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Abstract¹

This paper uses datasets from six surveys to describe entrepreneurship in Argentina. While the quantity of entrepreneurship in Argentina is high, its quality is low, given the high proportion of informal and necessity entrepreneurs. Income is found to play a greater role in determining probability of becoming an entrepreneur than parental wealth; entrepreneurship is, however, transmitted inter-generationally. Although it is found that Argentina promotes entrepreneurial values more than most Latin American countries, entrepreneurs face several obstacles. Finally, using panel data based on household surveys, the paper estimates the short and long-run effects of an increase in public employment on entrepreneurship, finding the effects to be negative and strong. Overall, the evidence suggests that changes in public policies and other areas are needed for Argentina to become an entrepreneurial economy.

JEL classifications: L26, L5, O17

Keywords: Entrepreneurship, Values, Economic policy, Public employment, Argentina

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1. Rationale and Objectives

An entrepreneurial spirit has long been viewed as a positive factor for economic growth (Schumpeter, 1934; Schmitz, 1989; King and Levine, 1993; Wennekers and Thurik, 1999). In addition, a large middle class has been postulated as the cradle of entrepreneurship (Landes, 1998; Maddison, 2007). The usual argument posits that middle-class individuals have the resources and values to postpone gratification and reap the long-term benefits of innovation. Linking these two together, it appears that a large middle class should promote economic growth through a dynamic entrepreneurial environment.

Argentina is particularly puzzling. It has long been described as having a large middle class (Altimir, 1986). Since the early twentieth century, Argentina and Uruguay have had the largest middle classes in Latin America (Torrado, 1992). According to the theory in the previous paragraph, this attribute should have translated into high economic growth in subsequent decades. However, Argentina's economy performed poorly in the second half of the twentieth century. Questioning why the link between a large middle class and economic growth broke down, we tentatively answer that public policy in the second half of the twentieth century made a difference, and that, if a large middle class is a necessary condition for economic catch-up, it is not sufficient. Public policy incentives are such that too few within the Argentinean middle class become productive entrepreneurs.

Argentina is home to many entrepreneurs, as documented by Ardagna and Lusardi (2008), among others. The type of entrepreneurship that dominates the landscape, however, is not conducive to economic growth. As the authors put it, there are many "necessity" entrepreneurs, but not so many "opportunity" entrepreneurs. "Necessity" entrepreneurs are those who choose entrepreneurship because they lack a decent salaried alternative, not because they see a business opportunity. As we will show, a large number of entrepreneurs, i.e., business owners and the self-employed, are of the informal type in low-productivity occupations, and many of them engage in rent-seeking. Thus, it is important to characterize entrepreneurship by both its quantity and its quality. Taking a long-term perspective, this is exactly what Baumol (1990) does, although only theoretically and historically, when he distinguishes between productive, unproductive, and destructive entrepreneurship.² Only the first type is conducive to

² Hirschleifer (2001) also develops this topic.

economic growth, according to the theories of Schumpeter (1934) and Aghion and Howitt (1992).

The question then becomes: why does a relatively large middle class fail to yield a relatively large high-producing entrepreneurial class? Our hypothesis is that public policy-directed choices pushed middle-class individuals out of productive entrepreneurship.

What were those policies? First, the broken link between the middle classes and entrepreneurship is partly due to a disastrous monetary and financial policy, which kept the financial sector highly undeveloped. According to World Bank Indicators, credit to the private sector in Argentina amounts to 14 percent of GDP, while in Brazil it is 53 percent, in Chile it is 97 percent, and in OECD countries it is 152 percent. The savings of the middle class are consequently not channeled to highly productive investments with high micro-level indivisibilities and uncertainty (Acemoglu and Zilibotti, 1997). Second, the bureaucracy has been highly inefficient in promoting business creation and reducing its costs, as De Soto (1986) argued about circumstances in Peru. Third, the tax system is highly non-continuous, meaning that the marginal rates for business have drastic jumps in size. This policy has created a segmented business distribution: a few large, formal, high-productivity businesses and many small, informal, low-productivity businesses.³ As a consequence, entrepreneurs have no incentive to increase the size of their businesses. Fourth, labor regulations and taxes have deterred formal job creation. Last, fiscal federalism created rentier provincial governments that use federal transfers to obtain local political support by offering attractive public employment (Gervasoni, 2010), and public employment has crowded out entrepreneurship.

This paper has four objectives. First, we describe entrepreneurs in Argentina: their demographics, schooling, employment conditions, the size of their firms, income, and inter-generational characteristics.⁴ This characterization provides measures of quantity and quality of entrepreneurs. Section 2 discusses measurement issues, and Sections 3 and 4 characterize entrepreneurs. Second, we describe entrepreneurial values, and analyze how much Argentinean society supports those values (Section 5).⁵ The third objective is to summarize the main policy

³ A recent publication (IDB, 2010) shows the predominance of small firms in Latin America, including Argentina, with low aggregate productivity, especially in the service sector.

⁴ Similar characterizations have been done by Evans and Leighton (1989) for the United States and Blanchflower and Shadforth (2007) for the United Kingdom.

⁵ Similar work on the relationship between values and entrepreneurship can be found in Phelps (2011) and Freytag and Thurik (2010).

obstacles faced by entrepreneurs, which we discuss in Section 6. Finally, in Section 7, we estimate the effect of a particular public policy, i.e., public employment, on entrepreneurship.⁶

The paper is mainly descriptive. We believe that providing a collection of stylized facts is necessary given the relatively small amount of research on entrepreneurship in developing countries and its relationship to public policy. The paper also presents a wide range of characteristics, including quality of entrepreneurs, demographics, values, and public policies. We hope that such a collection of facts and correlations will serve as a guide for future formal modeling and deeper empirical analysis. Finally, since there is no single source of information, we use a large number of datasets: three Argentine household surveys in Sections 3 and 4 (EPH, EPH special survey, and EDS), the World Values Survey in Section 5, two firm-level surveys in Section 6 (i.e., the registered and the unregistered firms Enterprise Surveys), and administrative data on registered firms, as well as EPH, in Section 7. Although these datasets provide valuable information, many measurement problems remain unsolved, particularly measuring the “quality” of entrepreneurship.

2. Who is an Entrepreneur?

There are three main interrelated classical definitions of entrepreneur. Two of them emphasize characteristics of entrepreneurs, i.e., risk-taking and innovation, and the third emphasizes the entrepreneurial role as a factor of production. The first definition is put forward by Knight (1929) and somewhat formulized by Kihlstrom and Laffont (1979): the entrepreneur has a “peculiar twofold function of i) exercising responsible control and ii) securing the owners of productive services against uncertainty and fluctuation in their incomes.” The essence of this definition is that the entrepreneur is the bearer of all risks, and unpredictable income is the result. Neither a top manager nor the owner of capital is per se an entrepreneur: “The nearest approach to an entrepreneur only would be a man who borrowed all the resources for operating a business and then hired a manager and gave him an absolutely free hand.”

The second definition, proposed by Schumpeter (1934), indicates that an entrepreneur is a person who “carries out new combinations” of productive factors. He defines a new combination

⁶ In several sections we discuss the relationship between the middle classes and entrepreneurship. We do so in Section 4, where we analyze parental wealth and the occupations of parents of entrepreneurs. We do so in Section 5, implicitly, when we consider entrepreneurial values. An important theoretical link between the middle class and entrepreneurship runs through values.

as one of the following: i) an introduction of a new good, that is, one with which consumers are not familiar; ii) the introduction of a new production method; iii) the opening of a new market; iv) the acquisition of a new source of supplies of primary or semi-manufactured products; and v) the new organization of an industry, such as a monopoly position. Like Knight, he distinguishes the entrepreneur from the capitalist and the manager, but he does not emphasize the uncertainty of the situation. Rather, he emphasizes the entrepreneur's creation of value.

The third definition is the first one chronologically, attributed to Say (1880), but it is also the one incorporated by modern classical theory in which an entrepreneur is "one who undertakes an enterprise, especially a contractor, acting as intermediary between capital and labour."

These definitions overlap in some cases. For example, the last definition seems to accept a manager as an entrepreneur even if he does not bear risk or create value, but merely manages the "current flow of circulation." Another person can bear a lot of risk but not create anything of value, such as by operating in a risky environment, e.g., a gambler. Conversely, an employed person may not bear risk but may be the one who creates value for the firm, e.g., a creative scientist hired by a firm.

An important question is whether the abovementioned concepts are well captured when using the typical measure of entrepreneurship as independent or self-employed workers. This measurement is likely to produce two types of errors: it excludes employees who are actually engaged in entrepreneurial activities (error I), and includes as entrepreneurs some self-employed workers who are not (error II). The typical case of "error I" includes individuals who conduct a non-profit activity that puts their reputation on the line and their creative mind at work (e.g., so-called social entrepreneurs). That person may be taking risk, may be innovating, and may be coordinating factors of production, but may still be classified as an employee. The typical case of "error II" is an individual who works alone but carries out a routine task, say, a taxi driver. In other words, entrepreneurship is a function pursued by individuals regardless of their type of employment.

The lack of appropriate data, however, induces researchers to use self-employment as a proxy for entrepreneurship. In what follows, we classify entrepreneurs as those independent workers, i.e., employers or the self-employed, who manage or work in a business of two or more people. We also distinguish between employer-entrepreneurs, i.e., those who hire workers, and

self-employed entrepreneurs, i.e., those who do not hire workers; and we distinguish between formal and informal entrepreneurs, innovative and rent-seeking entrepreneurs, and high- and low-productivity entrepreneurs. While the categories we use are likely to suffer from the two types of errors described above, it is the best we can do with the available data. Future research should focus on measuring entrepreneurship based on the functions and activities of the population and organizations.

3. Stylized Facts of Entrepreneurship in Argentina

In this section we describe Argentinean entrepreneurship using the Permanent Household Survey (EPH), which has been conducted since 1974 in urban agglomerates distributed all over the country, covering about 65 percent of the total population.⁷ First, we consider the main facts in 2010 using the whole sample. Second, we draw on a one-time special survey conducted only in Greater Buenos Aires, which accounts for roughly 33 percent of the country's population in the fourth quarter of 2005, which asks about informality and motivation for entrepreneurship, i.e., necessity-opportunity. Third, we present a time series since 1974 for some of the variables of interest.

The main facts related to entrepreneurship in Argentina in 2010 follow. For ease of reading, we include most of the tables in Appendix A.

Fact 1. Nearly one-fourth of the employed population over 14 years of age are independent workers (22.7 percent), of which 4.5 percent are employers (which we call employer-entrepreneurs); 4.7 percent are self-employed and work with at least one more person (which we call self-employed entrepreneurs); and 13.5 percent are the “pure” self-employed. Entrepreneurs represent 9.2 percent of the employed population (Table A.1).⁸

Fact 2. A large share of these become entrepreneurs out of necessity rather than opportunity. Within employer-entrepreneurs (or entrepreneur 1), 22.5 percent are so by

⁷ The EPH has been conducted between two and four times a year since 1974 and covers 31 urban areas. The coverage has increased over time. Some important methodological changes were introduced in 2003 (see www.indec.gov.ar).

⁸ The population of Argentina was 40.1 million in 2010. Of these, 29.9 million were older than 15, of which 18.3 million make up the economically active population (applying EPH percentages to the whole population, which may be imprecise because it includes the rural population that is not surveyed). Within the EAP, 1.3 million were unemployed and 17 million were employed. Of these, 695,000 were employers (entrepreneurs), 3.1 million were self-employed (of which 723,000 were self-employed entrepreneurs and 2.4 million were solo self-employed), and 13.2 million were employees (of which 10.5 million were private employees and 2.7 million were public employees). The total number of entrepreneurs would be, according to our classification, around 1.4 million.

necessity, while within self-employed entrepreneurs (or entrepreneur 2), 45.5 percent are so by necessity (Table A.2).

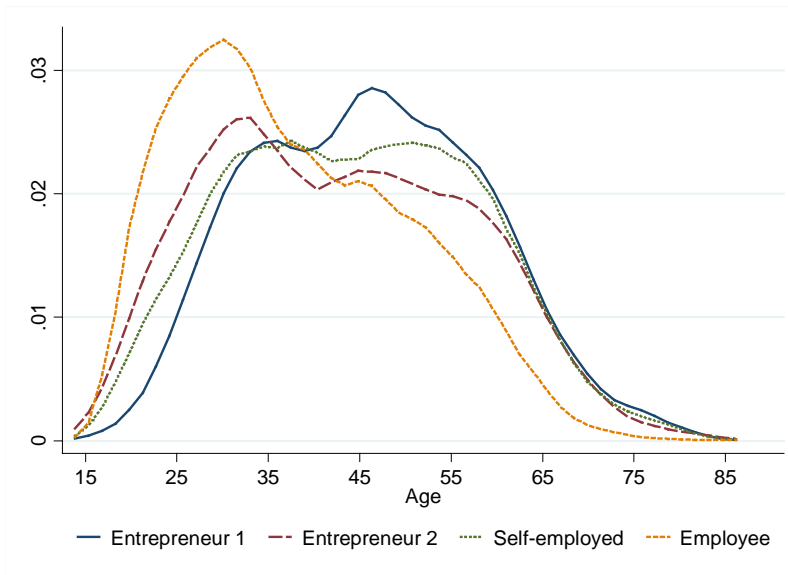
Fact 3. Informality, i.e., lack of business registration for tax purposes is pervasive among entrepreneurs, though it is much higher for self-employed entrepreneurs, or 54.4 percent, than for employer-entrepreneurs, or 11.5 percent. (Table A.3).

