

The Mount Laurel doctrine: A case study in housing affordability and the labor market in New Jersey

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SUMMARY

The United States housing shortage has hampered economic growth and societal welfare for multiple decades, and New Jersey is one of the most severe examples of this historically overlooked predicament. As the most densely populated, economically segregated, and second-richest state, New Jersey has implemented many housing affordability policies, such as the Mount Laurel doctrine, which was enacted in Burlington County in 2000. These policies have incited immense amounts of controversy from both builders and residents alike. We explored the dynamic landscape of affordable housing policies in New Jersey within the context of a historical case study of the Mount Laurel doctrine. We hypothesized that the 140-home Ethel R. Lawrence (ERLH) housing complex in Burlington increased housing affordability for those of lower economic classes, decreased the unemployment rate, and increased the size of the labor force in Burlington County when compared to nearby counties. We considered variables such as the ratio of average rent to the average median income for both individuals and households, unemployment rate, and civilian labor force by county across three states. We found that the ERLH initiative and overarching Mount Laurel doctrine may have positively affected housing affordability strictly for individual residents as opposed to a negligible effect on households. The unemployment rate and labor force largely remained the same before and after the policy intervention. Drawing from lessons about NJ zoning, the land market, and housing supply, policymakers can navigate the intricate landscape of affordable housing and create a more equitable housing future for the **United States.**

INTRODUCTION

Over the past few decades, the United States (US) has undergone countless affordable housing policy changes, ranging from the national level down to individual counties. These laws have attempted to lower the prices of affordable housing units, encourage the construction of inclusive residential complexes, and improve cost-burdened households' standard of living (1). Housing remains a crucially important aspect of individuals' lives, and not providing appropriate housing to low-income households hampers national economic growth and societal welfare (2). Currently, the US Department of Housing and Urban Development

(HUD) defines affordable housing as housing on which the resident is not paying more than 30% of their gross income in living costs (3). Despite past policies, such as the 1986 Low-Income Housing Tax Credit (LIHTC), which sought to allocate tax credits to make rental housing more affordable, the American housing shortage remains prevalent (4). It is clear that much of the country needs policy reform.

One of the primary components exacerbating the present national housing crisis is the rate at which housing prices are rising in comparison to income and wealth accumulation. In the aftermath of the Great Recession, only 78% of new and existing home sales were affordable for the average family after taking income and mortgage interest rates into account (5). In contrast, merely 56% of houses on sale were classified as affordable in 2018, even amidst an economy that had returned to relative stability (5). En masse, housing is taking up a larger proportion of peoples' incomes than before, and this situation has only been worsened in the context of the recent COVID-19 pandemic (6). Robert Shiller, winner of the Economics Nobel Prize in 2013, concluded that US home prices surged 45 percent from the tail end of 2019 to June 2022 and that a sudden increase of this magnitude had never happened in the history of the US national home price index, which he created in 1987 (7). Low interest rates have resulted in lower mortgage and home financing rates, leading to more demand and less supply (8). Recent stimulus checks and unemployment benefits from the government's response to the pandemic have also boosted household incomes and, therefore, naturally increased housing demand, while supply chain issues have provided further cost-push pressures to housing prices (8).

There are three main questions about the housing affordability crisis in the US, namely (1) how we got here, (2) why we got here, and (3) what policymakers can do now to aid both prospective and existing homeowners for the future. Glaeser et al. (2005) concluded that nearly eight decades ago, in 1950, rising prices often occurred because of better housing quality and construction, while from 1970 onwards the surge in housing prices could primarily be attributed to the difficulty in acquiring regulatory and legal approval for construction (9). This is due to housing prices not only being a result of demand-side pressures such as interest rates, but also supply-side factors like land, physical structure, and government approval for construction. The paper also suggests that these demand-side costs are not the driving force behind the difficulty of large-scale development and rise in housing prices in recent years, but it is instead a changing regulatory regime (9).

