff indicator, it additionally includes Barbados and Uruguay.

at their disposal. The small agency staffs in the smaller Latin American and Caribbean countries also may not have attained the minimum institutional size necessary for the basic functioning of a competition agency.

As Table 10.2 makes clear, though, regional averages obscure important within-region variations in budgets and staffing. The Latin American and Caribbean countries in which competition agencies enjoy the broadest legal authority, including the ability to bring criminal charges in cases of

Table 10.2. Relative Levels of Staffing and Budgets

	High budget	Medium budget	Low budget
High staffing	Brazil Chile Colombia Mexico		Argentina
Medium staffing		Dominican Republic Ecuador El Salvador Honduras Peru	
Low staffing			Barbados Costa Rica Nicaragua Paraguay Trinidad and Tobago Uruguay

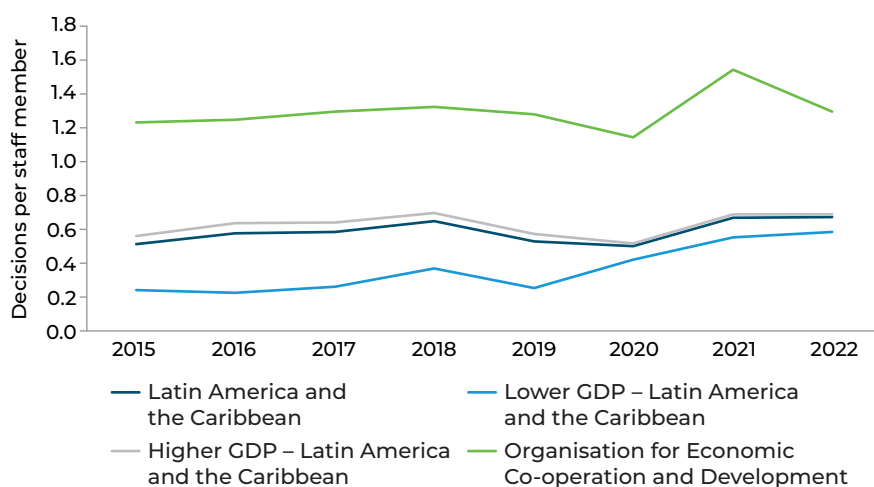
Source: IDB staff calculations, based on the Global Competition Review (2023) and public information.
Note: The budget cells cover the following ranges: high budget, US\$8 million–US\$34 million; medium budget, US\$2 million–US\$6 million; low budget, US\$0.4 million–US\$2 million. The staffing cells cover the following ranges: high staffing, 77–528; medium staffing, 31–70; low staffing, 6–23. Panama is excluded because the country's budget and staffing figures include its very sizeable consumer protection functions, which may dwarf its competition activities.

anticompetitive conduct—Brazil, Chile, Colombia, and Mexico—also have the highest budgets and staffing levels. Countries that grant less legal authority to their competition agencies (for example, the Dominican Republic, Paraguay, and Trinidad and Tobago) also have lower budgets and staffing. In all countries but Argentina, staffing and budgets are correlated. The low budget of the Argentine competition authority suggests that, despite high staffing, budgets may be too low to invest in significant investigative and analytical work and to attract the highly qualified staff essential to the enforcement effort.

Ultimately, the aim of budgets and staffing is to enable the detection and punishment of anticompetitive behavior and to block or impose remedies on mergers that unduly increase the market power of the merged entities. If those resources are inefficiently deployed or are of low quality, however, agency productivity will be low. Figure 10.6 demonstrates that competition agencies are, indeed, less productive in Latin America and the Caribbean. Even for the larger countries that account for most of the competition decisions in the region, the number of decisions per staff member is less than half that in OECD countries.

Legal Autonomy and Functional Separation

The legal authority of Latin American and Caribbean competition agencies is more restricted and their financial resources and productivity all significantly

Figure 10.6. Decisions per Staff Member, by Region

Source: IDB staff calculations, based on Competition Trends, OECD calculations.

Note: Ratio of number of decisions (cartel, abuse of dominance, and mergers) to staff. “Higher GDP – Latin America and the Caribbean” includes Argentina, Brazil, Chile, Colombia, Mexico, and Peru. The number of decisions in the “Lower GDP – Latin America and the Caribbean” category includes data from Barbados, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Nicaragua, Panama, and Uruguay. The staff aggregate for the same category also includes Paraguay.

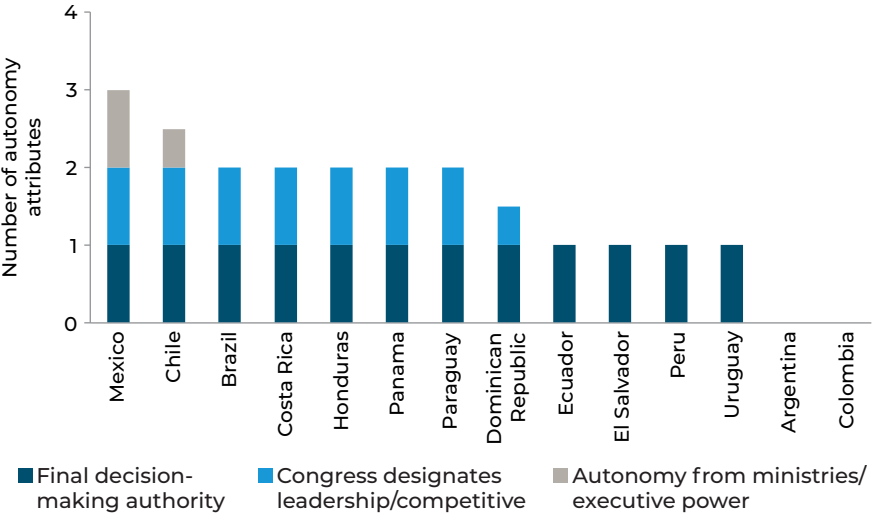
lower than those of the OECD. In addition, they enjoy less legal independence from political interference. Autonomy is key because the economic actors who engage in anticompetitive behavior are often politically influential. Independent competition agencies have greater freedom to investigate and block anticompetitive conduct by those firms that governments might not be inclined to pursue. Government support for competition is still important, however; since agency autonomy is rarely enshrined in the constitution, governments can pursue legislative changes that limit the independence of any agency. Hence, even antitrust agencies that enjoy significant formal autonomy may hesitate to take on controversial cases.

Three dimensions of autonomy are summarized in Figure 10.7. The first dimension is autonomy from the executive branch and its ministries, a level of independence that is rare in the region. Chile’s Tribunal de Defensa de la Libre Competencia (TDLC), for example, enjoys this autonomy.²²

The second dimension relates to how agency leadership is selected. It requires that appointments not be solely at the discretion of the executive

²² Chile has two agencies. The National Economic Prosecutor’s Office (Fiscalía Nacional Económica, FNE), an executive branch agency, undertakes investigations and prosecutes anticompetitive practices. The TDLC adjudicates these cases. The FNE also oversees mergers and acquisitions; its decisions here can be appealed to the TDLC.

Figure 10.7. Legal Independence of Competition Agencies by Country



Source: IDB staff calculations, based on a review of all applicable antitrust laws and regulations for Latin American and Caribbean countries, as of October 2024.
Note: Mexico is classified according to the regulatory framework in force until December 2024. The three attributes of autonomy are the authority to decide whether to investigate and prosecute firms; the authority to issue resolutions and case decisions; and the approval of agency budgets and leadership by the legislature rather than decided by the president.

branch but instead are competitive or subject to congressional approval. Many more agencies in the region exhibit this characteristic; they are in Brazil, Chile, Costa Rica, the Dominican Republic, Honduras, Panama, and Paraguay.²³

The third dimension of independence is common in the region: Agencies, rather than officials in the executive branch, are the final decision makers in antitrust cases. Two exceptions are Argentina and Colombia, where the final resolution of cases is dictated by a political official not exclusively dedicated to competition functions (the Secretary of Commerce in Argentina and the Superintendent of Industry and Commerce in Colombia). In 2018, Argentina passed legislation that provided for the same levels of agency independence as in Brazil and Chile, but it has not yet been implemented.

In general, countries with greater autonomy also pursue more cases and detect more cartel behavior. This is the case with Brazil and Chile, for example. Colombia is an exception; its competition agency pursues many cases, despite lacking formal independence, but the agency enjoys significant funding, high staffing levels, and ample legal authority, and the official in charge

²³ In the Dominican Republic, the Executive Directorate is appointed by the executive branch. In fact, Pro-Competencia, the agency, was unable to enforce the law for eight years because appointments to the directorate had not been made.

of antitrust investigations (Delegado para la Protección de la Competencia) is perceived as technically qualified and independent (CeCo 2024).

The legal authority of autonomous agencies can pose hazards. If exercised capriciously or arbitrarily, it can inflict significant damage on the economy and reduce social welfare. A remedy is to incorporate checks and balances into the institutional design of competition agencies. These increase predictability and prevent abuse in decision making. To achieve this, institutional arrangements to enforce competition law can assign functions to two different (independent) agencies. One becomes responsible for deciding whether to open investigations (*instrucción*) and make indictments (*acusación*); another adjudicates and resolves cases. In Chile, for example, the National Economic Prosecutor’s Office (Fiscalía Nacional Económica) undertakes investigations, prosecutes anticompetitive practices, and oversees mergers and acquisitions, but the independent TDLC adjudicates these cases. Also contributing institutionally to checks and balances in Chile is that, although the prosecutor is formally in the executive branch, designation of the prosecutor is competitive and requires congressional approval.

Table 10.3 summarizes the independence and separation of powers of agencies across Latin America and the Caribbean. In general, concerns about abuse of power are greatest in the case of more powerful (independent and autonomous) competition agencies. Consistent with such concerns, functional separation is a much more common feature of the more powerful agencies in the region than of those that lack independence.

Building Support for Competition

Competition law and its enforcement primarily seek to address behavior by firms that undermines competitive markets. Collusive behavior by firms or

Table 10.3. Legal Independence and Separation of Powers

	Independence			
	High	Medium-high	Medium-low	Low
Functional separation	Chile Mexico	Brazil Costa Rica Dominican Republic Panama Paraguay	Ecuador Peru	
No functional separation		Honduras	El Salvador Uruguay	Argentina Colombia

Source: IDB staff calculations, based on a review of all applicable antitrust laws and regulations for Latin American and Caribbean countries, as of December 2024.

mergers aimed solely at increasing market power is not the only threat to competitive markets, however. The public itself may be indifferent or hostile to competition.

It is not easy for voters to appreciate the positive impact on their welfare of the “invisible hand” of competitive markets. This makes them more willing to embrace regulations that suppress competition, especially if those regulations curb visible and concrete market failures. Even the *de facto* and *de jure* authority of competition agencies depends on public support for competitive markets. When this is fragile, the agencies give greater weight to the political sensibilities surrounding potential enforcement actions. The importance of public support for competition underlines the need for competition agencies to engage in vigorous advocacy for competition.

Competition agencies can also play a role in shaping public policies that relieve the market-limiting effects of poor infrastructure, geographical barriers on competition, and regulation. One common tool agencies can use to make the case for such reforms is market studies. Through them, agencies analyze competitive conditions in a sector and opportunities to make the sector more competitive. Studies may identify anticompetitive behavior by firms, spurring agencies to open investigations, or regulatory obstacles to competition, thereby laying the groundwork for policy reforms.

The authority to conduct analyses of the competitive impact of regulations before they are imposed is an even more powerful tool than market studies. Based on the conclusions of these analyses, competition agencies can recommend changes to the draft regulations that allow regulatory goals to be achieved without reducing competition. In fact, two competition agencies in the region—Chile’s Tribunal para la Defensa de la Competencia (TDLC) and Peru’s Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (Indecopi)—can issue binding decisions to change or suspend regulations that create unreasonable barriers to competition. Most, however, can only issue nonbinding recommendations to improve competitive conditions.

Competition Policy in the Digital World

The advent of the digital economy and artificial intelligence has raised new issues in competition policy, many not yet resolved. One is whether the change in the composition of the economy has affected market power, as reflected in the markup of firm prices over their marginal costs (recalling that, in perfectly competitive markets, these should be the same). De Loecker, Eeckhout, and Unger (2020) conclude average markups in the United States have risen,

raising the suspicion that a decline in competition and weaker antitrust enforcement are to blame. Miller (2025), however, argues that the increase in markups is the result of technological advances, including the changing and increasingly digital composition of the economy. He bases this conclusion on a review of industry studies that examine the evolution of market power over long time horizons. Foster, Haltiwanger, and Tuttle (2022) provide detailed evidence from U.S. Census data supporting the conclusion that technological change has driven the increase in markups in manufacturing.

Marto (2023) offers a different explanation for the rise in aggregate markups in the United States between 1980 and 2015 but, again, does not attribute it to a decline in competition. Instead, Marto concludes, markups rose because of the complicated interplay of several factors: productivity increases in manufacturing; higher incomes; and a shift in demand for services. Consistent with the conclusions of Miller (2025) and Tuttle (2024), technology again plays a role: The rise of service firms during this period coincides with that of the digital economy, from internet commerce and social media to financial technologies (FinTech) and the “sharing economy.”

Should the standards for enforcing competition policy be different for these new service industries? This much-debated topic exceeds the scope of this chapter and, in any case, is an area where disagreement among experts in several countries makes it difficult to formulate recommendations for Latin America and the Caribbean. It is useful to observe, however, that much of the debate concerns the effects of these industries on competitors (for example, the effect of Amazon on booksellers), while competition policy usually focuses on the effects of market power on consumers (although concern recently has risen regarding the potential for firms to exert market power over their suppliers, particularly workers).

By the usual consumer standards, most evidence points to positive effects from the presence of large digital firms. Jo, Matsumura, and Weinstein (2024) find that e-commerce in Japan reduced the intercity price dispersion of goods sold in physical stores and lowered variety-adjusted prices between 1996 and 2014 by 0.9 percent—more in cities with highly educated populations. Balyuk (2023) concludes that consumers who obtain FinTech loans subsequently have greater access to bank credit. Wallsten (2017) finds that the entry of ride-sharing services into New York City reduced consumer complaints per trip about taxis in the city, including complaints about broken credit card machines, air conditioning and heating, and rudeness.

Nevertheless, these new firms and industries raise new issues for competition policy. First, how should policy address the strong network economies of many of these new industries, such as e-commerce? Here the essential question is whether the economies of scale are so large as to

preclude competitive entry, allowing these enterprises to charge higher than competitive prices to vendors (in the case of large e-commerce firms) or advertisers (in the case of large social media firms).

Second, many of these new firms are platforms that sell services both to downstream consumers (such as households) and suppliers (such as vendors on e-commerce firms like Amazon and advertisers on social media websites). What is the potential for these platforms to engage in anticompetitive conduct or exert market power?

Third, how should competition authorities evaluate mergers and acquisitions in the digital economy? This is a fraught area of economics and law. Gutiérrez (2022) analyzes the complexity of regulating one major e-commerce platform, noting that while some commonly supported regulations could reduce consumer welfare, others could raise it. Rong et al. (2024) analyze the introduction of China's Anti-Monopoly Guidelines for the Platform Economy and find that, rather than increasing competition, the guidelines reduced venture capital investment and entry into these markets.

A related issue is whether the assessment of mergers and acquisitions by digital firms should be based on their effects on markups in relevant markets or, rather, on (difficult) analyses of the effects of the transactions on future innovation and entry. Findings by Cunningham, Ederer, and Song Ma (2021) confirm the use of "killer acquisitions" in the pharmaceutical industry—that is, acquisitions intended to slow the emergence of innovations that would reduce the acquiring firm's market share. Acquisitions of complementary technologies, such as platforms, by firms with significant market power are also a concern; they can extend the market power of the acquiring firms into other markets (Hovenkamp 2021). Some acquisitions by platforms that were approved by authorities, such as the purchase of Instagram by Facebook, have been criticized precisely for overlooking effects on innovation. But evidence of widespread killer acquisitions by digital firms is so far lacking.

Killer acquisitions require significant barriers to entry and high rates of innovation and technological change. Both the pharmaceutical and digital sectors exhibit the latter. In the pharmaceutical sector, the barriers to entry are patents and the fixed costs of developing new drugs. In the digital sector, the main barrier is the network economies enjoyed by incumbents. This barrier may be relatively low, however, when measured against the fixed costs of entry in the pharmaceutical industry, which killer acquisitions can delay for years.

Artificial intelligence also has implications for competition policy. Some issues simply require the application of standard competition tools to a new technology. A concern in both the digital and analog economies, for example,

is whether firms can leverage market power in one sector to achieve it in another. In AI, the issue is whether firms that enjoy market power in key AI inputs (hardware, as with Nvidia, or computing power, as with Amazon, Google, and Microsoft) will be able to leverage their market power in other areas of AI, such as through arrangements that give them exclusive access to data or AI models. Hagiu and Wright (2025) are optimistic that the seven large firms in this area (Amazon, Apple, Google, Meta, Microsoft, Nvidia, and Open AI) will exert significant competitive pressures on each other. Unlike with firms built around internet searches, the two authors do not observe data feedback loops that generate network economies in AI.

Other competition issues raised by AI are novel. AI may, for example, facilitate price collusion across many actors. In markets with many buyers and sellers and heterogeneous products, such as apartment rentals, it is difficult for sellers to coordinate prices. AI, with its ability to process massive quantities of data, can solve this coordination problem. In the United States, criminal and civil cases have been brought against landlords, meat processors, online resellers, hotels, and casinos, all charged with using AI algorithms to collude on pricing. Inderst and Thomas (2024) argue, though, that pricing algorithms can benefit consumers by increasing price transparency. Hence, from a consumer welfare perspective, the optimal response of antitrust authorities to the use of algorithms to collude is unlikely to be a prohibition on their use. Hagiu and Wright (2025) observe that AI may reduce the market power of some platform businesses by replacing one side of the market with an AI solution. It is unclear, however, whether competition will increase, since the AI providers of this solution may also enjoy market power.

The Reform Agenda Ahead

Although most firms do not engage in anticompetitive practices, this behavior is common enough in the OECD to justify significant efforts to support competition agencies that can curb it. The fact that markups in Latin America and the Caribbean are higher than in the OECD suggests that anticompetitive behavior may be even more common in the region. This is especially the case if one considers that technological change has had a stronger effect on the economic composition of OECD economies. Based on the findings of Miller (2025) and others reviewed earlier, if competition and antitrust enforcement are held constant, OECD economies should exhibit higher markups than in Latin America and the Caribbean. Instead, they are lower.

Despite this, the efforts of governments of the region to suppress anticompetitive behavior appear to be significantly less vigorous than in the OECD. Competition agencies in Latin America and the Caribbean have less

funding and weaker legal authority, are less autonomous, and, ultimately, are less productive than their counterparts in the OECD.

Just as with the reform of regulatory institutions recommended in Chapter 9, the reform of competition agencies has the potential to deliver large gains to growth and poverty reduction at minimal fiscal cost. Governments in Latin America and the Caribbean can pursue many reform options to strengthen institutional protections for competitive markets.

First, competition agencies in Latin America and the Caribbean should invest more in detecting and dismantling cartels. The evidence presented earlier suggests large rates of underdetection in the OECD; it could be twice as pervasive in the region. This has large negative effects on social welfare and particularly on low-income households. All countries of the region should adopt provisions allowing for leniency and make more intensive use of this and other tools in their efforts to deter anticompetitive practices.

Second, governments can reinforce the advocacy function of their competition agencies. These should be empowered to identify regulations at all levels of government that are likely to have anticompetitive effects and, at least in egregious cases, to propose a reconsideration of the rules to mitigate those effects. More broadly, they should be empowered to advocate for competitive markets as key vehicles for improving individual welfare. This is particularly important in countries where public suspicion of markets is high.

Third, the low productivity of competition agencies in the region relative to their OECD counterparts suggests that the procompetitive efforts of these agencies should receive greater political support. This support can be both rhetorical—in the form, say, of public endorsements by governments of the importance of competitive markets and the work of these agencies—and legislative, by granting the agencies greater autonomy and the resources they need to suppress anticompetitive behavior and advocate for more competitive markets.

Fourth, the countries of the region have adopted different approaches to competition policy and should attempt to learn from each other regarding their successes and failures. Small countries of the region confront particular challenges. The smallness and relative inactivity of their competition agencies suggest they have not attained the minimum scale necessary to protect competitive markets in their countries. One ideal response could be to reduce trade barriers, both tariff and nontariff, including those related to cross-border infrastructure. As long as those barriers remain high, however, these countries should consider undertaking more collaborative efforts, such as systematic exchanges of information and evidence, joint investigations and procedures in multinational cases, and even the constitution of a

regional competition network of agencies, which can help achieve the minimum scale necessary for effective antitrust enforcement.²⁴

In sum, the evidence in this chapter highlights the significant welfare losses households suffer because of anticompetitive behavior in Latin America and the Caribbean. Governments have many reform options at their disposal to reverse these losses. They range from broader institutional reforms to strengthen competition and procurement agencies to more specific reforms related to the enforcement of competition law and the conduct of public sector procurement.

²⁴ The European Competition Network (ECN) is a useful reference for effective collaboration tools.

The Political Economy of (Lack of) Competition

Competition is a process and a structure. The discussion so far has focused on the outcomes of market transactions, like markups and markdowns, that reveal how competition plays out or reflect the effects of government actions, such as the time businesses spend dealing with regulation. The focus here is on political economy and the set of policy interventions that affect competition.

While competition is affected by many policies—from infrastructure investment to tax regimes—the analysis will concentrate on the regulatory burden carried by firms, as it is an area for which systematic measurement is available. Some regulations are procompetitive, aiming to correct market failures, reduce information asymmetries, and support fair competition through antitrust laws, merger reviews, and facilitation of market entry. Many well-intentioned regulations, however, end up protecting incumbents by creating barriers to other firms seeking to enter the market. Excessive compliance costs, restrictive licenses, and zoning rules often deter new competitors, while permit systems meant to ensure safety are frequently used to exclude rivals.

The regulatory burden in a country at any given time is the consequence of the accumulation of laws and regulations approved over long periods. Each regulation was initially implemented at some point in time, and, unless changed, sustained through path-dependent dynamics.¹ What happened at each point since was conditioned by the prevailing structural economic conditions, state capabilities, and political dynamics. Hence, competition or the lack of it depends not only on the current politico-economic equilibrium but on the actors, their incentives, and their power at different times in history. In many cases, even understanding which laws or regulations could

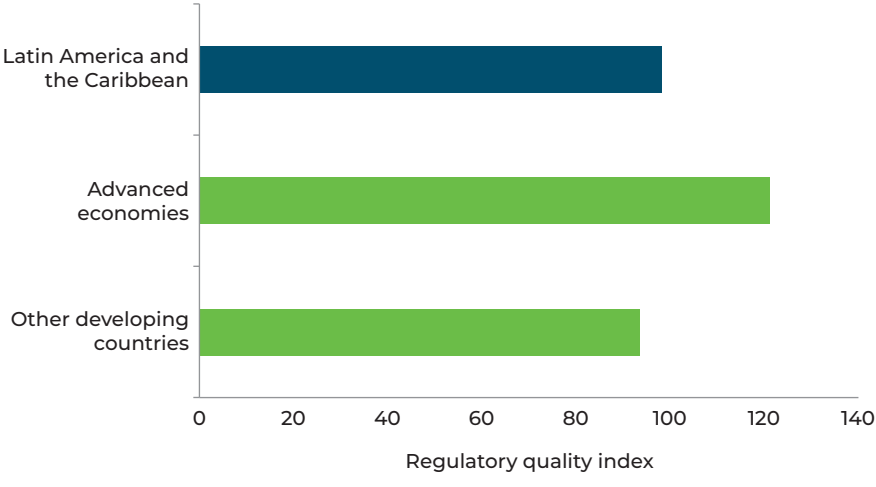
¹ Path dependence is the idea that the decisions and conditions pertinent today are deeply influenced by the decisions and conditions that took place in the past, often in a way that locks in particular decisions even if better alternatives exist.

be affecting competition is challenging. Figure 11.1 shows a measure of regulatory quality that captures perceptions of the ability of the government to formulate and implement policies and regulations that promote private sector development. Regulatory quality is worse in Latin America and the Caribbean than in advanced economies.

As will be explained, competition is an opaque and misunderstood public good. Collective-action problems among consumers and the general public limit their ability to resist the actions of organized business, unions, and professional associations, which use their privileged access to the policymaking game to reduce the provision of this public good by introducing regulatory barriers to entry.

Preventing anticompetitive practices requires the presence of regulatory institutions, such as those described in Chapter 9, that yield benefits that are also difficult to observe and long-term in nature. Limiting the emergence of barriers and limiting them once they are in place is more likely to be possible in societies that can achieve cooperative outcomes more easily—that is, in contexts, first, where there are good “aggregation technologies” so that the number of collective actors with direct impact on the policy-making game is not too large; second, where there are well-institutionalized arenas for political exchange; third, where key actors have long-term horizons; and, finally, where there are credible enforcement mechanisms, such

Figure 11.1. Regulatory Quality, 2023



Source: IDB staff calculations, based on Worldwide Governance Indicators, World Bank.
Note: The regulatory quality index captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. The estimate ranges from approximately -2.5 to 2.5. In this figure, for ease of exposition, the index has been standardized to have a median of 100.

as an independent judiciary or a strong bureaucracy to which certain public policies can be delegated.²

Removing the barriers altogether typically requires broad market liberalization, involving coordinated reforms across regulatory and tax policy and infrastructure. While the long-term benefits can be substantial—greater competition, innovation, and efficiency—the short-term costs are immediate and politically sensitive. Dismantling the legacy of accumulated anticompetitive regulations is rarely incremental; it tends to occur at specific political moments, when strong leadership converges with favorable circumstances. Success demands not only political will but strategic ingenuity to navigate entrenched interests, overcome bias, and address deep informational asymmetries.

An Opaque and Misunderstood Public Good

Market competition shares the core features of a public good: It benefits a large, dispersed group—consumers—while being difficult to restrict to a few. Yet because the benefits of competition are indirect and diffuse, individual consumers have little incentive to defend it.

The Olsonian Argument Applied to Competition

According to the theoretical framework proposed sixty years ago by Mancur Olson, public goods tend to be underprovided because their beneficiaries are numerous and uncoordinated, while the costs of providing them are concentrated among and often opposed by organized producer groups (Olson 1965; Wilson 1980). This dynamic is especially true for competition; when it increases, consumers enjoy lower prices and better services, but these gains are spread thinly and fail to trigger collective action. In contrast, incumbents who will incur losses are well organized and politically influential.

These vested interests not only lobby effectively to preserve regulations that stand in the way of entry and protect rents; they shape public opinion.³ They often frame competition as a threat to jobs, industrial development, or national sovereignty. Politicians, responding to both voter sentiment and pressure from organized interests, adopt interventionist policies that curb market openness, despite long-term economic costs.

² See, for instance, Murillo et al. (2006), Spiller and Tommasi (2009), and Scartascini and Tommasi (2014).