Fact 4. The majority of employer-entrepreneurs are male. This predominance is somewhat smaller among the self-employed—both the “pure” and the self-employed entrepreneurs—and considerably smaller among employees.⁹

Fact 5. The mean age is higher for independent workers, i.e., entrepreneurs and self-employed, than for employees.

It is interesting to see the whole distribution, as it suggests a life-cycle explanation. The density function of age for employees has its mode in the late twenties and then diminishes strongly. The density function of age for self-employed and entrepreneurs grows more slowly but stays high for a longer period, until their late fifties. In fact, it looks like some entrepreneurs start as employees or self-employed during their twenties, to become entrepreneurs in their thirties and forties.

Figure 1. Density Function of Age, by Occupation Status, EPH

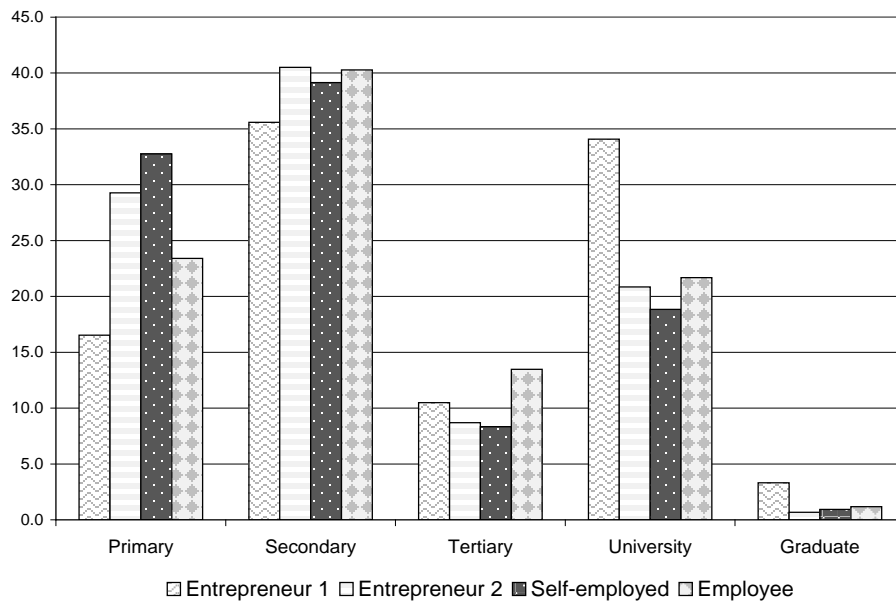


⁹ It is not clear why male predominance is higher for independent workers than for employees. It could be related to either income or physical security, perhaps associated with the “brawn vs. brain” explanation (Rendall, 2010). For large firms, the fact that employers are predominantly male may be related to discrimination.

Fact 6. A larger share of employer-entrepreneurs than self-employed entrepreneurs are married, and a larger share of these than of the pure self-employed and employees are married. Among entrepreneurs, marriage is more common the larger the business.¹⁰

Fact 7. On average, employer-entrepreneurs have more education than employees, and these have more education than self-employed workers (either pure or self-employed entrepreneurs). In all four categories, dispersion is large, being smaller for employees.¹¹

Figure 2. Schooling Distribution, by Occupational Status, EPH



Fact 8. Employer-entrepreneurs and employees are more likely to have health insurance compared to the self-employed.

Fact 9. Both types of entrepreneurs work longer hours on average than either the pure self-employed or employees.

Fact 10. A large share of self-employed workers would have preferred to work more hours than they worked in the previous month.

Fact 11. Most entrepreneurs work in small businesses. On average, employer-entrepreneurs manage businesses of nine workers (the median is only four), while self-employed

¹⁰ It is not clear why these variables associate with each other. There could be causality in both directions: being an entrepreneur may facilitate marriage for that person (due to higher income or better prospects), while a married person might have greater financial security (due to the larger family), which allows him to be an entrepreneur.

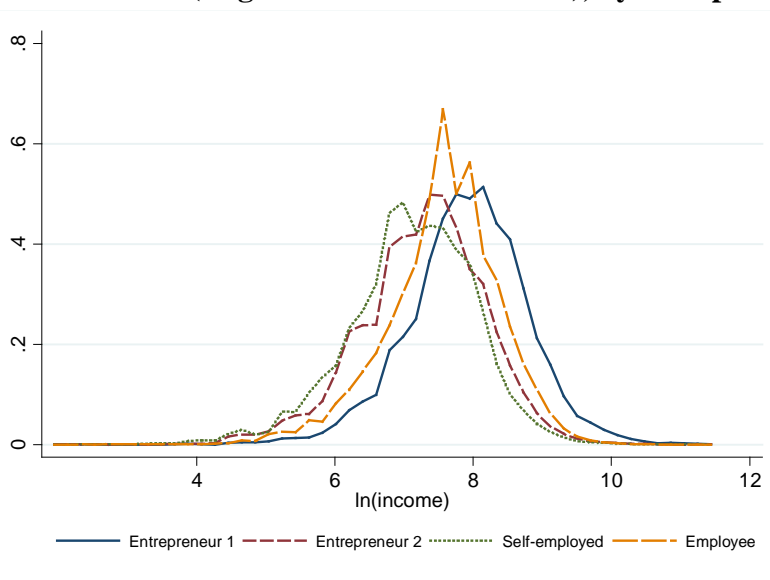
¹¹ All educational categories include people who either completed or not completed the level. Graduate refers to a masters or Ph.D. degree.

entrepreneurs work in firms of three persons, on average (with medians of only two). On average, employees work in firms of around 120 employees, though the median is only 18.^{12,13}

Fact 12. A large share of entrepreneurs own or rent equipment/machinery, though the share is larger for employer-entrepreneurs than for self-employed entrepreneurs. The share is, however, much smaller for the purely self-employed. Almost none of the self-employed own equipment/machinery valued at higher than US\$15,000, and only slightly more than 5 percent of entrepreneurs own equipment/machinery (not shown in tables).¹⁴

Fact 13. Employer-entrepreneurs have, on average, higher incomes than employees, and they have, on average, higher incomes than both purely self-employed and self-employed entrepreneurs.

Figure 3. Income Distribution (Logarithm of Total Income), by Occupational Status, EPH



¹² Why do so few entrepreneurs own a medium- or large-size firm (say, larger than 40 employees)? First, there can be especially high non-response within medium and large firm owners. Second, it may show that effectively there are too few medium and large firms. This fact may suggest that a more focused and less representative survey of individuals, along the lines of Kantis et al. (2002), may be more useful for understanding some aspects of entrepreneurship. We analyze firm-level surveys in Section 6.

¹³ It is difficult to get an absolute number of firms. A rough estimate can be obtained by adding the number of employer-entrepreneurs (assuming that there is a one-to-one relationship between employer and firm) and the number of self-employed entrepreneurs divided by the average number of co-workers (as they do not hire employees, all workers in those firms must be self-employed entrepreneurs). This calculation gives us 944,000 businesses for Argentina in 2010. Interestingly, dividing the number of private employees by the number of employer-entrepreneurs gives us a mean firm size of 16.1, 73 percent higher than the one reported in Table A.1 (9.3). This difference can be attributed to two factors: underrepresentation of medium and large firms in EPH survey, and underreporting of the number of workers by employer-entrepreneurs, presumably due to labor taxes and regulations.

¹⁴ We suspect that underreporting could be a problem with these figures.

3.1 Necessity vs. Opportunity Entrepreneurs

In this section we distinguish between “necessity” and “opportunity” entrepreneurs using the EPH special survey on informality for 2005. We classified an entrepreneur as a “necessity entrepreneur” in either of two cases: First, if they answered “I did not find a job as an employee” to the question “Why do you devote yourself to this business/firm/activity?” Second, if they answered the question: “If you could choose, would you be an employee or an independent worker?” with the first option. We classified the rest of the independent workers as “opportunity entrepreneurs.”

Using these definitions, slightly more than one-third of entrepreneurs are classified as “necessity” entrepreneurs, and fewer than two-thirds are entrepreneurs by “opportunity.” There is not much difference between the two groups as to average age and hours worked, but there are significant differences with respect to male predominance, civil status—opportunity entrepreneurs are more frequently married—education, health insurance, underemployment, size of firm, ownership of capital, i.e., machinery/equipment, locale or vehicle, and income (see Table A.2.)

Figure 4. Schooling Distribution, by Type of Entrepreneur, EPH Special Survey

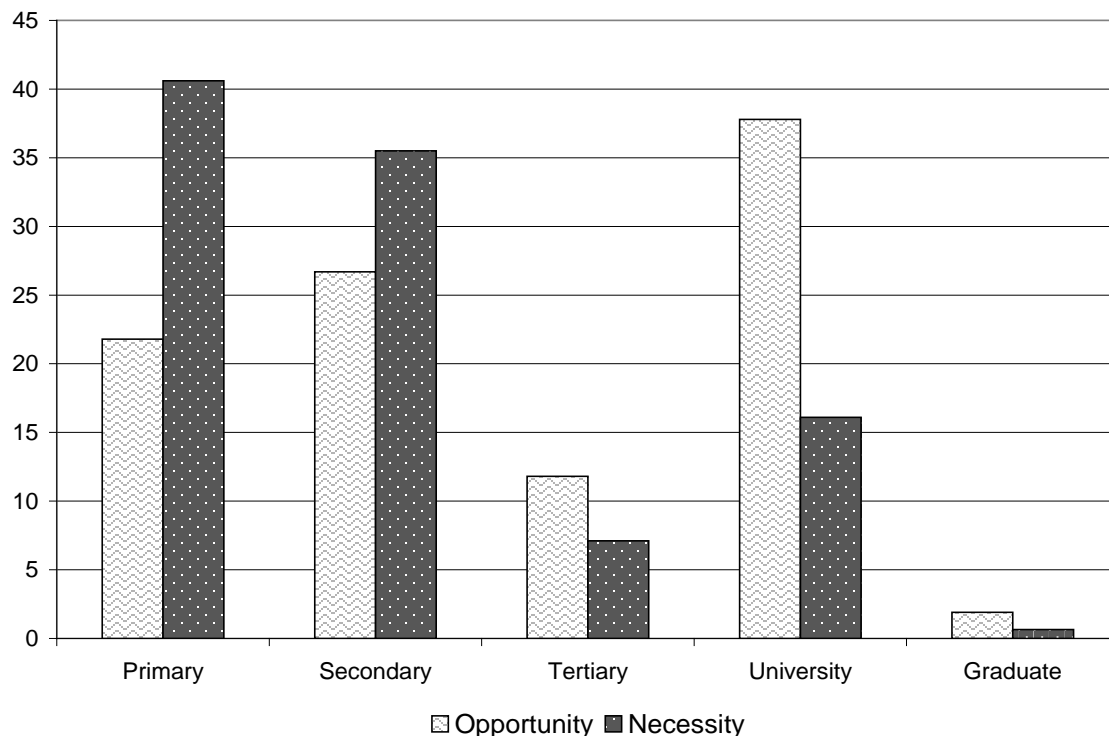
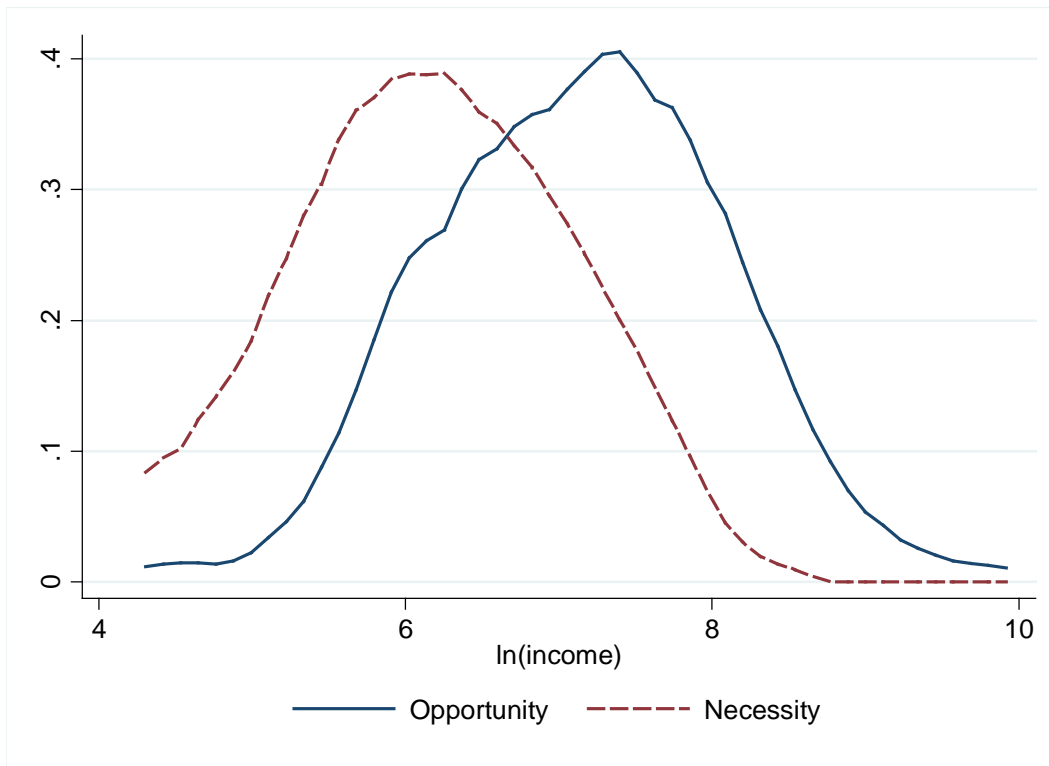


Figure 5. Income Distribution by Type of Entrepreneur, EPH Special Survey



3.2 Formal vs. Informal Entrepreneurs

We say that an entrepreneur is “registered,” or formal, if they are registered as a taxpayer; if not, then he is classified as an informal entrepreneur. Almost 40 percent of entrepreneurs in the sample are informal. There are important differences as to all of the variables considered. A larger share of formal than informal entrepreneurs are male, formal entrepreneurs are much more likely to have health insurance, they are less often underemployed, they work in larger firms, they have a greater chance of owning assets such as machinery/equipment, locale, or vehicle, and they have, on average, a much larger income (see Table A.3.)

