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# EMPLOYMENT RESEARCH

## Supply Shock versus Demand Shock

### The Local Effects of New Housing in Low-Income Areas

Brian J. Asquith, Evan Mast, and Davin Reed

#### ARTICLE HIGHLIGHTS

- *Policymakers worry that new market-rate apartment buildings in gentrifying neighborhoods could raise nearby rents and accelerate gentrification.*
- *New buildings could change nearby amenities or neighborhood reputation, increasing demand for the neighborhood enough to offset the effect of increasing supply.*
- *We test this hypothesis and find that new market-rate apartment buildings in low-income central city areas instead slow rent increases.*
- *New market-rate apartment buildings also increase the number of people migrating from other low-income neighborhoods to the nearby area.*

Public frustration over escalating housing costs has steadily risen, particularly in large urban centers, as rents eat up an ever-larger portion of take-home pay. A commonly suggested solution is to allow developers to build more market-rate housing, which should lower rents by increasing supply. Previous research suggests that this will indeed reduce housing costs on average, but many think that this overall benefit comes with a significant cost—new development could raise rents in the immediately surrounding neighborhood.

This runs counter to standard economic models of supply and demand, but a slightly more complicated story could generate this result. The story is particularly plausible in low-income or gentrifying neighborhoods. Because new units are typically expensive, they are usually filled by high-income households. These households could attract new stores, restaurants, or other amenities, and they could also signal that a neighborhood is changing in a way that is attractive to other high-income households. If these amenity or reputation changes are large, they could increase demand for the neighborhood by enough to completely offset the increase in supply, causing rents to increase and accelerating gentrification.

This story has substantial influence in the policy debate, leading many policymakers and residents to strongly oppose new market-rate housing developments in low-income areas. However, there is currently very little evidence for or against the idea. Our recent working paper fills the gap in knowledge by testing this theory directly.

We find that new market-rate apartment buildings in low-income areas do not accelerate gentrification. Instead, they slow rent increases in nearby apartments and increase the number of people who move into the area from other

low-income neighborhoods. Thus, the effect of new supply appears to outweigh any amenity or reputation improvements. The latter may be small because new housing, even in currently low-income areas, goes into areas that are already gentrifying. This implies that new developments serve mainly to absorb existing demand for an area

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**We find that new apartment buildings in low-income areas do not accelerate gentrification. Instead, they slow rent increases in nearby apartments and increase migration from other low-income neighborhoods.**

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rather than to generate new demand. In turn, this reduces pressures on nearby rents because many high-income households move to the new building rather than outbidding lower-income households for nearby apartments.

#### Where Are New Apartment Buildings Constructed?

We start with the most basic question: Where do developers build new market-rate apartments? We focus on a setting where the affordability crisis is worst, the housing debate is most contentious, and the amenities story is most plausible: large (50+) unit apartment buildings constructed in low-income, central city neighborhoods of major market cities between 2010 and 2019. These cities are Atlanta, Austin, Boston, Brooklyn, Chicago,

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#### Effects of Unemployment Insurance Reforms in Brazil

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and Túlio Cravo  
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## Supply Shock versus Demand Shock

**Table 1 Building Neighborhood Characteristics**

	No building	Some building
Household income		
2000 (\$)	47,190	44,998
2010 (\$)	45,097	48,181
2017 (\$)	47,129	63,771
2000–2010 (%)	–4.4	7.1
2010–2017 (%)	4.5	32.4
College degree (%)		
2000	18	33
2010	23	44
2017	27	55
Number of tracts	2,459	1,094

NOTE: Means of the characteristics of the neighborhoods (census tracts) which received new buildings or not. “Some building” column means are weighted by the number of buildings in each neighborhood. Samples of buildings and neighborhoods are described in detail in the working paper: [https://research.upjohn.org/up\\_workingpapers/316/](https://research.upjohn.org/up_workingpapers/316/).

SOURCE: Real Capital Analytics, Census 2000 Long Form (“2000”), American Community Survey 2006–2010 5-Year Estimates (“2010”), and American Community Survey 2013–2017 5-Year Estimates (“2017”).

Denver, Los Angeles, Philadelphia, Portland, San Francisco, and Washington, D.C.