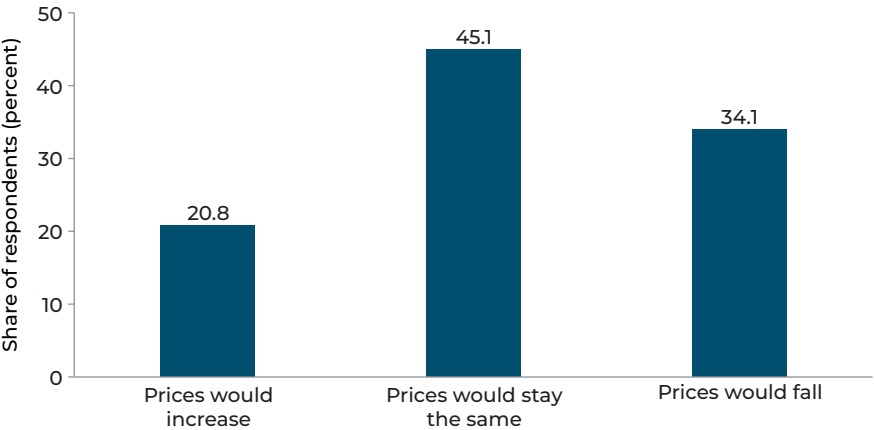
³ Economic rent is an amount of income that exceeds what is economically or socially necessary.

Surveys confirm that many citizens in the region struggle to grasp the benefits of competition. As shown in Figure 11.2, only 34 percent believe that having more stores and supermarkets would lower prices, and less than half understand how caps on rental prices might reduce housing supply.

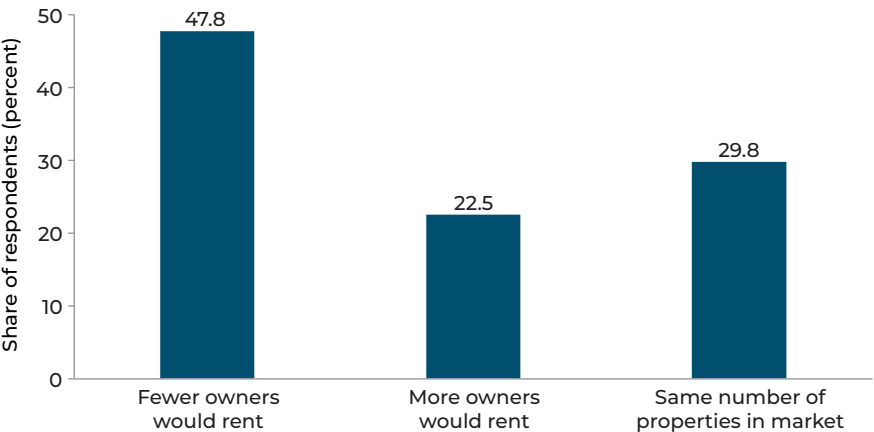
These views reflect not only narrative distortion but the limited visibility of the workings of competition. Many anticompetitive rules—licensing hurdles, technical norms, export bans, or selective subsidies—are obscure,

Figure 11.2. Government Policies, Market Entry, and Citizens’ Beliefs

A. Entry of firms and prices



B. Price caps and quantities



Source: IDB staff calculations, based on IDB-LAPOP Online Survey.
Note: Panel A reports the answers to the survey question, “If more supermarkets and stores were to open in your community . . . What do you think would happen to the prices of products?” (9,097 respondents). Panel B reports the answers to the question, “Imagine that people are complaining that rents are too high. In response, the government imposes a cap on rent prices. What do you think will happen?” (9,089 respondents).

framed in pro-social language, and hard to trace to market outcomes. This makes it easier for governments and special interests to quietly protect insiders, with minimal public resistance. Strict banking license requirements, for example, are often justified on the grounds of financial stability, but, in practice, they may also serve to block new entrants, raise fees, and stifle innovation.⁴ Similar barriers exist in sectors like medicine, law, and urban transportation, where restrictive licensing often protects professionals more than it benefits consumers. A clear case is the backlash in response to ride-hailing platforms across Latin America and the Caribbean, against which taxi unions successfully mobilized using narratives of fairness and safety, while platform users, though numerous, remained politically fragmented and unorganized.⁵

Still, voter preferences and narratives alone do not explain the full array of regulations that constrain competition and reduce welfare. An important factor is the incomplete information voters possess: If people do not observe either the regulations or their impacts, they are unlikely to oppose them. Many barriers operate behind the scenes and are cloaked in lofty objectives like protecting jobs, sovereignty, or public education. And, unlike visible shocks, such as price hikes or unemployment, the costs of reduced competition are diffuse, gradual, and difficult to attribute, making political mobilization even harder. This informational asymmetry allows anticompetitive rules to persist with little public scrutiny.

Finally, these dynamics are compounded by the nature of competition itself; it, too, works slowly and invisibly. When countries in the region deregulated their airline sectors in the 1990s, for example, prices declined over time, but few attributed the improvements to competition. Meanwhile, public sympathy often remained with state-owned “national champion” airlines, which were shielded from market forces through subsidies and protectionist

⁴ Becerra, Cavallo, and Scartascini (2012) show that credit levels depend on both incumbent power and government capacity. This chapter repeatedly highlights that incumbents benefit from restricting entry, and only capable states can preserve competition by counteracting these pressures. In recent times, incumbent banks have responded to FinTech (financial technology) competition by lobbying for restrictive regulations under the pretext of consumer protection and fairness. These efforts often shield the banks' market share at the expense of innovation, competition, and financial inclusion—particularly in areas underserved by traditional banking.

⁵ Other examples include teacher unions, which, while defending labor rights, often act as incumbents resisting reforms that promote competition and accountability in education (Galindo et al. 2011). By opposing changes like the institution of performance evaluations or flexible staffing, they can block innovation and limit quality improvements, ultimately harming students. Similar dynamics affect the imbalance between public and private universities in many countries.

policies. These measures benefited politically connected insiders while burdening taxpayers and limiting consumer choice and innovation.

Extending the Olsonian Argument beyond Output Markets

Olson's theory of collective action helps explain why competition is often underprovided in consumer markets. The same logic applies, perhaps even more forcefully, in business-to-business and input markets. These upstream markets are essential to the functioning of the economy, yet they are typically less visible than consumer markets and, hence, even more susceptible to concentrated influence by powerful actors. Because the general public is even further removed from transactions in input markets, anticompetitive regulations pertaining to them are harder to detect, debate, or contest publicly.⁶

In business-to-business contexts, large incumbent firms often lobby for regulations that shape the terms of access to essential inputs for downstream competitors, such as raw materials, intermediate goods, logistics, infrastructure, or finance. These regulations can take the form of export bans, price controls, preferential subsidies, or technical standards that selectively favor insiders. While they may be justified as protecting strategic industries or ensuring stability, they often function to entrench dominant firms, raise rivals' costs, and reduce market contestability—all out of public view.

A clear example emerged in Argentina during its 2025 deregulation initiative. Before it was eliminated, a regulation had benefited leading steel producers for years by imposing export restrictions on scrap metal, their primary input. They were able to sustain this barrier to entry because of their political connections, a lack of voter information about the restrictions, and their impact on job creation, but also because of the narrative they disseminated of safeguarding domestic industrial inputs. The measures artificially suppressed domestic scrap prices, effectively guaranteeing these large producers a steady and cheap supply. This not only gave them a major cost advantage over competitors; it created distortions across related sectors. Smaller firms and alternative users of scrap metal, such as metal recyclers

⁶ While upstream markets are often opaque and vulnerable to capture—that is, industry interests exert undue influence over the rules or the enforcement agencies meant to oversee them—this does not always mean unchecked power for incumbent suppliers. In some cases, powerful downstream firms, like manufacturers, exporters, or retail chains, can act as counterweights, lobbying or litigating when input distortions threaten their competitiveness. This is especially true in concentrated or export-oriented sectors.

or manufacturers, incurred higher costs and supply shortages. The result was a less dynamic and less competitive market ecosystem, where innovation, entry, and entrepreneurship were stifled, not by market forces, but by regulatory privilege.

This kind of upstream protectionism highlights an important blind spot in public debates about competition: While the general public may be aware of monopolies in telecommunications or retail, few recognize how industrial policy and regulatory discretion in input markets can quietly entrench concentrated power. These interventions are harder to scrutinize because they involve complex technical rules and are couched in bureaucratic language. Yet their impact on market structure, productivity, and innovation can be just as far-reaching.

In sum, competition suffers from both a political and cognitive disadvantage. It is easy to undermine, hard to defend, and often invisible in its effects, especially when regulations are complex and interests are entrenched. Without clear leadership and public understanding, competition remains a systematically underdefended pillar of economic development.

The Policymaking Process and Competition

The previous section established that competition is an opaque and misunderstood public good. Overcoming such obstacles to promote a competitive and (hence) dynamic economy puts heavy requirements on the policymaking process.

Actors and Their Actions

Policy outcomes depend on who participates in decision making, their incentives, and their relative power, given the set of rules that govern the decision-making process. In the most stylized setting, public policies tend to be decided in public arenas—such as the national congress, sub-national layers of government, the bureaucracy, and the judiciary—that are populated by state actors or professional politicians, including presidents, party leaders, legislators, governors, bureaucrats, and judges. The incentives of public officials, as well as the state capabilities necessary to perform certain essential functions, are determinants of which policies are politically and technically feasible and sustainable. They even condition the types of political demands private actors will pursue (Scartascini and Tommasi 2010).

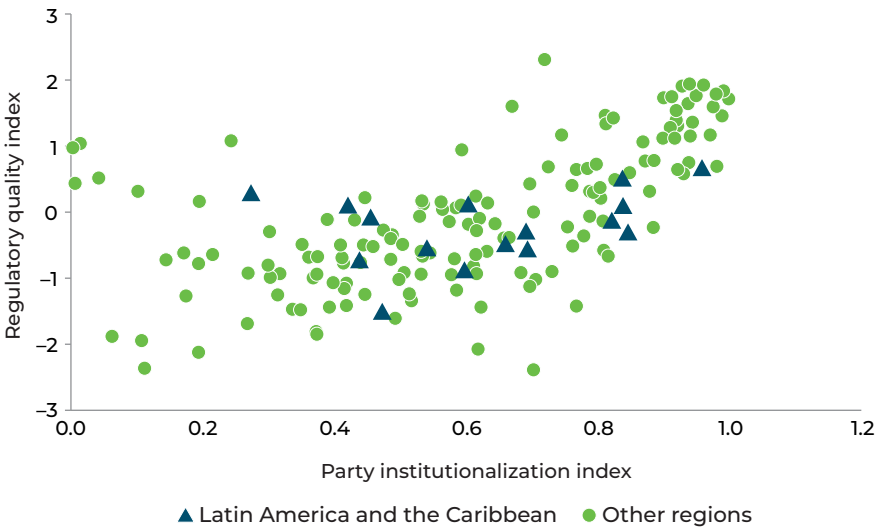
Politicians and government officials should be interested in increasing the level of competition in the economy, since it will generate desirable

long-term outcomes for society as a whole. Whether they actually prioritize the pursuit of such policies depends on factors that vary across countries and over time, such as the transparency of the policymaking and political process, the level and quality of information that forms the basis for public opinion, their disposition to cater to special interests or the general interest, and their incentives to prioritize short-term political payoffs versus long-term welfare outcomes.

Effectively pursuing competition-enhancing policies requires substantial state capabilities. Conducting antitrust regulation, ensuring labor and health safety for workers and consumers, and other such efforts all require a competent bureaucracy. Similarly, to pursue industrial policy that can't be easily captured, the government must be able to evaluate the best alternatives while avoiding being captured by lobbies and private interests.

Politicians' incentives and state capabilities depend on a number of features of political institutions and of the political system; these include, for example, whether political party systems are institutionalized (as Figure 11.3 shows, countries with more institutionalized party systems tend to have better

Figure 11.3. Party Institutionalization and Regulatory Quality



Source: IDB staff calculations, based on the Varieties of Democracy (V-Dem) Project and Worldwide Governance Indicators, World Bank.

Note: The party institutionalization index measures the extent to which political parties in a country are institutionalized. The index ranges from 0 (low institutionalization) to 1 (high institutionalization). The regulatory quality index captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. The estimate ranges from approximately -2.5 to 2.5. The pairwise correlation between party institutionalization and regulatory quality is 0.40 for Latin America and Caribbean countries and 0.19 for countries in other regions.

regulations); whether they are programmatic (that is, focused on broad policies or platforms) or clientelistic (offering favors or benefits in exchange for public support); whether the policy process is national in orientation or fragmented into local bailiwicks; whether national legislatures have strong policymaking capabilities and legislators have long horizons; whether judiciaries are independent or subservient to the government of the day; and whether civil service systems are well developed and professionalized or are dependent upon political strings held by the government in power (Scartascini et al. 2010).

The set of public policies considered in the policymaking process depends on what actors choose to demand. In low-capacity states, they are less likely to push for policies that promote competition, since demanding government action is costly and only worthwhile if implementation is likely. Faced with uncertain state capacity, interest groups often prioritize policies that yield immediate, predictable benefits, like subsidies or tax exemptions, over long-term investments, such as infrastructure or export facilitation. This bias undermines productivity and competition. In other words, regulations are more onerous if the state has less capacity to design, implement, and enforce regulations and supervisory duties (Becerra, Cavallo, and Scartascini 2012; Franco Chuaire, Scartascini, and Tommasi 2017). In Latin America and the Caribbean, countries with stronger state capacity—as measured by institutional quality (Panel A in Figure 11.4) and government effectiveness (Panel B)—tend to have more business-friendly regulations.

Figure 11.4. Government Capabilities and Regulatory Quality

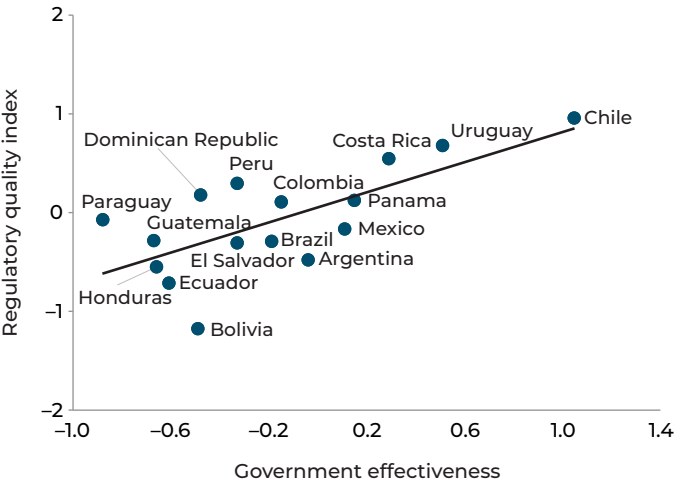
A. Regulatory quality by institutional quality



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Figure 11.4. Government Capabilities and Regulatory Quality *(continued)*

B. Regulatory quality by government effectiveness



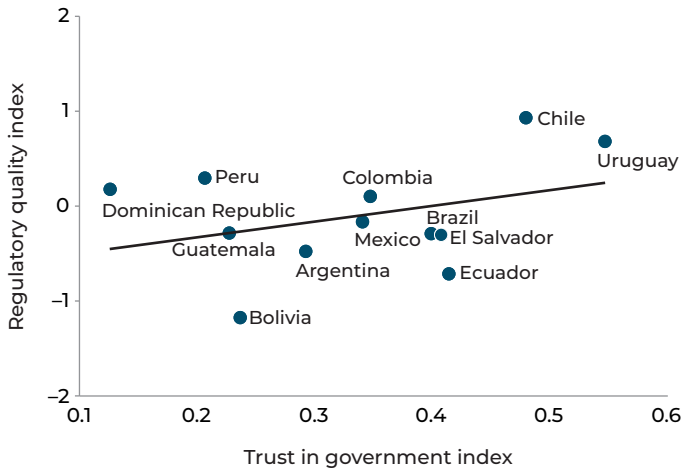
Source: IDB staff calculations, based on the International Country Risk Guide Quality of Government (ICRG QoG) and Worldwide Governance Indicators, World Bank.

Note: The ICRG QoG index represents the mean value of three key variables from the International Country Risk Guide (ICRG): corruption, law and order, and bureaucracy quality. These components are scaled from 0 to 1, with higher values indicating a higher quality of government. The government effectiveness index measures perceptions of the quality of a country's public administration. It combines various dimensions, including the quality of public service delivery, the professionalism and competence of civil servants, the quality and independence of bureaucracy from political influence, and the credibility of the government's commitment to its policies. Regulatory quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. The estimates range from approximately -2.5 to 2.5.

Trust in Government and in Others

Trust is a vital foundation for procompetitive reform. As Keefer and Scartascini (2022) show, mistrust undermines the provision of public goods by weakening citizens' willingness to demand reforms and coordinate action. When voters doubt that others will join them in pushing for broad benefits, or they don't trust institutions to implement reforms fairly, they tend to favor narrow, clientelist policies. In low-trust environments, actors are less likely to support lowering entry barriers or investing in shared infrastructure, fearing that the gains will go to insiders.

Ironically, mistrust can also lead citizens to demand stricter regulations to control firm behavior—regulations that often end up protecting incumbents rather than consumers (Aghion et al. 2010). These are hard to dismantle because low trust in regulators fuels suspicion toward deregulation. Mistrust also limits support for lower-cost public goods, like certifications and coordination platforms, that require cooperation between public and private actors.

Figure 11.5. Trust in Government and Regulation Quality

Source: IDB staff calculations, based on the World Value Survey Database (WVS) and Worldwide Governance Indicators, World Bank.

Note: The figure plots the relationship between trust in government and the regulatory quality index. The values for trust in government range from 0 to 1, with values closer to 1 signifying stronger trust. Regulatory quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. The estimates range from approximately -2.5 to 2.5.

In short, collective action to defend competition relies on trust. Citizens must believe others will resist rent-seeking and contribute to shared public goods. But survey evidence suggests that when trust is low, even basic civic mobilization, like organizing a petition, is viewed as futile. Weak trust thus erodes both political participation and the demand for procompetitive policies.

Political parties and civil society organizations can reduce the costs of collective action and channel citizen demands. But when parties are weakly institutionalized, as is often the case in Latin America and the Caribbean, they fail to present coherent platforms or aggregate interests. Legislators in low-trust systems tend to favor narrow transfers over public goods like infrastructure and regulation. Similarly, civil society organizations are effective in advocating for competition only when they themselves are trusted by citizens. Figure 11.5 shows that trust in the government is positively correlated with the quality of regulation and fewer entry barriers across the region.

Aggregating Policy Demands in Political Arenas

Each actor's policy demands depend on its economic position, endowments, and trust in state institutions. An asset owner tied to a specific industry, for instance, has a strong incentive to support policies that boost that industry's

profitability, such as subsidies or barriers to entry, and to oppose those that threaten it, like higher taxes. These demands can either promote or restrict competition. Incumbents often seek protection in the markets where they sell their products but may support more efficient input markets, such as those for credit, labor, or infrastructure.

Which interests prevail depend on the actors' ability to organize. Collective action is easier for concentrated groups with high stakes, like owners of regulated utilities, than for diffuse actors with diverse interests, such as consumers or small farmers. The level of aggregation also matters. Individual firms tend to pursue narrow, firm-specific goals, such as subsidies, while broader business associations are more likely to push for public goods, such as infrastructure or legal reform. Aggregated representation by business associations helps internalize externalities and makes it harder to demand distortive benefits for a few.

Firms typically benefit from efficiency in input markets and general macroeconomic stability, but mobilizing around such broad goals is harder without high-level organization. The structure of the economy and the policy-making process shape these dynamics. In countries with centralized decision making, cohesive business representation can be effective, as was historically the case in Colombia. In more fragmented systems (for example, Brazil today), decentralized lobbying and local-level influence are more common.

It follows that political systems that aggregate interests well, via stable parties and legislative bargaining, are better suited to delivering long-term, procompetitive policies. In contrast, systems with many access points often encourage fragmented rent-seeking. When interactions between the state and private actors are institutionalized and trust based, policy demands tend to be longer-term and beneficial for competition. In many Latin American and Caribbean countries, however, weak institutions and short time horizons have encouraged a balkanized policymaking process. Business elites, unions, and informal workers each secure targeted benefits through distinct channels, often undermining competition and coherent economic reform (Lora and Scartascini, 2010). The next section looks at one cluster of actors crucial to market competition: the business sector.

The Power of Business

The role of business in policymaking is intimately related to the degree of competition in different markets. Firms exert both structural and instrumental forms of power, helping to influence the rules that govern economic activity and leading to outcomes that range from the advancement of public goods to the allocation of opaque, particularistic benefits for a few

well-connected players. This section examines how businesses engage with the state, the nature of their demands, and how these interactions differ across countries and over time. Drawing on foundational works in political economy and recent regional studies, an argument is made that business influence is not inherently positive or negative; its effects depend on the substance of demands and the strategies used to pursue them.

Business power in policymaking operates through two principal channels. First, *structural power* refers to the implicit influence businesses have because of their central role in the economy. Because investment decisions affect employment, growth, and fiscal revenues, governments are often compelled to adopt policies that maintain business confidence. This gives business actors leverage, even without active lobbying (Lindblom 1977; Culpepper 2015). Second, *instrumental power* involves direct political action: lobbying, campaign financing, coalition building, and influence through business associations. This type of power is more visible and is the subject of much literature in the field of interest group politics. Business actors with high instrumental power can negotiate favorable regulatory changes, secure tax breaks, or block reforms that threaten their interests.

Is Business Power Good or Bad?

The normative evaluation of business power depends on the nature of the demands and how they are pursued. Broadly speaking, these demands can be classified into four categories, according to the degree to which they reflect the collective interests of firms. The more this is the case, the less harmful (and potentially the more beneficial) the demands are to society as a whole:

- *The Good: Collective Demands for Public Goods.* When businesses advocate for improvements in property rights, macroeconomic stability, infrastructure, and regulatory efficiency, their demands align with broader societal goals, helping to create a more predictable and efficient environment for all economic actors. These are public goods that benefit not only the businesses but society at large. Many of the World Bank's "Business Ready" indicators pertain to this category.
- *The So-So: Contested Policy Areas.* Other demands, such as those related to taxation and labor policies, are more ambivalent. Business preferences for lower taxes or more flexible labor regulations may boost investment and competitiveness, but if implemented in a regressive or unbalanced way, they can also erode state capacity to redistribute or provide public goods and worker protections.

In these cases, the impact of business influence depends heavily on context and implementation.

- *The Bad: Sector-Specific Protection.* When firms lobby for protectionist policies for specific sectors—through tariffs, subsidies, or quotas—this often reduces overall efficiency. While such protection may preserve jobs or cushion shocks in the short term, it tends to reduce innovation, hinder productivity, and perpetuate rent-seeking behavior.
- *The Ugly: Firm-Specific Privileges.* The most damaging forms of business influence are those that result in firm-specific protection, where well-connected companies secure favorable regulations, contracts, or subsidies unavailable to others. These privileges undermine competition, distort resource allocation, and erode public trust. They are also the most opaque, often buried in the fine print of state budgets, government contracts, or regulatory codes. Box 11.1 summarizes a prominent literature exploring how “political connections” affect competition.

Box 11.1. Political Connections and Competition

Often, politicians and public officials are connected to firms in the private sector. These connections take many shapes and forms. In some cases, politicians come from the private sector, having served on corporate boards or in other executive roles. In others, the connections are less direct, arising from firms' support for political campaigns. Regardless of their origin, political connections can influence firm outcomes, and, when they favor certain firms over others, they can also become a source of anticompetitive behavior.

Political connections have been shown to affect firms' access to financial resources and their overall performance. Evidence shows that politically connected firms—especially those contributing to political campaigns—receive larger loans, are more likely to be bailed out of financial difficulty, and are less likely to exit the market (Claessens, Feijen, and Laeven 2008; Faccio, Masulis, and McConnell 2006; Khwaja and Mian 2005; Diegmann, Pohlen, and Weber 2024). These firms also enjoy preferential access to government contracts (Khwaja and Mian 2005; Acemoglu et al. 2018), bureaucratic advantages that streamline administrative processes and reduce operating costs (Shleifer and Vishny 1994), regulatory leniency and reduced oversight (Faccio, Masulis, and McConnell 2006), favorable tax treatment and subsidies (Goldman, Rocholl, and So 2013; Choi and Lim 2023), and access to credit from state-owned or politically influenced financial institutions (Leuz and Oberholzer-Gee 2006; Schoenherr 2019).

(continued on next page)

Box 11.1. Political Connections and Competition *(continued)*

While the value of political connections is not always easy to quantify, their importance often becomes more apparent when the ties are severed (Fisman 2001; Acemoglu et al. 2018). When, for example, political leaders die, the stock value of politically connected firms falls. Ultimately, political connections can redirect rents toward connected firms at the expense of broader economic efficiency. This dynamic leads to resource misallocation (Foster, Haltiwanger, and Krizan 2006), dampens business dynamism (Akcigit, Baslandze, and Lotti 2023), and results in large efficiency losses at the aggregate level (Restuccia and Rogerson 2008; Hsieh and Klenow 2009).

The Political Economy of Business Influence

Business plays a central role in shaping the political and economic landscape of Latin America and the Caribbean. Understanding how firms interact with the state—and how these interactions have evolved over time—is essential to grasping the region's persistent challenges with market concentration and regulatory capture.

The Historical Power of Business Elites

The structural power of business elites in Latin America and the Caribbean has deep historical roots. As Acemoglu and Robinson (2008; 2013) emphasize, the origins of elite dominance lie in the colonial and postcolonial concentration of wealth and land, which translated into disproportionate political influence. These elites were able to shape institutions in ways that protected their economic privileges, often capturing the state or forming alliances with political actors to ensure policies aligned with their interests. Through control over credit markets, land, and infrastructure, they acted as gatekeepers of economic opportunity and could effectively veto reforms that threatened their positions.

Democratization and the expansion of suffrage in the late 20th century did not fully dislodge elite dominance, since the right to vote did not necessarily solve the collective-action problems of citizens nor deny elites their organizational advantage (Acemoglu and Robinson 2008). Economic elites adapted to democracy by developing more sophisticated and legitimate forms of influence (Ardanaz and Scartascini 2013). Instead of overt dominance, they pursued subtler strategies: lobbying, financing political campaigns, forming think tanks, and shaping public discourse. In many cases, they made a transition from being *above* the political system to becoming central players

within it. Their influence persisted through networks, regulatory capture, and the shaping of policy agendas, especially in areas less visible to the general public, such as the regulation of input markets, tax policy, or industrial subsidies (Cárdenas 2016, 2019; Castañeda and Ruiz 2021; Eslava and Melendez 2010; Pachón and Brolo 2021; Schneider 2021).

Special Interest Politics and Interest Group Theory

Complementary to the work of Acemoglu and Robinson is a strand of the political economy literature on the role of elites that offers a fragmented and pluralistic view of business power more applicable to many modern democracies. Instead of seeing policymaking as being generated by one dominant elite, the model developed by Grossman and Helpman (1994, 2001) presents it as the outcome of lobbying by multiple interest groups, each seeking rents or protections. In this view, business is not a monolith but a collection of actors with divergent interests, including different sectors (for example, agriculture, banking, manufacturing); firms at different stages of the value chain (upstream versus downstream); and even individual companies.

This disaggregation matters. In contexts where business is fragmented, political influence tends to be more targeted and particularistic. Firms lobby for sectoral exemptions, special credit lines, or export subsidies that benefit only a narrow constituency. The result is a policy process in which competing demands are arbitrated through bargaining and deal making, rather than strategic long-term planning. This environment favors the businesses that are best organized or closest to the state, reinforcing inequality of influence.