Figure 6. Schooling Distribution, by Type of Entrepreneur, EPH Special Survey

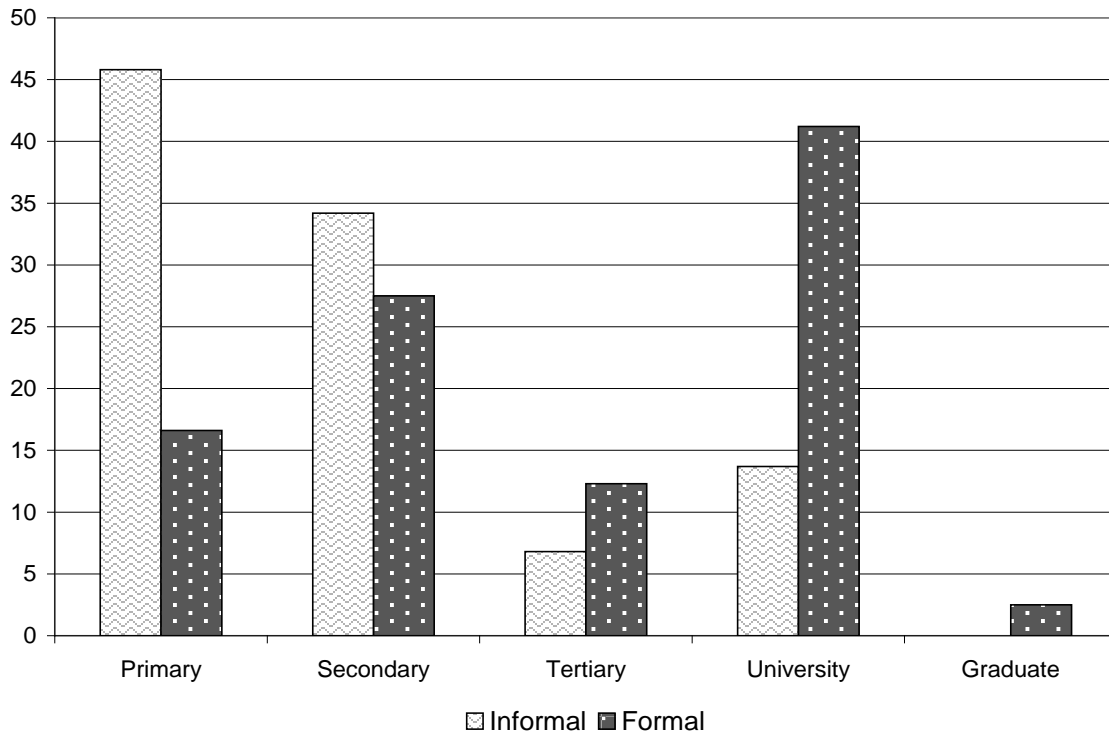
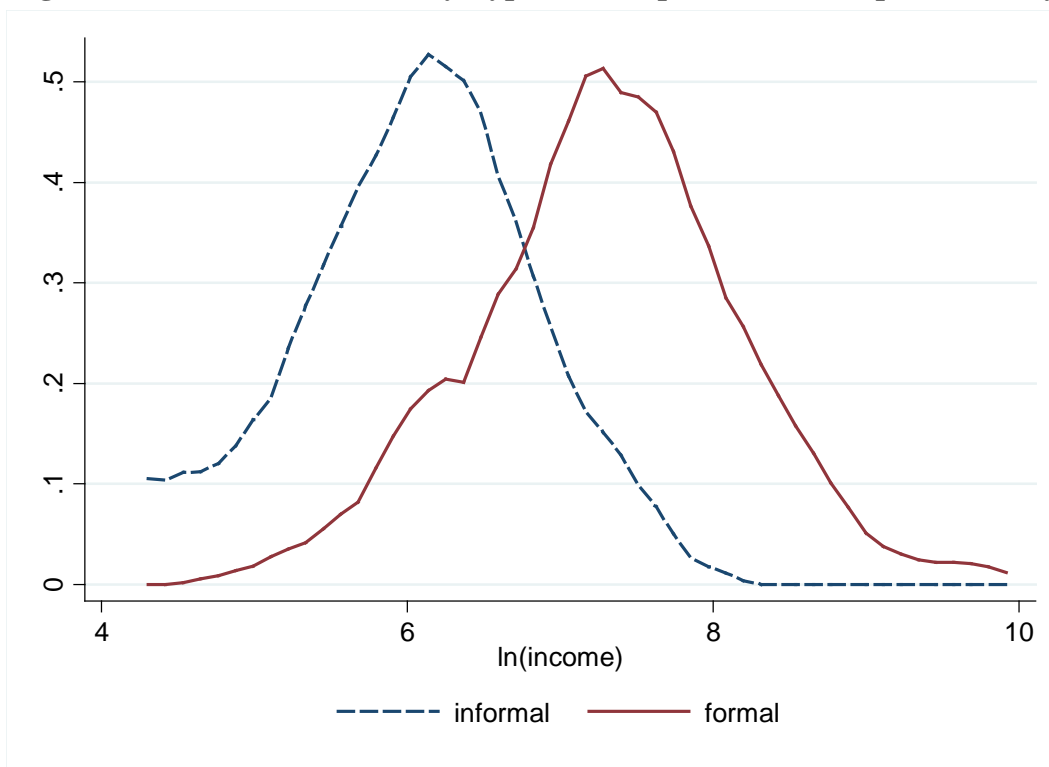


Figure 7. Income Distribution by Type of Entrepreneur, EPH Special Survey



3.3 Evolution of Entrepreneurship over Time

How did entrepreneurship evolve over time? Figure 8 shows the percentage of entrepreneurs among the economically active population (EAP) between 1974 and 2011. We have smoothed the series for the trends to emerge clearly.¹⁵ Between 1974 and 1980 there was an important increase in the percentage of entrepreneurs, from around 10 percent to 13 percent, followed by a decade of relative stability, ending in a high peak during the hyperinflation years of 1989-1992. From then on, the indicator decreased from more than 13 percent to near 8 percent in 2011. Recent years have seen a slowdown in the decreasing percentage of entrepreneurs.

Figure 8. Evolution of Entrepreneurship (as a Share of EAP, Percentages), 1974-2011, EPH

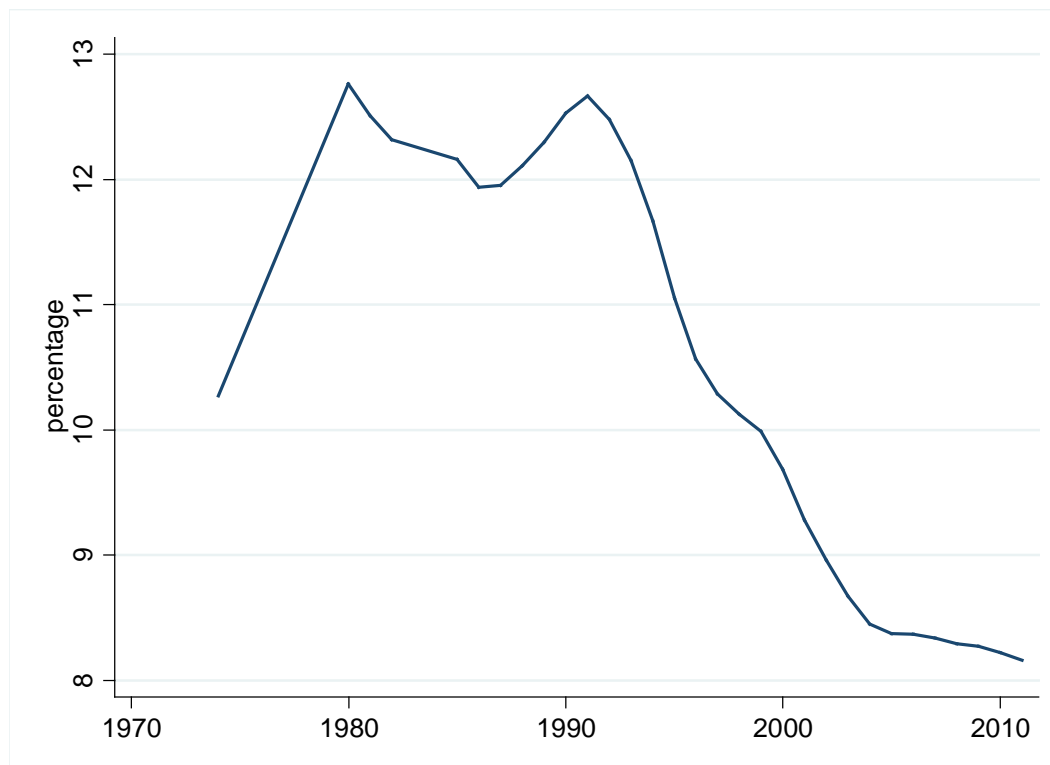
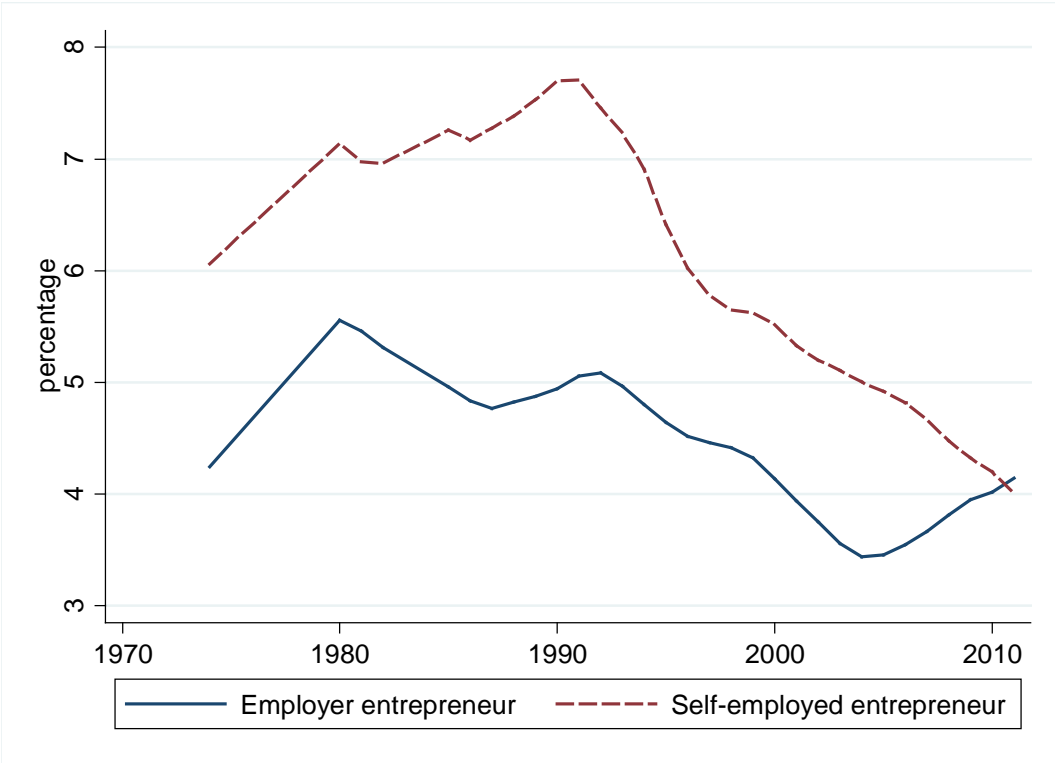


Figure 9 separates employer-entrepreneurs from self-employed entrepreneurs. Between 1974 and 1980, the share of both types of entrepreneurs increased. In the next six or seven years, the number of employer-entrepreneurs decreased, while self-employed entrepreneurs increased.

¹⁵ Due to the methodological changes made to the EPH survey in 2003, the data before 2003 have been rescaled to make them comparable with post-2003 data.

In the critical period of 1988-1992, both types of entrepreneurship increased. During the modernization period of the 1990s, both types of entrepreneurs decreased until around 2004. Since 2005, the trend for employer-entrepreneurs has been increasing while the trend for self-employed entrepreneurs has been decreasing.

Figure 9. Evolution of Types of Entrepreneurship (as a Share of the EAP, Percentages), 1974-2011, EPH



Summing up, we separate independent workers into three groups: employer-entrepreneurs, self-employed entrepreneurs, and pure self-employed, since these groups have different characteristics. The self-employed entrepreneurs have some attributes similar to the pure self-employed, such as a low average income or lack of health insurance, but in other aspects, such as hours worked or ownership of machinery, they are more similar to employer-entrepreneurs. Second, we observe that many of the entrepreneurs are so by necessity, or informal, or both, which suggests a low average quality of entrepreneurship, in the sense that the social value added by them is low. Moreover, most of the necessity and informal entrepreneurs are self-employed entrepreneurs, which suggests that there are frictions in the economy that

impede self-employed entrepreneurs from becoming either formal employees or formal entrepreneurs. Third, during the second half of the 1970s the percentage of entrepreneurs in the EAP increased; in the 1990s it decreased dramatically; and in the most recent decade it decreased little. However, a significant change in composition occurred during the last 10 years with an increase in the share of employer-entrepreneurs and a reduction in the number of self-employed entrepreneurs. This could indicate a recent improvement in the “quality” of entrepreneurs, as the former tend to be registered and seeking opportunities rather than satisfying necessities. However, we prefer not to draw any strong conclusion on this matter since we do not observe the evolution of some key aspects of entrepreneurial “quality” such as the extent of innovation and rent-seeking.

