

## How Much Did Mobility Change among High and Low-Income Individuals during the Pandemic?



Before the pandemic, income and mobility were positively correlated. In particular, the share of people who moved more than 1 kilometer in a day was 15 percentage points higher among high-income individuals than among their low-income counterparts.



During the early pandemic (between April and June 2020), both groups experienced sizable mobility reductions. However, high-income individuals reduced mobility by 19 percentage points more compared to low-income individuals.



These patterns can be partially attributed to the fact that high-income individuals are more likely to have jobs that can be performed remotely. They may also have higher savings that allow them to stop working if teleworking is not feasible.

### CONTEXT

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The arrival of the COVID-19 pandemic threatened to cause one of the most severe health, economic, and social crises that Latin America has experienced in modern times. To slow the spread of the virus, governments implemented numerous measures that led to a drastic decline in human mobility between March and June 2020. But did everyone comply with these measures? Were low-income and high-income individuals equally able to reduce mobility? How much did each group reduce its mobility?

### PROJECT

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We studied differences in mobility patterns among low-income and high-income individuals in eight large metropolitan areas in Latin America. We first computed the percentage of people traveling more than 1 kilometer per day using georeferenced data from cellular phones provided by the company Veraset. Second, we formed socioeconomic groups using census data on the share of people over 25 years old who completed secondary education. Combining these datasets, we compared mobility before the pandemic (March 5-11, 2020) and during the early pandemic (March 12 to June 14, 2020) to estimate differences across socioeconomic groups.

## RESULTS

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The results indicate that, before the pandemic, mobility was higher among high-income individuals compared to low-income individuals in all eight cities analyzed. On average, the share of people who traveled at least one kilometer in a day was 15 percentage points higher for high-income compared to low-income individuals. The largest differences in mobility between these two groups were found in Mexico City and Guadalajara, where the gaps were 23 and 25 percentage points, respectively. In contrast, Guayaquil exhibited the smallest gap in mobility by socioeconomic group (7 percentage points).

During the early months of the pandemic (March to June 2020), with the implementation of social distancing policies, human mobility decreased, but the intensity of the reduction was different depending on socioeconomic status. In the eight cities analyzed, high-income individuals reduced mobility by 44 percentage points, whereas low-income individuals reduced mobility by only 25 percentage points. That is, the reduction in mobility among high-income individuals was 75 percent (19 percentage points) higher. This substantial reduction reversed pre-pandemic patterns: in the early pandemic, low-income individuals traveled more than high-income individuals in six of the eight cities included in the study. The only two cities where high-income individuals continued to display higher mobility rates were Guadalajara and Mexico City. An explanation is that, in these two cities, high-income individuals were much more mobile before the pandemic than low-income individuals. Still, in these two cities, high-income individuals reduced their mobility more compared to their low-income counterparts.

## POLICY IMPLICATIONS

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The coronavirus pandemic resulted in dramatic changes in mobility patterns due to the implementation of social distancing policies and informational campaigns. Given that reduced mobility slows the spread of COVID-19, understanding individuals' ability to comply with these measures is important. It is also relevant, however, to consider the context in which social distancing policies are implemented. Given the high levels of informality and inequality in Latin America and the Caribbean, complying with those policies might be easier for high-income compared to low-income individuals.

The evidence presented in this paper suggests a strong relationship between mobility and socioeconomic conditions. In particular, while we find that all socioeconomic groups reduced their mobility during the early months of the pandemic, these reductions were more substantial among high-income compared to low-income individuals. These patterns can be partially attributed to the fact that high-income individuals are more likely to have jobs that can be performed remotely. In contrast, low-income individuals are often employed in manual or high-contact occupations, which in most cases cannot be done remotely. In addition, low-income individuals' lack of savings and consequent need to keep working may also prevent low-income individuals from reducing their mobility. Thus, when deliberating on the length and stringency of social distancing policies, policymakers should consider that low-income individuals may disproportionately experience higher economic costs that prevent them from reducing mobility at a higher rate.