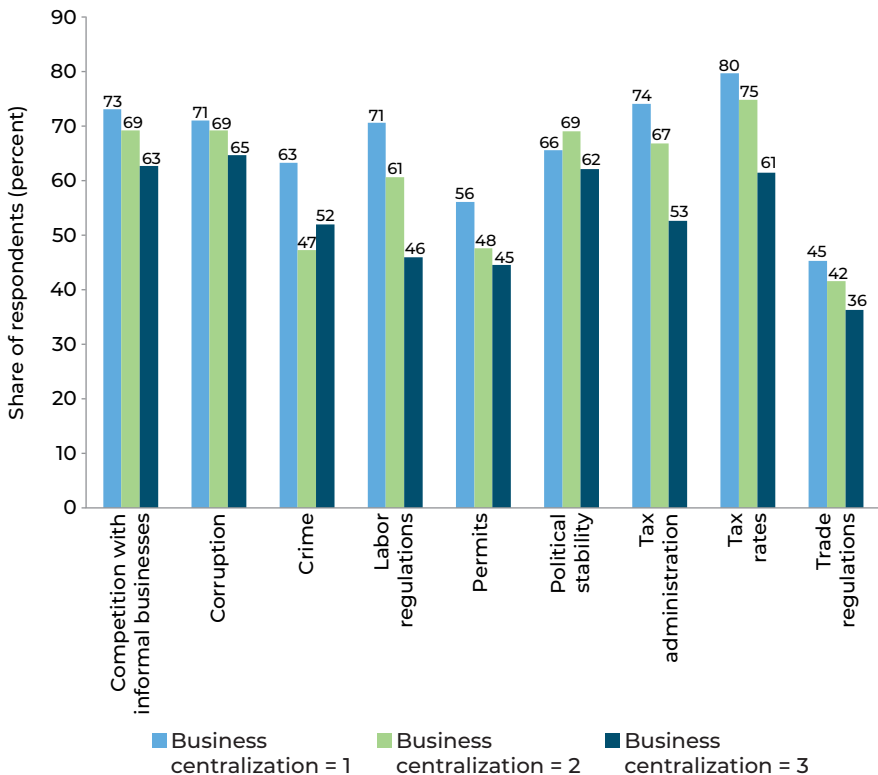
Subsequent scholarship further extends this framework by treating interest group formation as an endogenous process. It asks *who* gets organized and *how* (Dutt and Mitra 2002; Schneider 2004; Bombardini and Trebbi 2012)? Olson's theory of collective action helps explain why large, diffuse interests (for example, all businesses demanding better infrastructure) are harder to organize than narrow, concentrated ones (a handful of firms seeking tax breaks). Institutional environments, state capacity, and associational traditions shape the density, coherence, and strategies of business actors.

Yet another strand of literature has focused on providing a detailed account of how business engages with policymaking in Latin America and the Caribbean through different modes of organization and political strategies (Schneider 2009, 2010, and 2013a). It highlights that firms exercise their instrumental power by choosing from a "portfolio" of avenues: They may seek to influence policy through business associations, direct lobbying, personal networks, campaign financing, or partnerships with state actors, depending on the issue, the institutional environment, and their own capabilities.

A key insight from Schneider is that the level of aggregation of business political participation shapes the kinds of demands firms make. When business actors organize collectively—through strong national associations or sectoral chambers—they are more likely to demand public goods, like stable macroeconomic policies, strong property rights, efficient infrastructure, or better regulation. In contrast, when business representation is fragmented, political action tends to become more particularistic, oriented toward firm-specific protections, tax exemptions, or regulatory favors.

Empirical evidence supports this argument. As shown in Figure 11.6, in countries where business representation is more centralized, firms report

Figure 11.6. Obstacles Faced by Firms over the Business Centralization Index Categories



Source: IDB staff calculations, based on the World Bank's Enterprise Survey (WBES) and the database on special interest groups in Latin America.

Note: Each category on the x-axis corresponds to a question on the WBES that elicits the percentage of firms identifying the category as a major constraint. Under the category "business centralization," respondents in group 1 consider that there is no peak employer confederation; those in group 2 that a peak employer confederation exists but has none of the powers or resources listed under group 3; and those in group 3 that a peak employer confederation exists and has one or more of the following: the power of appointment of affiliates; a veto over wage agreements; a veto over lockouts; its own conflict funds.

Figure 11.7. Trust in Business Associations on Regulation Quality



Source: IDB staff calculations, based on Latinobarometro and Worldwide Governance Indicators, World Bank.
Note: The indicator “trust in business association” comes from Latinobarometro. It is based on two years of data: 1996 (Question P33K) and 2005 (Question P47ST_K). Respondents were asked how much confidence they have in a list of institutions, including business associations, with the following response options: [1] a lot, [2] some, [3] a little, and [4] no confidence. The variable captures the average from the dummy, where the dummy is coded 1 if respondents answered 1, 2, or 3 (indicating any level of trust) and 0 if they answered 4 (no confidence). Regulatory quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. The estimates range from approximately -2.5 to 2.5.

fewer obstacles to doing business. Likewise, Figure 11.7 shows that higher trust in business associations correlates with more favorable regulatory environments. These patterns suggest that stronger, more representative, and more legitimate business organizations may contribute to better governance and policies that are more favorable to competition, while fragmented, particularistic representation may entrench privileges and distort market functioning.

New Developments in Business Participation

Over the past three decades, business actors in Latin America and the Caribbean have adapted to a more pluralistic and open political environment. Business power has not disappeared with democratization or market-oriented reforms—it has mutated. Business groups have found new entry points into policymaking through party financing, public–private partnerships, and sectoral negotiations.

The weakening of traditional business associations and the rise of *grupos económicos* have shifted the nature of business–state interactions (Lora and

Scartascini 2010). These *grupos*—conglomerates that are often family-owned and highly diversified—now play a dominant role in shaping policy in several countries (Cárdenas 2016, 2019; Eslava and Melendez, 2010; Pachón and Brolo 2021; Schneider 2021). Their incentives, however, are often firm-specific, leading to less coherent demands for general business-friendly reforms and more lobbying for narrow advantages. This shift weakens support for policies that promote competition and innovation, contributing to a more fragmented and less efficient economic landscape. The next section elaborates.

Competition that Didn't Happen

Over the past few decades, Latin American and Caribbean countries made transitions from authoritarian rule to gradually more inclusive electoral democracies, while also liberalizing their economies through trade openness, privatization, and deregulation. These two processes—political and economic liberalization—were often promoted with the expectation that they would dismantle entrenched privileges, reduce barriers to entry, and stimulate open competition.

Yet, while both democratization and market reform transformed the political economy of the region, they did not systematically increase competition in many sectors. Markets have often remained highly concentrated, dominated either by traditional business elites who adapted to the new rules or new groups empowered by populist regimes. Both old and new powerful business actors reconfigured their strategies and continued to exert significant influence over markets and policy.⁷ In many cases, this produced a pattern where dominant actors adjusted to new institutional environments without relinquishing their privileges.⁸

⁷ See, for instance, Castañeda (2018).

⁸ These dynamics echo broader theoretical perspectives on the political economy of institutional change. Acemoglu and Robinson (2013) argue that inclusive, competitive societies emerge only within a “narrow corridor,” where a strong state is balanced by an equally strong and mobilized civil society. Outside this corridor, either state domination by elites or state weakness allows entrenched interests to dominate, stifling both political and economic competition. Similarly, North, Wallis, and Weingast (2009) distinguish between limited-access orders—where elite coalitions restrict access to political and economic resources—and open-access orders, where institutions are impersonal, inclusive, and conducive to broad-based competition. Both frameworks highlight how institutional arrangements shape the distribution of power and opportunity and help explain why democratization and market reform do not automatically dismantle privilege or foster open competition. Most Latin American and Caribbean countries, these authors suggest, remain stuck in hybrid or limited-access arrangements that continue to privilege insiders over challengers.

This section explores why expectations of increased competition failed to materialize and how business actors reshaped their power in the wake of democratization and liberalization.

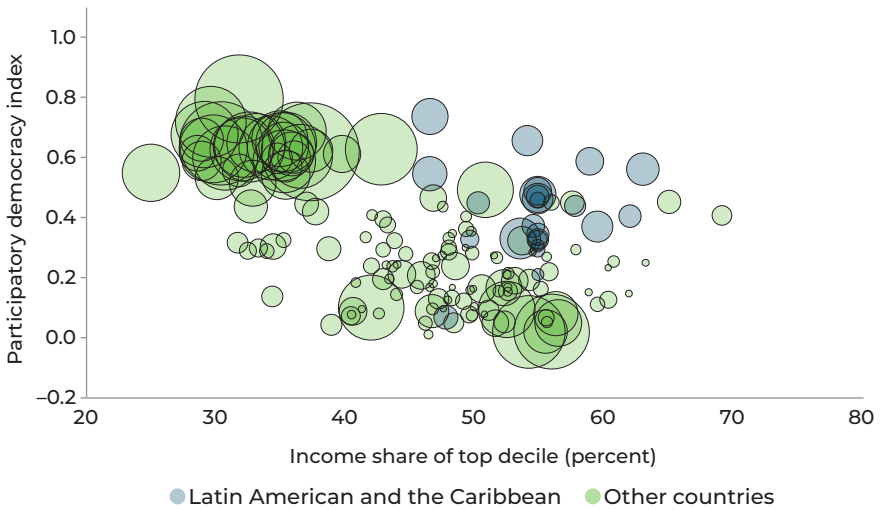
The (Unfulfilled) Promise of Democratization

In some countries of the region, democratization unfolded as a gradual process, marked by successive waves of political incorporation that extended civil and political rights to broader segments of the population over time. From the initial transitions away from authoritarian rule to the consolidation of more participatory systems, the expectation was that these changes would foster more equitable and competitive economic structures.

Democratic transitions were widely believed to open political access to a broader range of actors, thereby reducing the disproportionate influence of entrenched elites. By expanding civil liberties, increasing transparency, and enabling more inclusive public deliberation, democratization was seen as a pathway to curbing elite dominance in policymaking and fostering more open markets (Boix 2003; Acemoglu and Robinson 2006). Organized civil society, independent media, and political opposition were expected to challenge privileges and promote fairer economic outcomes.

One core expectation was that greater democratic participation would dilute elite influence and lead to more redistributive and inclusive policies. This was broadly supported by global evidence. As illustrated in Figure 11.8, participatory democracy tends to be negatively correlated with the income share of the top decile, suggesting that more inclusive political systems often reduce economic concentration. Latin America and the Caribbean, however, stands out as an exception in the figure. Despite substantial democratic gains, the region remains highly unequal, and its political systems have not consistently delivered either broad redistribution or a dismantling of entrenched economic power (Huber and Stephens 2012; Fairfield 2015).

Another common expectation was that democratization would strengthen the business environment by enhancing the rule of law, regulatory quality, and institutional performance. Data show that (electoral) democracies do, indeed, generally score higher on global indicators of the quality of the business climate. Still, improvements in institutional quality in the region have been uneven; in many cases, formal democratic institutions coexist with weak enforcement capacity, limited transparency, and persistent clientelism (Levitsky and Murillo 2009; Fergusson, Larreguy, and Riaño 2022). Democratization typically involves two complementary dimensions: *inclusive institutions*, such as participatory elections and majority rule, and *republican institutions*, such as independent courts, strong legislatures, and

Figure 11.8. Income Inequality and Participatory Democracy Index

Source: IDB staff calculations, based on the Varieties of Democracy (V-Dem) Project and World Inequality Database.

Note: The “income share of the top decile” measures the share of pre-tax national income received by the top 10 percent of the population in each country and year. The income is calculated for equal-split adults, meaning that within couples, income is divided equally between partners, and the population considered includes individuals over age 20. Pre-tax national income includes all income from labor and capital before taxes and transfers but after accounting for pensions. Pensions are a key distinction: While factor income treats pensions based on contributions made, pre-tax income accounts for pensions based on the benefits actually received. The participatory democracy index measures the extent to which the ideal of participatory democracy is achieved in a given country and year. The scale ranges from 0 to 1, with higher values indicating greater achievement of participatory democratic ideals. Larger circles indicate higher GDP per capita.

effective checks on executive power. In Latin America and the Caribbean, democratic transitions have generally advanced on both fronts, but often unevenly. In several countries, progress in political inclusion—the expansion of voting rights and representation—has been more consistent than progress in building robust republican institutions. Without strong institutional checks, policymaking remains vulnerable to clientelism, regulatory capture, and instability, undermining the conditions needed for fair and competitive markets.

One reason for this gap between expectations and outcomes lies in the institutional fragmentation that often accompanied democratization in the region. The transition to more inclusive political systems frequently involved decentralizing power, increasing the number of players with veto power (for example, independent legislatures, federal subunits, or autonomous agencies), and weakening previously centralized, technocratic policymaking bodies (Murillo et al. 2006; Scartascini and Tommasi 2014). In some countries, these changes eroded corporatist arrangements that

had historically coordinated economic policy in the name of stability and growth (Wiesner 2008; Lora and Scartascini 2010).

In short, while democratization opened political arenas to new actors, it also created a more fragmented and complex policy landscape—one in which organized business interests were often best equipped to navigate the institutional maze. In countries like Colombia and Mexico, for example, the decline of centralized corporatist structures gave way to more individualized and opaque forms of influence. Rather than channeling their demands through trade or industry associations or formal dialogue with the executive, powerful business groups adapted to the new rules of the game by deploying decentralized lobbying strategies. These included targeting subnational governments, sectoral regulators, and even courts, which allowed them to take advantage of regulatory asymmetries and limited oversight. In doing so, they secured favorable regulations, tax exemptions, and procurement contracts that might have been harder to obtain under more centralized regimes. As a result, democratization did not eliminate rent-seeking; it simply relocated it to new arenas, allowing well-connected conglomerates to entrench their advantages behind the scenes of institutional pluralism.⁹

At the same time, in some countries, democratization empowered populist or clientelist governments that actively undermined fair competition by allocating market privileges to cronies. Instead of dismantling economic privilege, these governments reallocated it to politically loyal actors. In places like Venezuela and (to a less extreme extent) Argentina, regulatory agencies, state-owned enterprises, and procurement systems were often taken over and repurposed to favor new business elites aligned with the regime. This dynamic not only limited market contestability but created environments where rent-seeking flourished under the guise of “economic justice” or “national development” (Corrales 2011; Manzetti 2014).

Market Reforms and the Paradox of Concentration

Market-oriented reforms in Latin America, implemented primarily during the 1980s and 1990s, were designed to foster more competitive markets by reducing state intervention and privatizing state-owned enterprises. In theory, such reforms would dismantle inefficient state monopolies and level the playing field for more firms to compete.

In practice, however, these reforms sometimes led to greater market concentration or failed to generate effective competition, particularly in sectors with high entry barriers or natural monopoly characteristics—such as

⁹ See Castañeda (2018) and references therein.

electricity, water, and telecommunications. Outcomes varied across countries and sectors. In Argentina, for instance, the wave of privatizations during the early 1990s yielded significant efficiency gains in areas like telecommunications and electricity generation, where competition increased and services improved (Chisari, Estache, and Romero 1999). In segments such as electricity and gas distribution, however, privatization resulted in a small number of firms dominating the market, operating under limited regulatory oversight (Manzetti 1999). Water and railways, meanwhile, saw weaker outcomes, with deteriorating service quality and access challenges. These mixed results reflect not so much uniform concentration, but rather a broader failure to create conditions for sustained competition and strong consumer protection. In Mexico, telecom privatization initially created a dominant private monopoly with slow pass-through of benefits to consumers (Murillo 2002). Brazil's privatization efforts often favored politically connected conglomerates with privileged access to public financing (Schneider et al. 1998), while in Peru, several key industries were transferred to a small group of buyers (Durand 2016). Across these cases, the main limitation was not privatization itself, but the absence of robust regulatory institutions capable of ensuring contestability, fair outcomes, and the broad diffusion of efficiency gains.

Financial liberalization followed a comparable trajectory, as described in Chapter 5. In Chile, banking reforms in the 1980s led to sectoral collapse, followed by consolidation into a few dominant financial groups (Ffrench-Davis 2010). Mexico's banking privatization in the early 1990s transferred control to a small elite with limited experience in banking, contributing to the 1994–95 crisis and subsequent reconcentration of the sector (Haber 2005).

In sum, while some reforms liberalized Latin American economies in formal terms, they often entrenched or reconfigured economic dominance rather than dismantling it. Rather than reducing rent-seeking, liberalization often shifted it to new domains (González, Prem, and Urzúa 2020). As governments abandoned control, business elites redirected their influence toward regulation, procurement, and sector-specific rulemaking, arenas that were often less visible and more technical, where they could preserve or extend their advantages (Castañeda 2017; Schneider 2013b). Without a robust competition policy or strong regulatory institutions, privatization can ultimately reward those already well positioned and reinforce the concentration of power in a new guise (Chong and López de Silanes 2005; Stryzowska 2012).

From Resistance to Adaptation in a Fragmented State

A useful way to understand the persistence, and sometimes deepening, of market concentration in post-reform Latin America and the Caribbean

is based on an updated version of the popular Acemoglu-Robinson perspective.¹⁰ While their initial work emphasizes how elites resist institutional reforms that threaten their rents (Acemoglu and Robinson 2006), later formulations shift the focus from resistance to adaptation (Acemoglu and Robinson 2008). This logic can be applied to the most recent scenario analyzed here, in a way that might be dubbed “Acemoglu-Robinson 3.0.” Rather than opposing democratization or liberalization outright, many incumbent economic elites in Latin America learned to navigate, and ultimately thrive within, the new institutional landscape. Political and economic liberalization did not dislodge their power; instead, it offered new venues and strategies through which to preserve and expand it.

This adaptive capacity was greatly enhanced by the fragmented and decentralized nature of post-authoritarian democratic governance in the region. As centralized regimes gave way to pluralistic democracies, policy-making authority became dispersed across congresses, courts, autonomous regulatory agencies, and subnational governments. While this fragmentation increased political inclusion, it also created multiple access points for business influence. In this new environment, business actors could bypass centralized negotiation with the executive branch and instead exert pressure through less transparent, more localized channels, lobbying regional governments, influencing regulatory appointments, or striking deals with individual legislators.

Colombia, for instance, offers a telling example: The erosion of centralized corporatist institutions and the rise of legislative and judicial activism weakened the executive’s capacity to coordinate economic policy (Landau 2014). Business interests filled the vacuum through fragmented lobbying, often resulting in targeted policies that benefited particular firms rather than promoting overall competition. A similar dynamic unfolded in Mexico, where powerful conglomerates used their financial and political leverage to shape sectoral regulation in telecommunications, banking, and construction. Politicians, often reliant on these groups for campaign financing and post-electoral support, found it expedient to accommodate their demands, leading to a proliferation of tax exemptions, regulatory loopholes, and tailor-made contracts.

The rise of the *grupos económicos* was a defining feature of this period. In many cases, they used their scale, cross-sector presence, and access to internal capital markets to navigate crises, outcompete rivals, and influence policy across several domains simultaneously. Moreover, in some cases,

¹⁰ This section draws from Castañeda (2018). See also Demmers, Fernández Jilberto, and Hogenboom (2012).

conglomerates expanded into many sectors not because it made sense “economically” but to gain influence that allowed them to extract more rents. The evidence suggests that conglomerates in Chile, for example, have enjoyed an advantage in gaining political influence and market power, and that this political influence and market power have the potential to distort product market competition (Zingales 2025).

The cumulative effect of these dynamics was the reproduction of concentrated market structures under the guise of liberalization and democracy. The fragmentation of the state, the rise of decentralized and opaque policymaking channels, and the growing political sophistication of the *grupos económicos* combined to undermine the egalitarian promises of reform. Instead of dismantling rent-seeking, market-oriented reforms often displaced and reconfigured it, entrenching the power of those best equipped to adapt. While reforms liberalized Latin America's economies in formal terms, they did not democratize market structures. In the absence of institutional safeguards, both entrenched elites and newly empowered political cronies were able to convert liberalization into an opportunity for rent capture, reproducing economic privilege under the banner of modernization and reform.

More than Reforms

The limited success of democratization and liberalization in fostering competition in Latin America and the Caribbean reflects the deep interaction between institutional change and entrenched economic power (Ardanaz and Scartascini 2013; Levitsky and Murillo 2013; Schneider 2013b). While reforms opened political and economic spaces, incumbent business actors quickly adapted, exploiting institutional fragmentation and weak regulatory powers to preserve or even expand their advantages (Castañeda 2017; Schneider 2010). Rather than dismantling old privileges, new business–state relations, marked by the rise of business groups and decentralized lobbying, repackaged and sustained them under new institutional forms.

Fostering competition requires more than formal reforms. It demands cohesive and institutionalized representation of interests, paired with capable and trustworthy public institutions. When representation is fragmented and state capacity is weak, incumbents can easily extract rents (Lora and Scartascini 2010; Becerra, Cavallo, and Scartascini 2012). Trust also plays a central role; in high-trust societies, citizens are more willing to support reforms that benefit the broader economy. Low-trust settings, in contrast, tend to favor protectionism, clientelism, and excessive regulation, further eroding the foundations for competitive markets (Keefer and Scartascini 2022).

Because anticompetitive regulations accumulate gradually through political bargains, bureaucratic overreach, or cronyism, reform efforts must be strategic. An essential lesson from the literature on the political economy of reform is that piecemeal change often fails.¹¹ Tackling distortions sector by sector invites opposition from well-organized interest groups that benefit from the status quo. As Fernández and Rodrik (1991) and Martinelli and Tommasi (1997) argue, actors clearly perceive their potential losses from specific reforms, while the broader benefits remain diffuse and uncertain.

A more viable approach is to pursue broad, simultaneous reform packages that dilute concentrated opposition and increase the visibility of collective benefits. When barriers are lifted across many sectors at once, the gains are easier to communicate, and reform coalitions can emerge. As shown by Dewatripont and Roland (1992, 1995), such bundling can also reduce coordination problems, enabling more coherent transitions toward competitive markets.

To navigate the thicket of accumulated and often obscure distortions, reformist governments need a comprehensive strategy. The recent Argentine experience underlines three practical approaches: first, conducting a systematic legal and regulatory review; second, using price differentials as indicators of market distortions; and, third, consulting sectoral actors to identify the highest barriers to entry and competition.

Still, comprehensive reform efforts are rare and fragile. To be sustainable, they must be institutionalized. Windows for reform—often following deep crises—do not last. Long-term progress requires embedding safeguards against the reintroduction of distortions. This may involve strengthening procompetitive institutions and reinforcing procedural checks. Drawing on his work in behavioral economics and regulatory design, Cass Sunstein (2013, 2018, 2019) has argued for mechanisms that subject new laws and regulations to transparent, independent cost–benefit reviews, taking into account not only economic effects but political economy risks and long-term consequences.

In that spirit, and building on the diagnostic insights from earlier chapters of this book, policymakers can follow a set of concrete recommendations to help foster competitive, dynamic markets in Latin America and the Caribbean.

First, conduct a comprehensive legal and regulatory audit and bundle reforms across sectors. To promote competition effectively, reformist governments can adopt a comprehensive and strategic approach. This begins

¹¹ See Drazen and Easterly (2001); Fanelli (2007); Haggard and Webb (1994); Sturzenegger and Tommasi (1998); and Tommasi and Velasco (1996).

with conducting a thorough legal and regulatory audit to map and classify all existing laws, decrees, and regulations. The goal is to identify outdated, distortive, or redundant norms that create unnecessary barriers to competition and to categorize them for repeal, reform, or retention based on clear, procompetitive criteria. Then, rather than pursuing isolated, sector-by-sector deregulation—which often provokes resistance from narrow interest groups—governments can bundle reforms across sectors (Martinelli and Tommasi 1997). This broad, simultaneous approach helps dilute opposition and makes the collective benefits of reform more visible.

Second, prioritize reforms where distortions are greatest. Use economic indicators to detect distortions: Domestic and international price differentials can be used to identify sectors in which regulation, subsidies, or trade barriers create inefficiencies. Economic indicators can help prioritize reforms in areas where large price gaps signal significant distortions that undermine competitiveness. Governments should also target hidden barriers to entry, and attention should be paid to technical norms, licensing systems, permits, and bureaucratic hurdles that protect incumbents. Simplifying and harmonizing these procedures is essential for enabling fair and open market access. In addition, aim to emphasize procompetitive deregulation, not deregulation per se. Deregulation should be procompetitive, not indiscriminate. Governments are advised to distinguish between regulations that promote competition and those that hinder it, eliminating the latter while reinforcing the former.

Third, build institutions that can sustain competition. Start by making procompetitive regulation stronger. Also crucial is strengthening institutions that support market entry, innovation, and consumer protection. This includes empowering competition authorities, improving regulatory transparency, and enhancing enforcement mechanisms. Also, promote the ex ante defense of competition. All new regulations should be subjected to rigorous cost-benefit analysis by independent technical bodies to ensure they promote efficiency, contestability, and consumer welfare. These analyses should consider as well political economy risks, such as rent creation, regulatory capture, and long-term distortions (Sunstein 2019). A complementary priority is public sector reform to strengthen the state's capacity to design, implement, and enforce procompetitive reforms. This includes professionalizing the civil service and reducing regulatory discretion.

Finally, build broad support for reform. Involve the private sector transparently. Inclusive mechanisms should be created to gather input from businesses and consumers about regulatory barriers, ensuring consultations are broad-based and not captured by incumbents. And communicating clearly the public benefits of reform—such as lower prices, greater choice, and

innovation—using concrete, relatable examples can help build public support and counteract the hidden costs of protectionism and overregulation.

Following these recommendations can set countries on a course to greater competition and prosperity. The political economy of competition is deeply intertwined with institutional structures, historical legacies, and the strategic behavior of powerful actors. Fostering a competitive environment requires a coordinated, transparent, and inclusive approach that addresses both visible and hidden barriers. Returning to the foundational idea that competition is a misunderstood public good is a reminder that its defense and promotion must be a collective endeavor, supported by strong institutions and an informed citizenry.