With regard to employment, much of the literature relating housing prices to labor mobility focuses on the clustering effect

rising housing costs have on workers. This term refers to how higher housing prices attract people with higher purchasing power while simultaneously discouraging those unable to afford housing (10). Furthermore, these high population density areas often experience notable boosts in productivity and economic growth because of the high concentration of skilled workers (10). However, as housing prices surge even higher, many potential workers are discouraged or unable to pursue work in those locations, resulting in a crowding-out effect in certain cases that then decreases productivity (11). Indeed, high housing costs in New York (NY) have forced many financially struggling families to leave the area, contributing to higher homelessness rates than in other major metropolitan hubs that exhibit lower rent prices (12). Furthermore, rent growth in NY has been lowest in the jurisdictions that have enabled the newest affordable housing construction, leading economists to conclude that adding new housing helps maintain low rent growth and overall residential affordability (12). Similarly, research also suggests that local housing subsidy programs are effective at stimulating the labor force in highly urbanized areas. For example, NYC's HOME initiative has been linked to over a 5% increase in employment across a 13-month period (13).

Among the 50 states in the US, New Jersey (NJ) presents a conundrum in terms of both geographical location and economic markers. NJ is both the most densely populated and richest state in the US, measured in terms of average median income (14, 15). NJ also ranks 9th in terms of the Gini index among states in the US, a numerical value measuring income inequality among a region, representing relatively high levels of wealth disparity (16). Given such circumstances, NJ severely lacks affordable housing, with the National Low Income Housing Coalition concluding that there were only 31 affordable and available rentals per 100 families earning below 30% of the area median income, one of the worst ratios among the entire Northeast (17).

One of the most notable reforms in the state's history is the Mount Laurel doctrine, originally proposed about 50 years ago. The doctrine mandates that all townships must utilize zoning powers to provide a fair share of affordable housing available to citizens of all income levels and connects each community's economic development to their housing affordability (18). Despite criticism from residents and developers, housing initiatives made possible by the Mount Laurel doctrine have created a positive impact on the affordable housing shortage in NJ, creating 40,000 new units of low- and moderate-incoming housing from 1983 to 2000 (19). Further "builder's remedy" policies, which allow developers of affordable housing to bypass existing zoning laws should the municipality fail to adhere to housing laws, have also aided in easing NJ's predicament (20).

There have also been past analyses on the historical background and county-wide effect of one specific housing initiative, enabled by the Mount Laurel doctrine in Burlington County. The intervention point was set in the year 2000, when the first set of Ethel R. Lawrence Homes (ERLH) finished construction, consisting of 140 housing units for families earning between 10 and 80 percent of the regional median income (21). There were no statistically significant differences between Mount Laurel Township and the three comparison regions both before and after 2000, and the opening of Ethel Lawrence homes had no statistically significant effect

on township home prices (22). Contrary to initial community misgivings, there was no evidence to show any increase in crime rates, increase in property tax rates, or decline in property values (22). Residents also experienced slight boosts to mental health and reductions in mental distress (22). Overall, it had promising results.

We built upon this foundation by comparing the township and county affected by the ERLH housing initiative to nearby counties in NJ, as well as counties in neighboring states, such as Connecticut (CT) and Delaware (DE). This research is important because it details how housing policies affect suburban rather than highly urbanized areas, a geographical category that is becoming increasingly more common in the US (23). Suburban areas are characterized by a lower population density, higher concentration of detached houses or duplexes, and lower job diversity (24). These key factors heavily influence the economic opportunities and subjective well-being of its residents, which is why it is important that research be done to assess the impacts of traditionally urbanoriented economic policies on these regions.

We hypothesized that these NJ housing policies would increase housing affordability for those of lower economic classes and improve the size of the labor force when compared to nearby counties. We evaluated variables, including the average median rent-to-average median income (AMI) ratio, unemployment rate, and labor force, to assess the impacts of a historical attempt at making housing more affordable in the state of NJ. We found that the ERLH initiative and overarching Mount Laurel doctrine may have positively affected housing affordability strictly for individual residents as opposed to a negligible effect on households. The unemployment rate and labor force largely remained the same before and after the policy intervention. Through this analysis, policymakers can utilize this information to make better decisions in the future.

