

RACIAL EQUITY AND SOCIAL JUSTICE TOOL

FAST TRACK VERSION



Racial Equity
& Social Justice Initiative





Racial Equity and Social Justice Initiative Racial Equity Analysis Tool Fast-Track Version

INSTRUCTIONS

This abbreviated version of the Comprehensive RESJI Racial Equity Analysis Tool is intended for issues on a short timeline or without a widespread impact.

Examples:

- single piece of legislation already drafted and introduced.
- creation of a single position description and job posting for an open position
- development of a single budget item proposal

For broader policies and legislation in its beginning phase, please use the full version of the RESJ Toolkit.

This tool should be completed by people with different racial and socioeconomic perspectives. When possible, involve those directly impacted by the issue. Include and document multiple voices in this process. The order of questions may be re-arranged to suit your situation.

Mission of the Racial Equity and Social Justice Initiative (RESJI): To establish racial equity and social justice as core principles in all decisions, policies and functions of the City of Madison.

Equity is just and fair inclusion into a society in which all, including all racial and ethnic groups, can participate, prosper, and reach their full potential. Equity gives all people a just and fair shot in life despite historic patterns of racial and economic exclusion (www.policylink.org).

Purpose of this Tool: To facilitate conscious consideration of equity and examine how communities of color and low-income populations will be affected by a proposed action/decision of the City.

The “*What, Who, Why, and How*” questions of this tool are designed to lead to strategies to prevent or mitigate adverse impacts and unintended consequences on marginalized populations.

BEGIN ANALYSIS

Name of topic or issue being analyzed:

Impact of ordinance changes to increase allowable densities and decrease conditional use thresholds in certain multi-family residential, mixed-use, and commercial districts.

Main contact name(s) and contact information for this analysis:

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Kurt Paulsen- University of Wisconsin
Nicole Solheim- Plan Commissioner, Real Estate Developer

Have stakeholders from different racial/ethnic and socioeconomic groups—especially those most affected—been informed, involved and represented in the development of this proposal or plan? Who is missing and how can they be engaged?

Recommendation for the City of Madison to adjust zoning ordinances to increase density has been a strategy identified in multiple Housing Strategy reports written by City of Madison staff and approved by Common Council. During the development of these reports, such as the City Comprehensive Plan, there was robust outreach to different racial/ethnic and socioeconomic groups and resident panels financially supported to obtain that feedback. Because outreach was done to develop the original recommendations in approved housing reports broad general feedback was not done on developing this policy change, however, meetings with Third Sector (non-profit developer group) representatives, a city-wide educational meeting done via zoom and referral to Housing Strategy Committee were done by staff to obtain feedback.

1. WHAT

a. What is the policy, plan or proposal being analyzed, and what does it seek to accomplish?

The Planning Division and ordinance sponsors are proposing a set of amendments to sections of the zoning code in the Madison General Ordinances. The modifications would increase the allowable residential densities and also expand the types and sizes of multi-family housing that can be approved administratively, without additional discretionary review by the City's Plan Commission (through the conditional use process). Increases to allowable density and adjustments to conditional use thresholds would apply to most multi-family residential districts and some mixed-use districts. The changes also include removal of a "dispersion requirement," in the zoning ordinance which currently necessitates conditional use approval for two-unit and small multi-family residential buildings when they are proposed within 300 feet of an existing similar building in certain residential districts.

This particular set of proposed changes focuses on making it easier and more predictable to develop small and mid-scale multi-family housing, and supports easier transition of auto-oriented commercial corridors to mixed-use neighborhoods. The changes would directly implement several specific and clear recommendations in the City's Comprehensive Plan (2018), Analysis of Impediments to Fair Housing Report (2019)(AIFH), and Equitable Development Report (2019). General policy guidance in the plans is to create more housing choice and more housing units, in an effort to slow increases in housing costs and improve access to housing. Staff believes that the zoning changes provide easier paths to the creation of more housing. While staff believes that the proposed changes will have only a modest overall change on the development review process (removing discretionary review and input by Planning staff, area residents, and the Plan Commission from small-scale and some mid-scale development), the hope is that by making it easier and more predictable for smaller-scale multi-family housing development, the City can remove barriers and thereby encourage more of the "missing-middle" housing we need throughout Madison, and also encourage new small-scale developers to invest in Madison's neighborhoods. Staff believe that developers focused on larger-scale buildings will not be affected by the proposed changes in most cases, and continue to move forward with proposals that do require conditional use review.

b. What does available data tell you about this issue? (See page 3 for guidance on data resources.)