References

- Abebe, Girum, A. Stefano Caria, and Esteban Ortíz-Ospina. 2021. "The Selection of Talent: Experimental and Structural Evidence from Ethiopia." *American Economic Review* 111 (6): 1757–806. <https://doi.org/10.1257/aer.20190586>.
- Acemoglu, Daron, and Dan Cao. 2015. "Innovation by Entrants and Incumbents." *Journal of Economic Theory* 157: 255–94. <https://doi.org/10.1016/j.jet.2015.01.001>.
- Acemoglu, Daron, and James A. Robinson. 2006. "Economic Backwardness in Political Perspective." *American Political Science Review* 100:115–31.
- . 2008. "Persistence of Power, Elites, and Institutions." *American Economic Review* 98 (1): 267–93. <https://doi.org/10.1257/aer.98.1.267>.
- . 2013. *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. London: Profile Books.
- Akerberg, Daniel A., Kevin Caves, and Garth Frazer. 2015. "Identification Properties of Recent Production Function Estimators." *Econometrica* 83 (6): 2411–51.
- Admati, Anat, and Martin Hellwig. 2014. *The Bankers' New Clothes: What's Wrong with Banking and What to Do About It*. Princeton University Press.
- Aghion, Philippe, Ufuk Akcigit, Ari Hyytinen, and Otto Toivanen. 2017. "The Social Origins of Inventors." NBER Working Paper No. 24110. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w24110>.
- Aghion, Philippe, Yann Algan, Pierre Cahuc, and Andrei Shleifer. 2010. "Regulation and Distrust." *Quarterly Journal of Economics* 125 (3): 1015–49. <https://doi.org/10.1162/qjec.2010.125.3.1015>.
- Aghion, Philippe, Céline Antonin, and Simon Bunel. 2021. *The Power of Creative Destruction: Economic Upheaval and the Wealth of Nations*. Translated by Jodie Cohen-Tanugi. Belknap Press of Harvard University Press. <https://doi.org/10.4159/9780674258686>.
- Aghion, Philippe, Antonin Bergeaud, Matthieu Lequien, Marc J. Melitz, and Thomas Zuber. 2024. "Opposing Firm-Level Responses to the China Shock: Output Competition Versus Input Supply." *American Economic Journal: Economic Policy* 16 (2): 249–69.
- Aghion, Philippe, Nick Bloom, Richard Blundell, Rachel Griffith, and Peter Howitt. 2005. "Competition and Innovation: An Inverted-U Relationship." *Quarterly Journal of Economics* 120 (2): 701–28. <https://doi.org/10.1093/qje/120.2.701>.
- Aghion, Philippe, Richard Blundell, Rachel Griffith, Peter Howitt, and Susanne Prantl. 2009. "The Effects of Entry on Incumbent Innovation and Productivity." *Review of Economics and Statistics* 91 (1): 20–32. <https://doi.org/10.1162/rest.91.1.20>.
- Aghion, Philippe, Jing Cai, Mathias Dewatripont, Luosha Du, Ann Harrison, and Patrick Legros. 2015. "Industrial Policy and Competition." *American Economic Journal: Macroeconomics* 7 (4): 1–32. <https://doi.org/10.1257/mac.20120103>.
- Aghion, Philippe, Thibault Fally, and Stefano Scarpetta. 2007. "Credit Constraints as a Barrier to the Entry and Post-Entry Growth of Firms." *Economic Policy* 22 (52): 732–79. <https://doi.org/10.1111/j.1468-0327.2007.00190.x>.

- Aghion, Philippe, Peter Howitt, and Susanne Prantl. 2015. "Patent Rights, Product Market Reforms, and Innovation." *Journal of Economic Growth* 20 (3): 223–62. <https://doi.org/10.1007/s10887-015-9114-3>.
- Akcigit, Ufuk, and Sina T. Ates. 2021. "Ten Facts on Declining Business Dynamism and Lessons from Endogenous Growth Theory." *American Economic Journal: Macroeconomics* 13 (1): 257–98. <https://doi.org/10.1257/mac.20180449>.
- . 2023. "What Happened to US Business Dynamism?" *Journal of Political Economy* 131 (8): 2059–124. <https://doi.org/10.1086/724289>.
- Akcigit, Ufuk, Salomé Baslandze, and Francesca Lotti. 2023. "Connecting to Power: Political Connections, Innovation, and Firm Dynamics." *Econometrica* 91 (2): 529–64. <https://doi.org/10.3982/ECTA18338>.
- Akcigit, Ufuk, John Grigsby, and Tom Nicholas. 2017. "The Rise of American Ingenuity: Innovation and Inventors of the Golden Age." NBER Working Paper No. 23047. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w23047>.
- Akcigit, Ufuk, and Marc Melitz. 2022. "International Trade and Innovation." In *Handbook of International Economics*, 5:377–404. Elsevier. <https://doi.org/10.1016/bs.hesint.2022.02.006>.
- Akcigit, Ufuk, Jeremy Pearce, and Marta Prato. 2025. "Tapping into Talent: Coupling Education and Innovation Policies for Economic Growth." *Review of Economic Studies* 92 (2): 696–736. <https://doi.org/10.1093/restud/rdae047>.
- Alaimo, Verónica, Mariano Bosch, David S. Kaplan, Carmen Pagés, and Laura Ripani. 2015. *Jobs for Growth*. <https://publications.iadb.org/en/jobs-growth>.
- Alesina, Alberto, Silvia Ardagna, Giuseppe Nicoletti, and Fabio Schiantarelli. 2005. "Regulation and Investment." *Journal of the European Economic Association* 3 (4): 791–825. <https://doi.org/10.1162/1542476054430834>.
- Alfaro, Laura, and Anusha Chari. 2014. "Deregulation, Misallocation, and Size: Evidence from India." *Journal of Law and Economics* 57 (4): 897–936. <https://doi.org/10.1086/680930>.
- Alfaro, Laura, Andrew Charlton, and Fabio Kanczuk. 2009. "Plant Size Distribution and Cross-Country Income Differences." In *NBER International Seminar on Macroeconomics 2008*, 243–72. University of Chicago Press. <https://doi.org/10.1086/596010>.
- Alfaro, Laura, and Maggie X. Chen. 2018. "Selection and Market Reallocation: Productivity Gains from Multinational Production." *American Economic Journal: Economic Policy* 10 (2): 1–38. <https://doi.org/10.1257/pol.20150437>.
- Alfaro, Laura, and Davin Chor. 2023. "Global Supply Chains: The Looming 'Great Reallocation.'" NBER Working Paper No. 31661. National Bureau of Economic Research, Cambridge, MA. <https://www.nber.org/papers/w31661>.
- Alfaro, Laura, Marcela Eslava, Marti Mestieri, and Luis Felipe Sáenz. 2023. "Jobless Industrialization." World Bank Group, Washington, DC. <https://thedocs.worldbank.org/en/doc/bfbd0578f3214bbb65afbcae08a801f5-0280032023/original/Updated-Felipe-Saenz-AEMS-2023-Jobless-Industrialization.pdf>.
- Alfaro-Ureña, Alonso, Isabela Manelici, and José P. Vásquez. 2022. "The Effects of Joining Multinational Supply Chains: New Evidence from Firm-to-Firm Linkages." *Quarterly Journal of Economics* 137 (3): 1495–552. <https://doi.org/10.1093/qje/qjac006>.
- Alperovych, Yan, Alexander Groh, and Anita Quas. 2020. "Bridging the Equity Gap for Young Innovative Companies: The Design of Effective Government Venture Capital Fund Programs." *Research Policy* 49 (10): 104051. <https://doi.org/10.1016/j.respol.2020.104051>.

- Alvarez, Vanessa. 2019. "Multinational Production and Comparative Advantage." *Journal of International Economics* 119:1–54. <https://doi.org/10.1016/j.jinteco.2019.03.004>.
- Alvarez, Vanessa, Michele Fioretti, Ken Kikkawa, and Monica Morlacco. 2025. "Two-Sided Market Power in Firm-to-Firm Trade." Unpublished manuscript. Research Department, Inter-American Development Bank; Department of Economics, UBC Sauder School of Business, Università Bocconi; and Economics Department, University of Southern California. https://www.vanessa-alvarez.com/_files/ugd/bc42ea_5b6d483342374c1ab95707a7465a5df1.pdf.
- Alvarez, Vanessa, Keith Head, and Thierry Mayer. 2025. "Global Giants and Local Stars: How Changes in Brand Ownership Affect Competition." *American Economic Journal: Microeconomics* 17 (1): 389–432. <https://doi.org/10.1257/mic.20210244>.
- Alvarez, Vanessa, and Fernando Morales. Forthcoming. "Pricing Power in Latin America and the Caribbean: Insights from the CompeteLAC Dataset." Inter-American Development Bank, Washington, DC.
- Amiti, Mary, Cédric Duprez, Jozef Konings, and John Van Reenen. 2024. "FDI and Superstar Spillovers: Evidence from Firm-to-Firm Transactions." *Journal of International Economics* 152:103972. <https://doi.org/10.1016/j.jinteco.2024.103972>.
- Amiti, Mary, and Sebastian Heise. 2025. "U.S. Market Concentration and Import Competition." *Review of Economic Studies* 92 (2): 737–71. <https://doi.org/10.1093/restud/rdae045>.
- Amodio, Francesco, Emanuele Brancati, Peter Brummund, Nicolás de Roux, and Michele Di Maio. 2024. "Global Labor Market Power." Social Science Research Network, Rochester, NY. <https://doi.org/10.2139/ssrn.4737333>.
- Amodio, Francesco, and Nicolás de Roux. 2024. "Measuring Labor Market Power in Developing Countries: Evidence from Colombian Plants." *Journal of Labor Economics* 42 (4). <https://www.journals.uchicago.edu/doi/suppl/10.1086/725248>.
- Amodio, Francesco, Pamela Medina, and Monica Morlacco. 2024. "Labor Market Power, Self-Employment, and Development." Discussion Paper Series No. 18/24. Rockwool Foundation Berlin and Centre for Research and Analysis of Migration. <https://www.rfberlin.com/wp-content/uploads/2024/09/24018.pdf>.
- Amore, Mario Daniele, Cédric Schneider, and Alminas Žaldokas. 2013. "Credit Supply and Corporate Innovation." *Journal of Financial Economics* 109 (3): 835–55. <https://doi.org/10.1016/j.jfineco.2013.04.006>.
- Ancalle, Celene, and María Gracia García. 2024. "Impact of Interoperability Regulation on the Use of Digital Payments in Peru." IHEID Working Papers. <https://ideas.repec.org/p/gii/giihei/heidwp02-2024.html>.
- Antón, Miguel, Florian Ederer, Mireia Giné, and Martin Schmalz. 2025. "Innovation: The Bright Side of Common Ownership?" *Management Science* 71 (5): 3713–33. <https://doi.org/10.1287/mnsc.2024.04363>.
- Antunes, António, Tiago Cavalcanti, and Anne Villamil. 2008. "The Effect of Financial Repression and Enforcement on Entrepreneurship and Economic Development." *Journal of Monetary Economics* 55 (2): 278–97.
- . 2015. "The Effects of Credit Subsidies on Development." *Economic Theory* 58 (1): 1–30.
- Aparicio, Diego, and Alberto Cavallo. 2021. "Targeted Price Controls on Supermarket Products." *Review of Economics and Statistics* 103 (1): 60–71. https://doi.org/10.1162/rest_a_00880.
- Ardanaz, Martín, and Carlos Scartascini. 2013. "Inequality and Personal Income Taxation: The Origins and Effects of Legislative Malapportionment." *Comparative Political Studies* 46 (12): 1636–63.

- Ares de Parga-Regalado, Gonzalo. 2023. "The Economic Impact of Increased Banking and Competition: The Case of Mexico." SSRN Scholarly Paper. Social Science Research Network. <https://doi.org/10.2139/ssrn.4619255>.
- Argente, David, Salomé Baslandze, Douglas Hanley, and Sara Moreira. 2023. "Patents to Products: Product Innovation and Firm Dynamics." Working paper. Federal Reserve Bank of San Francisco. https://doughanley.com/files/papers/ABHM_Patents_to_Products.pdf.
- Arkolakis, Costas, Arnaud Costinot, Dave Donaldson, and Andrés Rodríguez-Clare. 2019. "The Elusive Pro-Competitive Effects of Trade." *Review of Economic Studies* 86 (1): 46–80. <https://doi.org/10.1093/restud/rdx075>.
- Armangué-Jubert, Tristany, Nezih Guner, and Alessandro Ruggieri. 2025. "Labor Market Power and Development." *American Economic Review: Insights* 7 (2): 177–95. <https://doi.org/10.1257/aeri.20230564>.
- Arnold, David. 2019. "Mergers and Acquisitions, Local Labor Market Concentration, and Worker Outcomes." Social Science Research Network, Rochester, NY. <https://doi.org/10.2139/ssrn.3476369>.
- Arnold, Jens Matthias, Beata Javorcik, Molly Lipscomb, and Aaditya Mattoo. 2016. "Services Reform and Manufacturing Performance: Evidence from India." *Economic Journal* 126 (590): 1–39. <https://doi.org/10.1111/ecoj.12206>.
- Arnold, Jonathan, and Jordan Peebles. 2024. "Bridging the Employment Debate: The Minimum Wage and Monopsonistic Competition." Unpublished job market paper. Economics Department, University of Pennsylvania.
- Arrow, Kenneth J. 1962. "The Economic Implications of Learning by Doing." *Review of Economic Studies* 29 (3): 155. <https://doi.org/10.2307/2295952>.
- . 1967. "Samuelson Collected." *Journal of Political Economy* 75 (5): 730–37. <https://doi.org/10.1086/259346>.
- Artuc, Erhan, Daniel Lederman, and Guido Porto. 2015. "A Mapping of Labor Mobility Costs in the Developing World." *Journal of International Economics* 95 (1): 28–41. <https://doi.org/10.1016/j.jinteco.2014.10.007>.
- Asil, Aslihan, Paulo Ramos, Amanda Starc, and Thomas G. Wollmann. 2024. "Painful Bargaining: Evidence from Anesthesia Rollups." NBER Working Paper No. 33217. National Bureau of Economic Research, Cambridge, MA. <https://ideas.repec.org/p/nbr/nberwo/33217.html>.
- Asker, John, and C. Scott Hemphill. 2020. "A Study of Exclusionary Coalitions: The Canadian Sugar Combination, 1887–1889." Social Science Research Network, Rochester, NY. <https://papers.ssrn.com/abstract=3385756>.
- Asker, John, and Volker Nocke. 2021. "Chapter 12—Collusion, Mergers, and Related Antitrust Issues." In *Handbook of Industrial Organization*, edited by Kate Ho, Ali Hortaçsu, and Alessandro Lizzeri 5:177–279. Elsevier. <https://doi.org/10.1016/bs.hesind.2021.11.012>.
- Asturias, José, Sewon Hur, Timothy J. Kehoe, and Kim J. Ruhl. 2023. "Firm Entry and Exit and Aggregate Growth." *American Economic Journal: Macroeconomics* 15 (1): 48–105. <https://doi.org/10.1257/mac.20200376>.
- Atkeson, Andrew, and Ariel Burstein. 2008. "Pricing-to-Market, Trade Costs, and International Relative Prices." *American Economic Review* 98 (5): 1998–2031.
- Atkin, David, Azam Chaudhry, Shamyra Chaudry, Amit K. Khandelwal, and Eric Verhoogen. 2017. "Organizational Barriers to Technology Adoption: Evidence from Soccer-Ball Producers in Pakistan." *Quarterly Journal of Economics* 132 (3): 1101–64. <https://doi.org/10.1093/qje/qjx010>.
- Atkin, David, Benjamin Faber, and Marco González-Navarro. 2018. "Retail Globalization and Household Welfare: Evidence from Mexico." *Journal of Political Economy* 126 (1): 1–73. <https://doi.org/10.1086/695476>.

- Atkin, David, Amit K. Khandelwal, and Adam Osman. 2017. "Exporting and Firm Performance: Evidence from a Randomized Experiment." *Quarterly Journal of Economics* 132 (2): 551–615. <https://doi.org/10.1093/qje/qjx002>.
- Autor, David H., David Dorn, and Gordon H. Hanson. 2013. "The China Syndrome: Local Labor Market Effects of Import Competition in the United States." *American Economic Review* 103 (6): 2121–68. DOI: 10.1257/aer.103.6.2121.
- Autor, David, David Dorn, Gordon Hanson, and Kaveh Majlesi. 2020. "Importing Political Polarization? The Electoral Consequences of Rising Trade Exposure." *American Economic Review* 110 (10): 3139–83. DOI: 10.1257/aer.20170011.
- Autor, David, David Dorn, Lawrence F. Katz, Christina Patterson, and John Van Reenen. 2017. "Concentrating on the Fall of the Labor Share." *American Economic Review* 107 (5): 180–85.
- Autor, David, David Dorn, Lawrence F. Katz, Christina Patterson, and John Van Reenen. 2020. "The Fall of the Labor Share and the Rise of Superstar Firms." *Quarterly Journal of Economics* 135 (2): 645–709.
- Avignon, Remi, and Etienne Guigue. 2023. "Markups and Markdowns in the French Dairy Market." Job market working paper. <http://hal.science/hal-04986946v1>.
- Ayres, João, and Gajendran Raveendranathan. 2023. "Firm Entry and Exit during Recessions." *Review of Economic Dynamics* 47: 47–66. <https://doi.org/10.1016/j.red.2021.12.001>.
- Azar, José, and Ioana Marinescu. 2024. "Monopsony Power in the Labor Market: From Theory to Policy." *Annual Review of Economics* 16 (1): 491–518.
- Azar, José, Ioana Marinescu, and Marshall Steinbaum. 2017. "Labor Market Concentration." NBER Working Paper No. 24147. National Bureau of Economic Research, Cambridge, MA. <https://www.nber.org/papers/w24147>.
- Azar, José, Ioana Marinescu, Marshall Steinbaum, and Bledi Taska. 2019. "Concentration in the US Labor Markets: Evidence from Online Vacancy Data." NBER Working Paper No. 24395. National Bureau of Economic Research, Cambridge, MA. <https://www.nber.org/papers/w24395>.
- Azkarate-Askasua, Miren, and Miguel Zerecero. 2024. "Union and Firm Labor Market Power." Unpublished manuscript. University of Mannheim and University of California, Irvine. https://mzerecero.netlify.app/working_papers/union_firm.pdf.
- Azuara, Oliver, Rodrigo Azuero, Mariano Bosch, and Jesica Torres. 2019. "Special Tax Regimes in Latin America and the Caribbean: Compliance, Social Protection, and Resource Misallocation." Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0001586>.
- Bailey, James B., and Diana W. Thomas. 2017. "Regulating Away Competition: The Effect of Regulation on Entrepreneurship and Employment." *Journal of Regulatory Economics* 52 (3): 237–54. <https://doi.org/10.1007/s11149-017-9343-9>.
- Balasundharam, Vybhavi. 2020. "Bottlenecks versus Ripple Effects: The Role of Linkages in India's Product Market Liberalization." Working paper. Department of Economics, University of Michigan. <https://www.cafral.org.in/sfControl/content/Speech/352019120908PMJMP.pdf>.
- Balyuk, Tetyana. 2023. "FinTech Lending and Bank Credit Access for Consumers." *Management Science* 69 (1): 555–75. <https://doi.org/10.1287/mnsc.2022.4319>.
- Banerjee, Abhijit V., and Esther Duflo. 2010. "Giving Credit Where It Is Due." *Journal of Economic Perspectives* 24 (3): 61–80.
- Bao, Cathy Ge, and Maggie Xiaoyang Chen. 2018. "Foreign Rivals Are Coming to Town: Responding to the Threat of Foreign Multinational Entry." *American Economic Journal: Applied Economics* 10 (4): 120–57. <https://doi.org/10.1257/app.20170113>.

- Baqae, David. 2018. "Cascading Failures in Production Networks." *Econometrica* 86 (5): 1819–38. <https://doi.org/10.3982/ECTA15280>.
- Bardóczy, Bence, Gideon Bornstein, and Sergio Salgado. 2024. "Monopsony Power and the Transmission of Monetary Policy." Working paper. Wharton School, University of Pennsylvania.
- Barkley, Aaron. 2023. "The Human Cost of Collusion: Health Effects of a Mexican Insulin Cartel." *Journal of the European Economic Association* 21 (5): 1865–1904. <https://doi.org/10.1093/jeea/jvad005>.
- Barone, Guglielmo, and Federico Cingano. 2011. "Service Regulation and Growth: Evidence from OECD Countries." *Economic Journal* 121 (555): 931–57. <https://doi.org/10.1111/j.1468-0297.2011.02433.x>.
- Barrozo, Marcos. 2024. "Market Power and Carbon Emissions in the Amazon." Job market working paper. https://www.tse-fr.eu/sites/default/files/TSE/documents/sem2024/jobmarket_eco/barrozo_jmp.pdf.
- Bartkus, Viva Ona, Wyatt Brooks, Joseph P. Kaboski, and Carolyn Pelnik. 2022. "Big Fish in Thin Markets: Competing with the Middlemen to Increase Market Access in the Amazon." *Journal of Development Economics* 155:102757. <https://doi.org/10.1016/j.jdeveco.2021.102757>.
- Bassanini, Andrea, and Giorgio Brunello. 2011. "Barriers to Entry, Deregulation and Workplace Training: A Theoretical Model with Evidence from Europe." *European Economic Review* 55 (8): 1152–76. <https://doi.org/10.1016/j.euroecorev.2011.05.004>.
- Bassi, Vittorio, and Aisha Nansamba. 2022. "Screening and Signalling Non-Cognitive Skills: Experimental Evidence from Uganda." *Economic Journal* 132 (642): 471–511.
- Baumol, William J. 1977. "On the Proper Cost Tests for Natural Monopoly in a Multiproduct Industry." *American Economic Review* 67 (5): 809–22.
- Baumol, William J., John C. Panzar, and Robert D. Willig. 1982. *Contestable Markets and the Theory of Industry Structure*. New York, NY: Harcourt Brace Jovanovich.
- Becerra, Oscar, Eduardo Cavallo, and Carlos Scartascini. 2012. "The Politics of Financial Development: The Role of Interest Groups and Government Capabilities." *Journal of Banking & Finance* 36 (3): 626–43. <https://doi.org/10.1016/j.jbankfin.2011.10.017>.
- Beck, Thorsten, Asli Demirguc-Kunt, and Vojislav Maksimovic. 2004. "Bank Competition and Access to Finance: International Evidence." *Journal of Money, Credit and Banking* 36 (3): 627–48.
- Bell, Alex, Raj Chetty, Xavier Jaravel, Neviana Petkova, and John Van Reenen. 2018. "Who Becomes an Inventor in America? The Importance of Exposure to Innovation." *Quarterly Journal of Economics* 134 (2): 647–713. <https://doi.org/10.1093/qje/qjy028>.
- Benavente, José Miguel, and Pluvia Zúñiga. 2021. "The Effectiveness of Innovation Policy and the Moderating Role of Market Competition: Evidence from Latin American Firms." Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0003655>.
- . 2022. "How Does Market Competition Affect Firm Innovation Incentives in Emerging Countries? Evidence from Chile and Colombia." Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0004235>.
- Benfratello, Luigi, Fabio Schiantarelli, and Alessandro Sembenelli. 2008. "Banks and Innovation: Microeconomic Evidence on Italian Firms." *Journal of Financial Economics* 90 (2): 197–217. <https://doi.org/10.1016/j.jfineco.2008.01.001>.
- Benmelech, Efraim, Nittai Bergman, and Hyunseob Kim. 2018. "Strong Employers and Weak Employees: How Does Employer Concentration Affect Wages?" NBER Working Paper No. 24307. National Bureau of Economic Research, Cambridge, MA. <https://ideas.repec.org/p/nbr/nberwo/24307.html>.

- Bentolila, Samuel, and Giuseppe Bertola. 1990. "Firing Costs and Labour Demand: How Bad Is Eurosclerosis?" *Review of Economic Studies* 57 (3): 381–402.
- Berger, Allen N., Rebecca S. Demsetz, and Philip E. Strahan. 1999. "The Consolidation of the Financial Services Industry: Causes, Consequences, and Implications for the Future." *Journal of Banking & Finance* 23 (2–4): 135–94.
- Berger, David W., Thomas Hasenzagl, Kyle F. Herkenhoff, Simon Mongey, and Eric A. Posner. 2023. "Merger Guidelines for the Labor Market." NBER Working Paper No. 31147. National Bureau of Economic Research, Cambridge, MA. <https://ideas.repec.org/p/nbr/nberwo/31147.html>.
- Berger, David, Kyle Herkenhoff, and Simon Mongey. 2022. "Labor Market Power." *American Economic Review* 112 (4): 1147–93. <https://doi.org/10.1257/aer.20191521>.
- Bernanke, Ben S. "The Financial Accelerator and the Credit Channel." 2007. Speech presented at the Credit Channel of Monetary Policy in the Twenty-First Century Conference, Federal Reserve Bank of Atlanta, Atlanta, Georgia. <https://www.federalreserve.gov/newsevents/speech/bernanke20070615a.htm>.
- Bernard, Andrew B., Stephen J. Redding, and Peter K. Schott. 2007. "Comparative Advantage and Heterogeneous Firms." *Review of Economic Studies* 74 (1): 31–66. <https://doi.org/10.1111/j.1467-937X.2007.00413.x>.
- . 2010. "Multiple-Product Firms and Product Switching." *American Economic Review* 100 (1): 70–97. <https://doi.org/10.1257/aer.100.1.70>.
- Berry, Steven, James Levinsohn, and Ariel Pakes. 1995. "Automobile Prices in Market Equilibrium." *Econometrica* 63 (4): 841–90.
- Berry, Steven, and Joel Waldfogel. 2010. "Product Quality and Market Size." *Journal of Industrial Economics* 58 (1): 1–31.
- Bertola, Giuseppe. 2004. "A Pure Theory of Job Security and Labour Income Risk." *Review of Economic Studies* 71 (1): 43–61.
- Bertoni, Fabio, José Martí, and Carmelo Reverte. 2019. "The Impact of Government-Supported Participative Loans on the Growth of Entrepreneurial Ventures." *Research Policy* 48 (1): 371–84. <https://doi.org/10.1016/j.respol.2018.09.006>.
- Bertrand, Marianne, and Francis Kramarz. 2002. "Does Entry Regulation Hinder Job Creation? Evidence from the French Retail Industry." *Quarterly Journal of Economics* 117 (4): 1369–413.
- Besley, Timothy, and Robin Burgess. 2004. "Can Labor Regulation Hinder Economic Performance? Evidence from India." *Quarterly Journal of Economics* 119 (1): 91–134. <https://doi.org/10.1162/003355304772839533>.
- Beuermann, Diether, Sylvia Dohnert, Henry Mooney, and Ricardo Sierra. 2024. "Are We There Yet? The Path towards Sustained Economic Growth in the Caribbean." <https://doi.org/10.18235/0013218>.
- Bhaskar, Venkataraman, and Ted To. 1999. "Minimum Wages for Ronald McDonald Monopsonies: A Theory of Monopsonistic Competition." *Economic Journal* 109 (455): 190–203. <https://doi.org/10.1111/1468-0297.00427>.
- Binder, Carola Conces, and Gillian Brunet. 2022. "Inflation Expectations and Consumption: Evidence from 1951." *Economic Inquiry* 60 (2): 954–74. <https://doi.org/10.1111/ecin.13051>.
- Biondi, Filippo, Sergio Inferrera, Matthias Mertens, and Javier Miranda. 2024. "Declining Business Dynamism in Europe: The Role of Shocks, Market Power, and Technology." Düsseldorf Institute for Queen Mary University of London (Inferrera), MIT FutureTech (Mertens), and Friedrich Schiller University Jena and Center for Business and Productivity Dynamics (Miranda).
- Blinder, Alan S., and William J. Newton. 1981. "The 1971–1974 Controls Program and the Price Level: An Econometric Post-Mortem." *Journal of Monetary Economics* 8 (1): 1–23. [https://doi.org/10.1016/0304-3932\(81\)90002-7](https://doi.org/10.1016/0304-3932(81)90002-7).