RESULTS

In order to gauge the effectiveness of the ERLH housing initiative, we chose to compare the housing market of Burlington County, NJ, to nearby regions that were not affected by the new influx of affordable housing supply. Alongside Burlington County (NJ), Mercer County (NJ), Hartford County (CT), and New Castle County (DE) were chosen due to their geographical proximity and similar personal income per capita, found through Federal Reserve Economic Data (25-28). To investigate our hypothesis, we analyzed variables, such as the average rent-to-average median income (AMI) ratio, housing price indices, unemployment rate, and labor force size of all four counties from 1970 to 2023. For each variable, we first visually examined trends as event studies to see what was happening before and after the year the ERLH homes were constructed. We then used an econometric technique known as difference-in-differences (detailed in Angrist and Pischke 2008) to detect statistically significant results where there were any, even when faced with visually similar graphs (29).

The difference-in-differences method entails two steps. The first step is to test whether trends in the variables of interest were similar before the ERLH intervention across our "treatment" area of Burlington County and the "control" areas of Mercer County, Hartford County, and New Castle County. This is called testing for parallel trends and was done with Equation 1 of the form:

 $y = \beta_0 + \beta_1 Year + \beta_2 Treated + \beta_3 (Year * Treated) (1)$ where Year denotes the year of the data, Treated is a dummy variable that is equal to 1 for observations in Burlington County (Treatment) and 0 for all the others (Control), and (Year *Treated) is the product of these two variables. We used all pre-2000 data, which we tested for the significance of to determine whether Burlington County's trend was different from that of other counties pre-2000. If it was not significant (the p-value is high), we could reject any differences in the trends between our treated counties and control counties. If we could reject differences in trends, it meant that the variable y (any of our mentioned variables) had parallel trends in treatment and control areas before the treatment. This was important for our analysis as it was used to create a valid counterfactual scenario of what would have happened in Burlington without the ERLH initiative - it would have most likely trended parallel to the other counties, given the available evidence. Thus, if we subsequently found evidence of a divergence in trends following 2000, we would be able to say something about the effect of the ERLH initiative (the difference-in-difference treatment effect). After checking for parallel trends, the second step of difference-in-differences is running our second equation that was similar to the one above but using both pre- and post-2000 (treatment year) data. Equation 2 has the same form:

$$y = \beta_0 + \beta_1 Year + \beta_2 Treated + \beta_3 (Year * Treated)$$
 (2)

But now, gave us the differential impact of being in Burlington County *post*-ERLH – the treatment effect we were interested in. Given that trends were parallel across all counties before 2000, any additional difference displayed in Burlington County post-2000 was suggestive evidence of the effect that the ERLH homes created, being the only policy known to have been implemented exactly in 2000 in Burlington County and not the other regions.

Following the above-mentioned approach, we first analyzed trends in housing prices for each county to determine whether the Mount Laurel doctrine increased housing affordability in Burlington County after 2000. Based on all-transactions house price indices for each county, calculated using a weighted average of regional housing prices, it was

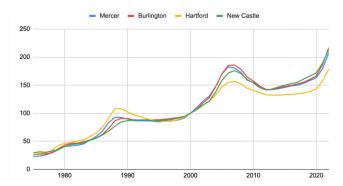


Figure 1: All-transactions housing price index. Line graphs show relative house price indices of four counties over time from 1973 to 2022. The housing price index used in the figure is the Federal Housing Finance Agency House Price Index (FHFA HPI), which measures changes in single-family homes through a repeat-sales index. Blue: Mercer County, Red: Burlington County, Yellow: Hartford County, Green: New Castle County. Data used was from the St. Louis Federal Reserve Economic Data database.