Table 1 compares low-income neighborhoods (defined as a census tract with median household income below the metropolitan area median) that received a new building to those that did not.<sup>1</sup> Two striking patterns emerge. First, while 2010 household income is similar across the two groups, the areas that received a new building saw much larger increases in income during both the 2000–2010 and 2010–2017 time period. Second, areas receiving construction had substantially higher levels of college education, which is often considered a leading indicator of gentrification. These patterns suggest that developers tend to target areas that are already changing, rather than attempting to kickstart gentrification in previously stable neighborhoods.

In short, new developments are correlated with gentrification, but they follow it rather than precede it. This is likely because relatively high rents are necessary to make new construction feasible, so developers do not build in areas where they cannot charge those

rents. Note that these patterns are specific to large apartment buildings but may be different for other types of construction.

### How Do New Buildings Affect Nearby Rents?

We then use data on individual rent listings provided by Zillow to assess the central question in the policy debate: Do new buildings in low-income areas increase rents? We focus on buildings built between 2015 and 2016 in order to be able to observe at least three years of data before and after construction.

The major challenge to estimating causal effects is that new buildings are not randomly placed. Developers target areas where rent is rising fast and is expected to continue to rise in the future. Because of this, a simple comparison of rents in areas that did and did not get new construction (similar to our income comparison in Table 1) would likely show that rents increased by more near new buildings. However, this difference would not necessarily be caused by the new building. We use two quasi-experiments to overcome this problem.

First, we compare a treatment group very close to the new building (within 250 meters) to a control group slightly further away (between 250 and 600 meters). The idea is that while developers might well target a specific neighborhood, they cannot choose exactly when and where to build because not every parcel is for sale or able to be developed. This means that within a small area, the exact placement of a new building is relatively random, making our treatment and control group close to identical except that the treatment group is closer to the new building. This strategy is good for picking up very local effects of new buildings, like new retail options or the aesthetic improvement of replacing a vacant lot.

However, new buildings might have broader amenity or reputation effects that extend beyond that geographically small treatment and control group. To account for these, we construct a second “experiment.” We compare rents near sites developed in 2015–2016 (our treatment group) to those near sites that were developed in 2019 (our control group). The idea is that these two groups of sites are both appealing to developers but were not developed at the same time due to random delays in the land acquisition, financing, city approval, or construction processes. Because our treatment buildings are no longer in the same neighborhood as control buildings, we can detect changes in rents that are caused by effects that span a larger geography.

Both approaches suggest that new buildings decrease rents by 5 to 7 percent relative to what they otherwise would be. In both cases, we find that rents were following similar trends in the treatment and control groups before the buildings were completed, but rent increases slow sharply in the treatment areas immediately after the buildings’ completion. This effect remains constant for the three postconstruction years that we can observe before our sample ends, and,

in a separate estimation, we find no evidence that effects change when we focus on earlier buildings and observe five years after completion.

We note that this effect is relative to what rents would be had the building not been constructed—our finding does not mean that rents decreased in absolute terms. Because our treatment areas are the places most likely to experience the positive amenity and reputation effects that could cause rents to increase, we take this as strong evidence that new buildings in low-income areas decrease rather than increase rents.

### Do New Buildings Affect Who Moves into the Surrounding Neighborhood?

Last, we study how a new development changes in-migration to the surrounding neighborhood (excluding the new building itself). We do so using address history data from Infutor Data Solutions, a marketing intelligence company. The data do not include information on individuals' incomes, so we instead construct outcomes using the average income in migrants' origin neighborhoods.

Figure 1 shows trends in the number of high-income arrivals within 250 meters of buildings completed in 2014 or 2015 in a low-income neighborhood.<sup>2</sup> We define high-income movers as those who moved from a neighborhood with income above the metropolitan median. As shown in the black line, the total number of high-income arrivals does increase by about 20 percent following a building's completion. However, this increase is entirely driven by arrivals to the new building itself (the red line). The blue line, which shows the number of arrivals to the area within 250 meters *excluding* the new building, remains flat or declines slightly after construction.