- Bloom, Nicholas, Benn Eifert, Aprajit Mahajan, David J. McKenzie, and John Roberts. 2013. "Does Management Matter? Evidence from India." *Quarterly Journal of Economics* 128 (1): 1–51. <https://doi.org/10.1093/qje/qjs044>.
- Bloom, Nicholas, Aprajit Mahajan, David McKenzie, and John Roberts. 2020. "Do Management Interventions Last? Evidence from India." *American Economic Journal: Applied Economics* 12 (2): 198–219. <https://doi.org/10.1257/app.20180369>.
- Bloom, Nicholas, and John Van Reenen. 2010. "Why Do Management Practices Differ across Firms and Countries?" *Journal of Economic Perspectives* 24 (1): 203–24. <https://doi.org/10.1257/jep.24.1.203>.
- Blyde, Juan S., Matias Busso, and Dario Romero. 2020. "Labor Market Adjustment to Import Competition: Long-Run Evidence from Establishment Data." IDB Working Paper No. 01100. Inter-American Development Bank, Washington DC. <http://dx.doi.org/10.18235/0002148>.
- Boal, William M., and Michael R. Ransom. 1997. "Monopsony in the Labor Market." *Journal of Economic Literature* 35 (1): 86–112.
- Boix, Carles. 2003. *Democracy and Redistribution*. 1st ed. Cambridge University Press. <https://doi.org/10.1017/CBO9780511804960>.
- Boldrin, Michele, Juan Correa Allamand, David K. Levine, and Carmine Ornaghi. 2011. "Competition and Innovation." *Cato Papers on Public Policy* 1:109.
- Bombardini, Matilde, and Francesco Trebbi. 2012. "Competition and Political Organization: Together or Alone in Lobbying for Trade Policy?" *Journal of International Economics* 87 (1): 18–26. <https://doi.org/10.1016/j.jinteco.2011.11.011>.
- Bondi, Tommaso, Luís Cabral, Shreya Kankanhalli, and Miguel Ángel Talamas Marcos. 2025. "Defensive Specialization: Theory and Evidence from Mexico's Retail Sector." Working paper. Cornell Tech and the SC Johnson School of Management, Cornell University (Bondi and Kankanhalli), Inter-American Development Bank (Talamas), and Department of Economics, New York University (Cabral).
- Bonomo, Marco, Tiago Cavalcanti, Fernando Chertman, and Amanda Fantinatti. 2023. "Does Loan Portability Promote Bank Competition?" Working paper. University of Cambridge.
- Bonomo, Marco, Tiago Cavalcanti, Fernando Chertman, Amanda Fantinatti, Andrew Hannon, and Cezar Santos. 2024. "Consumer Loans, Heterogeneous Interest Rates, and Inequality." Working paper. University of Cambridge.
- Bouis, Romain, Romain Duval, and Johannes Eugster. 2020. "How Fast Does Product Market Reform Pay off? New Evidence from Non-Manufacturing Industry Deregulation in Advanced Economies." *Journal of Comparative Economics* 48 (1): 198–217. <https://doi.org/10.1016/j.jce.2019.09.006>.
- Bourlès, Renaud, Gilbert Cetté, Jimmy Lopez, Jacques Mairesse, and Giuseppe Nicoletti. 2013. "Do Product Market Regulations in Upstream Sectors Curb Productivity Growth? Panel Data Evidence for OECD Countries." *Review of Economics and Statistics* 95 (5): 1750–68. https://doi.org/10.1162/REST_a_00338.
- Bracco, Jessica, Irene Brambilla, Manuela Cerimelo, Andrés César, and Guillermo Falcone. 2025. "Globalization, Technological Change and Market Power in Latin America: Evidence for Chile and Colombia." IDB Working Paper. Inter-American Development Bank, Washington, DC.
- Branstetter, Lee G., Douglas Hanley, and Huiyan Zhang. 2023. "Unleashing the Dragon: The Case for Patent Reform in China." Working paper. https://doughanley.com/files/papers/unleashing_the_dragon.pdf.
- Brock, William A. 1983. "Contestable Markets and the Theory of Industry Structure: A Review Article." *Journal of Political Economy* 91 (6): 1055–66. <https://doi.org/10.1086/261200>.
- Broda, Christian, and David E. Weinstein. 2006. "Globalization and the Gains from Variety." *Quarterly Journal of Economics* 121 (2): 541–85.

- Broms, Rasmus, Carl Dahlström, and Mihály Fazekas. 2019. "Political Competition and Public Procurement Outcomes." *Comparative Political Studies* 52 (9): 1259–92. <https://doi.org/10.1177/0010414019830723>.
- Brooks, Wyatt J., Joseph P. Kaboski, Yao Amber Li, and Wei Qian. 2019. "Exploitation of Labor? Classical Monopsony Power and Labor's Share." NBER Working Paper No. 25660. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w25660>.
- Brown, Charles, and James Medoff. 1989. "The Employer Size-Wage Effect." *Journal of Political Economy* 97 (5): 1027–59.
- Brugués, Felipe, Javier Brugués, and Samuele Giambra. 2024. "Political Connections and Misallocation of Procurement Contracts: Evidence from Ecuador." *Journal of Development Economics* 170: 103296. <https://doi.org/10.1016/j.jdevec0.2024.103296>.
- Brugués, Felipe, and Rebecca De Simone. 2024. "Taxation When Markets Are Not Competitive: Evidence from a Loan Tax." IDB Working Paper No. 1580. Inter-American Development Bank, Washington, DC. <http://dx.doi.org/10.18235/0005548>.
- Bruhn, Miriam. 2011. "License to Sell: The Effect of Business Registration Reform on Entrepreneurial Activity in Mexico." *Review of Economics and Statistics* 93 (1): 382–86. https://doi.org/10.1162/REST_a_00059.
- Buccirosi, Paolo, Lorenzo Ciari, Tomaso Duso, Giancarlo Spagnolo, and Cristiana Vitale. 2013. "Competition Policy and Productivity Growth: An Empirical Assessment." *Review of Economics and Statistics* 95 (4): 1324–36. https://doi.org/10.1162/REST_a_00304.
- Buchak, Greg, Gregor Matvos, Tomasz Piskorski, and Amit Seru. 2018. "Fintech, Regulatory Arbitrage, and the Rise of Shadow Banks." *Journal of Financial Economics* 130 (3): 453–83. <https://doi.org/10.1016/j.jfineco.2018.03.011>.
- Buera, Francisco J., and Joseph P. Kaboski. 2012. "The Rise of the Service Economy." *American Economic Review* 102 (6): 2540–69.
- Buera, Francisco J., Joseph P. Kaboski, and Yongseok Shin. 2011. "Finance and Development: A Tale of Two Sectors." *American Economic Review* 101 (5): 1964–2002. <https://doi.org/10.1257/aer.101.5.1964>.
- . 2021. "The Macroeconomics of Microfinance." *Review of Economic Studies* 88 (1): 126–61.
- Burnier, Paulo. 2019. "The 'Car Wash' Investigations in Brazil: Inception, Scope, and Implications for Competition Enforcement." OECD-GVH RCC Newsletter No. 12. Regional Centre for Competition, Budapest, Hungary. https://kt.gov.it/uploads/documents/files/Newsletter_12_ENG_final.pdf.
- Burstein, Ariel, Vasco M. Carvalho, and Basile Grassi. 2020. "Bottom-Up Markup Fluctuations." NBER Working Paper No. 27958. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w27958>.
- Busso, Matias, and Oscar Fentanes. 2024. "Building Up Local Productivity: Infrastructure and Firm Dynamics in Mexico." Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0013181>.
- Busso, Matias, Oscar Fentanes, and Santiago Levy. 2018. "The Longitudinal Linkage of Mexico's Economic Census 1999–2014." Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0001338>.
- Busso, Matias, and Sebastian Galiani. 2019. "The Causal Effect of Competition on Prices and Quality: Evidence from a Field Experiment." *American Economic Journal: Applied Economics* 11 (1): 33–56. <https://doi.org/10.1257/app.20150310>.
- Busso, Matias, Lucia Madrigal, and Carmen Pagés. 2013. "Productivity and Resource Misallocation in Latin America." *B.E. Journal of Macroeconomics* 13 (1): 903–32.

- Busso, Matias, Sebastián Montañó, and Juan S. Muñoz-Morales. 2023. "Signaling Specific Skills and the Labor Market of College Graduates." IDB Working Paper No. 1456. Inter-American Development Bank, Washington DC. <https://doi.org/10.18235/0004759>.
- Bustos, Paula. 2011. "Trade Liberalization, Exports, and Technology Upgrading: Evidence on the Impact of MERCOSUR on Argentinian Firms." *American Economic Review* 101 (1): 304–40. <https://doi.org/10.1257/aer.101.1.304>.
- Cai, Jing, and Adam Szeidl. 2018. "Interfirm Relationships and Business Performance." *Quarterly Journal of Economics* 133 (3): 1229–82. <https://doi.org/10.1093/qje/qjx049>.
- Calatayud, Agustina, Santiago Sánchez, Felipe Bedoya-Maya, Francisca Giraldez Zúñiga, and José María Márquez. 2021. "Urban Road Congestion in Latin America and the Caribbean: Characteristics, Costs, and Mitigation." Inter-American Development Bank, Washington, DC. <http://dx.doi.org/10.18235/0003149>.
- Caldwell, Sydnee, and Oren Danieli. 2024. "Outside Options in the Labour Market." *Review of Economic Studies* 91 (6): 3286–315.
- Calvino, Flavio, Chiara Criscuolo, and Rudy Verlhac. 2020. "Declining Business Dynamism: Structural and Policy Determinants." OECD Science, Technology and Industry Policy Papers 94. Organisation for Economic Co-operation and Development, Paris, France. <https://doi.org/10.1787/77b92072-en>.
- Campbell, James, Avi Goldfarb, and Catherine Tucker. 2015. "Privacy Regulation and Market Structure." *Journal of Economics & Management Strategy* 24 (1): 47–73. <https://doi.org/10.1111/jems.12079>.
- Campos-Vázquez, Raymundo M., and Gerardo Esquivel. 2021. "The Effect of Doubling the Minimum Wage on Employment and Earnings in Mexico." *Economics Letters* 209 (C). <https://ideas.repec.org/a/eee/ecolet/v209y2021ics0165176521004018.html>.
- . 2023. "The Effect of the Minimum Wage on Poverty: Evidence from a Quasi-Experiment in Mexico." *Journal of Development Studies* 59 (3): 360–80.
- Carballo, Jerónimo, Ignacio Marra de Artiñano, and Christian Volpe Martincus. 2019. "Linkages with Multinationals: The Effects on Domestic Firms' Exports." Working paper. <https://doi.org/10.18235/0001848>.
- Carbó Valverde, Santiago, Sujit Chakravorti, and Francisco Rodríguez Fernández. 2016. "The Role of Interchange Fees in Two-Sided Markets: An Empirical Investigation on Payment Cards." *The Review of Economics and Statistics* 98 (2): 367–81. https://doi.org/10.1162/REST_a_00502.
- Card, David. 2022. "Who Set Your Wage?" *American Economic Review* 112 (4): 1075–90. <https://doi.org/10.1257/aer.112.4.1075>.
- Card, David, Ana Rute Cardoso, Joerg Heining, and Patrick Kline. 2018. "Firms and Labor Market Inequality: Evidence and Some Theory." *Journal of Labor Economics* 36 (S1): 13–70.
- Cárdenas, Julián. 2016. "Why Do Corporate Elites Form Cohesive Networks in Some Countries, and Do Not in Others? Cross-National Analysis of Corporate Elite Networks in Latin America." *International Sociology* 31 (3): 341–63. <https://doi.org/10.1177/0268580916629965>.
- . 2019. "Exploring the Relationship between Business Elite Networks and Redistributive Social Policies in Latin American Countries." *Sustainability* 12 (1): 1–17.
- Carranza, Eliana, Robert Garlick, Kate Orkin, and Neil Rankin. 2022. "Job Search and Hiring with Limited Information about Workseekers' Skills." *American Economic Review* 112 (11): 3547–83. <https://doi.org/10.1257/aer.20200961>.

- Carranza, Juan Esteban, Robert Clark, and Jean-François Houde. 2015. "Price Controls and Market Structure: Evidence from Gasoline Retail Markets." *Journal of Industrial Economics* 63 (1): 152–98. <https://doi.org/10.1111/joie.12071>.
- Casacuberta, Carlos, and Néstor Gandelman. 2023. "Wage Councils, Product Markups and Wage Markdowns: Evidence from Uruguay." *International Journal of Industrial Organization* 87 (C). https://econpapers.repec.org/article/eeeindorg/v_3a87_3ay_3a2023_3ai_3ac_3as0167718722000911.htm.
- . 2024. "Market Power Pass-Through to Prices and Wages: Evidence from Uruguay." Banco Central de Uruguay. https://www.bcu.gub.uy/Estadisticas-e-indicadores/estudios/Documents/casacuberta_gandelman.pdf.
- Cassiman, Bruno, and Reinhilde Veugelers. 2006. "In Search of Complementarity in Innovation Strategy: Internal R&D and External Knowledge Acquisition." *Management Science* 52 (1): 68–82. <https://doi.org/10.1287/mnsc.1050.0470>.
- Castañeda, Alejandro, and Daniel Ruiz. 2021. "The Political Economy of the Telecommunications Reform in Mexico." UNDP LAC Working Paper No. 08: Background Paper for the UNDP LAC Regional Human Development Report 2021. https://www.undp.org/sites/g/files/zskgke326/files/migration/latinamerica/undp-rblac-PNUD_bckPapers08-OK.pdf.
- Castañeda, Néstor. 2017. "Business Interest Groups and Policy-Making in South America." In *Handbook of South American Governance*. Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315661162-20/business-interest-groups-policy-making-south-america-n%C3%A9stor-casta%C3%B1eda>.
- . 2018. "Business Groups, Tax Efficiency, and Regressivity in Colombia." In *Rethinking Taxation in Latin America*, edited by Jorge Atria, Constantin Groll, and María Fernanda Valdés, 187–211. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-60119-9_7.
- Catalini, Christian, Jorge Guzmán, and Scott Stern. 2019. "Passive Versus Active Growth: Evidence from Founder Choices and Venture Capital Investment." NBER Working Paper 26073. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w26073>.
- Cattaneo, Matias D., Richard K. Crump, Max H. Farrell, and Yingjie Feng. 2024. "On Binscatter." *American Economic Review* 114 (5): 1488–514. DOI: 10.1257/aer.20221576.
- . 2025. "Binscatter Regressions." *Stata Journal* 25 (1): 3–50.
- Cavalcanti, Tiago, Joseph P. Kaboski, Bruno Martins, and Cezar Santos. 2023. "Financing Costs and Development." IDB Working Paper No. 1526. Inter-American Development Bank, Washington, DC.
- Cavalcanti, Tiago, and Paulo Henrique Vaz. 2017. "Access to Long-Term Credit and Productivity of Small and Medium Firms: A Causal Evidence." *Economics Letters* 150 (C): 21–25.
- Cavallo, Alberto, Gina Gopinath, Brent Neiman, and Jenny Tang. 2021. "Tariff Pass-Through at the Border and at the Store: Evidence from U.S Trade Policy." *American Economic Review: Insights* 3 (1): 19–34. DOI: 10.1257/aeri.20190536.
- Cavallo, Eduardo A., Andrew Powell, and Tomas Serebrisky, eds. 2020. *From Structures to Services: The Path to Better Infrastructure in Latin America and the Caribbean*. Development in the Americas Series. Washington, DC: Inter-American Development Bank. <https://publications.iadb.org/en/from-structures-to-services-the-path-to-better-infrastructure-in-latin-america-and-the-caribbean>.
- Cave, Martin E., and Elisa V. Mariscal. 2020. "The Impact of Telecommunications Regulation on Less Well-Off Mexican Households." *Telecommunications Policy* 44 (4). <https://ideas.repec.org/a/eee/telpol/v44y2020i4s0308596119304537.html>.

- Cavenaile, Laurent, Murat Alp Celik, and Xu Tian. 2021. "The Dynamic Effects of Antitrust Policy on Growth and Welfare." *Journal of Monetary Economics* 121: 42–59. <https://doi.org/10.1016/j.jmoneco.2021.04.011>.
- CeCo (Centro Competencia). 2024. "Estudio de percepción de la institucionalidad de libre competencia 2024" [Study of the perception of the institutionality of free competition]. Universidad Adolfo Ibáñez, George Washington University Competition Law Center, Universidad Del Pacífico, Pontificia Universidad Javeriana, Universidad San Francisco de Quito.
- Cerra, Valerie, and Sweta Chaman Saxena. 2008. "Growth Dynamics: The Myth of Economic Recovery." *American Economic Review* 98 (1): 439–57. <https://doi.org/10.1257/aer.98.1.439>.
- Chandra, A., B. Handel, and J. Schwartzstein. 2019. "Behavioral Economics and Health-Care Markets." In *Handbook of Behavioral Economics: Applications and Foundations* 12:459–502. North-Holland.
- Chassang, Sylvain, and Juan Ortner. 2019. *Collusion in Auctions with Constrained Bids: Theory and Evidence from Public Procurement*. University of Chicago Press. <https://doi.org/10.1086/701812>.
- Chatterjee, Shoumitro. 2023. "Market Power and Spatial Competition in Rural India." *Quarterly Journal of Economics* 138 (3): 1649–711.
- Cheshire, Paul C., Christian A. L. Hilber, and Ioannis Kaplanis. 2015. "Land Use Regulation and Productivity—Land Matters: Evidence from a UK Supermarket Chain." *Journal of Economic Geography* 15 (1): 43–73. <https://doi.org/10.1093/jeg/lbu007>.
- Chisari, Omar, Antonio Estache, and Carlos Romero. 1999. "Winners and Losers from the Privatization and Regulation of Utilities: Lessons from a General Equilibrium Model of Argentina." *World Bank Economic Review* 13 (2): 357–78. <https://doi.org/10.1093/wber/13.2.357>.
- Choi, Jaedo, Andrei Levchenko, Dimitrije Ruzic, and Younghun Shim. 2024. "Superstars or Supervillains? Large Firms in the South Korean Growth Miracle." NBER Working Paper 32648. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w32648>.
- Choi, Jaerim, and Sunghun Lim. 2023. "Tariffs, Agricultural Subsidies, and the 2020 US Presidential Election." *American Journal of Agricultural Economics* 105(4): 1149–75. <https://doi.org/10.1111/ajae.12351>.
- Chong, Alberto E., and Florencio López de Silanes. 2005. *Privatization in Latin America: Myths and Reality*. Stanford University Press. <https://www.sup.org/books/economics-and-finance/privatization-latin-america>.
- Christainsen, Gregory B., and Robert H. Haveman. 1981. "Public Regulations and the Slowdown in Productivity Growth." *American Economic Review* 71 (2): 320–25.
- Claessens, Stijn, Erik Feijen, and Luc Laeven. 2008. "Political Connections and Preferential Access to Finance: The Role of Campaign Contributions." *Journal of Financial Economics* 88 (3): 554–80. <https://doi.org/10.1016/j.jfineco.2006.11.003>.
- Clavijo, Renzo. 2025. "Regulation, Competition, and Market Power in Telecommunications across Latin America." IDB Technical Note No. 3066. Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0013354>.
- Coase, Ronald H. 1960. "The Problem of Social Cost." *Journal of Law and Economics* 3: 1–44.
- COFECE (Comisión Federal de Competencia Económica). 2016. "Reporte mensual: Junio 2016". <https://www.cofece.mx/sanciona-cofece-a-agentes-economicos-por-la-realizacion-de-practicas-monopolicas-absolutas-en-el-mercado-de-azucar>.

- Cohen, Wesley M. 2010. "Fifty Years of Empirical Studies of Innovative Activity and Performance." In *Handbook of the Economics of Innovation*, 1:129–213. Elsevier. [https://doi.org/10.1016/S0169-7218\(10\)01004-X](https://doi.org/10.1016/S0169-7218(10)01004-X).
- Cole, Harold L., Lee E. Ohanian, Álvaro José Riascos, and James A. Schmitz. 2006. "Latin America in the Rearview Mirror." *Quarterly Review* 30 (1). <https://ideas.repec.org/a/fip/fedmqr/y2006isepnv.30no.1.html>.
- Colombo, Massimo G., Diego D'Adda, and Lorenzo H. Pirelli. 2016. "The Participation of New Technology-Based Firms in EU-Funded R&D Partnerships: The Role of Venture Capital." *Research Policy* 45 (2): 361–75. <https://doi.org/10.1016/j.respol.2015.10.011>.
- Colonnelli, Emanuele, and Mounu Prem. 2022. "Corruption and Firms." *Review of Economic Studies* 89 (2): 695–732. <https://doi.org/10.1093/restud/rdab040>.
- Comisión Nacional de Defensa de la Competencia. 2023. RESOL-2023-287-APN-SC#MEC. *Boletín Oficial de la República Argentina* [Official bulletin of the Republic of Argentina].
- Comisión Nacional de Defensa de la Competencia – PRO-COMPETENCIA. 2024. "Observatorio de las condiciones de competencia en los mercados. Semestre julio–diciembre 2023". Santo Domingo, República Dominicana. <https://procompetencia.gob.do/>.
- . 2025. "Observatorio de las condiciones de competencia en los mercados. Semestre julio–diciembre 2024". Santo Domingo, República Dominicana. <https://procompetencia.gob.do/>.
- Comisión Nacional de la Competencia. 2020. "Resolución D/AL N° 18/2020, Acta de Directorio EX/N° 8/2020, Frigomerc S.A. y Frigorífico Norte S.A. s/ Notificación de operación de concentración [Versión pública]." National Government of Paraguay.
- Conte, Maddalena, Pierre Cotterlaz, and Thierry Mayer. 2022. "The CEPII Gravity Database." Working Paper No. 2022-05. CEPII Research Center. https://www.cepii.fr/PDF_PUB/wp/2022/wp2022-05.pdf.
- Cooke, Dudley, Ana P. Fernandes, and Priscila Ferreira. 2021. "Entry Deregulation, Firm Organization, and Wage Inequality." *International Journal of Industrial Organization* 77: 102763. <https://doi.org/10.1016/j.ijindorg.2021.102763>.
- Corbae, Dean, and Pablo D'Erasmus. 2021. "Reorganization or Liquidation: Bankruptcy Choice and Firm Dynamics." *Review of Economic Studies* 88 (5): 2239–74. <https://doi.org/10.1093/restud/rdaa091>.
- Córdoba Solano, Daniela, Felipe Gómez-Trejos, and Alberto Vindas Quesada. 2025. "Market Power, Industry Concentration and Trade Liberalization: Evidence from Costa Rica." Inter-American Development Bank, Washington, DC.
- Corrales, Javier. 2011. "Latin America: A Setback for Chávez." *Journal of Democracy* 22 (1): 122–36.
- Correa, Juan A., and Carmine Ornaghi. 2014. "Competition and Innovation: Evidence from U.S. Patent and Productivity Data." *Journal of Industrial Economics* 62 (2): 258–85. <https://doi.org/10.1111/joie.12050>.
- Corsi, Christian, and Antonio Prencipe. 2019. "High-Tech Entrepreneurial Firms' Innovation in Different Institutional Settings. Do Venture Capital and Private Equity Have Complementary or Substitute Effects?" *Industry and Innovation* 26 (9): 1023–74. <https://doi.org/10.1080/13662716.2018.1561358>.
- Covarrubias, Matías, Germán Gutiérrez, and Thomas Philippon. 2020. "From Good to Bad Concentration? US Industries over the Past 30 Years." *NBER Macroeconomics Annual* 34 (1): 1–46.
- Crespi, Gustavo, Elena Arias-Ortiz, Ezequiel Tacsir, Fernando Vargas, and Pluvia Zúñiga. 2014. "Innovation for Economic Performance: The Case of Latin American Firms." *Eurasian Business Review* 4 (1): 31–50. <https://doi.org/10.1007/s40821-014-0001-1>.

- Crespi, Gustavo, Sylvia Dohnert, Alessandro Maffioli, Antônio Marcos Hoelz Pinto Ambrozio, M. Barron, F. Bernini, L. Figal Garone, K. Grant, P. Mohan, D. Morris, A. Presbitero, R. Rabellotti, F. Lage de Sousa, E. Strobl, and P. Watson. 2017. "Exploring Firm-Level Innovation and Productivity in Developing Countries: The Perspective of Caribbean Small States." <https://doi.org/10.18235/0000616>.
- Crespi, Gustavo, María Paula Gerardino, Edwin A. Goñi Pacchioni, Oscar A. Mitnik, Rodolfo Stucchi, and Christian Volpe Martincus. 2024. *What Works to Improve Lives?: What Works to Foster Productive Sector Development*. Washington, DC: Inter-American Development Bank. <https://doi.org/10.18235/0012887>.
- Criscuolo, Chiara, Jonathan Haskel, and Ralf Martin. 2004. "Import Competition, Productivity, and Restructuring in UK Manufacturing." *Oxford Review of Economic Policy* 20: 393–408. <https://doi.org/10.1093/oxrep/grh023>.
- Croce, Annalisa, José Martí, and Samuele Murtinu. 2013. "The Impact of Venture Capital on the Productivity Growth of European Entrepreneurial Firms: 'Screening' or 'Value Added' Effect?" *Journal of Business Venturing* 28 (4): 489–510. <https://doi.org/10.1016/j.jbusvent.2012.06.001>.
- Crowley, Meredith A., Lu Han, and Thomas Prayer. 2024. "The Pro-Competitive Effects of Trade Agreements." *Journal of International Economics* 150:103936. <https://doi.org/10.1016/j.jinteco.2024.103936>.
- Cuesta, José Ignacio, and Alberto Sepulveda. 2021. "Price Regulation in Credit Markets: A Trade-Off between Consumer Protection and Credit Access." Working Paper No. 21-047. Stanford Institute for Economic Policy Research, Stanford, CA. <https://siepr.stanford.edu/publications/working-paper/price-regulation-credit-markets-trade-between-consumer-protection-and>.
- Culpepper, Pepper D. 2015. "Structural Power and Political Science in the Post-Crisis Era." *Business and Politics* 17 (3): 391–409. <https://doi.org/10.1515/bap-2015-0031>.
- Cumming, Douglas J., Luca Grilli, and Samuele Murtinu. 2017. "Governmental and Independent Venture Capital Investments in Europe: A Firm-Level Performance Analysis." *Journal of Corporate Finance* 42: 439–59. <https://doi.org/10.1016/j.jcorpfin.2014.10.016>.
- Cumming, Douglas, and Sofia Johan. 2019. "Government Venture Capital Research: Fake Science and Bad Public Policy." *Venture Capital* 21 (1): 121–31. <https://doi.org/10.1080/13691066.2018.1558508>.
- Cunningham, Colleen, Florian Ederer, and Song Ma. 2021. "Killer Acquisitions." *Journal of Political Economy* 129 (3): 649–702. <https://doi.org/10.1086/712506>.
- Cusolito, Ana Paula, Álvaro García-Marín, and William F. Maloney. 2023. "Proximity to the Frontier, Markups, and the Response of Innovation to Foreign Competition: Evidence from Matched Production-Innovation Surveys in Chile." *American Economic Review: Insights* 5 (1): 35–54. <https://doi.org/10.1257/aeri.20210466>.
- Dal Bó, Ernesto, Pedro Dal Bó, and Erik Eyster. 2018. "The Demand for Bad Policy When Voters Underappreciate Equilibrium Effects." *Review of Economic Studies* 85 (2): 964–98. <https://doi.org/10.1093/restud/rdx031>.
- D'Amico, Leonardo, Edward Glaeser, Joseph Gyourko, William Kerr, and Giacomo A. M. Ponzetto. 2024. "Why Has Construction Productivity Stagnated? The Role of Land-Use Regulation." NBER Working Paper No. 33188. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w33188>.
- Dams, Carolina, Virginia Sarria Allende, and María José Murcia. 2021. "Multilateral Development Banks: Understanding Their Impact on Start-Up Development in Latin America." *European Business Review* 33 (6): 942–56. <https://doi.org/10.1108/EBR-11-2020-0274>.
- Davis, Steven J., and John Haltiwanger. 1992. "Gross Job Creation, Gross Job Destruction, and Employment Reallocation." *Quarterly Journal of Economics* 107 (3): 819–63.