	(1)	(2)	(3)
	Price Index	Unemployment	Labor Force Size
		Rate	
Year	3.147***	-0.268***	-1224.8
	(0.000)	(0.000)	(0.856)
Treated	-2.297	1.487	-150299.7
	(0.625)	(0.550)	(0.573)
Year x Treated	0.123	-0.0778	3980.5
(Placebo)	(0.715)	(0.538)	(0.768)
Constant	29.17***	10.31***	311514.6**
	(0.000)	(0.000)	(0.024)
N	100	40	40

p-values in parentheses p < 0.10, p < 0.05, p < 0.01

Table 1: Testing for Parallel-Trends.

not clear whether the trend was different for Burlington when compared to the other three counties (Figure 1). Pre-2000, all five counties trended similarly, with Hartford housing prices spiking higher than the other four in 1988. From 2000 to 2007, Mercer and Burlington County housing prices increased by 1.81 and 1.86 times, respectively, while New Castle and Hartford County prices rose 1.76 and 1.6 times, respectively. The all-transactions house price indices were higher among the two NJ counties at the peak of 2007 than Hartford, but they were nearly indistinguishable from New Castle. We also quantitatively tested the parallel trends on this index using a difference-in-difference style regression equation. We found no evidence of differing trends pre-2000, based on the statistical insignificance of the coefficient on (Year * Treated) (**Table 1**). As there were no differing trends pre-2000, we were able to find a difference-in-difference estimate of the effect post-2000, as described by our method in lines 138 to 158. We show our results in **Table 2**. There was statistically significant evidence that prices in Burlington County had risen relative to the other three counties after 2000, with the price index rising by 0.281 relative to the others, but this evidence is marginally significant (p = 0.054). This does not support our hypothesis of the lowering of housing prices due to the construction of the ELRH homes.

Next, we matched each decile of individual income earners with each decile of yearly rent payers for housing units. Breaking up income earners into deciles gave us a more focused lens through which to analyze the impacts of the ERLH policy on specific economic classes in comparison to the all-transactions housing index metric – we may see that the effects accrued only for the lowest income groups (as hoped), and not for the higher income groups. We calculated and graphed the ratio between yearly rent and individual incomes in all four counties across the deciles (**Figure 2**). In Mercer, Hartford, and New Castle County, we observed that housing affordability did not experience noticeable improvements at any decile from before the year 2000 to after.

Then, we examined the ratio of average rent to average median income for households rather than individuals (**Figure 3**). In this alternative framing, the graphical evidence appeared inconclusive and did not suggest that the ERLH initiative had any positive or negative effect on housing affordability to its intended target demographic post-2000. However, it is worth

	(1)	(2)	(3)
	Price Index	Unemployment	Labor Force Size
		Rate	
Year	3.167***	0.0146	1579.8
	(0.000)	(0.412)	(0.125)
Treated	-1.790	-0.285	-71257.4**
	(0.629)	(0.619)	(0.033)
Year x Treated	0.281*	0.00939	-245.5
(DiD Estimate)	(0.054)	(0.618)	(0.821)
_cons	31.14***	4.877***	257141.3***
	(0.000)	(0.000)	(0.000)
N	192	132	132
	n-value	es in parentheses	

Table 2: Difference-in-Differences Estimate.

noting that in Burlington County, the ratio between average rent-to-household AMI for the 5th percentile remained consistently above the 15th percentile, while the ratio for the 5th percentile was more volatile in the other three counties and often intersected with the 15th or even 25th percentiles, suggesting that housing may have been less affordable for low-income households in Burlington County post-2000 than in the other three counties (**Figure 3C**), though this is simply suggestive, as we lack the data to test this more formally.

* p < 0.10, ** p < 0.05, *** p < 0.01

Finally, we assessed the housing complex's effects on the unemployment rate in all four counties (Figure 4). There was no visible difference between the unemployment rates pre- and post-2000 in Burlington when compared to the other three counties. Similarly, there was no visible difference in the trend patterns of the civilian labor force of Burlington to other counties after the doctrine (Figure 5). We were able to test whether these trends were parallel or not using the procedure described at the beginning of the section. The trends were not differential pre-2000, and so our parallel trends requirement was met (columns 2 and 3 of Table 1). This allowed us to do our difference-in-difference analysis, but the coefficient on (Year * Treated) in columns 2 and 3 confirmed to us that there was indeed no statistically significant change in the unemployment rate or civilian labor force population of Burlington relative to the other three control counties. This means that there was no detectable change to the labor market as a result of the ERLH initiative.