Following the Great Recession beginning in 2008, Madison's population has continued to grow steadily. Housing construction slowed greatly in the years following 2008 and still has not caught up, resulting in housing shortages and increasing housing prices.

From 2013 to 2020, Madison built between 1600 and 2300 new housing units. During that time, Madison grew by more than 2700 people per year.

According to the Comprehensive Plan, Madison will see population growth of more than 56,000 people in over 27,000 households between 2020 and 2040.

Multifamily vacancy rates in Madison have hovered between just under 2% to under 3.5% between 2013 and 2020. While inflation never rose above 2.5% between 2013 and 2018, median gross rent in Madison rose by over 4% annually. During this time, construction costs rose between 3% and 7% annually. The value of land in Madison increased 3% annually during the same period.

Additional Data Sources:

[Analysis of Impediments to Fair Housing Choice \(2019\)](#)

[Equitable Development in Madison \(2019\)](#)

[DPCED Housing Snapshot Report \(2020\)](#)

[Housing Affordability Report \(2021\)](#)

c. What data are unavailable or missing?

While City of Madison staff are able to track some housing data easily and quickly, other data and data sources are more difficult to obtain or are significantly delayed, resulting in issues with obtaining current data, making it difficult to track impacts in real time. Below is a list of data staff does not have easy access to or has access only to data that is several years old:

- Year-over-year rental costs by smaller geographies
- Year-over-year rental costs by unit types
- Land costs by smaller geographies
- Private development return on investment for development types or geographies
- Additional information regarding developer/development costs/financing

2. WHO

a. Who (individuals or groups) could be impacted by the issues related to this policy, plan or proposal?

In consideration of zoning changes being made across the nation right now, Madison is considering making very modest changes to zoning. In a review of 10,000 development deals brought in front of Plan Commission only 4% would have been effected by this change. Though staff anticipates the number of small projects proposed may increase if regulatory barriers are lessened.

Overall approval of these changes will streamline the development process, which is impactful for real estate developers, particularly, small scale developers. This will include non-profit and for-profit developers and may create more opportunities for current property owners to expand units.

The proposed amendments are part of a much broader package of City initiatives involving funding and regulatory changes to promote more housing, more housing affordable to households with low-incomes, and more housing choices. These changes alone will not develop more low cost housing in the community and therefore will not directly create units for lowest median households in Madison. However, in partnership with City's affordable housing policies that align financial benefits to developers to build housing units, with the intent to decrease operating costs, lower cost housing can be developed.

b. Who would benefit?

As the population of the city continues to grow there needs to be an increase in housing units as well. Ultimately, these changes will benefit groups that are interested in housing development. By reducing regulatory barriers in some zoning districts in the city this can benefit the developers looking to create more units of housing.

There is a limited number of developers building at the scale of 60 units or less. Regulatory barriers to multi-family development within the City process could be causing some financial barriers for some developers to get into the market. Shorter holding times and fewer opportunities for nearby residents/users to derail/delay projects would benefit most housing developers, and smaller and non-profit developers the most. The actual number of developers who will take advantage of the proposed zoning changes are unknown at this time but it is something that can be measured over time

The zoning amendments will not directly affect creation of new affordable housing units. Through other housing strategy tools the City seeks to financially support mid-scale development that would create rent/income restricted units. Streamlining the approval process could impact overall holding costs to these developers who may be for-profit, non-profit or graduates of development classes that support women and people of color to enter the development market. Through the financing terms of these loans the City can also create longer term affordability to types of housing developments.

c. Who would be burdened?

Creating more by-right housing will eliminate the opportunity for public comment on developments seeking Conditional Use at Plan Commission. Historically, Madison's Neighborhood Associations are well organized groups that have used Plan Commission as an opportunity to express opinions to policy makers on proposed developments. When seeking financing from City of Madison it will still be expected that developer's contact Alder and local neighborhood groups, but it will be a requirement of funding rather than development approval.

During the equity review the group had a robust conversation about potential burden to developers as it relates to land costs. It was agreed that land prices can impact development costs and if there is a need for more supply it can make land prices rise, increasing overall costs. There was not consensus that zoning approval via conditional use was already factored into current sales prices or not. Overall it was agreed that property owners wanting to get the max equity from property will drive up costs and a seller is less likely to wait through conditional use land process if there is a willing, able buyer who can purchase faster.

d. Are there potential disproportionate impacts on communities of color or low-income communities?