While this suggests that a new building does not drastically change in-migration to a neighborhood, it does not provide causal evidence on the building's effect. In our final exercise,

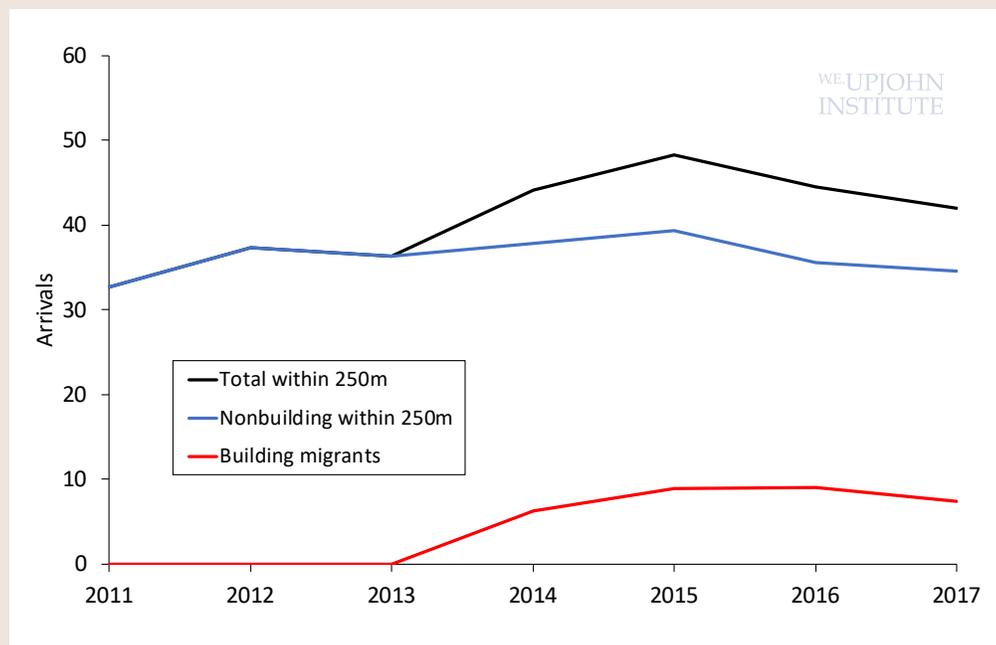
we repeat the quasi-experiments that we used to study rent but instead use the origin neighborhood income of in-migrants as the outcome. We find that new buildings increase the number of arrivals from neighborhoods with average income below two-thirds of the metropolitan area median by three percentage points and reduce average origin income by a similar amount. The increase in low-income arrivals implies that new buildings also decrease rents for relatively cheap units, not just the expensive units that are their most direct competitors. More directly, the new buildings appear to allow more low-income households to move to these frequently gentrifying neighborhoods.

### Policy Implications

The housing approval process in low-income and gentrifying areas is contentious, often because of concerns that new buildings will accelerate rent

increases and neighborhood change. Our evidence suggests that this is typically not the case. Instead, new buildings slow nearby rent increases and increase the ability of individuals from low-income neighborhoods to move to the nearby area. While the neighborhoods containing new buildings do gain richer residents, the gain is concentrated in the new building. This effectively diverts high-income individuals from outbidding low-income individuals for units in the nearby preexisting buildings. The new housing thus helps absorb the pressure from the increasing number of high-income individuals that want to live in central city neighborhoods. Moreover, by allowing more low-income households to move to an area, new housing helps these rapidly changing neighborhoods remain economically integrated, which research suggests promotes economic mobility for low-income residents.

**Figure 1 In-Migration to Areas around New Buildings**



NOTE: This figure shows trends in the number of in-migrants from tracts with income above the MSA-median to the area within 250 meters of new buildings. Nonbuilding migrants are those arriving to the area within 250 meters but not the new building, building migrants are arrivals to the new building itself, and total migrants is the sum. The sample includes 2011–2017 moves within 250 meters of new buildings completed in 2014–2015. SOURCE: Authors' calculations using data from Infutor Data Solutions and the U.S. Census Bureau.