- Decker, Ryan A., John Haltiwanger, Ron S. Jarmin, and Javier Miranda. 2020. "Changing Business Dynamism and Productivity: Shocks versus Responsiveness." *American Economic Review* 110 (12): 3952–90. <https://doi.org/10.1257/aer.20190680>.
- Decker, Ryan, John Haltiwanger, Ron Jarmin, and Javier Miranda. 2014. "The Role of Entrepreneurship in US Job Creation and Economic Dynamism." *Journal of Economic Perspectives* 28 (3): 3–24. <https://doi.org/10.1257/jep.28.3.3>.
- De Elejalde, Ramiro, Carlos J. Ponce, and Flavia Roldán. 2022. "Multidimensional Innovation Responses and Foreign Competition." *Industrial and Corporate Change* 31 (6): 1397–427. <https://doi.org/10.1093/icc/dtac024>.
- De Loecker, Jan, and Jan Eeckhout. 2018. "Global Market Power." NBER Working Paper No. 24768. National Bureau of Economic Research, Cambridge, MA. DOI 10.3386/w24768.
- De Loecker, Jan, Jan Eeckhout, and Simon Mongey. 2021. "Quantifying Market Power and Business Dynamism in the Macroeconomy." NBER Working Paper No. 28761. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w28761>.
- De Loecker, Jan, Jan Eeckhout, and Gabriel Unger. 2020. "The Rise of Market Power and the Macroeconomic Implications." *Quarterly Journal of Economics* 135 (2): 561–644. <https://doi.org/10.1093/qje/qjz041>.
- De Loecker, Jan, and Johannes Van Biesebroeck. 2018. "Effect of International Competition on Firm Productivity and Market Power." In *The Oxford Handbook of Productivity Analysis*, edited by E. Grifell-Tatjé, C. K. Lovell, and R. C. Sickles. Oxford University Press.
- De Loecker, Jan, and Frederic Warzynski. 2012. "Markups and Firm-Level Export Status." *American Economic Review* 102 (6): 2437–71. <https://doi.org/10.1257/aer.102.6.2437>.
- De Michele, Roberto, and Gastón Pierri. 2020. "Transparency and Digital Government: The Impact of COMPR.AR in Argentina." IDB Discussion Paper No. 767. Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0002335>.
- Deming, David J. 2017. "The Growing Importance of Social Skills in the Labor Market." *Quarterly Journal of Economics* 132 (4): 1593–640. <https://doi.org/10.1093/qje/qjx022>.
- Demirer, Mert, and Ömer Karaduman. 2024. "Do Mergers and Acquisitions Improve Efficiency? Evidence from Power Plants." NBER Working Paper No. w32727. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w32727>.
- Demmers, Jolle, Alex E. Fernández Jilberto, and Barbara Hogenboom, eds. 2012. *Good Governance in the Era of Global Neoliberalism*. Routledge Studies in the Modern World Economy. Routledge.
- Demsetz, Harold. 1973. "Industry Structure, Market Rivalry, and Public Policy." *Journal of Law and Economics* 16 (1): 1–9.
- Dent, Robert C., Fatih Karahan, Benjamin Pugsley, and Ayşegül Şahin. 2016. "The Role of Startups in Structural Transformation." *American Economic Review* 106 (5): 219–23. <https://doi.org/10.1257/aer.p20161053>.
- De Ridder, Maarten. 2024. "Market Power and Innovation in the Intangible Economy." *American Economic Review* 114 (1): 199–251. <https://doi.org/10.1257/aer.20201079>.
- Dewatripont, Mathias, and Gérard Roland. 1992. "Economic Reform and Dynamic Political Constraints." *Review of Economic Studies* 59 (4): 703. <https://doi.org/10.2307/2297994>.

- . 1995. "The Design of Reform Packages under Uncertainty." *American Economic Review* 85 (5): 1207–23.
- Diegmann, André, Laura Pohlen, and Andrea Weber. 2024. "Do Politicians Affect Firm Outcomes? Evidence from Connections to the German Federal Parliament." Halle Institute for Economic Research. https://doi.org/10.18717/DP_CQGQ-A590.
- Diez, Federico J., Davide Malacrino, and Ippei Shibata. 2022. "The Divergent Dynamics of Labor Market Power in Europe." Working Paper No. 2022/247. International Monetary Fund, Washington DC. <https://ideas.repec.org/p/imf/imfwpa/2022-247.html>.
- Ding, Siying, Ahmad Lashkaripour, and Volodymyr Lugovskyy. 2024. "A Global Perspective on the Incidence of Monopoly Distortions." CESifo working paper. Center for Economic Studies, University of Munich. <https://alashkar.pages.iu.edu/DLL2024.pdf>.
- DiSalvo, James. 2023. "Banking Trends: Has the Banking Industry Become Too Concentrated?" *Economic Insights* 8 (1): 11–26.
- Dodini, Samuel, Kjell G. Salvenes, and Alexander Willén. 2024. "The Dynamics of Power in Labor Markets: Monopolistic Unions versus Monopsonistic Employers." Unpublished manuscript. Federal Reserve Bank of Dallas, IZA, CESifo, and Department of Economics, Norwegian School of Economics. https://samueldodini.com/files/Dodini_Salvenes_Willen_unions_monopsony_8_2024.pdf.
- Donovan, Kevin, and Todd Schoellman. 2021. "The Role of Labour Market Frictions in Structural Transformation." STEG Pathfinding Paper. Structural Transformation and Economic Growth. <https://steg.cepr.org/publications/role-labour-market-frictions-structural-transformation>.
- Döppler, Hendrik, Alexander MacKay, Nathan H. Miller, and Joel Stiebale. 2024. "Rising Markups and the Role of Consumer Preferences." NBER Working Paper No. 32739. National Bureau of Economic Research, Cambridge, MA. <https://www.nber.org/papers/w32739>.
- Doraszelski, Ulrich, and Jordi Jaumandreu. 2013. "R&D and Productivity: Estimating Endogenous Productivity." *Review of Economic Studies* 80 (4): 1338–83. <https://doi.org/10.1093/restud/rdt011>.
- Drazen, Allan, and William Easterly. 2001. "Do Crises Induce Reform? Simple Empirical Tests of Conventional Wisdom." *Economics & Politics* 13 (2): 129–57.
- Durand, Francisco. 2016. "Cuando El Poder Extractivo Captura El Estado: Lobbies, Puertas Giratorias y Paquetazo Ambiental En Perú." Oxfam. https://scholar.google.com.pe/citations?view_op=view_citation&hl=es&user=pFsAPX4AAAAJ&citation_for_view=pFsAPX4AAAAJ:hFOr9nPyWt4C.
- Dustmann, Christian, Attila Lindner, Uta Schönberg, Matthias Umkehrer, and Philipp vom Berge. 2022. "Reallocation Effects of the Minimum Wage." *Quarterly Journal of Economics* 137 (1): 267–328.
- Dutt, Pushan, and Devashish Mitra. 2002. "Endogenous Trade Policy through Majority Voting: An Empirical Investigation." *Journal of International Economics* 58 (1): 107–33. [https://doi.org/10.1016/S0022-1996\(01\)00162-3](https://doi.org/10.1016/S0022-1996(01)00162-3).
- Ederer, Florian, and Bruno Pellegrino. 2024. "A Tale of Two Networks: Common Ownership and Product Market Rivalry." NBER Working Paper No. 30004. National Bureau of Economic Research <https://doi.org/10.3386/w30004>.
- Edmond, Chris, Virgiliu Midrigan, and Daniel Yi Xu. 2018. "Competition, Markups, and the Gains from International Trade." *American Economic Review* 108 (9): 2519–54. DOI: 10.1257/aer.20120549.
- Eeckhout, Jan. 2021. *The Profit Paradox: How Thriving Firms Threaten the Future of Work*. Princeton, NJ: Princeton University Press.

- . 2023. “The Simplest Fix for Banking.” *Project Syndicate*. <https://www.project-syndicate.org/commentary/central-bank-digital-currencies-end-bank-runs-excessive-risk-taking-by-jan-eeckhout-2023-03>.
- Égert, Balázs. 2016. “Regulation, Institutions, and Productivity: New Macroeconomic Evidence from OECD Countries.” *American Economic Review* 106 (5): 109–13. <https://doi.org/10.1257/aer.p20161026>.
- Elliott, Jonathan T., Georges Vivien Hounghonon, Marc Ivaldi, and Paul Scott. 2025. “Market Structure, Investment, and Technical Efficiencies in Mobile Telecommunications.” *Journal of Political Economy* 133 (5): 1401–59. <https://www.journals.uchicago.edu/doi/abs/10.1086/734132>.
- Engbom, Niklas, and Christian Moser. 2022. “Earnings Inequality and the Minimum Wage: Evidence from Brazil.” *American Economic Review* 112 (12): 3803–47. <https://doi.org/10.1257/aer.20181506>.
- Ennis, Sean F., and Selvin Thanacoody. 2024. “Do Product Market Reforms Work? Assessing Regulatory Changes Impacting Competition.” Mimeo, University of East Anglia.
- Eslava, Marcela, Alvaro Garcia-Marin, and Julián Messina. 2025. “Inequality and Market Power in Latin America and the Caribbean.” *Oxford Open Economics* 4:i416–25.
- Eslava, Marcela, John Haltiwanger, Adriana Kugler, and Maurice Kugler. 2004. “The Effects of Structural Reforms on Productivity and Profitability Enhancing Reallocation: Evidence from Colombia.” *Journal of Development Economics* 75 (2): 333–71.
- . 2013. “Trade and Market Selection: Evidence from Manufacturing Plants in Colombia.” *Review of Economic Dynamics* 16 (1): 135–58. <https://doi.org/10.1016/j.red.2012.10.009>.
- Eslava, Marcela, John Haltiwanger, and Álvaro Pinzón. 2022. “Job Creation in Colombia Versus the USA: ‘Up-or-Out Dynamics’ Meet ‘The Life Cycle of Plants.’” *Economica* 89 (355): 511–39. <https://doi.org/10.1111/ecca.12418>.
- Eslava, Marcela, and Marcela Meléndez. 2010. “Cómo los grupos de interés influyen sobre las políticas de productividad” [How stakeholders influence productivity policies]. In *Consecuencias Imprevistas de La Constitución de 1991: La Influencia de La Política En Las Políticas Económicas*. Bogotá. [Unintended consequences of the 1991 constitution: The influence of politics on economic policies. Bogotá], edited by Eduardo Lora and Carlos Scartascini. Fedesarrollo and Alfaomega. <http://dx.doi.org/10.18235/0002833>.
- Eslava, Marcela, Marcela Meléndez, and Nicolás Urdaneta. 2021. “Market Concentration, Market Fragmentation, and Inequality in Latin America.” UNDP LAC Working Paper Series No. 11. United Nations Development Programme. <https://www.undp.org/latin-america/publications/market-concentration-market-fragmentation-and-inequality-latin-america>.
- Eslava, Marcela, Marcela Meléndez Arjona, Laura Daniela Tenjo Galvis, and Nicolás Urdaneta. 2023. “Business Size, Development, and Inequality in Latin America: A Tale of One Tail.” Policy Research Working Paper No. 10584. World Bank, Washington, DC. <https://ideas.repec.org/p/wbk/wbrwps/10584.html>.
- Estefan, Alejandro, Roberto Gerhard, Joseph P. Kaboski, Illenin Kondo, and Wei Qian. 2024. “Outsourcing Policy and Worker Outcomes: Causal Evidence from a Mexican Ban.” NBER Working Paper No. 32024. National Bureau of Economic Research, Cambridge, MA. <https://papers.ssrn.com/abstract=4687029>.
- Faccio, Mara, Ronald W. Masulis, and John J. McConnell. 2006. “Political Connections and Corporate Bailouts.” *Journal of Finance* 61 (6): 2597–635. <https://doi.org/10.1111/j.1540-6261.2006.01000.x>.

- Fairfield, Tasha. 2015. *Private Wealth and Public Revenue in Latin America: Business Power and Tax Politics*. 1st ed. Cambridge University Press. <https://doi.org/10.1017/CBO9781316104767>.
- Fajgelbaum, Pablo D., Pinelopi K. Goldberg, Patrick J. Kennedy, and Amit K. Khandelwal. 2020. "The Return to Protectionism." *Quarterly Journal of Economics* 135 (1): 1–55. <https://doi.org/10.1093/qje/qjz036>.
- Fanelli, José María. 2007. *Understanding Market Reforms in Latin America*. London: Palgrave Macmillan UK. <https://link.springer.com/book/9780230500570#auth-or-1-0>.
- Fang, Tony, and John Hartley. 2022. "Evolution of Union Wages and Determinants." IZA Discussion Paper No. 15333. IZA Institute of Labor Economics. <https://papers.ssrn.com/abstract=4123774>.
- Farber, Henry S., Daniel Herbst, Ilyana Kuziemko, and Suresh Naidu. 2021. "Unions and Inequality over the Twentieth Century: New Evidence from Survey Data." *Quarterly Journal of Economics* 136 (3): 1325–85. <https://doi.org/10.1093/qje/qjab012>.
- Farias, Pedro, Richard Alcorn, Daniel Trnka, Manuel Flores, Delia Rodrigo, Eliezer Olivares, and Ana María Zárate Moreno. 2022. "¿Preparados para regular? Lecciones y desafíos de la regulación en América Latina y el Caribe" [Ready to regulate? Lessons and challenges of regulation in Latin America and the Caribbean]. Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0004329>.
- Fazekas, Mihály, and Jurgen Rene Blum. 2021. "Improving Public Procurement Outcomes: Review of Tools and the State of the Evidence Base." Policy Research Working Paper No. 9690. World Bank, Washington, DC. <https://hdl.handle.net/10986/35727>.
- Fazekas, Mihály, Viktoriia Poltoratskaya, Marc Tobias Schiffbauer, and Bence Tóth. 2025. "Procuring Low Growth: The Impact of Political Favoritism on Public Procurement and Firm Performance in Bulgaria." Policy Research Working Paper Series No. 11085. World Bank, Washington, DC. <https://ideas.repec.org/p/wbk/wbrwps/11085.html>.
- Fazio, Dimas, and Alminas Žaldokas. 2024. "Kamikazes in Public Procurements: Bid-Rigging and Real Non-Market Outcomes." *Proceedings of the EUROFIDAI-ESSEC Paris December Finance Meeting 2024*. Social Science Research Network, Rochester, NY. <https://doi.org/10.2139/ssrn.5043930>.
- Felix, Mayara. 2022. "Trade Labor Market Concentration and Wages." Unpublished manuscript. Princeton University. https://www.bc.edu/content/dam/bc1/schools/mcas/economics/pdf/seminars/Felix_JMP.pdf.
- Fergusson, Leopoldo, Horacio Larreguy, and Juan Felipe Riaño. 2022. "Political Competition and State Capacity: Evidence from a Land Allocation Program in Mexico." *Economic Journal* 132 (648): 2815–34. <https://doi.org/10.1093/ej/ueac041>.
- Fernandes, Ana M., Caroline Freund, and Martha Denisse Pierola. 2016. "Exporter Behavior, Country Size and Stage of Development: Evidence from the Exporter Dynamics Database." *Journal of Development Economics* 119:121–37.
- Fernandes, Ana P., Priscila Ferreira, and L. Alan Winters. 2014. "Firm Entry Deregulation, Competition and Returns to Education and Skill." *European Economic Review* 70: 210–30. <https://doi.org/10.1016/j.euroecorev.2014.04.004>.
- Fernández, Raquel, and Dani Rodrik. 1991. "Resistance to Reform: Status Quo Bias in the Presence of Individual-Specific Uncertainty." *American Economic Review* 81 (5): 1146–55.
- Ffrench-Davis, Ricardo. 2010. *Economic Reforms in Chile*. London: Palgrave Macmillan UK. <https://doi.org/10.1057/9780230289659>.
- Finnovista, Inter-American Development Bank, and IDB Invest. 2022. "Fintech in Latin America and the Caribbean: A Consolidated Ecosystem for Recovery."

- Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0004202>.
- Fisman, Raymond. 2001. "Estimating the Value of Political Connections." *American Economic Review* 91 (4): 1095–102. <https://doi.org/10.1257/aer.91.4.1095>.
- Flory, Jeffrey A., Andreas Leibbrandt, and John A. List. 2015. "Do Competitive Workplaces Deter Female Workers? A Large-Scale Natural Field Experiment on Job Entry Decisions." *Review of Economic Studies* 82 (1): 122–55. <https://doi.org/10.1093/restud/rdu030>.
- Fonseca, Julia, and Adrien Matray. 2024. "Financial Inclusion, Economic Development, and Inequality: Evidence from Brazil." *Journal of Financial Economics* 156:103854. <https://www.sciencedirect.com/science/article/pii/S0304405X24000771>.
- Foster, Lucia, John Haltiwanger, and C. J. Krizan. 2006. "Market Selection, Reallocation, and Restructuring in the U.S. Retail Trade Sector in the 1990s." *Review of Economics and Statistics* 88 (4): 748–58. <https://doi.org/10.1162/rest.88.4.748>.
- Foster, Lucia, John Haltiwanger, and Cody Tuttle. 2022. "Rising Markups or Changing Technology?" NBER Working Paper No. w30491. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w30491>.
- Fowlie, Meredith, Mar Reguant, and Stephen P. Ryan. 2016. "Market-Based Emissions Regulation and Industry Dynamics." *Journal of Political Economy* 124 (1): 249–302. <https://doi.org/10.1086/684484>.
- Franco Chuaire, María, Carlos Scartascini, and Mariano Tommasi. 2017. "State Capacity and the Quality of Policies. Revisiting the Relationship between Openness and Government Size." *Economics & Politics* 29 (2): 133–56. <https://doi.org/10.1111/ecpo.12090>.
- Fried, Stephanie, and David Lagakos. 2023. "Electricity and Firm Productivity: A General-Equilibrium Approach." *American Economic Journal: Macroeconomics* 15 (4): 67–103. <https://doi.org/10.1257/mac.20210248>.
- Friedman, Milton. 1974. "Inflation, Taxation, Indexation." In *Inflation: Causes, Consequences, Cures*, 71–88. IEA Readings 14. London: Institute of Economic Affairs.
- Galindo, Arturo, Carlos Scartascini, J. Mark Payne, Robert Daughters, Alberto Melo, Koldo Echebarría, Eduardo Lora, et al. 2011. *The State of State Reform in Latin America*. Washington, DC: Inter-American Development Bank.
- Gandelman, Néstor, Rodrigo Lluberas, Daniel Misail, and Diana Gaitán. 2023. "The Impact of a Financial Inclusion Program on Household's Payment Choice, Savings, and Credit." IDB Working Paper No. 1448. Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0004789>.
- Gandelman, Néstor, Flavia Roldán, and Sofía Viera. 2025a. "An Examination of Numerical Portability in Mobile Communication in Uruguay." IDB Working Paper No. 1655. Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0013380>.
- . 2025b. "The Impact of Multi-Acquiring in the Payment System: Evidence from Uruguayan Financial Inclusion Program." IDB Working Paper No. 1654. Inter-American Development Bank, Washington, DC. <http://dx.doi.org/10.18235/0013400>.
- García-Marín, Álvaro. 2021. "Labor Market Concentration and Earnings: Evidence from Chile." UNDP LAC Working Paper No. 10. United Nations Development Programme. https://www.undp.org/sites/g/files/zskgke326/files/migration/latinamerica/undp-rblac-PNUD_bckPapers10_c.pdf.
- Garetto, Stefania, Nina Pavnick, Natalia Ramondo, Vanessa Alviarez, Jingting Fan, Nitya Pandalai-Nayar, Nicola Limodio, Isabela Manelici, Nicolas Morales,

- Evangelina Dardati, Ezequiel García-Lembergman, Grace Gu, Galina Hale, David Hemous, Ralf Martin, Farid Farrokhi, Heitor Pellegrina, Pierre Louis Vezina, Laura Boudreau, and Jose Vasquez. 2025. "Foreign Direct Investment and Development." *VoxDevLit* 13 (1). https://voxddev.org/sites/default/files/2025-02/Foreign_Direct_Investment_Issue_1.pdf.
- Gathmann, Christina, and Uta Schönberg. 2010. "How General Is Human Capital? A Task-Based Approach." *Journal of Labor Economics* 28 (1): 1–49. <https://doi.org/10.1086/649786>.
- Genakos, Christos, Tommaso Valletti, and Frank Verboven. 2018. "Evaluating Market Consolidation in Mobile Communications." *Economic Policy* 33 (93): 45–100. <https://doi.org/10.1093/epolic/eix020>.
- Gilje, Erik P., Todd A. Gormley, and Doron Levit. 2020. "Who's Paying Attention? Measuring Common Ownership and Its Impact on Managerial Incentives." *Journal of Financial Economics* 137 (1): 152–78. <https://doi.org/10.1016/j.jfineco.2019.12.006>.
- Gindling, Tim Henry, and Lucas Ronconi. 2025. "Minimum Wage Policy and Inequality in Latin America and the Caribbean." *Oxford Open Economics* 4 (Supplement_1): i400–415. <https://doi.org/10.1093/ooec/odae011>.
- Goldberg, Pinelopi Koujianou, Amit Kumar Khandelwal, Nina Pavcnik, and Petia Topalova. 2010. "Imported Intermediate Inputs and Domestic Product Growth: Evidence from India." *Quarterly Journal of Economics* 125 (4): 1727–67. <https://doi.org/10.1162/qjec.2010.125.4.1727>.
- Goldman, Eitan, Jörg Rocholl, and Jongil So. 2013. "Politically Connected Boards of Directors and the Allocation of Procurement Contracts." *Review of Finance* 17 (5): 1617–48. <https://doi.org/10.1093/rof/rfs039>.
- Goñi, Edwin, and William F. Maloney. 2017. "Why Don't Poor Countries Do R&D? Varying Rates of Factor Returns across the Development Process." *European Economic Review* 94: 126–47. <https://doi.org/10.1016/j.euroecorev.2017.01.008>.
- González, Felipe, Mounu Prem, and Francisco Urzúa. 2020. "The Privatization Origins of Political Corporations: Evidence from the Pinochet Regime." *Journal of Economic History* 80 (2): 417–56. <https://doi.org/10.1017/S0022050719000780>.
- Goolsbee, Austan, and Chad Syverson. 2008. "How Do Incumbents Respond to the Threat of Entry? Evidence from the Major Airlines." *Quarterly Journal of Economics* 123 (4): 1611–33. <https://doi.org/10.1162/qjec.2008.123.4.1611>.
- Gordon, Marcy, and Hillel Italie. 2022. "US Begins Court Battle against Publishing Giants' Merger." AP News. <https://apnews.com/article/publishing-government-and-politics-d27836f927d66cc48a1ea9a7f1a70085>.
- Gouveia, Ana Fontoura, and Christian Osterhold. 2018. "Fear the Walking Dead: Zombie Firms, Spillovers and Exit Barriers." OECD Productivity Working Papers 13. Organisation for Economic Co-operation and Development, Paris, France. <https://doi.org/10.1787/e6c6e51d-en>.
- Goyal, Aparajita. 2010. "Information, Direct Access to Farmers, and Rural Market Performance in Central India." *American Economic Journal: Applied Economics* 2 (3): 22–45. <https://doi.org/10.1257/app.2.3.22>.
- Gray, Wayne B. 1987. "The Cost of Regulation: OSHA, EPA and the Productivity Slowdown." *American Economic Review* 77 (5): 998–1006.
- Graziano, Alejandro, Monika Sztajerowska, and Christian Volpe Martincus. 2024. "Trading Places: How Trade Policy Is Reshaping Multinational Firms' Location." Technical Report 11514, CESifo Working Paper Series. Center for Economic Studies, University of Munich. https://www.ifo.de/DocDL/cesifo1_wp11514.pdf.
- Greco, Esteban, Eduardo Stordeur, and María Fernanda Viececens. 2021. "Origen e historia de la ley de defensa de la competencia Argentina: Hacia los 100 años de legislación" [Origin and history of the Argentine competition law: Towards 100

- years of legislation]. In *Anuario de Derecho de La Competencia* [Competition law yearbook]. Asunción: La Ley Paraguaya.
- Greco, Esteban, and María Fernanda Vicens. 2020. "FinTech y BigTech: Barreras a la entrada y a la innovación. Estado de situación En América Latina" [FinTech and BigTech: Barriers to entry and innovation. State of the state in Latin America]. *Revista Latinoamericana de Economía y Sociedad Digital*, no. 1, 30–50.
- . 2024. "Competencia en la economía digital: Latinoamérica y El Caribe en perspectiva con el modelo Europeo" [Competition in the digital economy: Latin America and the Caribbean in perspective with the European model]. In *Estudios sobre inteligencia artificial y economía digital* [Studies on artificial intelligence and the digital economy], edited by César García Novoa, Francisco Hernández Rodríguez, Pablo Durán Santomil, José Manuel Maside Sanfiz, and Marcos R. Torres Carlos. Cizur Menor, Spain: Aranzadi.
- Greenstone, Michael, John List, and Chad Syverson. 2012. "The Effects of Environmental Regulation on the Competitiveness of U.S. Manufacturing." NBER Working Paper No. 18392. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w18392>.
- Griffith, Rachel, Rupert Harrison, and Gareth Macartney. 2007. "Product Market Reforms, Labour Market Institutions and Unemployment." *Economic Journal* 117 (519): C142–66. <https://doi.org/10.1111/j.1468-0297.2007.02039.x>.
- Griffith, Rachel, Rupert Harrison, and Helen Simpson. 2010. "Product Market Reform and Innovation in the EU: Product Market Reform and Innovation in the EU." *Scandinavian Journal of Economics* 112 (2): 389–415. <https://doi.org/10.1111/j.1467-9442.2010.01602.x>.
- Griffith, Rachel, Elena Huergo, Jacques Mairesse, and Bettina Peters. 2006. "Innovation and Productivity across Four European Countries." *Oxford Review of Economic Policy* 22 (4): 483–98. <https://doi.org/10.1093/oxrep/grj028>.
- Griffith, Rachel, Martin O'Connell, and Kate Smith. 2022. "Price Floors and Externality Correction." *Economic Journal* 132 (646): 2273–89. <https://doi.org/10.1093/ej/ueac011>.
- Griffith, Rachel, Stephen Redding, and John Van Reenen. 2004. "Mapping the Two Faces of R&D: Productivity Growth in a Panel of OECD Industries." *Review of Economics and Statistics* 86 (4): 883–95. <https://doi.org/10.1162/0034653043125194>.
- Grossman, Gene M., and Elhanan Helpman. 1994. "Endogenous Innovation in the Theory of Growth." *Journal of Economic Perspectives* 8 (1): 23–44.
- . 2001. *Special Interest Politics*. MIT press.
- Guadalupe, María. 2007. "Product Market Competition, Returns to Skill, and Wage Inequality." *Journal of Labor Economics* 25 (3): 439–74. <https://doi.org/10.1086/513299>.
- Guasch, J. Luis, and Robert W. Hahn. 1999. "The Costs and Benefits of Regulation: Implications for Developing Countries." *World Bank Research Observer* 14 (1): 137–58. <https://doi.org/10.1093/wbro/14.1.137>.
- Guner, Nezih, Gustavo Ventura, and Yi Xu. 2008. "Macroeconomic Implications of Size-Dependent Policies." *Review of Economic Dynamics* 11 (4): 721–44. <https://doi.org/10.1016/j.red.2008.01.005>.
- Gutiérrez, Germán. 2022. "The Welfare Consequences of Regulating Amazon." University of Washington, Foster School of Business. <https://ssrn.com/abstract=3965566>.
- Gutiérrez, Germán, and Thomas Philippon. 2017. "Declining Competition and Investment in the US." NBER Working Paper No. 23583. National Bureau of Economic Research, Cambridge, MA. DOI 10.3386/w23583.
- Gwartney, James, Robert Lawson, Joshua Hall, and Ryan Murphy. 2022. "Economic Freedom of the World: 2022 Annual Report." Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/economic-freedom-of-the-world-2022.pdf>.