When regions do not produce an adequate supply of housing to meet demand, prices and rents rise faster than incomes. The lowest income households experience the most housing squeeze and cost burden.

The review team discussed the potential for the increased risk of speculative land acquisition for the purposes of maximizing profit from the demand of at/above market-rate units in/around the Isthmus, which could cause lower cost units and therefore lower income households to areas that lack transit or other amenities. There was not consensus within the review team of this risk specifically related to these zoning amendments, and given that these are modest zoning amendments, this risk is not especially acute.

See Attachment 1- additional comments prepared by Kurt Paulsen, UW- Madison

3. WHY

a. What are potential unintended consequences (social, economic, health, environmental or other)?

Commercial areas, strip malls, could be prime opportunities under zoning amendments for future housing development. While one of the central growth management strategies in the Comprehensive Plan is to encourage infill redevelopment of underutilized, auto-oriented commercial properties with housing and mixed-use development, these older spaces tend to offer lower leasing rates and could affect newer businesses coming into the market.

This policy alone will not create more housing for lower income households. Must couple the zoning changes with affordable housing strategies like financial support and technical assistance. Consider who the City is partnering with in those developments for tenant selection, otherwise it could lead to the creation of more affordable housing for white households with fewer existing barriers to housing choice.

Neighborhood covenants are still in place and hard to overturn which could limit the actual type of development that is completed in some neighborhoods or cause development to be in non-compliance with recorded documents that neighborhoods could continue to block development. However, the City is often not party to such covenants, so from a strict development review standpoint, it's not something the City has control over to remove.

4. HOW: RECOMMENDATIONS SECTION

a. Describe recommended strategies to address adverse impacts, prevent negative unintended consequences and advance racial equity (program, policy, partnership and/or budget/fiscal strategies):

More education to the community and more involvement by community on why we need more housing is important.

Need to broaden the field of developers. Look at pre-development costs or technical assistance for new developers of mid-scale housing developments.

Create more opportunity for developers to seek financing for mid-scale development and financing from City of Madison to support that development and create longer term affordability for those units. Could explore "License to Hunt" opportunities to non-profits again.

Must layer City's affordable housing strategies with new zoning amendments. City could use Land Banking process to purchase some sites for future development, provide financing for developers wanting to create affordability. Ensure developers who get City's financing use Best Practices of tenant selection process and longer term affordability.

Ensure City's financing tools to expand the supply of rent restricted units for lower income household's preference high amenity, transit-oriented areas- like the Isthmus.

DATA RESOURCES FOR RACIAL EQUITY AND SOCIAL JUSTICE IMPACT ANALYSIS

City of Madison

- Neighborhood Indicators (UW Applied Population Lab and City of Madison):
<http://madison.apl.wisc.edu>
- Open Data Portal (City of Madison):
www.cityofmadison.com/data
- Madison Measures (City of Madison):
<https://www.cityofmadison.com/finance/documents/MadisonMeasures-2016.pdf>
- Census reporter (US Census Bureau):
<http://censusreporter.org/profiles/06000US5502548000-madison-city-dane-county-wi>

Dane County

- Geography of Opportunity: A Fair Housing Equity Assessment for Wisconsin's Capital Region (Capital Area Regional Planning Commission):
www.capitalarearpc.org
- Race to Equity Report (Wisconsin Council on Children and Families):
<http://racetoequity.net>
- Healthy Dane (Public Health Madison & Dane County and area healthcare organizations):
www.healthydane.org
- Dane Demographics Brief (UW Applied Population Lab and UW-Extension):
www.apl.wisc.edu/publications/Dane_County_Demographics_Brief_2014.pdf

State of Wisconsin

- Wisconsin Quickfacts (US Census):
<http://quickfacts.census.gov/qfd/states/55000.html>
- Demographics Services Center (WI Dept of Administration):
www.doa.state.wi.us/section_detail.asp?linkcatid=11&linkid=64&locid=9
- Applied Population Laboratory (UW-Madison):
www.apl.wisc.edu/data.php

Federal

- American FactFinder (US Census):
<http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>
- 2010 Census Gateway (US Census):
www.census.gov/2010census

Racial Equity Analysis of Madison Zoning Ordinance Changes¹

-- DRAFT For Discussion Purposes – Comments welcome. Apologies for the length!