4. Family Background and Entrepreneurship

4.1 Distribution of Entrepreneurs by Parental Wealth

This section explores the socioeconomic background of Argentinean entrepreneurs. Ideally, we would like to have a long longitudinal survey to determine if actual entrepreneurs were born in high-, middle-, or low-income families. Unfortunately, none of the available surveys in Argentina provides such information.¹⁶ The Social Development Survey (EDS), however, is a cross-section that includes recall questions. Each person over the age of 25 answers questions about the income of her/his parents and their employment status when she/he was a 15 year-old child.¹⁷

We categorize people in three groups, i.e., high-income, middle-income and low-income, based on the self-assessed wealth of their parents when they were 15 years old.¹⁸ According to this categorization, 20 percent of actual entrepreneurs come from a high-income family, 65.3 percent come from a middle-income family, and 14.7 percent come from a low-income family (Figure 10).¹⁹ Thus, the majority of entrepreneurs were born in a middle-income family.

¹⁶ See Appendix B for a discussion of proxies of parental wealth.

¹⁷ The EDS is a household survey conducted in more than 100 localities in 1997 by the National Institute of Statistics and includes 75,374 individuals. The EPH does not include recall questions.

¹⁸ See Castellani and Parent (2011) for a discussion in defining and measuring middle class, and Lora and Fajardo (2011) for mismatches between subjective and objective measures of middle class.

¹⁹ We restrict the population to those between 18 and 64 years old: 16.4 percent of the employed population comes from a high-income family, 60.4 percent comes from a middle income family, and 23.2 percent comes from a low-income family.

Figure 10. Distribution of Entrepreneurs by Parental Wealth, EDS

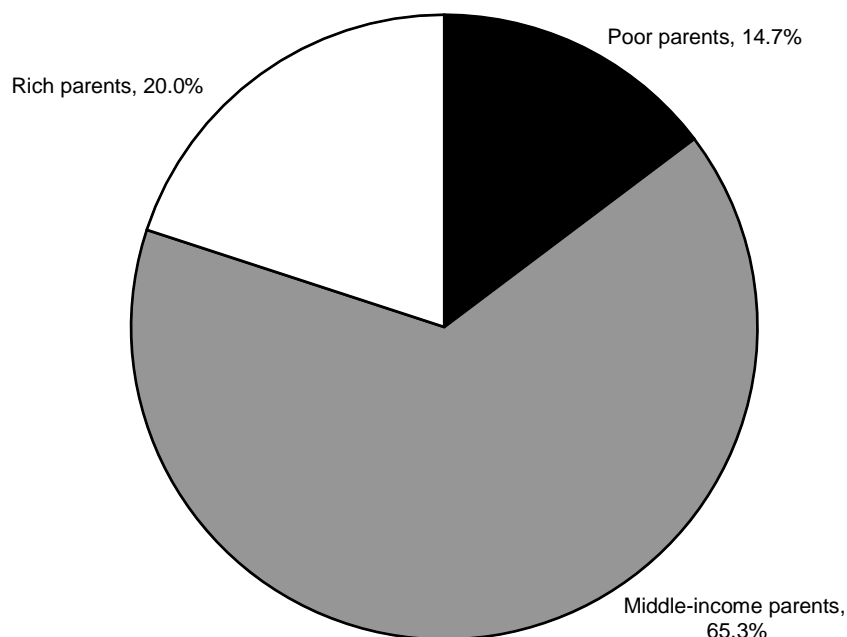


Table 1 shows the distribution of current occupations by family background. There is a relationship between parental wealth and current occupation: people born in higher-income families are more likely to become entrepreneurs, and people from lower-income families are more likely to end up working as either employees or as self-employed. But the differences are small: 13.4 percent of people born in a high-income family became entrepreneurs compared to 11.9 percent and 7.1 percent of people born in middle-income and low-income families, respectively. Thus, parental wealth is a predictor of entrepreneurial activity, but not a very strong one.

Table 1. Parental Wealth of Entrepreneurs, Self-Employed and Employees, EDS

Actual Occupation	Wealth of your parents when you were 15 years old (self-assessed)			Difference (1) – (3)	Difference (2) - (3)
	Low income(1)	Middle class (2)	High Income(3)		
Entrepreneur	7.1	11.9	13.4	-6.3***	-1.5**
Self-employed	18.7	15.5	17.7	1.0	-2.2***
Employee	74.3	72.6	68.9	5.4***	3.7***
Total	100	100	100	-	-

Note: *** Significant at the 0.01, ** 0.05 level.

In Table 2 we observe that people whose parents owned a business were more likely to become entrepreneurs than those whose parents did not own a business. Although the relationship is not perfect, it is stronger compared to the correlation between parental wealth and entrepreneurship: the probability of becoming an entrepreneur is 15.8 percentage points higher if your parents owned a business, while it is only between 1.5 and 6.3 percentage points higher if your parents were high income, relative to middle class and low income.

Table 2. Parental Occupation of Entrepreneurs, Self-Employed and Employees, EDS

Current Occupation	Were your parents owners of a firm when you were 15 years old?		
	Yes	No	Difference
Entrepreneur	25.0	9.2	15.8***
Self-employed	14.7	14.8	-0.1
Employee	60.3	76.0	-15.7***
Total	100	100	-

Note: *** Significant at the 0.01, ** 0.05 level.

Parental occupation is thus a better predictor of entrepreneurship compared to parental wealth, suggesting that the inter-generational transmission of values is an important factor explaining entrepreneurial activity. Parental wealth, however, is an important determinant of the skills of entrepreneurs, as shown below.

4.2 Skills of Entrepreneurs and Parental Wealth

Entrepreneurs who were born in low-income families appear to be, on average, much less productive compared to entrepreneurs born in middle- and high-income families, i.e., their earnings are less than half, and they are less likely to hire workers. The data suggest that this is in part because they have less human and social capital. As shown in Table 3, entrepreneurs from lower-income families have on average between three and four years less schooling compared to entrepreneurs from higher-income families.

Regrettably, the EDS does not allow for determination of whether a business is formally registered or its resources are devoted to innovation. It does include a few characteristics of the business, such as sales to the public sector and access to government programs that provide credit or assistance to small businesses. Entrepreneurs who were born in high-income families

are more likely to benefit from the government compared to entrepreneurs from middle-income and low-income families. This could be due to more personal relationships with government authorities and favoritism in the allocation of public funds. Thus, entrepreneurs from higher-income families receive more human and social capital, allowing their businesses to be more profitable.

Table 3. Human Capital and Productivity of Entrepreneurs, by Parental Wealth, EDS

Variable	Wealth of your parents when you were 15 years old (self-assessed)			Diff (1)–(3)
	Low income(1)	Middle class (2)	High Income(3)	
Monthly income (\$)	407	1,19	1,085	-677***
Share Employer Entrepreneur	18.4 %	42.6 %	37.0 %	-18.6***
Years of schooling	7.4	10.6	11.6	-4.2***
Receives credit from government	0%	3.0 %	6.3 %	-6.3***
Main client is public sector	5.4 %	11.6 %	11.4 %	-6.0***
Works in the street or at home	43.9 %	18.7 %	19.8 %	24.1***

Note: *** Significant at the 0.01, ** 0.05 level.

5. Values and Entrepreneurship

Having characterized the number of entrepreneurs in Argentina, some aspects of their quality and some inter-generational links, we will now characterize the values of both the society at large and the entrepreneurial class. We address two questions: first, what are typical worldwide entrepreneurial values? And second, does Argentinean society support those values?

We use the World Values Survey (WVS), a dataset with more than 50,000 interviews in over 50 countries, for the 2005-2007 waves. We ask two questions. First, we code an “entrepreneur” as being an “employer/manager of an establishment.” We consider all others, including inactive people, as “non-entrepreneurs.” Second, the main value question that we use asks about the “qualities that children can be encouraged to learn at home.” Respondents have to choose up to 5 of 10 alternatives: independence, hard work, sense of responsibility, imagination, tolerance and respect for other people, thrift (saving money and things), determination and perseverance, religious faith, unselfishness, and obedience.

Weber (1905) wrote the seminal study on the relationship between values and economic progress. He hypothesized that the Protestant ethic, which emphasizes hard work, thriftiness, patience, and perseverance, was the cultural and spiritual basis for the development of

capitalism. It is natural to associate those values with entrepreneurs, given the central role of these values in capitalist systems. The world has, however, changed dramatically in the last 100 years, such that the values that underlie entrepreneurship might have changed accordingly. Rather than deciding a priori which values are entrepreneurial, we opted to infer them from the self-assessed values of entrepreneurs and non-entrepreneurs worldwide. We find that, worldwide, entrepreneurs place more emphasis—relative to non-entrepreneurs—on responsibility, tolerance and respect, independence, determination and perseverance, and imagination (Table 4). They value obedience, value religious faith and thriftiness less than non-entrepreneurs do, but there is no significant difference between both groups as to unselfishness and hard work.

Table 4. Entrepreneurial Values: Share of Respondents Stating that the Value is Important for Children to Learn at Home, WVS 2005-2007

Value	Entrepreneurs (1)	Non-entrepreneurs (2)	Diff. (1) - (2)	Type of value inferred
Responsibility	77.9	71.8	6.1***	Entrepreneurial
Tolerance/Respect	74.7	70.3	4.4***	Entrepreneurial
Hard work	54.7	55.9	-1.1	Neutral
Independence	60.1	51.0	9.1***	Entrepreneurial
Obedience	34.4	43.0	-8.6***	Non-entrepreneurial
Religious faith	32.0	41.4	-9.4***	Non-entrepreneurial
Thrift	36.2	38.8	-2.6***	Non-entrepreneurial
Determination/Perseverance	45.1	37.3	7.8***	Entrepreneurial
Unselfishness	34.8	34.1	0.7	Neutral
Imagination	30.2	22.8	7.4***	Entrepreneurial

Notes: The observations are 4,019 entrepreneurs and 78,973 non-entrepreneurs. *** Significant at the 0.01.

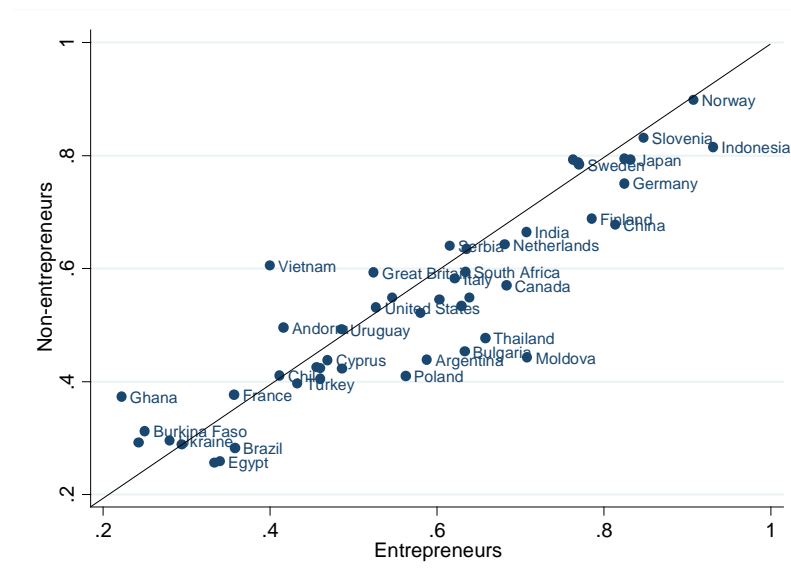
This classification seems plausible. Some of the inferred entrepreneurial values are similar to those cited by Weber, such as responsibility, independence, and perseverance. Weber and others also viewed obedience and religious faith as detrimental to the capitalist spirit insofar as they deterred rational economic behavior vis-à-vis traditional and non-scientific behavior. Meanwhile, tolerance has long been associated with nascent capitalism, emphasized by economic historians in the case of, for example, the vibrant seventeenth-century Dutch economy.^{20,21}

²⁰ For example, Maddison (2006: 82) writes: “Dutch institutions favoured economic growth. Religious tolerance encouraged skilled immigration.”

An important empirical fact is that the differences in values between societies are larger than they are between entrepreneurs and non-entrepreneurs within a particular society. This can be seen, for example, in Figure 10, which shows the proportion of respondents indicating that “independence” is an important value that children should be taught at home. Two facts are worth noting. First, as most points are below the 45 degree line, on average entrepreneurs value independence more than non-entrepreneurs. Second, the figure shows that values of entrepreneurs and non-entrepreneurs correlate highly within societies.

The values of entrepreneurs can be determined in two ways. First, societal values can influence those of entrepreneurs directly; it is hard for a small group to have values radically different from those of the society in which it lives. The second way is through inter-generational influence, as a dynamic economy has a large proportion of cases of descendants of non-entrepreneurs who become entrepreneurs, and vice versa. We now turn to analyze the values that characterize Argentinean society (Table 5).

Figure 10. Proportion of Answers Indicating that the Value of Independence Is Important for Children to Learn at Home, for Entrepreneurs vis-à-vis Non-Entrepreneurs



²¹ We believe that the ascent of imagination as a value of entrepreneurs and the demise of hard work and thriftiness (thriftiness is significantly more valued by non-entrepreneurs) are related to the way that capitalism evolved. Financial markets have separated the agents of saving from those of investment, and therefore an entrepreneur does not need to be frugal himself, but can use the frugality of others to set up his project. The increasing importance of human capital and innovation in modern capitalism makes imagination a scarce factor compared to hard work per se. This classification makes sense from an anecdotal point of view. For example, the great entrepreneur Steve Jobs, in his 2005 commencement speech at Stanford, did not recommend thriftiness and hard work; instead, he emphasized independence, imagination, and perseverance.