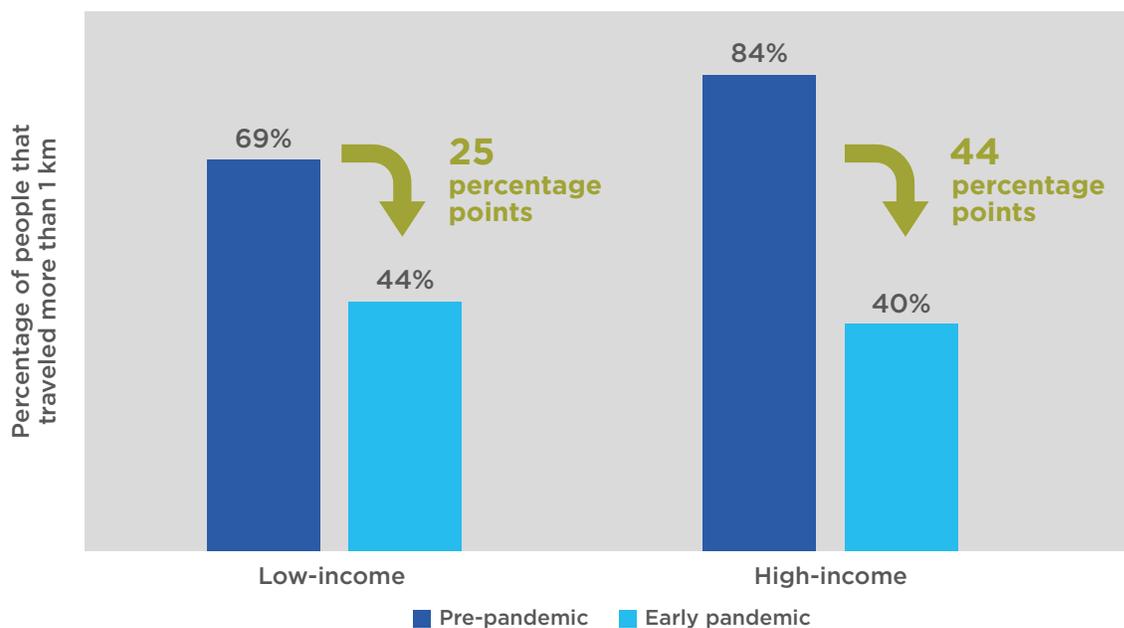
### Key Concept



### PERCENTAGE POINT CHANGE

The raw difference between two percentages. For example, a reduction from 10% to 9% is a 1 percentage point decrease. This is not the same as a percent change.

**Figure 1. Changes in Mobility Due to the Pandemic for Low- and High-Income Individuals**



Note: Each bar displays the average mobility of the 8 cities analyzed. The dark blue bars represent the percentage of people who travel more than 1 km in the pre-pandemic period (March 5-11). The light blue bars correspond to the same measure of mobility during the early pandemic (March 12-June14). The bars on the left display these averages for low-income individuals, while the two bars on the right present this information for high-income individuals. For each socioeconomic group, the green arrows and green text present the percentage point reduction in mobility after the pandemic.

## IDB RESEARCH ON HUMAN MOBILITY

This study is part of a larger project that produced the Human Mobility Map, which shows effects of COVID-19 in Latin America and the Caribbean. This project, led by the IDB Research Department, involved collaboration with the Information and Technology Department, the Institutions for Development Sector, the Knowledge, Innovation, and Communication Sector, the Legal Department, and the Office of the Secretary.



### FULL STUDY

[Aromi, J. Daniel, María Paula Bonel, Julián Cristia, Martín Llada, and Luis Palomino. 2021. "Socioeconomic Status and Mobility during the COVID-19 Pandemic: An Analysis of Eight Large Latin American Cities."](#)

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