- Haber, Stephen. 2005. "Mexico's Experiments with Bank Privatization and Liberalization, 1991–2003." *Journal of Banking & Finance* 29 (8): 2325–53. <https://doi.org/10.1016/j.jbankfin.2005.03.017>.
- Haggard, Stephan, and Steven Benjamin Webb, eds. 1994. *Voting for Reform: Democracy, Political Liberalization and Economic Adjustment*. Washington DC: World Bank.
- Hagiü, Andrei, and Julian Wright. 2025. "Artificial Intelligence and Competition Policy." *International Journal of Industrial Organization*, 103134. <https://doi.org/10.1016/j.ijindorg.2025.103134>.
- Hall, Bronwyn H., Georg Von Graevenitz, and Christian Helmers. 2021. "Technology Entry in the Presence of Patent Thickets." *Oxford Economic Papers* 73 (2): 903–26. <https://doi.org/10.1093/oep/gpaa034>.
- Hall, Bronwyn H., and Josh Lerner. 2010. "The Financing of R&D and Innovation." In *Handbook of the Economics of Innovation* 1:609–39. Elsevier. [https://doi.org/10.1016/S0169-7218\(10\)01014-2](https://doi.org/10.1016/S0169-7218(10)01014-2).
- Hall, Bronwyn H., and Alessandro Maffioli. 2008. "Evaluating the Impact of Technology Development Funds in Emerging Economies: Evidence from Latin America." *European Journal of Development Research* 20 (2): 172–98. <https://doi.org/10.1080/09578810802060819>.
- Hall, Bronwyn H., and Jacques Mairesse. 2006. "Empirical Studies of Innovation in the Knowledge-Driven Economy." *Economics of Innovation and New Technology* 15 (4–5): 289–99. <https://doi.org/10.1080/10438590500512760>.
- Hall, Bronwyn H., Jacques Mairesse, and Pierre Mohnen. 2010. "Measuring the Returns to R&D." In *Handbook of the Economics of Innovation* 2:1033–82. Elsevier. [https://doi.org/10.1016/S0169-7218\(10\)02008-3](https://doi.org/10.1016/S0169-7218(10)02008-3).
- Hall, Robert E. 1988. "The Relation between Price and Marginal Cost in US Industry." *Journal of Political Economy* 96 (5): 921–47.
- Hall, Robert E., and Alan B. Krueger. 2010. "Evidence on the Determinants of the Choice between Wage Posting and Wage Bargaining." NBER Working Paper No. 16033. National Bureau of Economic Research, Cambridge, MA. <https://ideas.repec.org/kline/p/nbr/nberwo/16033.html>.
- Hashmi, Aamir Rafique. 2013. "Competition and Innovation: The Inverted-U Relationship Revisited." *Review of Economics and Statistics* 95 (5): 1653–68. https://doi.org/10.1162/REST_a_00364.
- Heckman, James, and Carmen Pagés. 2003. "Law and Employment: Lessons from Latin America and the Caribbean." NBER Working Paper No. 10129. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w10129>.
- Heresi, Rodrigo. 2024. "Market Power in Latin America in Worldwide Perspective: An Empirical Exploration." Working Paper No. IDB-WP-1608. Inter-American Development Bank, Washington, DC. <http://dx.doi.org/10.18235/0005317>.
- Higgins, Sean. 2024. "Financial Technology Adoption: Network Externalities of Cashless Payments in Mexico." *American Economic Review* 114 (11): 3469–512. <https://doi.org/10.1257/aer.20201952>.
- Hjort, Jonas, Hannes Malmberg, and Todd Schoellman. 2022. "The Missing Middle Managers: Labor Costs, Firm Structure, and Development." NBER Working Paper No. 30592. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w30592>.
- Holmes, Thomas J., and James A. Schmitz, Jr. 2010. "Competition and Productivity: A Review of Evidence." *Journal of Economic Literature* 48 (4): 1076–100.
- Hopenhayn, Hugo, Julian Neira, and Rish Singhania. 2022. "From Population Growth to Firm Demographics: Implications for Concentration, Entrepreneurship and the Labor Share." *Econometrica* 90 (4): 1879–914. <https://doi.org/10.3982/ECTA18012>.

- Hovenkamp, Herbert. 2021. "Antitrust and Platform Monopoly." *Yale Law Journal* 130 (8): 1952–2050.
- Hsieh, Chang-Tai, and Peter J. Klenow. 2009. "Misallocation and Manufacturing TFP in China and India." *Quarterly Journal of Economics* 124 (4): 1403–48. <https://doi.org/10.1162/qjec.2009.124.4.1403>.
- . 2014. "The Life Cycle of Plants in India and Mexico." *Quarterly Journal of Economics* 129 (3): 1035–84. <https://doi.org/10.1093/qje/qju014>.
- Hsieh, Chang-Tai, and Benjamin A. Olken. 2014. "The Missing 'Missing Middle.'" *Journal of Economic Perspectives* 28 (3): 89–108. <https://doi.org/10.1257/jep.28.3.89>.
- Huber, Evelyne, and John D. Stephens. 2012. *Democracy and the Left: Social Policy and Inequality in Latin America*. University of Chicago Press.
- Hummels, David, Volodymyr Lugovskyy, and Alexandre Skiba. 2009. "The Trade Reducing Effects of Market Power in International Shipping." *Journal of Development Economics* 89 (1): 84–97. <https://doi.org/10.1016/j.jdevco.2008.05.001>.
- Hurst, Erik, Patrick J. Kehoe, Elena Pastorino, and Thomas Winberry. 2022. "The Distributional Impact of the Minimum Wage in the Short and Long Run." NBER Working Paper No. 30295. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w30294>.
- Iacovone, Leonardo, William Maloney, and David McKenzie. 2022. "Improving Management with Individual and Group-Based Consulting: Results from a Randomized Experiment in Colombia." *Review of Economic Studies* 89 (1): 346–71. <https://doi.org/10.1093/restud/rdab005>.
- IDB (Inter-American Development Bank). 2024a. "Agriculture Sector Framework Document." Inter-American Development Bank, Washington DC.
- . 2024b. "Agricultural Policies in Latin America and the Caribbean 2023." Inter-American Development Bank, Washington DC.
- Imbert, Clément, and Gabriel Ulyssea. 2024. "Rural Migrants and Urban Informality: Evidence from Brazil." Unpublished manuscript. Department of Economics, Sciences Po, and Department of Economics, University College London.
- IMF (International Monetary Fund). 2019. "The Rise of Corporate Market Power and Its Macroeconomic Effects." Chapter 2 in *World Economic Outlook: Growth Slowdown, Precarious Recovery*. Washington, DC: International Monetary Fund.
- INDECOPI (Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual). 2024. Resolución N° 148-2024/CLC-INDECOPI. Versión Pública. Perú. <https://cms.law/content/download/690627/file/Resoluci%C3%B3n%20N%C2%B0%20148-2024CLC-INDECOPI.pdf>.
- Inderst, Roman, and Stefan Thomas. 2024. "Algorithms and Antitrust: A Framework with Special Emphasis on Coordinated Pricing." <https://dx.doi.org/10.2139/ssrn.4816287>.
- Intendencia Nacional de Abogacía de la Competencia. 2021. "Estudio de mercado no. SCPM-IGT-INAC-002-2019: Sector lácteo (versión pública)" [Market study no. SCPM-IGT-INAC-002-2019: Dairy sector (public version)]. Dirección Nacional de Estudios de Mercado. https://www.sce.gob.ec/sitio/wp-content/uploads/2021/04/estudio_de_mercado_sector_lacteo_SCPM-IGT-INAC-002-2019.pdf.
- Jack, William, and Tavneet Suri. 2014. "Risk Sharing and Transactions Costs: Evidence from Kenya's Mobile Money Revolution." *American Economic Review* 104 (1): 183–223. <https://doi.org/10.1257/aer.104.1.183>.
- Jäger, Simon, Christopher Roth, Nina Roussille, and Benjamin Schoefer. 2024. "Worker Beliefs about Outside Options." *Quarterly Journal of Economics* 139 (3): 1505–56. <https://doi.org/10.1093/qje/qjae001>.

- Jensen, Robert. 2007. "The Digital Divide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector." *Quarterly Journal of Economics* 122 (3): 879–924. <https://doi.org/10.1162/qjec.122.3.879>.
- Jensen, Robert, and Nolan H. Miller. 2018. "Market Integration, Demand, and the Growth of Firms: Evidence from a Natural Experiment in India." *American Economic Review* 108 (12): 3583–625. <https://doi.org/10.1257/aer.20161965>.
- Jo, Yoon, Misaki Matsumura, and David E. Weinstein. 2024. "The Impact of Retail E-Commerce on Relative Prices and Consumer Welfare." *Review of Economics and Statistics* 106 (6): 1675–89. https://doi.org/10.1162/rest_a_01272.
- Joaquim, Gustavo, Bernardus Van Doornik, and José Renato Ornelas. 2019. "Bank Competition, Cost of Credit and Economic Activity: Evidence from Brazil." Working Paper Series 508. Research Department, Central Bank of Brazil. <https://ideas.repec.org/p/bcb/wpaper/508.html>.
- Joaquim, Gustavo, Felipe Netto, and José Renato Ornelas. 2023. "Government Banks and Interventions in Credit Markets." Working Paper Series 579. Research Department, Central Bank of Brazil. <https://ideas.repec.org/p/bcb/wpaper/579.html>.
- Juarez, Leticia. 2024. "Buyer Market Power as Buffer to Exchange Rate Shocks." IDB Working Paper No. 1628. Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0013557>.
- Kambourov, Gueorgui. 2009. "Labour Market Regulations and the Sectoral Reallocation of Workers: The Case of Trade Reforms." *Review of Economic Studies* 76 (4): 1321–58. <https://doi.org/10.1111/j.1467-937X.2009.00552.x>.
- Kaplan, David S., Eduardo Piedra, and Enrique Seira. 2011. "Entry Regulation and Business Start-Ups: Evidence from Mexico." *Special Issue: International Seminar for Public Economics on Normative Tax Theory* 95 (11): 1501–15. <https://doi.org/10.1016/j.jpubeco.2011.03.007>.
- Karahan, Fatih, Benjamin Pugsley, and Ayşegül Şahin. 2024. "Demographic Origins of the Start-Up Deficit." *American Economic Review* 114 (7): 1986–2023. <https://doi.org/10.1257/aer.20210362>.
- Katz, Michael L., and Carl Shapiro. 1985. "Network Externalities, Competition, and Compatibility." *American Economic Review* 75 (3): 424–40.
- Kawai, Kei, and Jun Nakabayashi. 2022. "Detecting Large-Scale Collusion in Procurement Auctions." *Journal of Political Economy* 130 (5): 1364–411. <https://doi.org/10.1086/718913>.
- Keefer, Philip, and Lucas Ronconi. Forthcoming. "Ideology, (Mis)Information and the Demand for Populist Anti-inflationary Policy." Mimeo.
- Keefer, Philip, and Carlos Scartascini. 2022. *Trust: The Key to Social Cohesion and Growth in Latin America and the Caribbean*. Washington, DC: Inter-American Development Bank.
- Keister, Todd, and Daniel Sanches. 2023. "Should Central Banks Issue Digital Currency?" *Review of Economic Studies* 90 (1): 404–31.
- Khanna, Gaurav, Nicolas Morales, and Nitya Pandalai-Nayar. 2022. "Supply Chain Resilience: Evidence from Indian Firms." NBER Working Paper No. 30689. National Bureau of Economic Research, Cambridge, MA. <https://ideas.repec.org/p/nbr/nberwo/30689.html>.
- Khwaja, Asim Khwaja, and Atif Mian. 2005. "Unchecked Intermediaries: Price Manipulation in an Emerging Stock Market." *Journal of Financial Economics* 78 (1): 203–41. <https://doi.org/10.1016/j.jfineco.2004.06.014>.
- Klapper, Leora, Luc Laeven, and Raghuram Rajan. 2006. "Entry Regulation as a Barrier to Entrepreneurship." *Journal of Financial Economics* 82 (3): 591–629. <https://doi.org/10.1016/j.jfineco.2005.09.006>.

- Klette, Tor Jakob, and Samuel Kortum. 2004. "Innovating Firms and Aggregate Innovation." *Journal of Political Economy* 112 (5): 986–1018. <https://doi.org/10.1086/422563>.
- Kline, Patrick, Neviana Petkova, Heidi Williams, and Owen Zidar. 2019. "Who Profits from Patents? Rent-Sharing at Innovative Firms." *Quarterly Journal of Economics* 134 (3): 1343–404. <https://doi.org/10.1093/qje/qjz011>.
- Knack, Stephen, Nataliya Biletska, and Kanishka Kacker. 2019. "Deterring Kickbacks and Encouraging Entry in Public Procurement Markets: Evidence from Firm Surveys in 90 Developing Countries." *World Bank Economic Review* 33 (2): 287–309. <https://doi.org/10.1093/wber/lhy016>.
- Kohli, Nikita. 2024. "The Role of Unions in Labor Markets with Informality: Evidence from Brazil." Unpublished job market paper. Sanford School of Public Policy, Duke University.
- Kortum, Samuel, and Josh Lerner. 2000. "Assessing the Contribution of Venture Capital to Innovation." *RAND Journal of Economics* 31 (4): 674. <https://doi.org/10.2307/2696354>.
- Kroszner, Randall S., and Raghuram G. Rajan. 1994. "Is the Glass-Steagall Act Justified? A Study of the U.S. Experience with Universal Banking before 1933." *American Economic Review* 84 (4): 810–32.
- Lagos, Lorenzo. 2024. "Union Bargaining Power and the Amenity-Wage Tradeoff." IZA Discussion Paper No. 17034. IZA Institute of Labor Economics. <https://doi.org/10.2139/ssrn.4850630>.
- Lamadon, Thibaut, Magne Mogstad, and Bradley Setzler. 2022. "Imperfect Competition, Compensating Differentials, and Rent Sharing in the US Labor Market." *American Economic Review* 112 (1): 169–212. <https://doi.org/10.1257/aer.20190790>.
- Landau, David Evan. 2014. "Beyond Judicial Independence: The Construction of Judicial Power in Colombia." Doctoral dissertation. Harvard University, Graduate School of Arts and Sciences. <http://nrs.harvard.edu/urn-3:HUL.InstRepos:14226088>.
- La Porta, Rafael, Florencio López de Silanes, and Andrei Shleifer. 2002. "Government Ownership of Banks." *Journal of Finance* 57 (1): 265–301. <https://doi.org/10.1111/1540-6261.00422>.
- Lashkaripour, Ahmad, and Volodymyr Lugovskyy. 2023. "Profits, Scale Economies, and the Gains from Trade and Industrial Policy." *American Economic Review* 113 (10): 2759–808.
- LAVCA. 2025. *2025 Trends in Tech: Insights on the Venture Capital Industry in Latin America*. Data as of December 31, 2024. <https://www.lavca.org/research/2025-lavca-trends-in-tech/>.
- Lederman, Daniel, and William F. Maloney. 2003. "R&D and Development." Social Science Research Network, Rochester, NY. <https://papers.ssrn.com/abstract=402480>.
- Letina, Igor, Armin Schmutzler, and Regina Seibel. 2024. "Killer Acquisitions and Beyond: Policy Effects on Innovation Strategies." *International Economic Review* 65 (2): 591–622. <https://doi.org/10.1111/iere.12689>.
- Leuz, Christian, and Felix Oberholzer-Gee. 2006. "Political Relationships, Global Financing, and Corporate Transparency: Evidence from Indonesia." *Journal of Financial Economics* 81 (2): 411–39. <https://doi.org/10.1016/j.jfineco.2005.06.006>.
- Levitsky, Steven, and María Victoria Murillo. 2009. "Variation in Institutional Strength." *Annual Review of Political Science* 12 (1): 115–33. <https://doi.org/10.1146/annurev.polisci.11.091106.121756>.

- Levonyan, Vardges, and Paolo Mengano. 2025. "Mergers and Market Power." Working paper. https://www.dropbox.com/scl/fi/zi9s9kjp1zi2tztqlpen/Mergers_and_Markups-jan26.pdf?rlkey=0kxog5tql6c6qgdxrvjgazzwi&e=1&dl=0.
- Libecap, Gary. 2024. "Williamson and Coase: Transaction Costs or Rent-Seeking in the Formation of Institutions." NBER Working Paper No. 32603. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w32603>.
- Libgober, Brian. 2020. "Meetings, Comments, and the Distributive Politics of Rulemaking." *Quarterly Journal of Political Science* 15 (4): 449–81. <https://doi.org/10.1561/100.00018135>.
- Libgober, Brian, and Steven Rashin. 2023. "What Public Comments during Rulemaking Do (and Why)." *American Politics Research* 51 (6): 715–30. <https://doi.org/10.1177/1532673X231175686>.
- Lindblom, Charles Edward. 1977. *Politics and Markets: The World's Political Economic Systems*. New York: Basic Books.
- Lindqvist, Erik, and Roine Vestman. 2011. "The Labor Market Returns to Cognitive and Noncognitive Ability: Evidence from the Swedish Enlistment." *American Economic Journal: Applied Economics* 3 (1): 101–28.
- Link, Albert N. 1982. "Productivity Growth, Environmental Regulations and the Composition of R&D." *Bell Journal of Economics* 13 (2): 548–54.
- List, John A., Daniel L. Millimet, Per G. Fredriksson, and W. Warren McHone. 2003. "Effects of Environmental Regulations on Manufacturing Plant Births: Evidence from a Propensity Score Matching Estimator." *Review of Economics and Statistics* 85 (4): 944–52.
- Lluberas, Rodrigo. 2025. "Competition and Market Power in the Latin American Banking Sector." IDB Working Paper No. 1683. Inter-American Development Bank, Washington, DC. <http://dx.doi.org/10.18235/0013409>.
- Loayza, Norman, and Luis Servén. 2010. *Business Regulation and Economic Performance*. Washington, DC: World Bank.
- Lo Bello, Salvatore, and Lorenzo Pesaresi. 2025. "The Concentration Channel of the Minimum Wage." Unpublished manuscript. Bank of Italy and University of Zurich.
- Lora, Eduardo, and Carlos Scartascini. 2010. *Consecuencias imprevistas de La Constitución de 1991: La influencia de la política en las políticas económicas* [Unintended consequences of the 1991 Constitution: The influence of politics on economic policies]. Washington, DC: Inter-American Development Bank. <https://doi.org/10.18235/0002833>.
- Lotti, Giulia, Julián Messina, and Luca Nunziata. 2025. "Minimum Wages, Non-Compliance and the Uncovered Sector in Developing Countries." Unpublished manuscript. <https://www.jsmessina.com/assets/papers/MinWage.pdf>.
- LYD (Leder & Derecho). 2011. "Acuerdos colusorios: Consideraciones del caso de los pollos" [Collusive agreements: Considerations on the chicken case]. LYD. <https://lyd.org/centro-de-prensa/noticias/2011/12/acuerdos-colusorios-consideraciones-del-caso-de-los-pollos/>.
- MacDonald, James M., and Nigel D. Key. 2012. "Market Power in Poultry Production Contracting? Evidence from a Farm Survey." *Journal of Agricultural and Applied Economics* 44 (4): 477–90. <https://doi.org/10.22004/ag.econ.137136>.
- Mankiw, N. Gregory, and Michael D. Whinston. 1986. "Free Entry and Social Inefficiency." *RAND Journal of Economics* 17 (1): 48. <https://doi.org/10.2307/2555627>.
- Mannarino, Valentin, Rodolfo Stucchi, Fernanda Vicens, and Estefanía Walker. 2025. "Mapping Competition Concerns in Agricultural Markets in Latin America and the Caribbean." IDB Invest Technical Note. IDB Invest, Washington, DC.

- Manning, Alan. 2003. *Monopsony in Motion: Imperfect Competition in Labor Markets*. Princeton University Press. <https://doi.org/10.2307/j.ctt5hhpvk>.
- . 2021. "Monopsony in Labor Markets: A Review." *ILR Review* 74 (1): 3–26. <https://doi.org/10.1177/0019793920922499>.
- Manning, Alan, and Barbara Petrongolo. 2017. "How Local Are Labor Markets? Evidence from a Spatial Job Search Model." *American Economic Review* 107 (10): 2877–907. <https://doi.org/10.1257/aer.20131026>.
- Manzetti, Luigi. 1999. *Privatization South American Style*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780198294665.001.0001>.
- . 2014. "Accountability and Corruption in Argentina During the Kirchners' Era." *Latin American Research Review* 49 (2): 173–95. <https://doi.org/10.1353/lar.2014.0030>.
- Marinescu, Ioana, Ivan Ouss, and Louis-Daniel Pape. 2020. "Wages, Hires, and Labor Market Concentration." NBER Working Paper No. 28084. National Bureau of Economic Research, Cambridge, MA. <https://doi.org/10.3386/w28084>.
- Marques, Bernardo P., and Carlos F. Alves. 2024. "Heterogeneity of Business Models and Banking Sector Resilience." *Journal of Banking Regulation* 25 (3): 256–71. <https://doi.org/10.1057/s41261-023-00227-6>.
- Martinelli, Cesar, and Mariano Tommasi. 1997. "Sequencing of Economic Reforms in the Presence of Political Constraints." *Economics & Politics* 9 (2): 115–31. <https://doi.org/10.1111/1468-0343.92024>.
- Martínez, Daniel, Oscar A. Mitnik, Edgar Salgado, Lynn Scholl, and Patricia Yañez-Pagans. 2019. "Connecting to Economic Opportunity? The Role of Public Transport in Promoting Women's Employment in Lima." IZA Discussion Paper No. 12020. IZA Institute of Labor Economics. <https://doi.org/10.2139/ssrn.3318780>.
- Martínez, Tomás, and Cezar Santos. 2025. "Market Power with Formal and Informal Firms." Unpublished paper. Department of Economics, Insper, and Research Department, Inter-American Development Bank, Washington, DC.
- Marto, Ricardo. 2023. "Structural Change and the Rise in Markups." Working Paper No. 2024-002B. Federal Reserve Bank of St. Louis.
- McAdams, John M. 2019. "Non-Compete Agreements: A Review of the Literature." Federal Trade Commission, Bureau of Economics, Washington, DC. <https://doi.org/10.2139/ssrn.3513639>.
- McDonald, Ian, and Robert Solow. 1981. "Wage Bargaining and Employment." *American Economic Review* 71 (5): 896–908.
- McKenzie, David. 2021. "Small Business Training to Improve Management Practices in Developing Countries: Re-Assessing the Evidence for 'Training Doesn't Work.'" *Oxford Review of Economic Policy* 37 (2): 276–301. <https://doi.org/10.1093/oxrep/grab002>.
- Melitz, Marc J. 2003. "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity." *Econometrica* 71 (6): 1695–725. <https://doi.org/10.1111/1468-0262.00467>.
- Méndez, Esteban, and Diana Van Patten. 2022. "Multinationals, Monopsony, and Local Development: Evidence from the United Fruit Company." *Econometrica* 90 (6): 2685–721. <https://doi.org/10.3982/ECTA19514>.
- Mérel, Pierre, and Richard J. Sexton. 2017. "Buyer Power with Atomistic Upstream Entry: Can Downstream Consolidation Increase Production and Welfare?" *International Journal of Industrial Organization* 50 (C): 259–93.
- Mertens, Matthias. 2023. "Labor Market Power and Between-Firm Wage (In) Equality." *International Journal of Industrial Organization* 91: 103005. <https://doi.org/10.1016/j.ijindorg.2023.103005>.

- Mesquita Moreira, Mauricio 2018. *Connecting the Dots: A Road Map for Better Regional Integration in Latin America and the Caribbean*. Washington, DC: Inter-American Development Bank. <http://dx.doi.org/10.18235/0001132>.
- Mesquita Moreira, Mauricio, Juan S. Blyde, Christian Volpe Martincus, and Danielken Molina. 2013. *Too Far to Export: Domestic Transport Costs and Regional Export Disparities in Latin America*. Washington, DC: Inter-American Development Bank. <http://dx.doi.org/10.18235/0012838>.
- Mesquita Moreira, Mauricio, Christian Volpe Martincus, and Juan S. Blyde. 2008. "Unclogging the Arteries: The Impact of Transport Costs on Latin American and Caribbean Trade." Inter-American Development Bank, Washington, DC. <http://dx.doi.org/10.18235/0012316>.
- Mesquita Moreira, Mauricio, and Ernesto H. Stein 2019. "Trading Promises for Results: What Global Integration Can Do for Latin America and the Caribbean." Inter-American Development Bank, Washington, DC. <http://dx.doi.org/10.18235/0001886>.
- Miao, Guannan, and Enrico Wegner. 2022. "Recent Trends in Transport and Insurance Costs and Estimates at Disaggregated Product Level." OECD Statistics Working Paper No. 2022/02. OECD Publishing, Paris, <https://doi.org/10.1787/b5dbab02-en>.
- Miller, Nathan H. 2009. "Strategic Leniency and Cartel Enforcement." *American Economic Review* 99 (3): 750–68. <https://doi.org/10.1257/aer.99.3.750>.
- . 2025. "Industrial Organization and The Rise of Market Power." *International Journal of Industrial Organization* 98: 103131. <https://doi.org/10.1016/j.ijindorg.2024.103131>.
- Ministerio de Comercio, Industria y Turismo, and Superintendencia de Industria y Comercio. 2015. Resolución N°80847 de 2015. Versión Pública. República de Colombia.
- Ministerio de Economía y Finanzas. 2024. Resolución N° 66/2024, "ATHN Foods Holdings S.A.U - Marfrig Global Foods S.A." Concentración económica. Comisión de Promoción y Defensa de la Competencia, Montevideo, Uruguay.
- Minton, Robbie, and Mariano Somale. 2025. "Detecting Tariff Effects on Consumer Prices in Real Time." FEDS Notes. Board of Governors of the Federal Reserve System. <https://www.federalreserve.gov/econres/notes/feds-notes/detecting-tariff-effects-on-consumer-prices-in-real-time-20250509.html>.
- Mongey, Simon. 2021. "Market Structure and Monetary Non-Neutrality." NBER Working Paper No. 29233. National Bureau of Economic Research. <https://doi.org/10.3386/w29233>.
- Morales, Fernando, Denisse Pierola, and Christian Volpe Martincus. 2019. "A Microeconomic Look at the Impact of Tariffs on Latin American Exports." Discussion Paper No. IDB-DP-00734. Inter-American Development Bank, Washington, DC.
- Moreau, Flavien, and Ludovic Panon. 2022. "Macroeconomic Effects of Market Structure Distortions: Evidence from French Cartels." IMF Working Paper No. 2022/104. International Monetary Fund, Washington, DC. <https://doi.org/10.5089/9798400210686.001>.
- Morlacco, Monica. 2020. "Market Power in Input Markets: Theory and Evidence from French Manufacturing." Unpublished manuscript. Department of Economics, University of Southern California.
- Mortensen, Dale T. 2010. "Dynamic Monopsonistic Competition and Labor Market Equilibrium." 2010 Meeting Paper No. 164. Society for Economic Dynamics. <https://ideas.repec.org/p/red/sed010/164.html>.