The City of Madison is currently considering a very modest change² to its zoning ordinances with the purpose of implementing its Comprehensive Plan goals to increase the supply of housing and the diversity of housing stock to meet the housing needs of a growing population. Specifically, the proposal intends to increase potential development opportunities for small- and medium-sized multifamily housing (SMMF). While most of the attention nationally and locally – as well as the bulk of academic research – has focused on large multifamily buildings (buildings with more than 50 units), nothing in this proposal affects large multifamily buildings zoning or permitting.

This proposal and its ensuing debate are part of a larger nation-wide conversation about zoning reforms for housing diversity and housing affordability in economically successful progressive cities like Madison. As can be expected, the social media version of this debate in other cities has often been full of conflict and acrimony. When I watched this debate at Madison’s Plan Commission and Common Council, I was pleased to see how thoughtful and considerate the discussion was. Madison might have longer meetings than most places in the country, but we tend to also have a more informed discussion. I am hoping that my comments can contribute in some small way to thinking through the implications of adopting or rejecting this zoning reform proposal. While I will mostly address these questions from a more academic research perspective, it is equally important to include people’s lived experiences in discussions of housing.

The immediate context for my thoughts is my participation in the City’s “Racial Equity and Social Justice Initiative (RESJI)” policy review of the zoning ordinance changes. The City of Madison very thoughtfully examines policy changes with a RESJI tool, “To facilitate conscious consideration of equity and examine how communities of color and low-income populations will be affected by a proposed action/decision of the City.”³ In the RESJI process, the city invites a wide range of stakeholders to work with city staff in identifying who could potentially be benefitted or burdened by a proposed action, identification of unintended consequences, and recommended strategies to mitigate potential adverse outcomes and advance racial justice.

The reason for this long (and technical) paper is to try to think through the likely benefits, burdens, and impacts on lower income households in the context of housing market outcomes where so many things are changing all-at-once and where the second- and third-round effects of any policy change (or the status quo) can be hard to predict. The purpose of this paper is to try to summarize some recent academic research that might be helpful to decision makers in considering this proposal.⁴ I had originally written some of these thoughts for my graduate course in housing policy to help students think through the high volume of recent empirical research papers.

Economically successful cities across the country in the past 20+ years have seen significant declines in housing affordability and significant increases in rent burdens for households whose current

¹ These comments prepared by Kurt Paulsen, UW – Madison. These comments are my own opinion, not necessarily the opinion of any state, city, or county agency or entity.

² Cf. my Letter to Madison Alders (March 29, 2021) for the details of the proposal and why I consider these to be modest changes.

³ See, Racial Equity and Social Justice Initiative Racial Equity Analysis Tool, City of Madison.

⁴ As a state government employee, I cannot advocate for or against any specific action of any local body. I am summarizing some of the relevant research literature.

income is below area median income (AMI), which disproportionately impacts households of color. These economically successful cities (which includes cities in the Midwest, not just on the coasts) have experienced significant employment growth, steady income growth, and strong population growth and have therefore attracted significant in-migration.

Job growth + income growth + population growth in these cities results in high housing demand. However, almost universally, strong-demand cities have not permitted enough housing to be built to keep up with demand. While there have been some cyclical variations in macroeconomic conditions affecting housing construction (recessions, interest rates, lumber prices, etc.), the main reason strong-demand cities and regions have not seen an adequate increase in housing construction is the cumulative effect of zoning and other land development regulations in municipalities within those regions. Regions in the United States contain many independent municipalities, each with independent zoning and land use regulations responsive to the financial and political interests of incumbent homeowners who vote in municipal elections.

To see this effect in the Madison/Dane County market, consider this table from the 2019 Dane County Housing Needs Assessment. It shows the annualized rate of growth in jobs, income, housing units, and housing prices for the region, with adjustments for inflation where appropriate.

Dane County: Demographic and Housing Changes (2010-2019)

	2010	2019	Change	% Change	Ann.% Change
Population	489,309	546,695	57,386	11.7%	1.2%
Households	203,073	229,760	26,687	13.1%	1.4%
Housing units	216,230	239,876	23,646	10.9%	1.2%
Jobs	295,075	344,363	49,288	16.7%	1.7%
<i>Inflation-adjusted to 2019\$:</i>					
Median household income (in 2019\$)	\$68,751	\$77,504	\$8,753	12.7%	1.3%
Median owner household income (in 2019\$)	\$94,851	\$107,875	\$13,024	13.7%	1.4%
Median renter household income (in 2019\$)	\$37,538	\$47,991	\$10,453	27.8%	2.8%
Median value of owner-occupied homes (in 2019\$)	\$270,966	\$294,100	\$23,134	8.5%	0.9%
Median gross rent (in 2019\$)	\$986	\$1,121	\$135	13.7%	1.4%

Sources: US Census; Bureau of Labor Statistics (QCEW). Inflation adjustment: CPI-U from BLS.