We looked at three groups: Argentina, other countries of Latin America (Brazil, Chile, Colombia, Mexico, Peru, and Uruguay), and Australia/New Zealand, and compare the average values of these groups.²² We found that the values of Argentinean society are better aligned with entrepreneurship than those of the rest of Latin America, although this group is heterogeneous. Table 5 shows that Argentinean society promotes seven values supportive of entrepreneurship compared to the rest of Latin America: higher responsibility, higher tolerance/respect, higher independence, lower obedience, lower religious faith, lower thriftiness, and higher imagination.

Table 5. Societal Values in Argentina, Other Latin American Countries, and Australia/New Zealand, WVS 2005-2007

Value	Percentage mentioning			Difference		Values for/against entrepreneurship	
	ARG	LA	A&NZ	ARG/LA	ARG/ A&NZ	ARG/ LA	ARG/ A&NZ
Responsibility	84.1	85.6	71.5	-1.5	12.6***	-	For
Tolerance/Respect	83.5	82.2	91.9	1.3	-8.4***	-	Against
Hard work	68.4	34.3	47	34.1***	21.4***	-	-
Independence	59.8	40.1	61.7	19.7***	-1.9	For	-
Obedience	53.4	58	32.2	-4.6**	21.2***	For	Against
Religious faith	36.7	48.6	19.1	-11.9***	17.6***	For	Against
Thrift	23.9	39.3	31	-15.4***	-7.1**	For	For
Determination							
Perseverance/	37.5	33.1	51.9	4.4**	-14.4***	For	Against
Unselfishness	15.1	53.4	49.8	-38.3***	-34.7***	-	-
Imagination	37.5	25.4	43.8	12.1***	-6.3**	For	Against
Summary for/against entrepreneurship relative to other society						6	-3

Notes: ARG refers to Argentina, LA to the following countries of Latin America: Brazil, Chile, Colombia, Mexico, Peru and Uruguay, and A&NZ to Australia and New Zealand. *** Significant at the 0.01, ** 0.05 level. If an entrepreneurial value (as defined in table 7.1) is significantly higher in Argentina than in other country-region we compute that as a support for entrepreneurship; if it is lower, we compute that as working against entrepreneurship. The opposite applies to non-entrepreneurial values.

The results from Australia/New Zealand are not surprising. Except with respect to responsibility (and thrift), in which Argentinean society ranks higher (lower), the Oceania countries show values more aligned with those of entrepreneurs: higher tolerance, higher independence, lower obedience, lower religious faith, and higher determination and perseverance.

²² Due to the fact that the question as to how many values the respondent can give (up to five) is an open one, we considered only those respondents who mentioned exactly five values to be able to compare across countries.

A few points should be mentioned. First, the value of the “feeling of responsibility” is rather vague. We consider three distinct interpretations when a person mentions this value. It can be interpreted as “individual responsibility” by which the individual is responsible for his actions and their consequences. It can also be interpreted as the person declaring that he or she feels responsible for the family and/or society. We believe that in Latin America “responsibility” would be interpreted (in the interview) as being responsible for family, while in other parts of the world it may well be interpreted as “individual responsibility” or being responsible for the well-being of society at large. The entrepreneurial value is more related to the latter interpretation than to “family” responsibility; therefore, it is not clear what can be gained from the results with respect to this value.

Second, thriftiness is not an entrepreneurial value in the sense that, once financial markets are developed, it is no longer a necessary condition for founding enterprises. However, for a society to flourish economically, someone in the society, though not necessarily the entrepreneur, must save, so it is still valuable in the aggregate. But in places such as Argentina where financial markets are underdeveloped, thriftiness again becomes a necessary condition for entrepreneurship. So it is not clear that low values of thriftiness in a society are an incentive for entrepreneurship.

Summing up, we find that Argentinean society overall promotes entrepreneurial values, but does so less than some successful, natural-resource-abundant economies, such as Australia and New Zealand. Argentinean society places relatively little value on determination and perseverance and relatively high value on obedience. We leave for future study an exploration of the long-run determinants of these values, but we conjecture that the periodic financial crises that the country suffered diminished perseverance, while the authoritarian past increased obedience.

Values are shaped by history and public policy, and they are transmitted inter-generationally. In turn, they shape public policy because people support governments and institutions that reflect their values. We therefore turn to a discussion of those policies that promote or hinder entrepreneurship.

6. Entrepreneurship and Public Policy

A large number of public policies influence the quantity and quality of entrepreneurial activity. Public policies can affect the supply and demand side of entrepreneurship; the availability of resources, skills, and knowledge; and the decision-making process. Several authors have analyzed these links, including Acs and Szerb (2007), Audretsch et al. (2007), Baumol et al. (2007), and Lundström and Stevenson (2005), although much of the literature focuses on developed countries.

This section uses firm-level data (i.e., the Enterprise Survey) in Argentina for three purposes. First, we analyze how public policies affect the costs and benefits of registration according to entrepreneurs' opinions. Second, we provide additional measures of the "quality" of entrepreneurs by describing access to financial instruments, the extent of innovation, and rent-seeking activities. Third, we describe the main policy obstacles according to the opinions of businessmen.

The Enterprise Survey is a firm-level survey that provides information on the business environment, sales, finance and other characteristics of firms. The survey is administered to business owners and senior managers. Two separate surveys were conducted in Argentina in 2010: one for registered firms (FES) and the other for unregistered firms (IES). The first included 1,054 firms located in Buenos Aires, Chaco, Cordoba, Mendoza, and Rosario, while the second included 384 firms in Buenos Aires and Chaco.²³

6.1 Benefits and Costs of Registration

Almost 10 percent of registered firms began operations informally and registered later on, while 5.3 percent of informal firms were registered at startup but stopped paying taxes and complying with regulations at some point. This suggests that the formality status of a firm changes little over time, although there is some transition both in and out of formality.

The majority of owners of informal businesses (51.2 percent) mention that one benefit of registering their businesses would be access to loans and financing, 38.2 percent mention the possibility of attracting more customers, and 36.2 percent mention better access to government

²³ According to the National Economic Census of 2004/2005 and the National Agricultural Census of 2008, there are almost 1 million firms in Argentina (see www.indec.gov.ar), but other estimates suggest that the figure is 1.6 million (Claves, 2010). The discrepancy is due to the difficulty in estimating the number of unregistered firms. The number of registered firms in 2009 was 616,000 (see www.trabajo.gov.ar).

services. Many of them (41.2 percent) report that they would like to register their businesses. When asked why they do not do so, however, they emphasize the cost of paying taxes as expected and the complexity of the registration process (Table 6).²⁴ The majority of owners of formal firms report that the reason for doing so is to comply with the law, as shown in Table 7.

Table 6. Why Is this Business Not Registered? IES 2010

Reasons for not registering your business	Percent
Because of time, fees and paper work to complete registration	35.0 %
Because of the taxes that need to be paid if registered	71.1 %
Because of the inspections that would take place if registered	16.4 %
Because there is no benefit for my business from being registered	39.1 %

Table 7. Most Important Factor that Motivated the Decision to Register, FES 2010

Factor	Percent
Don't know	4.3 %
Fewer gifts or informal payments to officials	0.1 %
More access to government programs or services	0.8 %
Better access to financing	2.8 %
Better access to skilled workers	0.4 %
Customers or suppliers only deal with registered firms	15.0 %
Comply with the law	71.7 %
Other reasons not included above	5.0 %

6.2 Access to Financial Instruments

As expected, access to financial instruments is limited among unregistered firms. Only 1.3 percent has a bank account and 5.5 percent have a loan. Almost every registered firm, however, has a business savings or checking account. What is more surprising is that only half of all registered firms have a loan. This is presumably because of the negative effect of inflation and political instability on Argentina's financial market.

²⁴ For evidence of the effects of recent simplification reforms on registration in Latin America, see Bruhn (2008) and Kaplan et al. (2006) for Mexico, Fajnzylber et al. (2009) for Brazil, and Ronconi and Colina (2011) for Argentina. De Soto (1986) is a seminal work in this area.

Table 8. Access to Financial Instruments, FES and IES 2010

	Unregistered firms (IES)	Registered firms (FES)
Have a business bank account	1.3 %	98.4 %
Have a loan	5.5 %	49.8 %
Have a loan from a bank	1.3 %	48.5 %

As the literature suggests, a highly developed financial system is important for the emergence of a successful entrepreneurial economy (Kauffman Foundation, 2007). This is an area where Argentina has much room for improvement.

6.3 Innovation and Rent-Seeking Among Formal Firms

As argued by Acs et al. (2009) and others, economic growth is strongly influenced by research, inventions, and their spillovers, and entrepreneurs play a fundamental role in linking these variables. The FES (but not the IES) includes a number of variables that provide information about innovation activities among Argentinean firms. More than 70 percent of formal entrepreneurs report that the idea that gave rise to the business was to modify or develop a new product; almost 40 percent report using a service to support innovation in the past three years, and 60 percent envisage using them in the next three years. Innovation activity is presumably less prevalent among informal firms.

We are also interested in analyzing rent-seeking, since anecdotal evidence suggests that many businessmen in Argentina devote a considerable part of their time to lobbying the government for subsidies or special treatment. Destructive entrepreneurship plays a major role in the decline of economies, as argued by Baumol's (1990) seminal work. But measuring rent-seeking is not easy, in part because neither government officials nor businessmen are likely to report their actual behavior, even in an anonymous survey such as the FES. Taking these caveats into account, the FES shows that almost one-fourth of businessmen report that a typical firm bribes government officials to secure a contract, and that about 20 percent of senior management's time is devoted to complying with government regulations, which we think could also mean lobbying for special treatment.

Table 9. Innovation and Rent-Seeking, FES 2010

Variable	Percent
Panel A – Innovation	
The idea that motivated this business was to modify or develop a new product	70.6 %
Used any services or programs to support innovation during last 3 years	39.1 %
Foresees using services or programs to support innovation in next 3 years	62.2 %
Have an internationally-recognized quality certification	33.4 %
Panel B – Rent-seeking	
Percentage of senior’s management time spent on dealing with requirements imposed by government regulations	20.3 %
Percentage of firms that report that an informal payment or gift is usually paid to secure a government contract	23.9 %

Although we do not have measures of rent-seeking among informal firms in Argentina, anecdotal evidence suggests that it is much less prevalent than among formal firms. We argue that this is an important aspect to consider when discussing the optimal distribution of firm size in an economy. Recent work by the IDB (2010) suggests that low firm productivity, particularly in the service sector, is a major problem in Latin America, and this is because the region is populated by too many small informal and unproductive firms. Although we agree that many of these small firms compete by evading regulations and are unable to exploit economies of scale, we think that this argument should be weighed against the inefficiencies and inequities that could be generated by a corporate model. The evidence shown above suggests that in Argentina, large registered firms not only innovate and exploit economies of scale, but they also lobby the government for special treatment, fostering non-competitive markets and corruption.

6.4 Obstacles and Policies

According to formal entrepreneurs, tax rates, political instability and corruption are the three main problems for their businesses (Table 10). Informal entrepreneurs point to lack of access to credit and crime as their main problems (Table 11).

Crime is relatively unimportant for formal entrepreneurs but important for informal, and corruption is a major concern for formal but not for informal firms. We interpret these results as follows: there are economies of scale in private security, i.e., the firm needs to hire at least one person; formal firms—which are bigger—can easily afford the fixed cost but informal firms cannot. Because formal firms have their own security, they consider crime and theft to be

relatively unimportant. The other reason is that many unregistered firms are street vendors and hence more exposed to thefts. The differences of opinion on corruption could be due to the fact that government officials target larger firms because they have more resources to pay bribes.

Table 10. Major Obstacles for Registered Firms, FES 2010

Obstacle	Percent
Tax rates	63.3%
Political Instability	60.4%
Corruption	56.9%
Inadequately educated labor force	56.6%
Labor regulations	47.9%
Courts	44.7%
Telecommunications	44.6%
Access to finance or loans	43.2%
Electricity supply	43.1%
Tax administration	40.5%
Practice of competitors in informal sector	39.6%
Crime, theft, disorder	28.6%
Access to land	26.2%
Transport	26.2%
Business license and permits	21.5%
Customs and trade regulations	15.9%

Table 11. Biggest Obstacle for Unregistered Firms, IES 2010

Obstacle	Percent
Access to finance or loans	36.4%
Crime, theft, disorder	28.8%
Electricity supply	14.0%
Access to land	10.4%
Corruption	6.0%
Water supply	4.4%

These figures should be interpreted with caution before deriving any policy recommendations from them. We are interested in designing policies that would increase entrepreneurs' social contribution to society, but the figures in the tables presumably indicate factors that reduce profits among established firms. There is overlapping in some cases. For example, political instability and corruption inhibit long-term investment and promote rent-

seeking, and hence reduces businesses' profits and social welfare. Crime and lack of credit are another example. But some potentially important policies are not listed. Public employment policy, for example, could inhibit nascent entrepreneurial activity, and hence is not likely to be considered by established firms as an obstacle.

7. The Effect of Public Employment Policies on Entrepreneurship

The effects of public employment policy on entrepreneurship have been relatively ignored in the empirical literature, with the exception of Alesina et al. (2001), who studied Italy. Argentina is a federal country with large differences in public employment across regions. As shown in Table 12, public employment is relatively high in cities located in Patagonia and the northern region and relatively low in the Pampas region. The two extreme cases are Viedma, a city located in Patagonia, where 27.3 percent of the population between 18 and 65 years old were public employees in 2010, and Rosario, located in the Pampas region, where only 7.5 percent of the population were public employees. The figure for the City of Buenos Aires is low, i.e., 12 percent, given that the seat of the national government is located there.