DISCUSSION

Extensive research has been done to show that increases in housing supply correspond with increases in affordability and the labor force across various metropolitan areas in the US, such as New York City. Guided by their research methods, we utilized a similar approach to evaluate whether the Mount Laurel doctrine implemented in NJ has been effective in lowering the amount of income individuals and

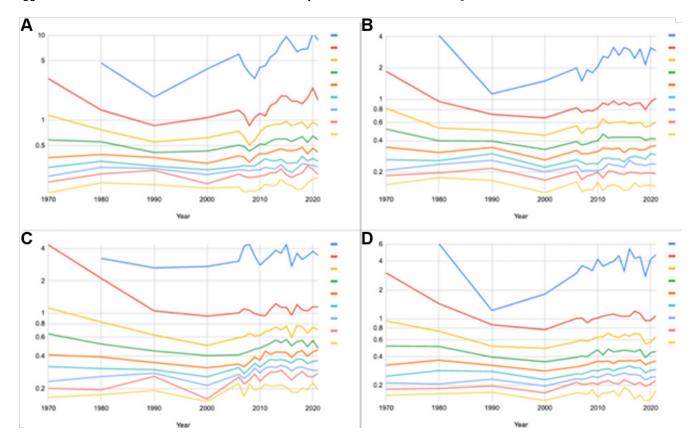


Figure 2: Median rent to individual average median income (AMI) ratio of different income groups for Mercer (A), Hartford (B), Burlington (C), and New Castle (D) County. The nine individual lines in each county's graph depict the ratios for the 15th, 25th, ... and 95th percentiles of individual income earners over time from 1970 to 2023 (from top to bottom). The 5th percentile ratio was not able to be calculated as in most years, the 5th percentile income value (denominator) was \$0. Data used was from the St. Louis Federal Reserve Economic Data database.

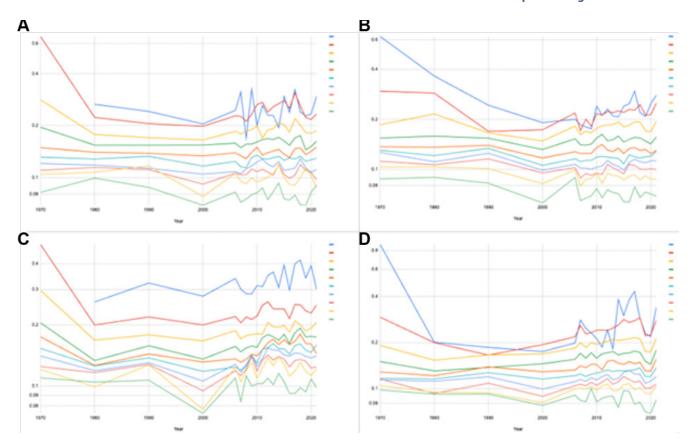


Figure 3: Median rent to household average median income (AMI) ratio of different income groups for Mercer (A), Hartford (B), Burlington (C), and New Castle (D) County. The ten individual lines in each county's graph depict the ratios for the 5th, 15th, 25th, ... and 95th percentiles of household income earners over time from 1970 to 2023 (from top to bottom). From 1970 to 1980, the 5th percentile ratio was not able to be calculated as the average income value (denominator) was \$0. Data used was from the St. Louis Federal Reserve Economic Data database.

households proportionately spend on living expenses and how it has changed the labor market. We found that the ERLH housing initiative, a case study of the implementation of the Mount Laurel doctrine, was possibly beneficial in increasing housing affordability for individuals living in Burlington County compared to other regions of NJ and adjacent states. This same effect was not observed in household rent-to-income ratio data. Additionally, the policy had negligible effects on the unemployment rate and labor force in Burlington County when compared to surrounding regions.