The right-hand column is the most useful for understanding our housing market. Jobs in Dane County have been growing more than 1.7 percent per year (average annualized growth), and households have been growing at an annualized rate of 1.4 percent per year. Household growth is faster than population growth because household size is decreasing with significant growth in 1- and 2-person households. Even though the region has seen significant housing construction, the annualized rate of growth of housing units is lower than the rate of growth of households or jobs.

Similarly, I conducted an analysis for my statewide housing report, which has now been updated to the latest Census numbers (through 2019).⁵ Dane County leads the state in terms of housing “underproduction.” From 2006 through 2019, Dane County added 43,063 households but only 31,997 net new housing units, an underproduction relative to demand of 11,206 units.

⁵ See Paulsen, K. “Wisconsin’s Workforce Housing Challenges.” Testimony to Wisconsin State Senate Housing Committee; April 20, 2021.

100,000 workers currently commute into Dane County every day to work, but do not live in Dane County. While some prefer to live in other nearby counties, undoubtedly some would live in Dane County (and commute shorter distances) if more affordable and available housing options existed.

The academic and research literature is unambiguous and clear about the regional effect on housing prices, housing affordability, and rent burdens that result from inadequate housing supply. When regions do not produce an adequate supply of housing to meet demand, prices and rents rise faster than incomes. The lowest income households experience the most housing squeeze and cost burdens.

Consider just one recent report, “Why the Most Affordable Homes Increased the Most in Price between 2000 and 2019.”⁶ The researchers study housing prices in 285 metropolitan statistical areas (MSAs) and divide all homes into thirds (terciles) in each MSA. They find that homes in the lowest-price tercile increased 126.2 percent over the study period, while houses in the middle-tercile increased 99.8 percent and homes in the highest-tercile increased 86.4 percent. They also find that in regions with stricter zoning and land use regulations, there was a greater gap in appreciation rates between the lowest-tier and highest-tier houses, as the lower priced homes accelerated in appreciation. Likewise, many studies have found similar results for lower-priced rental units: higher rates of rent growth in lower-priced units, particularly in supply-constrained markets.

Because strong-demand cities and regions experience in-migration of workers with higher incomes and education levels, these in-migrants outcompete existing residents for scarce housing, even if the housing they consume is higher-than-average in rent and quality. The existing residents they outcompete then take the next available unit, and so on down the housing market. This ripple effect of new in-migrants without new housing to accommodate their demands leads to excessive price pressures on the lower end of the housing market, often displacing lower-income tenants and families of color. The housing low-income renters are displaced to is often lower quality in terms of the unit or the neighborhood, and may involve lack of access to good transportation, schools, or amenities like grocery stores.

Research shows that new construction creates a ripple effect of “migration chains” that opens housing in the middle- and lower-tiers of the market and therefore reduces price pressures on the lower end of the market. But the inverse is also true: If cities do not build market housing to accommodate increased demand from in-migrants, the affordability of housing for lower income renters will get worse.

The regional effects of supply constraints are clear throughout the literature. It is often this macro-level regional result that drives proponents to argue for increasing the overall supply of housing in strong-demand regions. This “increase-supply-through-zoning-reform” argument highlights the counterfactual that, if we do not, then the situation for the lowest income renters will continue to get worse. Population and job growth will not stop in Madison or other economically successful regions. If we as a region do not build adequate housing to accommodate current and future housing demand, that demand doesn’t go away. It just displaces the lower-income residents we already have. Madison and Dane County have not experienced the displacement and extreme housing cost increases that the coastal regions have because our housing supply has increased