Differences in public employment across provinces are in part explained by fiscal federalism. The government transfers a disproportionate amount of resources to provinces with overrepresentation in the National Legislature, and governors use these resources to obtain local political support by offering attractive public employment (Gervasoni, 2010).

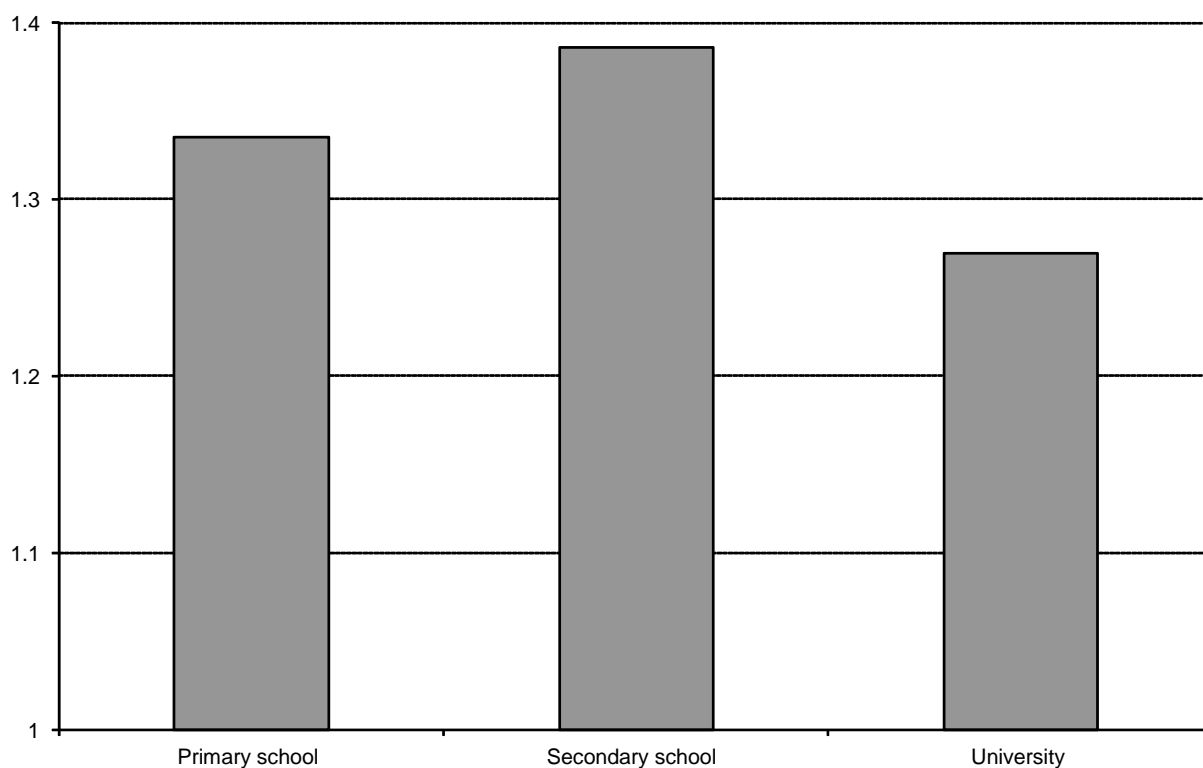
Table 12. Public Employment Per Capita across Urban Agglomerates, EPH 2010

Urban agglomerate	Public Employees (% population)	Urban agglomerate	Public Employees (% population)
Viedma – C. Patagones	27.3	Concordia	14.2
Río Gallegos	26.9	Corrientes	13.9
Ushuaia - Río Grande	24.1	Salta	13.2
Santa Rosa – Toay	21.5	Gran Tucumán – Tafí Viejo	13.0
Gran Catamarca	21.3	Gran San Juan	12.2
La Rioja	20.9	San Luis – Chorrillo	12.0
Rawson – Trelew	20.8	City Buenos Aires	12.0
Gran La Plata	20.5	Gran Mendoza	11.3
Neuquén – Plottier	18.8	C. Rivadavia – Rada Tilly	10.7
Jujuy – Palpalá	18.6	Gran Córdoba	9.8
Gran Paraná	18.2	Mar del Plata – Batán	9.7
Formosa	17.6	Río Cuarto	9.5
Gran Resistencia	17.2	Bahía Blanca – Cerri	9.3
Santiago del Estero - La Banda	15.2	Greater Buenos Aires	8.0
Gran Santa Fe	14.5	San Nicolás-V. Constitución	7.9
Posadas	14.4	Gran Rosario	7.5

Public employment has increased, on average, 8.8 percent in the last decade—from 10.2 percent of the population in 2003 to 11.1 percent in 2010—but with considerable heterogeneity across cities. While it increased by more than 30 percent in Resistencia and Mar del Plata, it has declined by more than 15 percent in San Luis and Rosario.

Public employees are relatively well paid. As shown in Figure 11, the ratio of the hourly wages of a public employee to those of a person working in the private sector is above 1 for all levels of education.

Figure 11. Hourly Wages of Public Employees Relative to Private Sector Workers, 2010



Theoretically, public employment can have a positive or a negative impact on entrepreneurship. Increasing the number of public employees can foster entrepreneurship in the long run if those employees level the playing field, provide public goods, solve coordination failures, promote competitive markets, and keep red tape at a minimum. Public employment can crowd out entrepreneurship if the working conditions in the public sector are too generous, a short-run effect, or if public employees introduce policies that deter entrepreneurs from pursuing otherwise profitable opportunities, a long-run effect.

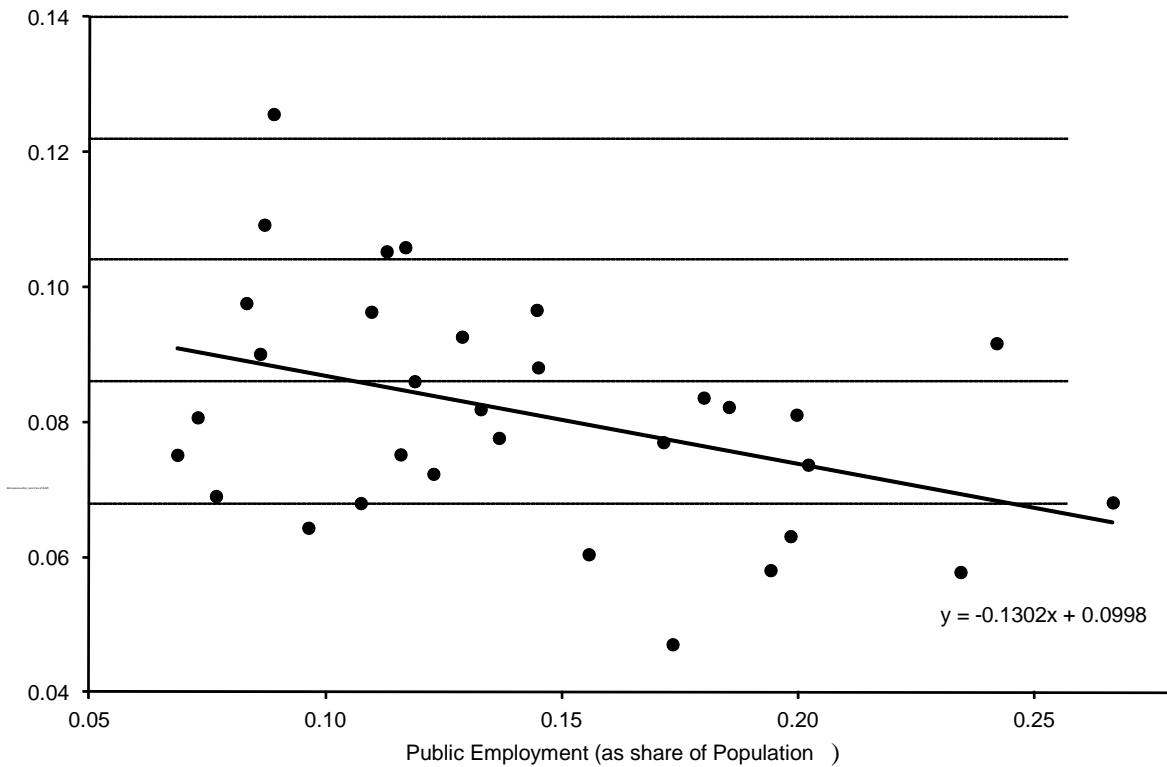
Public employment can affect not only the quantity, but also the quality of entrepreneurs. Increases in public employment can foster formality among entrepreneurs if public employees increase enforcement and/or simplify registration procedures. But, if higher corporate taxes are levied to cover the public sector payroll, firms could be drawn to the informal sector. Depending on the policies implemented, public employees can also increase or reduce the productivity of firms, affect the size distribution of firms, and the use of labor, etc.

Given the characteristics of the available data, we compute estimates of the short- and long-run effects of public employment on the quantity of entrepreneurs, and on two measures of “quality,” i.e., whether the entrepreneur has registered the firm and whether the entrepreneur hires workers, exploiting variation across provinces over time. Before presenting the results, it is important to point out three limitations of the analysis. First, there is no direct link between entrepreneurship and welfare. That is, finding that public employment reduces entrepreneurship does not necessarily imply that public employment reduces welfare. Second, although entrepreneurship is clearly linked to economic growth, this relationship is crucially shaped by the “quality” of entrepreneurs; the analysis we perform only covers some measures of quality. Third, by exploiting variation across provinces we can only capture some of the long-run effects of public employment on entrepreneurship, but leave out the effect of national level policies, that is, those that do not vary across provinces.

Figure 12 is a scatterplot that illustrates the relation between public employment as a share of the population and the quantity of entrepreneurship as a share of the EAP across the 32 urban agglomerates in the EPH. The figures are the average between 2003 and 2010.²⁵ Each data point represents different urban agglomerates. The figure shows that cities with a higher number of public employees per capita tend to have fewer entrepreneurs.

²⁵ For three cities (San Nicolas, Viedma and Rawson) the average is from 2006 to 2010.

Figure 12. Public Employment and Entrepreneurship across 32 Urban Agglomerates, EPH 2003-2010



The same negative correlation is observed when analyzing a sample of 81 smaller cities that are covered in the EDS but not in the EPH, although the correlation is stronger (Figure 13). The two extreme localities are Chamical, a city located in the northwestern province of La Rioja, where 34 percent of the population are public employees, and Venado Tuerto, located in the Pampas region, where only 2.5 percent are public employees.

Figure 13. Public Employment and Entrepreneurship across 81 Small Cities, EDS

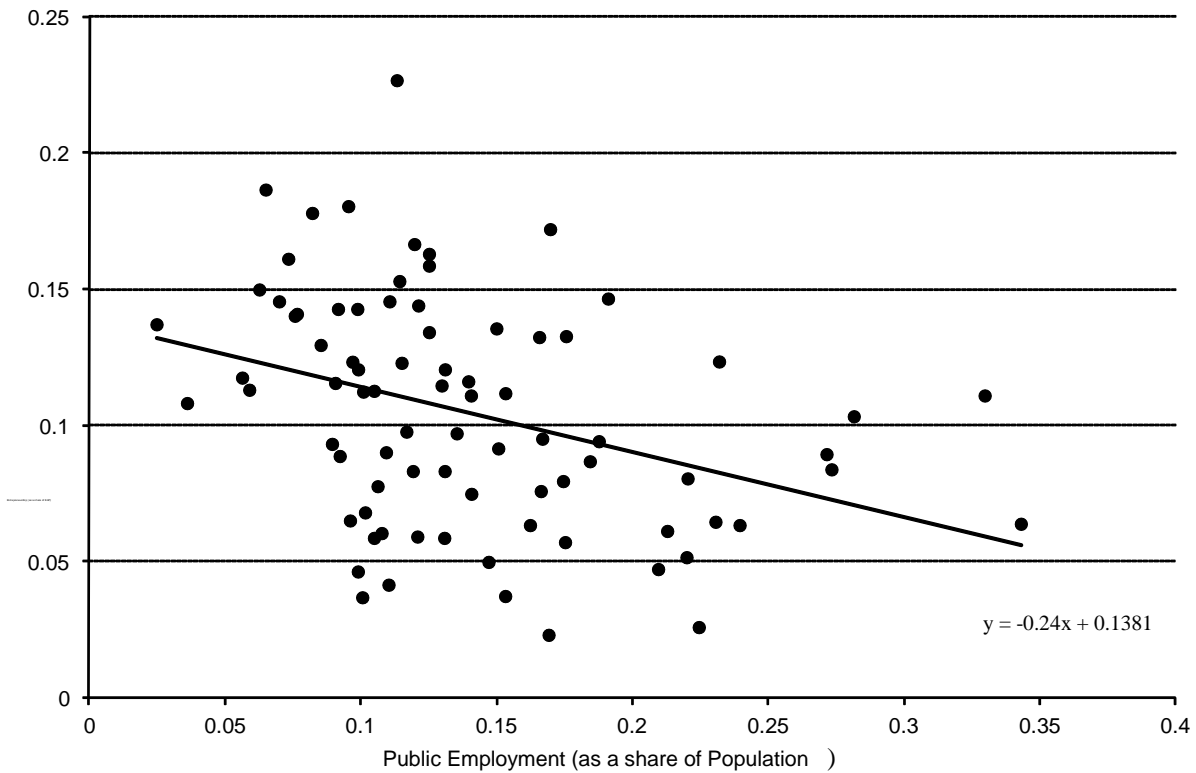
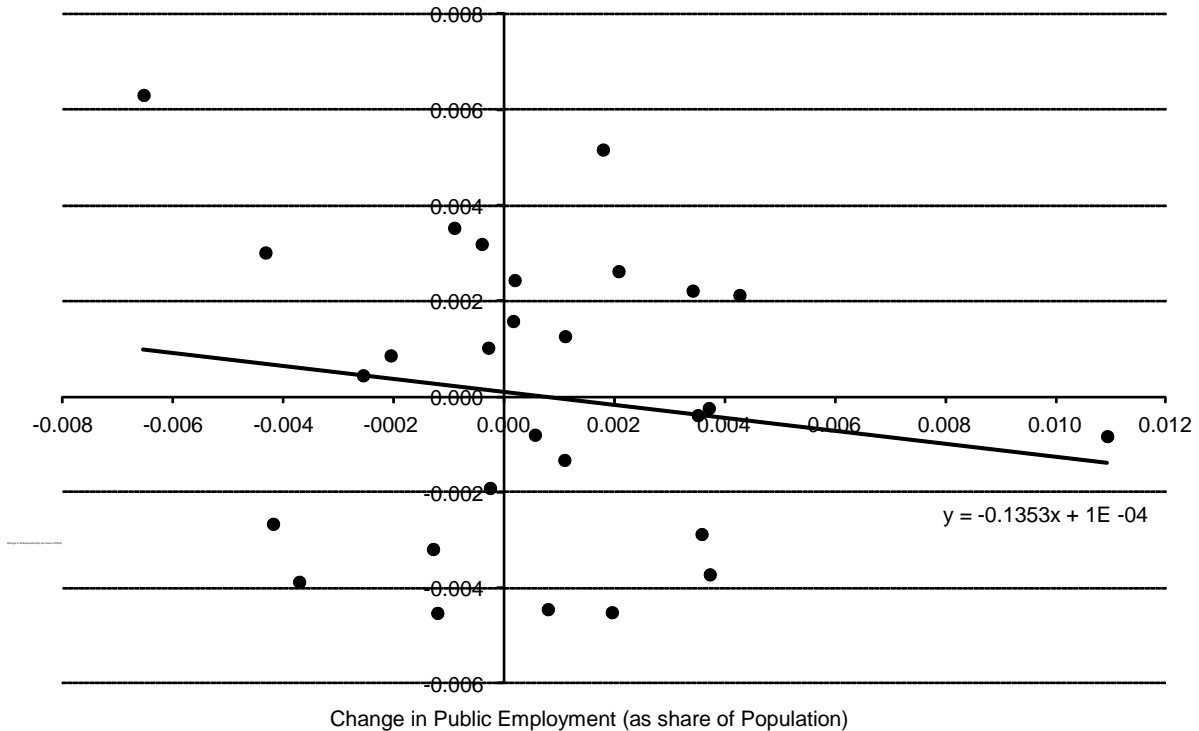