We utilized the average rent-to-average individual median income ratio to analyze the change in affordability of housing over time in different deciles. This measure is more effective than all-transaction house price indices as it gives greater insight into how people of different socioeconomic classes are specifically affected rather than the entire county. This method allowed us to have a more nuanced understanding of whether these policies had been effective for the low-income residents they were originally intended to target or whether they resulted in a uniform impact on all citizens. The greater the ratio is, the less affordable housing is for individuals, as they are paying proportionally more of their income on living expenses. We cannot tell whether the individuals in each decile of income earners are exactly the same individuals in the corresponding decile of rent payers due to lifestyle choices, household size and composition, and rent control. For example, individuals may need to spend proportionally

more on rent depending on the size of the households they are financially responsible for, altering the alignment between income and rent expenditure. However, economic principles, such as the income effect as well as empirical data, have shown that there is a positive correlation between income and housing expenditures; and thus, this measurement is still useful to gauge general affordability at each income level (30).

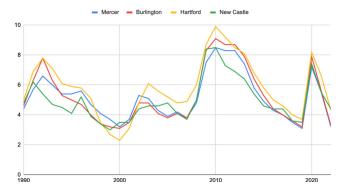


Figure 4: County-wide unemployment rate. Line graphs show county-wide unemployment rate across four counties from 1990 to 2022. Blue: Mercer County, Red: Burlington County, Yellow: Hartford County, Green: New Castle County. Data used was from the St. Louis Federal Reserve Economic Data database.

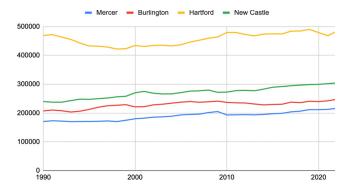


Figure 5: County-wide civilian labor force size. Line graphs show county-wide civilian labor force size across four counties from 1990 to 2022. Blue: Mercer County, Red: Burlington County, Yellow: Hartford County, Green: New Castle County. Data used was from the St. Louis Federal Reserve Economic Data database.

The primary limitation of this metric is in considering affordability at an individual level and not at a household level, which may not be the most natural housing arrangement for many people, such as couples or families. However, it is a useful benchmark to have and is meaningful if we make the normative judgment that housing affordability is a concept pertinent to individuals first and households second. Again, one must keep in mind that the original 140 Ethel R. Lawrence homes brought upon by the Mount Laurel doctrine in 2000 represent a tiny fraction of the existing Burlington housing market at the time, consisting of 161,311 total housing units and 3.810 developments above 50 individual units (31). Due to the large number of individuals in Burlington County in comparison to Ethel R. Lawrence Homes residents, the trends observed in data may be influenced by statistical noise as well as other arbitrary factors such as minor local regulations and seasonal preferences.

In light of these limitations, we also chose to examine the same ratio of average rent to average median income for households. Compared to individual income, this is a more comprehensive metric to link households of each decile to their corresponding housing units, considering that the average number of people per household in NJ is 2.66 (32). A limitation of both these groupings is that the datasets from which rent values were calculated also included expected rent reported by landlords for all vacant housing units and do not directly correspond with the actual housing units inhabited by those accounted for in the income data. However, we did not expect that there would be a difference in the impact the housing complex had on the rent-to-AMI ratios for individuals and households, as the economic characteristics of households often reflect the aggregate of the individuals themselves.

One possible reason for this divide between how the additional housing supply affected individuals and households lies in the way people group together. When housing is unaffordable for individuals, they often move in together and form households to share living expenses. However, when housing is made more affordable, they may choose to live as individuals once more and shoulder the entire burden of paying rent and other costs themselves (33). Thus, even if the doctrine's implementation did have a positive effect on affordability to households, this may not necessarily be reflected in the data. In the first case, this may have resulted

in the combined household rent-to-income ratio appearing artificially lower than it truly was, while the second case may have resulted in two or more separate households (consisting of only one individual) having artificially higher rent-to-income ratios.

This is only a theoretical possibility as to why these mismatches in outcomes appeared and could not be verified due to time and data limitations. Reliable surveys and datasets before the year 2000 on housing prices and general economic markers divided by state and county are extremely sparse and often only taken every decade. Data for specific townships is sparse and essentially non-existent. Additionally, government data before 2010 is taken every five years, and thus, there are significant gaps in the timeline where we were unable to detect any changes potentially brought upon by policies enacted before then. The available data being taken in repeated cross-sectional design also rules out some potential avenues of analysis that would be open if individual-level panel data were available.