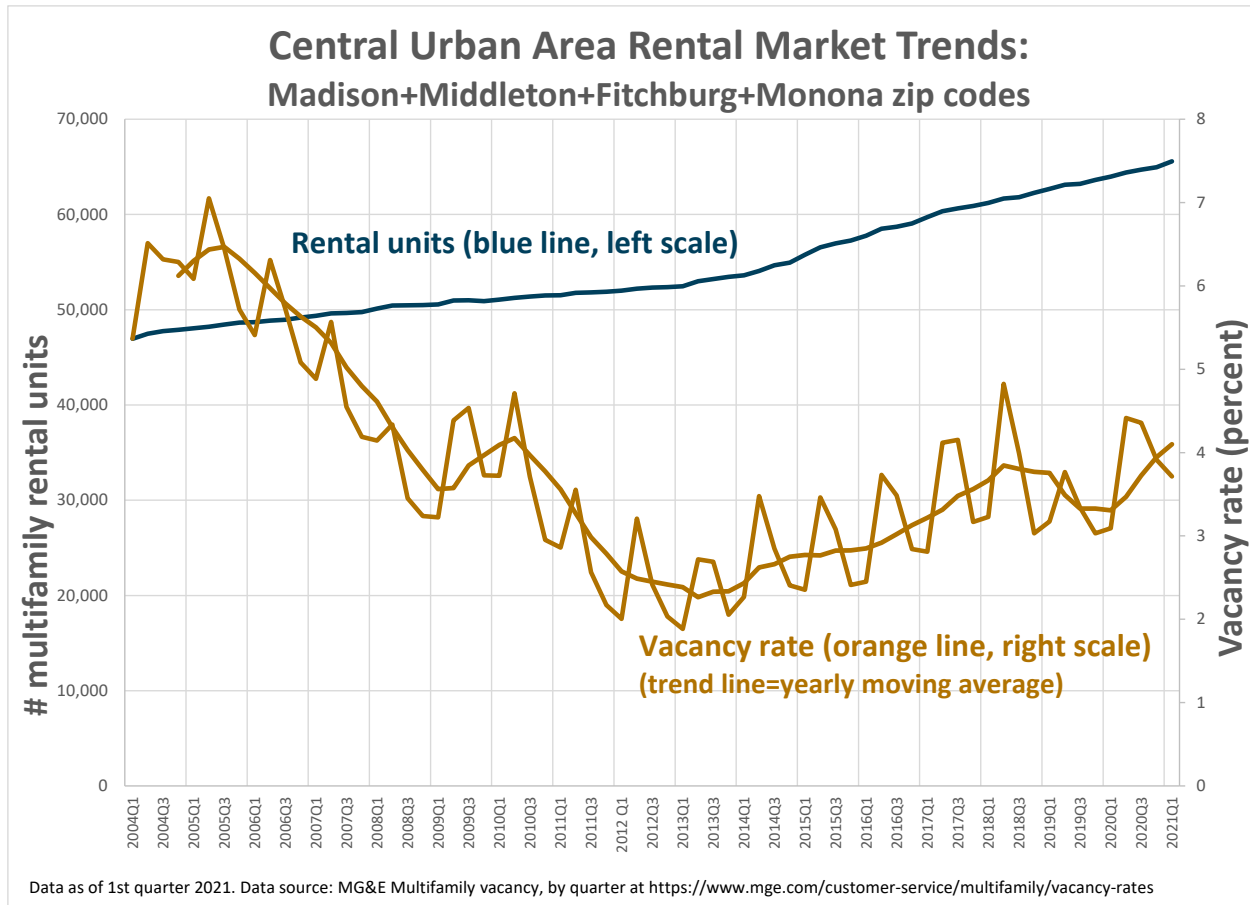
⁶ Choi, Walsh, and Goodman (2020). Available at: <https://www.urban.org/research/publication/why-most-affordable-homes-increased-most-price-between-2000-and-2019>

steadily over the past 10 years. We're still behind, but we are less behind than New York or Los Angeles or San Francisco.

My own research on rent price growth and housing supply for the state likewise showed that Wisconsin, overall, permitted more multifamily housing construction on a per-capita basis from 2000 to 2014 than any of our neighboring states. Because we had more units available, we experienced the slowest rate of rent price growth of any of our neighboring states.

Or, consider the table above for Dane County. Median gross rent in Dane County appreciated at an annualized rate of 1.4 percent, adjusted for inflation. That is slightly more than overall increases in income of 1.3 percent per year, adjusted for inflation. But that rate of rent price growth is far lower than extremely-supply-constrained cities on the coasts. Dane County has been able to moderate most of the rent price growth at the middle of the market (the median) because it has produced so many rental units in the past years.