Figure 14 presents the change between two consecutive quarters in public employment and entrepreneurship in the 32 agglomerates covered by EPH between the third quarter of 2003 and the fourth quarter of 2010. Each data point represents the change between two different consecutive quarters. Although the correlation over time is noisy, there appears to be a negative relationship, with a reduction in entrepreneurship, in those periods when public employment increases.

Figure 14. Changes in Public Employment and Entrepreneurship over Two Consecutive Quarters, EPH 2003-2010



These figures provide evidence that public employment and entrepreneurship are negatively correlated both across cities and over time. This is not enough, however, to claim that public employment has a negative causal effect on entrepreneurship, since a third factor could be driving the correlation. In particular, it is possible that cultural differences are driving the cross-city variation, or that public employment increases during recessions and fewer people start a business when aggregate demand is low.

Because variation in public employment is both at the city level and over time, the statistical model we use to test the contemporaneous crowding-out effect is:

$$Entrepreneurship_{it} = \alpha_i + \tau_t + \beta PublicEmployment_{it} + \mathbf{Z}_{it}\pi + \varepsilon_{it} \quad (1)$$

where *Entrepreneurship* is the share of the EAP that is an entrepreneur in city *i* and quarter-year *t*, *PublicEmployment* is the share of the population that works in the public sector, **Z** is a vector of covariates, and α and τ are time dummies and city fixed effects. We use the EPH, which covers 29 urban agglomerates from the third quarter of 2003 to the fourth quarter of 2010, and three additional agglomerates from the third quarter of 2006 to the fourth quarter of 2010. Because the survey was not conducted during the third quarter of 2007, the total number of

quarter-year-city cells is 892. We restrict the sample to the population between 18 and 65 years old.

Table 13 presents the results. We begin estimating equation (1) only including quarter-year dummies to control for national level unobserved shocks that could affect both public employment and entrepreneurship; in column 2 we add a set of labor force characteristics, i.e., sex, age, educational attainment, share foreign born and share migrant, and a measure of the business cycle, i.e., the unemployment rate in the city. Finally, in column 3 we relax the assumption of random effects and control for time-invariant heterogeneity, including city fixed effects. That is, we remove all cultural, institutional, or other variables that change little over time and could be biasing the estimates.

Table 13. The Effect of Public Employment on the Quantity of Entrepreneurship

Variable	Contemporaneous effect			Long run effect	
	(1)	(2)	(3)	(4)	(5)
Public Employment	-0.108*** (0.037)	-0.121*** (0.040)	-0.139** (0.052)	-0.546** (0.208)	-0.556** (0.207)
Labor force and business cycle	No	Yes	Yes	No	Yes
Quarter-year dummies	Yes	Yes	Yes	-	-
City fixed effects	No	No	Yes	-	-

Note: Number of observations is 892 in columns 1 to 3, and 29 in columns 4 and 5. The DV is the number of entrepreneurs in each quarter-year-city over the EAP in columns 1 to 3, and the change in entrepreneurship between 2003 and 2010 in columns 4 and 5; Public Employment is the number of public employees over the population in columns 1 to 3, and the change between 2003 and 2010 in columns 4 and 5. Robust standard errors are in parentheses. *** Significant at the 0.01 level, ** 0.05, * 0.1.

The results indicate that a one percentage point increase in public employment as a share of the population produces between a 0.1 and a 0.14 percentage point reduction on entrepreneurship as a share of the EAP, or between 0.07 and 0.1 percentage point reduction on entrepreneurship as a share of the population.²⁶ Is this crowding-out effect large? If the individuals that enter public employment were randomly selected from the EAP, then we should observe a 0.1 percent reduction in entrepreneurship per 1 percent increase in public employment.²⁷ Our findings, i.e., a reduction of between 0.07 and 0.1 percent, suggest that public employment has quite a large contemporaneous crowding-out effect. Certainly,

²⁶ The EAP/population ratio in the sample is 0.697.

²⁷ This is because entrepreneurs represent 10 percent of the workforce not employed in the public sector.

governments are not focused on hiring unemployed workers, which is the rationale for countercyclical public employment policies, and offer a sufficiently attractive compensation package to attract entrepreneurs into the public sector. As we show below, when public employment is created, some entrepreneurs abandon their firms and take those jobs.

The negative short-run effect could be more than compensated for in the long run if the newly hired public employees implement policies that foster entrepreneurship, such as, for example, providing public goods or promoting competitive markets, but they can implement policies that inhibit entrepreneurship. To test the long-run effects of public employment on entrepreneurship, we use the following model:

$$\Delta Entrepreneurship_i = \beta \Delta PublicEmployment_i + \Delta \mathbf{Z}_i \pi + \varepsilon_i \quad (2)$$

where $\Delta Entrepreneurship_i$ is the change in the share of the EAP that is an entrepreneur in city i between the third quarter of 2003 and the fourth quarter of 2010, that is, between the first and available surveys, and $\Delta PublicEmployment_i$ is the change in the share of the population that works in the public sector during the same period. By analyzing changes over a seven-year period, we can test whether public employment has fostered or inhibited entrepreneurship in the long run.²⁸

The results are in columns 4 and 5 of Table 13. In column 4 we do not include any controls, and in column 5 we add the same controls as before. The results indicate that a 1 percentage point increase in public employment as a share of the population produces a 0.55 percentage point reduction in entrepreneurship as a share of the EAP or a 0.37 reduction as a share of the population. That is, the effect in absolute value terms is more than three times larger than the contemporaneous effect, suggesting that the policies implemented by newly hired public employees have hampered entrepreneurship. Because public employment increased by 0.9 percentage points during the last decade, we can conclude that the policy has produced, in the long run, a reduction of approximately 0.33 percentage points in entrepreneurship.

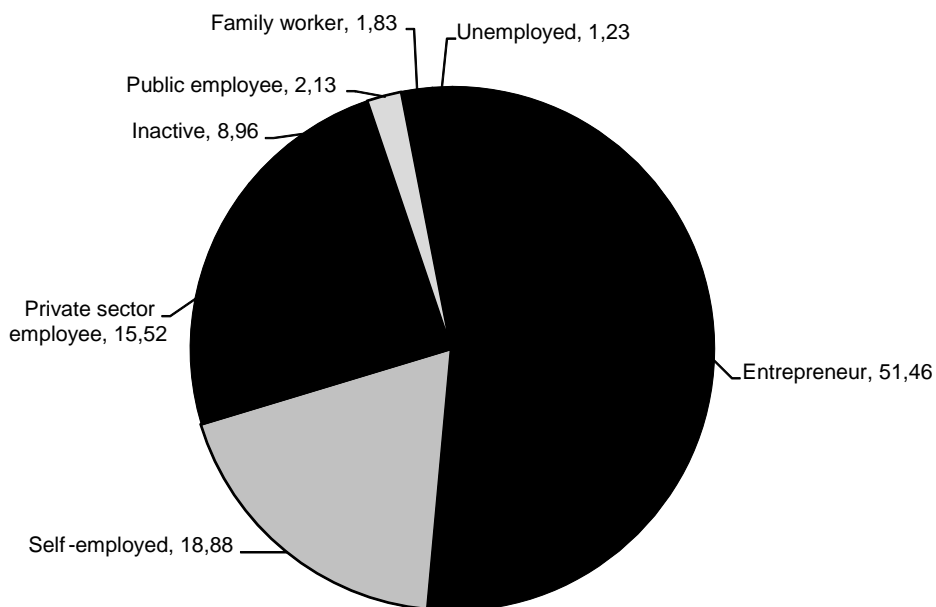
A useful feature of the EPH is that individuals are followed over 1.5 years. That is, if an individual was surveyed for the first time in the first quarter of the year 2004, then they would be

²⁸ We have also considered analyzing whether the effects of public employment on entrepreneurship vary by the jobs of public employees. For example, if the newly hired employees work as researchers or as professors at public universities, the effects on entrepreneurship could be positive in the long run due to the spillover effects of their research. The data and identification strategy we use, however, does not allow a proper analysis. First, only 5 percent of public employees in the sample report having such a job, making the estimates unreliable. Second, any spillover effect is likely to affect the whole country and not only the city where the job is located.

surveyed again in the second quarter of 2005. This longitudinal characteristic of the data allows counting the number of people who effectively change occupations from entrepreneurship to public employment, providing additional evidence of the short-run crowding out effect.

Figure 15 provides the transition probabilities of those individuals who were entrepreneurs the first time they were surveyed using the EPH between the third quarter of 2003 and the fourth quarter of 2010. The majority of entrepreneurs, 51.5 percent, have the same occupation a year and a half later, 18.9 percent continue working independently but without any employee, 15.5 percent became private sector employees, 8.9 percent left the labor force, 1.8 percent became family workers, and 1.2 percent were unemployed. Interestingly, 2.1 percent shut down their businesses and entered public employment.²⁹

Figure 15. Transition Probabilities of Individuals Who Were Entrepreneurs, One and a Half Year Period, EPH



Summing up, we find that public employment has a large short-run crowding-out effect on the quantity of entrepreneurs and an even larger long-run effect. These results suggest that the

²⁹ Note that this figure is likely to be a biased estimate of the causal effect of public employment on entrepreneurship. For example, it ignores those cases where the individual was considering starting a new business but did not start the project because they chose to enter public employment. Similarly, an increase in public employment might attract employees from the private sector, which may cause some transition from entrepreneurship to private employment.

public sector offers a sufficiently attractive compensation package to attract entrepreneurs into public employment, and that the policies implemented do not foster entrepreneurship.

How did public employment policy affect the “quality” of entrepreneurs? We analyze two measures of quality, i.e., whether the entrepreneur has registered the firm and whether the entrepreneur hires workers. The latter is obtained from the EPH by distinguishing employer-entrepreneurs from self-employed entrepreneurs, that is, between those who have and those who do not have employees working in their firms. The former is not available in the EPH; hence, we use administrative data from the Ministry of Labor.³⁰ The data indicate the total number of registered firms in each province during the fourth quarter between 2003 and 2009.

We run the same models as in Table 13, but using as dependent variables Employer-entrepreneur, self-employed entrepreneur, and registered firms, all as a share of the EAP. Table 14 presents the results, with one panel for each dependent variable.

Table 14. The Effect of Public Employment on the “Quality” of Entrepreneurship

Variable	Contemporaneous effect			Long-run effect	
	(1)	(2)	(3)	(4)	(5)
Panel A: Dependent variable is <i>Employer Entrepreneur</i>					
Public Employment	-0.015 (0.021)	-0.025 (0.025)	-0.038 (0.030)	-0.265** (0.129)	-0.257** (0.100)
Panel B: Dependent variable is <i>Self-employed Entrepreneur</i>					
Public Employment	-0.097*** (0.028)	-0.094*** (0.028)	-0.101** (0.041)	-0.281 (0.243)	-0.299 (0.192)
Panel C: Dependent variable is <i>Registered firm</i>					
Public Employment	0.001 (0.020)	-0.045** (0.022)	0.006 (0.019)	0.034 (0.039)	-0.026 (0.072)
Labor force and business cycle	No	Yes	Yes	No	Yes
Quarter-year dummies	Yes	Yes	Yes	-	-
City fixed effects	No	No	Yes	-	-

Note: Number of observations is 892 in columns 1 to 3 panel A and B, 161 in columns 1 to 3 panel C, 29 in columns 4 and 5 panels A and B, and 23 in columns 4 and 5 panel C. *** Significant at the 0.01 level, ** 0.05, * 0.1.