- Moscarini, Giuseppe, and Fabien Postel-Vinay. 2010. "Unemployment and Small Cap Returns: The Nexus." *American Economic Review* 100 (2): 333–37. <https://doi.org/10.1257/aer.100.2.333>.
- Murillo, María Victoria. 2002. "Political Bias in Policy Convergence, Privatization Choices in Latin America." *World Politics* 54: 462–93.
- Murillo, María Victoria, Ben Ross Schneider, Mercedes Iacoviello, Carlos Scartascini, Francisco Monaldi, J. Mark Payne, Cecilia Martínez-Gallardo, et al. 2006. "The Politics of Policies: Economic and Social Progress in Latin America: 2006 Report." Inter-American Development Bank, Washington DC. <https://doi.org/10.18235/0012575>.
- Neal, Derek. 1995. "Industry-Specific Human Capital: Evidence from Displaced Workers." *Journal of Labor Economics* 13 (4): 653–77.
- Nelson, Richard R. 1959. "The Simple Economics of Basic Scientific Research." *Journal of Political Economy* 67 (3): 297–306. <https://doi.org/10.1086/258177>.
- Nicoletti, Giuseppe, and Stefano Scarpetta. 2003. "Regulation, Productivity and Growth: OECD Evidence." *Economic Policy* 18 (36): 9–72. <https://doi.org/10.1111/1468-0327.00102>.
- Nishida, Mitsukuni. 2014. "The Costs of Zoning Regulations in Retail Chains: The Case of the City Planning Act of 1968 in Japan." *Journal of Regulatory Economics* 45 (3): 305–28. <https://doi.org/10.1007/s11149-014-9247-x>.
- Nobel Prize Committee. 2022. "Financial Intermediation and the Economy." Nobel Prize in Economics documents. https://ideas.repec.org/p/ris/nobel/2022_002.html.
- North, Douglass C., John Joseph Wallis, and Barry R. Weingast. 2009. *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*, 1st ed. Cambridge University Press. <https://doi.org/10.1017/CBO9780511575839>.
- OECD (Organisation for Economic Co-operation and Development). 2007. "Sugar Policy Reform in the European Union and in World Sugar Markets." OECD Committee of Agriculture. OECD Publishing, Paris, France. https://www.oecd.org/content/dam/oecd/en/publications/reports/2007/11/sugar-policy-reform-in-the-european-union-and-in-world-sugar-markets_g1gh8701/9789264040212-en.pdf.
- . 2014. "OECD Review of Telecommunication Policy and Regulation in Colombia." OECD Publishing, Paris, France. <https://doi.org/10.1787/9789264208131-en>.
- . 2018. "Market Examinations in Mexico: Case Study of the Chicken Meat Market." Organización para la Cooperación y el Desarrollo Económico.
- . 2024a. "Competition in the Food Supply Chain." OECD Roundtables on Competition Policy Papers, No. 319, OECD Publishing, Paris, France. https://www.oecd.org/en/publications/competition-in-the-food-supply-chain_37d6b801-en.html.
- . 2024b. *Panorama de las administraciones públicas: América Latina y el Caribe 2024* [Public administration overview: Latin America and the Caribbean 2024]. Paris: OECD. <https://doi.org/10.1787/0f191dcb-es>.
- OECD (Organisation for Economic Co-operation and Development)/Eurostat. 2018. *Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation, 4th Edition*. The Measurement of Scientific, Technological and Innovation Activities. Paris: OECD Publishing. <https://doi.org/10.1787/9789264304604-en>.
- Oi, Walter Y., and Todd L. Idson. 1999. "Chapter 33 Firm Size and Wages." *Handbook of Labor Economics* 3 (Part B): 2165–214. Elsevier. [https://doi.org/10.1016/S1573-4463\(99\)30019-5](https://doi.org/10.1016/S1573-4463(99)30019-5).

- Olson, Mancur. 1965. *The Logic of Collective Action, Public Goods and the Theory of Groups*. Harvard University Press. http://commres.net/wiki/_media/olson.pdf.
- Ormosi, Peter L. 2014. "A Tip of the Iceberg? The Probability of Catching Cartels." *Journal of Applied Econometrics* 29 (4): 549–66.
- Pachón, Mónica, and Javier Brolo. 2021. "Lobbying for Inequality? How Business Elites Shape Differently Policy in El Salvador, Honduras, and Guatemala." UNDP LAC Working Paper No. 06. Background Paper for the UNDP LAC Regional Human Development Report 2021. https://www.undp.org/sites/g/files/zskgke326/files/migration/latinamerica/undp-rblac-PNUD_bckPapers06-OK.pdf.
- Pantea, Smaranda, and Marcel Tkacik. 2024. "Venture Capital and High-Tech Start-Ups in Europe: A Systematic Review of the Empirical Evidence." *Venture Capital*: 1–24. <https://doi.org/10.1080/13691066.2024.2315069>.
- Parente, Stephen L., and Edward C. Prescott. 2000. *Barriers to Riches*. MIT Press.
- Pavcnik, Nina. 2002. "Trade Liberalization, Exit, and Productivity Improvements: Evidence from Chilean Plants." *Review of Economic Studies* 69 (1): 245–76. <https://doi.org/10.1111/1467-937X.00205>.
- Petersen, Niels. 2013. "Antitrust Law and the Promotion of Democracy and Economic Growth." *Journal of Competition Law & Economics* 9 (3): 593–636. <https://doi.org/10.1093/joclec/nht003>.
- Pierce, Justin R., and Peter K. Schott. 2016. "The Surprisingly Swift Decline of US Manufacturing Employment." *American Economic Review* 106 (7): 1632–662. DOI: 10.1257/aer.20131578.
- Ponce, Carlos, and Flavia Roldán. 2015. "Innovación e intensidad competitiva. Uruguay 2014–2012" [Innovation and competitive intensity. Uruguay 2004–2012]. No. 103. Universidad ORT Uruguay. <https://ideas.repec.org/p/avs/wpaper/103.html>.
- Prager, Elena, and Matt Schmitt. 2021. "Employer Consolidation and Wages: Evidence from Hospitals." *American Economic Review* 111 (2): 397–427. <https://doi.org/10.1257/aer.20190690>.
- Prasad, Eswar S. 2023. "The Future of Money and Its Implications for Society, Central Banks, and the International Monetary System." *Federal Reserve Bank of St. Louis Review*. <https://www.stlouisfed.org/publications/review/2022/12/23/the-future-of-money-and-its-implications-for-society-central-banks-and-the-international-monetary-system>.
- Purdue University. 2024. "How Brazil's 2035 Logistics Plan Could Transform Crop Production and Global Trade." Purdue University, Center for Food and Agricultural Business. <https://agribusiness.purdue.edu/2024/09/10/how-brazil-2035-logistics-plan-could-transform-crop-production-and-global-trade/>.
- Puri, Manju, and Rebecca Zarutskie. 2012. "On the Life Cycle Dynamics of Venture-Capital- and Non-Venture-Capital-Financed Firms." *Journal of Finance* 67 (6): 2247–93. <https://doi.org/10.1111/j.1540-6261.2012.01786.x>.
- Qian, Yi. 2008. "Impacts of Entry by Counterfeiters." *Quarterly Journal of Economics* 123 (4): 1577–609. <https://doi.org/10.1162/qjec.2008.123.4.1577>.
- Raith, Michael. 2003. "Competition, Risk, and Managerial Incentives." *American Economic Review* 93 (4): 1425–36. <https://doi.org/10.1257/000282803769206395>.
- Rajan, Raghuram, and Luigi Zingales. 2003. *Saving Capitalism from the Capitalists: Unleashing the Power of Financial Markets to Create Wealth and Spread Opportunity*. Crown Business.
- Raval, Devesh. 2023. "Testing the Production Approach to Markup Estimation." *Review of Economic Studies* 90:2592–611. <https://doi.org/10.1093/restud/rdad002>.
- Restuccia, Dieman and Richard Rogerson. 2008. "Policy Distortions and Aggregate Productivity with Heterogeneous Establishments." *Review of Economic Dynamics* 11 (4): 707–20. <https://doi.org/10.1016/j.red.2008.05.002>.

- Rinz, Kevin. 2020. "Labor Market Concentration, Earnings, and Inequality." *Journal of Human Resources* 57 (S): S251–83. <https://doi.org/10.3368/jhr.monopsony.0219-10025R1>.
- Ritter, Jay R. 2015. "Growth Capital-Backed IPOs." *Financial Review* 50 (4): 481–515. <https://doi.org/10.1111/fire.12075>.
- Robinson, Joan. 1969. *The Economics of Imperfect Competition*, 2nd ed. Palgrave Macmillan. https://econpapers.repec.org/bookchap/palpalchp/978-1-349-15320-6_5f19.htm.
- Romer, Paul M. 1990. "Endogenous Technological Change." *Journal of Political Economy* 98 (5, Part 2): S71–102. <https://doi.org/10.1086/261725>.
- Ronconi, Lucas. 2021. "How Do Labor Unions Affect Inequality and Efficiency in Latin America and the Caribbean?" UNDP LAC Working Paper No. 7. United Nations Development Programme. https://www.undp.org/sites/g/files/zskgke326/files/migration/latinamerica/undp-rblac-PNUD_bckPapers07-OK.pdf.
- Rong, Ke, D. Daniel Sokol, Di Zhou, and Feng Zhu. 2024. "Antitrust Platform Regulation and Entrepreneurship: Evidence from China." Harvard Business School Working Paper No. 24-039. Harvard Business School, Boston, MA.
- Rossi, Martín A., Antonia Vázquez, and Juan Cruz Vieyra. 2020. "Information Disclosure and the Performance of Public Investment: The Case of Costa Rica." IDB Discussion Paper No. 795. Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0002623>.
- Rossi-Hansberg, Esteban, Pierre-Daniel Sarte, and Nicholas Trachter. 2021. "Diverging Trends in National and Local Concentration." *NBER Macroeconomics Annual* 35 (1): 115–50.
- Rubens, Michael. 2023. "Market Structure, Oligopsony Power, and Productivity." *American Economic Review* 113 (9): 2382–410.
- Ryan, Stephen P. 2012. "The Costs of Environmental Regulation in a Concentrated Industry." *Econometrica* 80 (3): 1019–61. <https://doi.org/10.3982/ECTA6750>.
- Sampaio, Matheus, and José Renato Haas Ornelas. 2024. "Payment Technology Complementarities and their Consequences on the Banking Sector." SSRN Scholarly Paper. Social Science Research Network. <https://doi.org/10.2139/ssrn.5002235>.
- Santiso, Javier. 2012. *La década de las Multilatinas* [The decade of Multilatinas]. Madrid: Fundación Carolina: Siglo XXI.
- Sarkisyan, Sergey. 2024. "Instant Payment Systems and Competition for Deposits." Social Science Research Network, Rochester, NY. <https://doi.org/10.2139/ssrn.4176990>.
- Scartascini, Carlos, Ernesto H. Stein, Mariano Tommasi, Mark P. Jones, Sebastián Saiegh, Mariana Magaldi de Sousa, Cecilia Martínez-Gallardo, Laura Zuvanic, Mercedes Iacoviello, and Ana Laura Rodríguez Gusta. 2010. *How Democracy Works: Political Institutions, Actors and Arenas in Latin American Policymaking*. Washington, DC: Inter-American Development Bank.
- Scartascini, Carlos, and Mariano Tommasi. 2010. "The Politics of Productivity." *The Age of Productivity. Transforming Economies from the Bottom Up*. Development in the Americas. Inter-American Development Bank and Palgrave-Macmillan.
- . 2014. "Government Capabilities in Latin America: Why They Are So Important, What We Know About Them, and What to Do Next." IDB Working Paper No. IDB-PB-210. Inter-American Development Bank, Washington, DC. <https://doi.org/10.2139/ssrn.2380005>.
- Schäfer, Maximilian, and Geza Sapi. 2020. "Learning from Data and Network Effects: The Example of Internet Search." DIW Berlin Discussion Paper No. 1894. <https://doi.org/10.2139/ssrn.3688819>.

- Schiffbauer, Marc, James Sampi, and Javier Coronado. 2025. "Competition and Productivity: Evidence from Peruvian Municipalities." *Review of Economics and Statistics* 107 (1): 95–108. https://doi.org/10.1162/rest_a_01257.
- Schivardi, Fabiano, and Eliana Viviano. 2011. "Entry Barriers in Retail Trade." *Economic Journal* 121 (551): 145–70. <https://doi.org/10.1111/j.1468-0297.2009.02348.x>.
- Schneider, Ben Ross. 2004. *Business Politics and the State in Twentieth-Century Latin America*. 1st ed. Cambridge University Press. <https://doi.org/10.1017/CBO9780511606854>.
- . 2009. "Hierarchical Market Economies and Varieties of Capitalism in Latin America." *Journal of Latin American Studies* 41 (3): 553–75. <https://doi.org/10.1017/S0022216X09990186>.
- . 2010. "Business Politics in Latin America: Patterns of Fragmentation and Centralization." In *The Oxford Handbook of Business and Government*, edited by David Coen, Wyn Grant, and Graham Wilson. Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199214273.003.0014>.
- . 2013a. *Hierarchical Capitalism in Latin America: Business, Labor, and the Challenges of Equitable Development*. 1st ed. Cambridge University Press. <https://doi.org/10.1017/CBO9781107300446>.
- . 2013b. "Institutions for Effective Business-Government Collaboration: Micro Mechanisms and Macro Politics in Latin America." IDB Working Paper No. IDB-WP-418. Inter-American Development Bank, Washington DC. <https://ideas.repec.org/p/idd/briks/4674.html>.
- . 2021. "Big Business and the Inequality Trap in Latin America: Taxes, Collusion, and Undue Influence." UNDP LAC Working Paper No. 05. Background Paper for the UNDP LAC 2021 Regional Human Development Report. <https://www.undp.org/latin-america/publications/big-business-and-inequality-trap-latin-america-taxes-collusion-and-undue-influence>.
- Schneider, Ben Ross, Peter Evans, Eduardo Silva, Alfred Chandler, Franco Amatori, and Takahashi Hikino. 1998. "Elusive Synergy: Business-Government Relations and Development." *Comparative Politics* 31 (1): 101. <https://doi.org/10.2307/422108>.
- Schoenherr, David. 2019. "Political Connections and Allocative Distortions." *Journal of Finance* 74 (2): 543–86. <https://doi.org/10.1111/jofi.12751>.
- Schubert, Gregor, Anna Stansbury, and Bledi Taska. 2022. "Employer Concentration and Outside Options." Working Paper Series. Washington Center for Equitable Growth, Washington, DC. <https://equitablegrowth.org/wp-content/uploads/2021/01/030822-WP-Employer-Concentration-and-Outside-Options-Schubert-Stansbury-and-Taska.pdf>.
- Schumpeter, J. A. 1943. *Capitalism, Socialism and Democracy*. London: Allen Unwin.
- Shik, Olga, Rachel Boyce, and Carmine Paolo De Salvo. 2017. "Analysis of Agricultural Policies in Jamaica." Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0000767>.
- Shleifer, Andrei, and Robert W. Vishny. 1986. "Large Shareholders and Corporate Control." *Journal of Political Economy* 94 (3, Part 1): 461–88. <https://doi.org/10.1086/261385>.
- . 1994. "Politicians and Firms." *Quarterly Journal of Economics* 109 (4): 995–1025. <https://doi.org/10.2307/2118354>.
- Singla, Shikhar. 2023. "Regulatory Costs and Market Power." LawFin Working Paper Series No. 47. Foundations of Law & Finance (LawFin), Frankfurt, Germany. <https://dx.doi.org/10.2139/ssrn.4368609>.
- Sokolova, Anna, and Todd Sorensen. 2021. "Monopsony in Labor Markets: A Meta-Analysis." *ILR Review* 74 (1): 27–55. <https://doi.org/10.1177/0019793920965562>.

- Spiller, Pablo T., and Mariano Tommasi. 2009. *The Institutional Foundations of Public Policy in Argentina: A Transactions Cost Approach*. Political Economy of Institutions and Decisions. New York, NY: Cambridge University Press.
- Starr, Evan. 2019. "Consider This: Training, Wages, and the Enforceability of Covenants Not to Compete." *ILR Review* 72 (4): 783–17. <https://journals.sagepub.com/doi/10.1177/0019793919826060>.
- Starr, Evan, J. J. Prescott, and Norman Bishara. 2021. "Noncompete Agreements in the U.S. Labor Force." *Journal of Law and Economics* 64 (1). <https://doi.org/10.1086/712206>.
- Stryszowska, Marta. 2012. "Estimation of Loss in Consumer Surplus Resulting from Excessive Pricing of Telecommunication Services in Mexico." OECD Digital Economy Paper No. 191. OECD Publishing, Paris. <https://doi.org/10.1787/5k9gtw51j4vb-en>.
- Sturzenegger, Federico, and Mariano Tommasi, eds. 1998. *The Political Economy of Reform*. Cambridge: MIT Press.
- Sunstein, Cass R. 2013. *Simpler: The Future of Government*. New York: Simon & Schuster.
- . 2018. *The Cost-Benefit Revolution*. MIT Press.
- . 2019. *How Change Happens*. MIT Press.
- Sutton, J. 2001. *Technology and Market Structure: Theory and History*. MIT Press.
- Symeonidis, George. 2008. "The Effect of Competition on Wages and Productivity: Evidence from the United Kingdom." *Review of Economics and Statistics* 90 (1): 134–46.
- Tabak, Benjamin M., Dimas M. Fazio, and Daniel O. Cajueiro. 2012. "The Relationship between Banking Market Competition and Risk-Taking: Do Size and Capitalization Matter?" *Journal of Banking & Finance* 36 (12): 3366–81.
- Syverson, Chad. 2011. "What Determines Productivity?" *Journal of Economic Literature* 49 (2): 326–65. <https://doi.org/10.1257/jel.49.2.326>.
- Talamas Marcos, Miguel Ángel. 2025. "Surviving Competition: Neighbourhood Shops versus Convenience Chains." *Review of Economic Studies* 92 (1): 553–85. <https://doi.org/10.1093/restud/rdae023>.
- Tamkoc, M. Nazim, and Gustavo Ventura. 2024. "Rules and Regulations, Managerial Time and Economic Development." Policy Research Working Paper No. 10761. World Bank, Washington, DC. <http://documents.worldbank.org/curated/en/09904405032412007>.
- Tello, Mario D., Daniel S. Tello-Trillo, and Pablo Rojas. 2025. "Productivity and Market Power: The Case of Manufacturing Firms of Peru 2002–2019." IDB Working Paper No. 1684. Inter-American Development Bank, Washington, DC. <http://dx.doi.org/10.18235/0013470>.
- Tommasi, Mariano, and Andrés Velasco. 1996. "Where Are We in the Political Economy of Reform?" *Journal of Policy Reform* 1 (2): 187–238. <https://doi.org/10.1080/13841289608523362>.
- Tortarolo, Dario, and Román D. Zárate. 2018. "Imperfect Competition in Product and Labor Markets. A Quantitative Analysis." Social Science Research Network. <https://doi.org/10.2139/ssrn.3098141>.
- Tovar, Jorge, Christian Jaramillo, and Carlos Hernández. 2007. "Risk, Concentration and Market Power in the Banking Industry: Evidence from the Colombian System (1997–2006)." CEDE Document No. 4385. Faculty of Economics, University of Los Andes. <https://ideas.repec.org/p/col/000089/004385.html>.
- Trebbi, Francesco, Miao Ben Zhang, and Michael Simkovic. 2023. "The Cost of Regulatory Compliance in the United States." USC Marshall School of Business research paper, sponsored by iORB. <https://doi.org/10.2139/ssrn.4331146>.

- Tucker, Lee. 2017. "Monopsony for Whom? Evidence from Brazilian Administrative Data." Unpublished manuscript. Boston University.
- Ulyssea, Gabriel. 2018. "Firms, Informality, and Development: Theory and Evidence from Brazil." *American Economic Review* 108 (8): 2015–47. <https://doi.org/10.1257/aer.2014.1745>.
- U.S. Department of Justice and Federal Trade Commission. 2023. *Merger Guidelines*. <https://www.justice.gov/atr/2023-merger-guidelines>.
- U.S. Federal Trade Commission. 2024a. "FTC Announces 2024 Update of Size of Transaction Thresholds for Premerger Notification Filings." Press release. <https://www.ftc.gov/news-events/news/press-releases/2024/01/ftc-announces-2024-update-size-transaction-thresholds-premerger-notification-filings>.
- U.S. Federal Trade Commission. 2024b. "FTC Challenges Kroger's Acquisition of Albertsons." Press release. <https://www.ftc.gov/news-events/news/press-releases/2024/02/ftc-challenges-krogers-acquisition-albertsons>.
- U.S. Federal Trade Commission and Department of Justice. 2021. *Hart-Scott-Rodino Annual Report, Fiscal Year 2021*. Washington, DC. https://www.ftc.gov/system/files/ftc_gov/pdf/p110014fy2021hsrannualreport.pdf.
- Utar, Håle, Alfonso Cebreros Zurita, and Luis Torres. 2025. "The US-China Trade War and the Relocation of Global Value Chains to Mexico." <https://drive.google.com/file/d/1eBKus298icSouwPDG8gFlxE04mdFhJMV/view>.
- Vial Lecaros, Felipe, Román D. Zárate, and Jorge Pérez Pérez. 2023. "Urban Transit Infrastructure: Spatial Mismatch and Labor Market Power." Working paper no. 2023-17. Banco de México. <https://ideas.repec.org/p/bdm/wpaper/2023-17.html>.
- Vieicens, María Fernanda. 2024. "Competition for Sustainability: The Sugar Case." CPI Columns: Latin America. Competition Policy International. <https://www.pymnts.com/cpi-posts/competition-for-sustainability-the-sugar-case/>.
- Volpe Martincus, Christian. 2016. "Out of the Border Labyrinth: An Assessment of Trade Facilitation Initiatives in Latin America and the Caribbean." <https://publications.iadb.org/en/out-border-labyrinth-assessment-trade-facilitation-initiatives-latin-america-and-caribbean>.
- Volpe Martincus, Christian, Monika Sztajerowska, and Mariana Belén Santi. 2024. "Consumers and Firms in International Trade." Working paper. <https://publications.iadb.org/en/consumers-and-firms-international-trade>.
- Wallsten, Scott. 2017. "The Competitive Effects of the Sharing Economy: How Is Uber Changing Taxis?" Technology Policy Institute Research Papers. Technology Policy Institute, Washington, DC.
- Wang, Yifei, Toni M. Whited, Yufeng Wu, and Kairong Xiao. 2022. "Bank Market Power and Monetary Policy Transmission: Evidence from a Structural Estimation." *Journal of Finance* 77 (4): 2093–2141. <https://doi.org/10.1111/jofi.13159>.
- Weik, Stefan, Ann-Kristin Achleitner, and Reiner Braun. 2024. "Venture Capital and the International Relocation of Startups." *Research Policy* 53 (7): 105031. <https://doi.org/10.1016/j.respol.2024.105031>.
- Weyl, E. Glen, and Michal Fabinger. 2013. "Pass-Through as an Economic Tool: Principles of Incidence under Imperfect Competition." *Journal of Political Economy* 121 (3): 528–83.
- Wiesner, Eduardo. 2008. "The Political Economy of Macroeconomic Policy Reform in Latin America." No. 12913. Edward Elgar Publishing. <https://ideas.repec.org/b/elg/eebook/12913.html>.
- Wilson, James Q. 1980. *The Politics of Regulation*. Basic Books. <https://books.google.com/books?id=SxOGt8sAQa0C>.
- Wong, Sara, and Marjan Petreski. 2025. "Competition Law and Regulations: Productivity Impacts in Latin American Manufacturing Firms." IDB Working

- Paper No. 1645. Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0013363>.
- Wooldridge, Jeffrey M. 2009. "On Estimating Firm-Level Production Functions Using Proxy Variables to Control for Unobservables." *Economics Letters* 104 (3): 112–14. <https://doi.org/10.1016/j.econlet.2009.04.026>.
- World Bank. 2021. "Fixing Markets, Not Prices: Policy Options to Tackle Economic Cartels in Latin America and the Caribbean." World Bank, Washington, DC. <https://hdl.handle.net/10986/35985>.
- Yannelis, Constantine, and Anthony Lee Zhang. 2023. "Competition and Selection in Credit Markets." *Journal of Financial Economics* 150 (2): 103710. <https://doi.org/10.1016/j.jfineco.2023.103710>.
- Yeh, Chen, Claudia Macaluso, and Brad Hershbein. 2022. "Monopsony in the US Labor Market." *American Economic Review* 112 (7): 2099–138. <https://doi.org/10.1257/aer.20200025>.
- Yeyati, Eduardo Levy, and Alejandro Micco. 2007. "Concentration and Foreign Penetration in Latin American Banking Sectors: Impact on Competition and Risk." *Journal of Banking & Finance* 31 (6): 1633–47.
- Zanoni, Wladimir, Paul Carrillo-Maldonado, Juan Pantano, and Nicolás Chuquimarca. 2024. "Irrational Bunching? Tax Regimes, Brackets, and Taxpayer Behaviors." Inter-American Development Bank, Washington, DC. <https://doi.org/10.18235/0013005>.
- Zavala, Lucas. 2023. "Unfair Trade? Monopsony Power in Agricultural Value Chains." Unpublished paper, supported by the National Science Foundation and the MacMillan Center for International and Area Studies. <https://steg.cepr.org/sites/default/files/2022-01/Full%206%20Paper%20Zavala.pdf>.
- Zigraiova, Diana, and Tomas Havranek. 2016. "Bank Competition and Financial Stability: Much Ado About Nothing?" *Journal of Economic Surveys* 30 (5): 944–81.
- Zingales, Luigi. 2025. "The Role of Conglomerates in Chile." *Estudios de Economía* 51 (2). <https://estudiosdeeconomia.uchile.cl/index.php/EDE/article/view/76935>.

Latin America and the Caribbean has made major social and macroeconomic strides, yet growth and productivity remain weak. *Markets for Development: Improving Lives through Competition* argues that the region's core challenge is limited market competition. High market concentration, regulatory barriers, and weak enforcement of rules allow dominant firms to restrict entry, innovation, and opportunity. This book presents new evidence on how market power shapes firm behavior, employment, and inequality across sectors. It also demonstrates that reducing fragmentation, improving regulation, and strengthening competition policy can lower prices for consumers, raise productivity, create better jobs, and build fiscal capacity, making competition a central driver of development.

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