## Supply Shock versus Demand Shock

On the whole, new market-rate housing appears to benefit not just the region but also the local neighborhood. This suggests that market-rate housing should be an important part of any solution to the housing affordability crisis. Fears of increased rents near new buildings should not prevent governments from implementing desired reforms to regional housing supply.

We note two important caveats to our findings. First, we estimate an average effect that may disguise variation across different types of buildings and neighborhoods. Amenity and reputation effects are highly subjective and may vary widely depending on the local context. Second, the buildings in our sample are in the types of places that developers historically have wanted to build. While these areas are central to the debate, the effects may be different in other types of neighborhoods. For example, developers rarely build market-rate units in very low-income areas with high vacancy rates, so our results do not speak to what would happen if they did.

### Notes

1. A census tract is an area with about 4,000 people.
2. Our migration data contain one less year than our rent data, so we shift the buildings we study back by one year.

*This article draws on research from an Upjohn Institute working paper, which can be found at [https://research.upjohn.org/up\\_workingpapers/316/](https://research.upjohn.org/up_workingpapers/316/).*

*Brian J. Asquith and Evan Mast are economists at the Upjohn Institute. David Reed is a community development economic advisor at the Federal Reserve Bank of Philadelphia.*

# Effects of Unemployment Insurance Reforms in Brazil

*Christopher J. O'Leary, Túlio Cravo, Ana Cristina Sierra, and Leandro Justino Veloso*

The Brazilian unemployment insurance (UI) program was established in response to a severe economic recession in the 1980s. It is now the largest UI program in the Latin America and Caribbean region, with more than 40 million beneficiaries between 2012 and 2016. Despite its size, the program operates in a labor market where more than one-third of all employees work in informal jobs not covered by UI. Because these latter workers receive no benefits when they are separated from their jobs, formal sector employment is desirable, and previous research has found significant flows of workers between the formal and informal sectors and back again, which UI receipt may facilitate. In particular, some employers may use UI to subsidize wages of workers they lay off and then recall after UI benefits end. Some laid-off employees even continue to work informally in their prior jobs while receiving UI benefits (Van Doornik, Schoenherr, and Skrastins 2017). Moreover, the UI program has historically been generous in terms of minimal eligibility requirements within the formal sector, which could further incentivize such back-and-forth flows.

These features have made Brazil's UI program relatively expensive, and when

a recession in 2014 further increased costs, the Brazilian government instituted reforms in the eligibility rules to contain future costs. We investigate the effects of two such changes in UI eligibility rules in 2015 that increased the work experience requirements for first- and second-time UI applicants. While previous research estimated that these reforms significantly reduced layoffs (Carvalho, Corbi, and Narita 2018), our analysis, which relies on more complete administrative records, finds smaller overall reductions in layoffs, with somewhat larger decreases for workers with a single prior UI benefit spell.

### A Natural Experiment

The recession that began in early 2014, coupled with the institutional features of Brazil's UI program described above, led to calls for reforming the system. Facing general budget difficulties and anticipating a significant rise in unemployment, Brazilian President Dilma Rousseff issued Provisional Measure 665 in late December of 2014, raising UI eligibility requirements for first and second time UI claimants, effective March 1, 2015. Soon thereafter, the legislature passed a new law codifying eligibility

## ARTICLE HIGHLIGHTS

- *The Brazilian unemployment insurance (UI) program, established in 1990, is now the largest in Latin America.*
- *UI reforms in 2015 increased work experience eligibility requirements for first- and second-time UI applicants.*
- *We find reductions in layoffs are greater for workers with one prior UI spell than for first-time claimants.*

rules nearly as strict as the provisional measure, and this law took effect on June 17, 2015. Brazil thus experienced two sudden changes in UI eligibility rules in 2015, although these changes applied only for workers on their first or second UI application; rules for the third and subsequent applications were unchanged. Consequently, the reforms were targeted toward recent labor market entrants.

Specifically, the reforms increased the minimum number of months of employment workers needed before they would qualify for the shortest benefit duration on their first or second UI application. Prior to the first reform, any UI applicant who had worked six months in the prior three years could qualify for three months of benefits (first row of Table 1). Under both reforms, first- and second-time UI applicants now needed longer recent work experience to qualify for the shortest potential benefit duration. For first-time claimants, for example, the new minimum potential benefit shifted from three to four months, but the required work period increased from 12 to 18 months under the first reform, before returning to 12 months under the second reform, a mere four months later. A summary of the work requirements for UI benefit eligibility under each set of eligibility rules is listed in the Table 1.