The results suggest that the negative contemporaneous crowding effect of public employment policies over the quantity of entrepreneurs occurs mainly by a reduction in the

³⁰ The data can be obtained from www.trabajo.gov.ar

number of small and informal firms. In the long run, however, public employment produces a statistically significant reduction in the number of employer-entrepreneurs, but not in the number of self-employed entrepreneurs or in the number of registered firms. Our interpretation of these results is that public employment crowds out entrepreneurs who are somewhere in the middle of the “quality” spectrum. Without public employment, these people would have started a small and informal firm, but later on would have hired some workers, although they would have remained informal.

8. Conclusions

This paper covers a range of aspects related to entrepreneurship in Argentina and its relationship to public policies, using information from household surveys, firm surveys, and administrative data. Our aim is to provide a collection of stylized facts and identify the main bottlenecks, in the hope that they could serve as a guide for future research. The main findings are:

- The total number of independent workers in Argentina in 2010 is 22.7 percent of the employed population. Many of them appear to perform routine tasks and can hardly be considered entrepreneurs. We argue that properly measuring entrepreneurship—particularly its “quality”—is difficult with the available data. This is because entrepreneurship refers to the functions and activities of individuals and organizations, and such information is usually unavailable. We confront this problem by categorizing as entrepreneurs all independent workers who manage or work in a firm with two or more people, leaving out the solo self-employed. Using this proxy, about 9 percent of the employed population are entrepreneurs.
- We find that a large share of individuals categorized as entrepreneurs are likely to be engaged in activities that are not conducive to economic growth. First, 37 percent are necessity entrepreneurs, and 39 percent have not registered their businesses. They tend to use little machinery, and have low human capital and productivity. Second, among formal entrepreneurs, almost one-fourth report that a typical firm bribes government officials to secure a contract, and about 20 percent of senior management’s time is devoted to

dealing with government regulations (which we think could also mean lobbying for special treatment).

- We distinguish two types of entrepreneurs: employer-entrepreneurs and self-employed entrepreneurs who do not hire but work with other people. As a percentage of the employed population, the number of both types of entrepreneurs has fallen since 1980. However, during the last half-decade there has been an increase in employer-entrepreneurs as a share of total entrepreneurship. As these tend to be more formal and opportunity-driven than self-employed entrepreneurs, it could be that the quality of entrepreneurship has increased. However, more research is necessary, particularly an analysis of the evolution of innovation and rent-seeking, before any firm conclusions can be drawn in this regard.
- We explore the relationship between parental wealth and entrepreneurship, and find that people born in wealthier families receive a better education, have more access to a network of influential people, and have parents who can finance their start-ups, which is important when access to credit is very limited, as in Argentina. We find that these advantages are important in explaining differences in earnings among entrepreneurs, i.e., those born in middle class and upper-class families earn more than two times more than entrepreneurs born in lower-class families. However, we find a rather small positive correlation between parental wealth and the probability of becoming an entrepreneur.
- Parental occupation is a stronger predictor of entrepreneurship. The probability of becoming an entrepreneur is almost three times greater among those individuals whose parents were entrepreneurs. This is because entrepreneurs inculcate certain values in their children, i.e., responsibility, tolerance and respect, independence, determination and perseverance, and imagination, which have been found to be more conducive to entrepreneurship.
- We find that differences in values are larger between societies than between entrepreneurs and non-entrepreneurs within a particular society. In this sense,

equally important for entrepreneurship as the values of entrepreneurs are the values of the society at large. The Argentinean population has values that are better-aligned with entrepreneurial activity than does Latin America as a whole, but they are less aligned than in Australia/New Zealand.

- We analyze whether public employment crowds out entrepreneurship. Public employment is relatively high in some northern and Patagonian provinces that largely benefit from the federal fiscal regime. Public employment has been increasing in the last decade, and it is relatively well-paying compared to the private sector. We find that public employment has a rather large crowding-out effect on entrepreneurship both in the short and long run.
- We also find that public employment crowds out entrepreneurs who are somewhere in the middle of the “quality” spectrum, that is, people who, were it not for public employment, would have started a small and informal firm, and later on would have hired some workers.

Overall, the evidence suggests that there is much to be done in Argentina in order for it to become an entrepreneurial economy. Although we find that some improvements could be made by fostering certain cultural values, such as perseverance, or by redistributing wealth so that people born in poor families could become productive entrepreneurs, the main bottleneck in Argentina is inadequate public policy. Political and macroeconomic instability, lack of a developed financial market, inefficient bureaucracy, corruption, a complex tax system, and the use of public employment as a political instrument are the main culprits.

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Appendix A. Tables Characterizing Entrepreneurship in Argentina

**Table A.1. Characteristics of the Workforce, Argentina 2010
and Gran Buenos Aires Fourth Quarter of 2005**

Variable		2010	4th 2005, GBA
Employed of age 15 or more (% of)	Independent	22.7	23.5
	Entrepreneur 1	4.5	3.5
	Entrepreneur 2	4.7	6.1
	Self-employed	13.5	14.0
	Employee	77.3	76.5
Male (%)	Entrepreneur 1	73.0	78.8
	Entrepreneur 2	63.4	60.2
	Self-employed	65.8	65.4
	Employee	55.9	54.8
	Inactive	29.7	27.1
Age (mean, in years)	Entrepreneur 1	46.9	49.2
	Entrepreneur 2	43.5	44.9
	Self-employed	45.2	45.3
	Employee	38.1	38.1
	Inactive	46.9	49.1
Married (%)	Entrepreneur 1	60.2	66.7
	Entrepreneur 2	49.5	56.3
	Self-employed	41.9	46.8
	Employee	35.0	37.0
	Inactive	34.5	39.8
Health insurance (%)	Entrepreneur 1	77.0	74.7
	Entrepreneur 2	53.6	47.1
	Self-employed	49.5	45.4
	Employee	75.1	65.8
	Inactive	73.3	66.0
Hours worked (weekly)	Entrepreneur 1	49.6	51.9
	Entrepreneur 2	46.9	49.9
	Self-employed	38.3	37.5
	Employee	40.9	41.7
	Wanted more hours? (%)	Entrepreneur 1	10.1
Entrepreneur 2		16.0	15.4
Self-employed		31.9	41.9
Employee		15.4	23.7
Size of firm (mean (median) number of workers)		Entrepreneur 1	9.3 (4)
	Entrepreneur 2	2.9 (2)	2.6 (2)
	Employee	122 (18)	112.8 (18)
	Small (<=5)	72.5	67.7
Size of firm - Entrepreneur 1 (%)	Medium (>5 & <40)	23.7	29.6
	Large (>=40)	3.8	2.7

Table A.1., continued

Variable		2010	4th 2005, GBA
Size of firm - Entrepreneur 2 (%)	Small (≤ 5)	96.7	95.3
	Medium (>5 & <40)	3.1	4.7
	Large (≥ 40)	0.2	0.0
Size of firm - Employee (%)	Small (≤ 5)	23.7	24.4
	Medium (>5 & <40)	35.9	37.0
	Large (≥ 40)	40.5	38.6
Owns or rents machinery/tools? (%)	Entrepreneur 1	87	85.9
	Entrepreneur 2	77	73.2
	Self-employed	59	48.0
Owns or rents locale? (%)	Entrepreneur 1	85	91.4
	Entrepreneur 2	65	71.7
	Self-employed	33	28.7
Owns or rents vehicle? (%)	Entrepreneur 1	49	43.5
	Entrepreneur 2	31	32.0
	Self-employed	23	20.6
Annual Income (mean, US\$)	Entrepreneur 1	13,044	10,370
	Entrepreneur 2	6,513	3,611
	Self-employed	5,840	3,270
	Employee	7,863	3,847

Notes: Entrepreneur 1 identifies employers, while entrepreneur 2 identifies those who report being self-employed but who work with at least one additional person. We define self-employed, or “pure” self-employed, as those who work by themselves. Source: EPH.

**Table A.2. Characteristics of Necessity and Opportunity Entrepreneurs,
Fourth Quarter of 2005, Gran Buenos Aires**

Variable	Occupation	Necessity	Opportunity
Entrepreneurs (%)	Entrepreneur 1	22.5	77.5
	Entrepreneur 2	45.5	54.5
Male (%)	Entrepreneur 1	69.8	81.4
	Entrepreneur 2	57.2	62.6
Age (mean, in years)	Entrepreneur 1	50.6	48.8
	Entrepreneur 2	45.0	44.7
Married (%)	Entrepreneur 1	57.1	69.5
	Entrepreneur 2	50.9	60.8
Health insurance (%)	Entrepreneur 1	56.0	80.2
	Entrepreneur 2	29.4	61.9
Hours worked (weekly)	Entrepreneur 1	52.0	51.9
	Entrepreneur 2	49.2	50.5
Wanted more hours? (%)	Entrepreneur 1	26.4	5.0
	Entrepreneur 2	17.2	13.9
Size of firm (mean (median) number of workers)	Entrepreneur 1	6.6 (3)	17.2 (4)
	Entrepreneur 2	2.7 (2)	2.5 (2)
Size of firm - Entrepreneur 1 (%)	Small	82.2	63.5
	Medium	14.8	33.9
	Large	3.0	2.6
Size of firm - Entrepreneur 2 (%)	Small	92.0	98.0
	Medium	8.0	2.0
	Large	0.0	0.0
Owns or rents machinery/tools? (%)	Entrepreneur 1	76.7	88.5
	Entrepreneur 2	69.0	76.7
Owns or rents locale? (%)	Entrepreneur 1	90.2	91.7
	Entrepreneur 2	65.8	76.5
Owns or rents vehicle? (%)	Entrepreneur 1	50.0	41.6
	Entrepreneur 2	24.1	38.5
Annual Income (mean, US\$)	Entrepreneur 1	4,974	11,776
	Entrepreneur 2	2,045	4,927

Source: EPH informal additional survey.

**Table A.3. Characteristics of Formal and Informal Entrepreneurs,
Fourth Quarter of 2005, Gran Buenos Aires**

Variable	Occupation	Informal	Formal
Entrepreneurs (%)	Entrepreneur 1	11.5	88.5
	Entrepreneur 2	54.4	45.6
Male (%)	Entrepreneur 1	74.4	78.8
	Entrepreneur 2	51.3	67.2
Age (mean, in years))	Entrepreneur 1	51.5	48.9
	Entrepreneur 2	43.2	47.5
Married (%)	Entrepreneur 1	67.9	66.1
	Entrepreneur 2	48.2	66.9
Health insurance (%)	Entrepreneur 1	38.2	80.3
	Entrepreneur 2	26.7	73.6
Hours worked (weekly)	Entrepreneur 1	50.2	52.8
	Entrepreneur 2	48.5	52.0
Wanted more hours? (%)	Entrepreneur 1	24.4	5.9
	Entrepreneur 2	17.9	11.6
Size of firm (mean (median) number of workers)	Entrepreneur 1	7.4 (2)	13.0 (4)
	Entrepreneur 2	2.5 (2)	2.6 (2)
Size of firm - Entrepreneur 1 (%)	Small	87.3	66.4
	Medium	6.5	32.1
	Large	6.2	1.6
Size of firm - Entrepreneur 2 (%)	Small	93.6	97.5
	Medium	6.4	2.5
	Large	0.0	0.0
Owns or rents machinery/tools? (%)	Entrepreneur 1	78.4	88.6
	Entrepreneur 2	66.9	80.5
Owns or rents locale? (%)	Entrepreneur 1	83.3	93.6
	Entrepreneur 2	67.1	76.4
Owns or rents vehicle? (%)	Entrepreneur 1	39.2	43.6
	Entrepreneur 2	19.5	43.7
Annual Income (mean, US\$)	Entrepreneur 1	2,627	11,132
	Entrepreneur 2	2,039	5,867

Source: EPH informal additional survey.

Appendix B. Methodological Note

Is it reliable to use educational attainment or current income as proxies for parental wealth in Argentina? That is, are people born in wealthier families more likely to become wealthy or to attend college than people born in lower-income families? This is an important issue to analyze for the purposes of this paper because of the absence of recall questions in the other surveys we studied. If we find that educational attainment and/or current income are highly correlated with parental wealth, then we could use them as proxies in the EPH, ES, and WVS. We explore this issue using the EDS, which includes information on schooling, actual income, and self-assessed parental income.

The EDS suggests that educational attainment and current income are positively correlated with self-assessed parental wealth, but none of them is sufficiently highly correlated. The lack of a stronger correlation could be due to a number of factors, but it suggests that neither schooling nor income serves as a reliable proxy.

Table B.1. Educational Attainment and Parental Wealth, EDS

Educational attainment	Income of your parents when you were 15 years old (self-assessed)		
	Low income	Middle income	High income
Primary education or less	67.6	40.4	28.3
Secondary education	25.8	36.9	40.4
Tertiary education	6.6	22.7	31.4
Total	100	100	100

Table B.2. Current Income and Parental Wealth, EDS

Income quintile (Current income per capita)	Income of your parents when you were 15 years old (self-assessed)		
	Low income	Middle income	High income
First quintile (20% poorest)	33.2	15.8	12.9
Second quintile	25.8	17.5	17.7
Third quintile	20.3	19.6	20.6
Fourth quintile	14.5	22.3	23.9
Fifth quintile (20% richest)	6.2	24.8	24.9
Total	100	100	100