Additionally, the doctrine's implementation had no noticeable impact on the size or status of the labor market in Burlington County, as pre- and post-2000 trends in the unemployment rate and civilian labor force were visibly identical, although their initial levels were different. This contrasts much of the community's original fears of a relatively lower-income demographic, resulting in decreased productivity and employment (22). On the other hand, it also does not directly show a boost in productivity or labor participation that oftentimes is a result of more optimal employment allocation due to feasible housing options for potential workers. Thus, the doctrine either was not conducted on a large enough scale to affect a significant number of townships within the county or the housing constructed did not lead to the creation of new employment nor a more efficient allocation of residents to jobs.

As a final limitation, we must note that this paper is limited in its scope and methodology of analysis due to several constraints in the availability of data. While we use a wide range of datasets to speak to different aspects of our research question, due to the granularity of data available, we are restricted to visual inspection and descriptive analysis in parts. Where possible, we use more sophisticated undergraduate level methods such as differences-in-differences to arrive at more causal answers – we hope in the future that further data availability or primary data collection can answer our remaining questions with more causal rigor.

The NJ population will continue to grow in the following years, but the size of the state will not, and thus, in the future, it may be necessary to examine the land market instead of the housing market when looking at fluctuations in living expenses (34). Land regulation is the most influential factor to making housing more affordable, especially in already densely populated areas like NJ. There is a strong correlation between land regulation and rent prices, which means that stricter regulation often lowers homeownership rates (35). The opposite is also true, as land use deregulation could cause housing prices to decline by up to approximately 25% in populated states such as California (36).

A lack of affordable housing has affected NJ for many decades, and it is no surprise that concentrated and persistent poverty continues to rise in the state as a whole (37). This study found that one promising initiative, the Ethel

R. Lawrence homes, may have improved housing affordability for individual residents but not for households, and did not exhibit adverse effects on the labor market as many community members predicted. The implementation of policies such as these are small steps on a long journey. To solve the housing shortage which has been present for so long, policymakers must take both qualitative and quantitative approaches to forming landmark housing policies such as the Mount Laurel doctrine. This includes looking at academic research, but it also entails speaking to neighborhoods, affordability activists, and planning organizations to build a better housing future from the ground up.

MATERIALS AND METHODS

We primarily aimed to assess the effect of the doctrine on property values and their relative affordability in NJ's housing market. We considered a collection of four counties both within and outside of NJ (from neighboring states), namely Mercer, Burlington, Hartford, and New Castle County. We also took historical data ranging from the 1970s and 1980s to 2022, in order to investigate whether the Mount Laurel doctrine has had any noticeable impact on housing affordability and key economic markers, such as unemployment rate and labor force. Data was split into county and year, then values at the 5th, 15th, 25th..., and 95th percentiles of income were taken, thus evaluating the median of each decile. Finally, where data was available, we used regression equations to generate difference-in-difference estimates, the detailed steps of which are described in the results section.

For all-transaction housing price indices (**Figure 2**) as well as the unemployment rate and civilian labor force (**Figures 4 and 5**), data were taken from the Federal Reserve Economic Data (FRED) website. FRED provides aggregate statistics at the county level from government databases, such as the Bureau of Labor Statistics or Bureau of Economic Analysis (38).

The datasets for evaluating the average rent-to-AMI ratios for individuals and households (Figures 2 and 3) were taken from USA's Integrated Public Use Microdata Series (IPUMS). which harmonizes variables from both American Community Surveys (ACS) and Puerto Rican Community Surveys (39). ACS are repeated cross-sections of the US population, including different sets of individuals from one year to the next. The dataset is representative at the state level. Due to survey limitations, city/municipality data was not reliable or substantive and only consecutive years from 2006 onwards were available. Prior to that, only the years 2006, 2000, 1990, 1980, and 1970 were used. ACS datasets represent an unweighted 1% sample of the population and do not differentiate between group quarters, which are residential buildings that are not housing units, such as correctional facilities and college dormitories.

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