Our evaluation focuses on short-tenure workers who were most affected by the changes in UI eligibility rules. Using data that contains tenure at the daily level, we contrast job layoff rates for a treatment group of workers with at least 6 and less than 7 months of job tenure against a control group of workers with at least 5 and less than 6 months of job tenure. Under the initial regime, the treatment group with 6 months of job tenure was eligible for three months of UI benefits but first- and second-time applicants became ineligible for any benefits under both reforms. We estimate how differences in layoff risk between the treatment

and control groups vary across the different regimes, an approach called difference-in-differences. To isolate the impact of the reforms, we further adjust for differences across individuals in their geographic location, calendar month in the data, and demographic characteristics.

**Effects on Layoffs**

We find that the increase in work months needed for UI eligibility reduced employer layoffs. For short-tenure workers with no prior UI applications, the first reform reduced layoff risk by 0.18 percentage points (from a base layoff rate of 3.4 percent). The impact of the second reform was larger, cutting layoff risk by 0.41 percentage points relative to the period before either reform.

Among workers who had one prior UI application, the reforms had even stronger impacts, with the first reform reducing layoff risk by 0.9 percentage points (from a base layoff rate of 4.0 percent), and the second reform by 1.05 percentage points.

While sizable, these effects are smaller than those implied by earlier studies that did not have as detailed data on the number of prior UI applications. When we approximate the methodology of previous studies by not

accounting for the number of prior UI spells, we estimate a layoff reduction from the first reform of 0.35 percentage points, much smaller than earlier

**Program costs rose sharply with the recession starting in 2014 as more unemployed workers with sufficient experience drew UI benefits.**

estimates of 0.53 percentage points (Van Doornik et al. 2018) to 0.69 percentage points (Carvalho, Corbi, and Narita 2018).

**Reduction in Collusion**

In the United States, UI benefits are financed by experience-rated employer taxes that rise with total benefits paid to an employer’s former workers. Perhaps unsurprisingly, layoffs are lower in states where UI taxes rise more quickly with experience-rating (Card and Levine 1994). In contrast, Brazilian UI benefits are financed from general revenues, and neither employers nor workers pay specific taxes to finance the program. Consistent with this lack of implicit penalty for heavily using the system, Brazilian UI benefits appear to subsidize the flow between low-wage, short-term jobs and informal sector

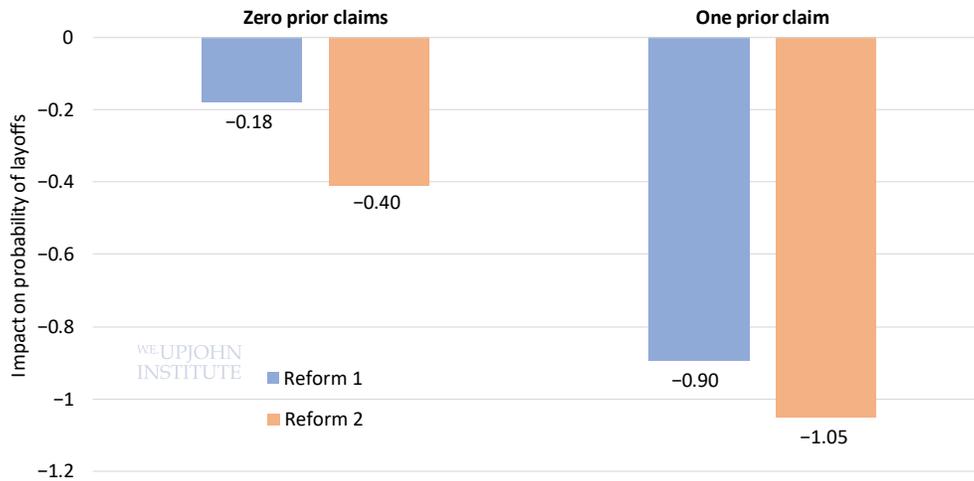
**Table 1 Months of Employment Required for UI Benefits, 1990–2017**

Number of UI claim	Potential benefit duration	Initial regime (1990 to Feb. 27, 2015)	Reform 1 (Feb. 28, 2015 to June 16, 2015)	Reform 2 (from June 17, 2015)
First	Three	6	—	—
	Four	12	18	12
	Five	24	24	24
Second	Three	6	—	9
	Four	12	12	12
	Five	24	24	24
Third or more	Three	6	6	6
	Four	12	12	12
	Five	24	24	24

NOTE: The table shows the number of months of formal employment required in the 36 months before UI application to be eligible for benefits, by number of UI claims and regime.  
 SOURCE: Authors’ calculations from provisions in Law 7.998, PM 665, and Law 13.134.

**Effects of Unemployment Insurance Reforms in Brazil**

**Figure 1 Both Eligibility Reforms Reduced the Risk of Layoffs**



SOURCE: Authors' calculations.

jobs, in some cases back and forth with the same employer (Doornik, Schoenherr, and Skrastins 2017).

We find the eligibility reforms affected this behavior, too. For short-tenure workers with no prior UI claims, the probability of being rehired by the same employer within 4 to 10 months of layoff fell by 1.3 percentage points after the first reform and 1.8 percentage points after the second reform. For short-tenure workers with one prior UI

claim, the first reform reduced recall to the same employer by 1.7 percentage points, an amount similar to workers with no prior UI claims. However, the second reform did not appear to affect recalls for these workers.

**Conclusion**

We confirm results of previous research that Brazil's 2015 increases in UI eligibility requirements reduced

layoffs. However, our results indicate that previous studies overestimated these reductions, likely because they were unable to precisely measure individuals' prior UI requests, a key parameter undergirding the changes in requirements. When we account for prior UI requests, we find that changes in UI eligibility rules reduced the chance of layoff the most for workers with exactly one prior UI benefit receipt spell. Our results provide some evidence that restrictions on UI eligibility reduced collusion between workers and employers using UI benefits to subsidize wages.

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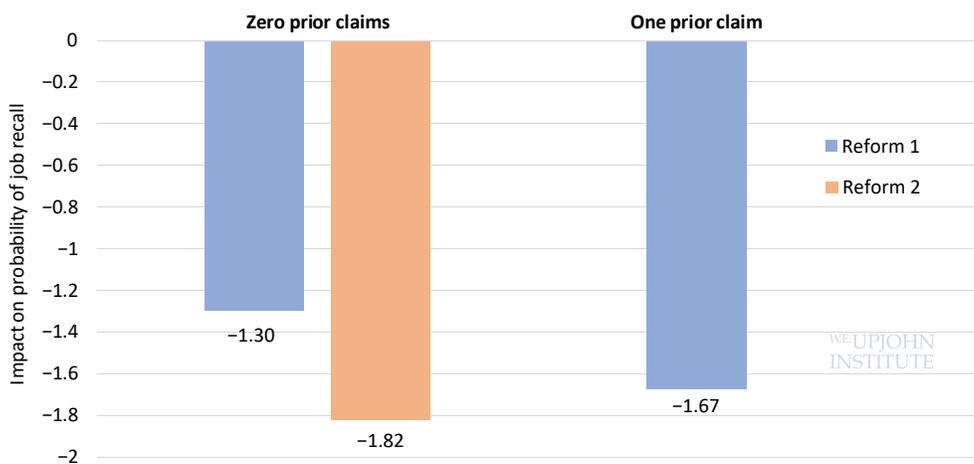
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**Figure 2 Both Eligibility Reforms Also Reduced Job Recall to the Same Employer**



SOURCE: Authors' calculations.

*This article draws on research from an Upjohn Institute working paper, which can be found at [https://research.upjohn.org/up\\_workingpapers/318/](https://research.upjohn.org/up_workingpapers/318/).*

*Christopher J. O'Leary is a senior economist at the Upjohn Institute, and Túlio Cravo is a principal economist at the African Development Bank. Ana Cristina Sierra and Leandro Justino Veloso are consultants to the Inter-American Development Bank.*

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