The chart below was also included in the 2019 county housing needs assessment, but I have updated it through Quarter 1 (March) of 2021. It shows the number of multifamily rental units in what I call the "central" urban rental market: all zip codes in the MG&E service area that are in the Central Urban Service Area (CUSA, designated by CARPC) and that have bus service available. The blue line shows the number of rental units in the central rental market and the orange line shows the vacancy rate. The current vacancy rate for the whole central market as of the end of Q1 2021 is 3.7 percent. Housing economists generally think that a vacancy rate of about 5 percent represents a healthy balance between supply and demand. The last time the Madison area rental market had that rate of vacancy was in 2007, before the housing/financial crisis. Obviously, the surge in foreclosures combined with the collapse in lending for new construction meant that rental demand surged while supply remained constant. Supply only began to pick up again in 2014. The figure shows that despite a robust supply increase of rental housing, vacancy rates in the area continue to remain low because of strong rental demand.



But notice also on the table for Dane County that the median household income for renters has increased 2.8 percent per year, adjusted for inflation – a far greater increase than overall median income and median owner income. That clearly shows the influx into the rental market of higher income tenants due both to displacement from the ownership market (because prices are high) and the influx of younger professional workers and millennials.⁷

I think the research is very clear from a macro-regional perspective and Madison’s experience is consistent with this research. In the face of strong demand, building significant amounts of multifamily housing moderates rent increases. This empirical evidence is one of the strong foundations for the “more supply” argument in Madison’s Comprehensive Plan. Of course, no one is arguing that robust new construction will actually bring down nominal rents because housing costs (including construction, maintenance, labor, etc.) are going up everywhere. But robust construction has kept overall rent levels from increasing too rapidly.

However, our focus here on affordability for lower-income residents should draw our attention not just to affordability at the middle (median) of the market, but affordability at all income levels. The

⁷ Although the zoning proposal currently under consideration does not affect the supply of single-family homes for ownership, it is worth considering that the high prices and low supply of single-family housing also creates price effects on rental housing, as would-be homeowners remain renters and drive rental demand. One way to reduce rental demand and therefore to moderate price pressures would be to increase the availability of affordable homes for ownership for younger workers and/or millennials.

2019 Dane County housing needs assessment shows that the number of renter households with incomes less than 50 percent AMI (“very low income” in HUD-speak) who pay more than 50 percent of their income to rent (“extremely cost-burdened” in HUD-speak) increased over the past 4 years to 15,400. As a percentage of all very-low-income renters, extreme cost-burdens declined slightly, but the numbers increased overall due to continued population growth. What we cannot tell for sure is how many additional very-low-income renters would have been extremely cost-burdened if thousands of new units had not been constructed. We can identify in the data that the number of rental units in Madison that were affordable to households making 50 percent of AMI or below (very-low-income renters) increased 41.5 percent over the study period (over 6,000 units). Because the data source that measures the number of units affordable at different levels includes subsidized units, some (but not all) of these 6,000 newly affordable units would represent units constructed with subsidy programs such as Low Income Housing Tax Credits.

While this evidence from Madison/Dane County is consistent with academic research on housing supply and “filtering,” it is only for one city, which does not allow for robust statistical controls to separate out correlation from causation. Robust multifamily housing construction in Madison was associated with limiting rent increases overall and increased availability of lower-cost rental housing for very-low-income households. But rents overall still increased relative to inflation and the number of very-low-income renters with extreme cost-burdens increased even while the percentage with such burdens decreased slightly. These data would suggest continued and ongoing need for expansion of rental subsidies and affordable housing development in addition to overall housing supply increases.

We must acknowledge that “filtering” as a concept of providing affordable (or, more precisely, “less unaffordable”) housing can be controversial and misunderstood. Research on filtering was sparse for many years, but 3 recent high-quality research articles give us empirical insight into the issue and are relevant to the discussion.

The theory of filtering in urban rental markets can often be misunderstood or misrepresented as the argument that “building market rate housing automatically produces affordable housing” (it doesn’t) or that “filtering is ineffective because the price of new units takes too long to depreciate to what would be affordable for the lower-income renters.” The academic literature on filtering is more nuanced than its popular representation, and these 3 recent articles tend towards a consistent interpretation.

Rosenthal (2014)⁸ is the most sophisticated filtering study due to its data coverage and statistical techniques. He looks at rental housing units over a long period of time in the American Housing Survey (US Census Bureau). The key issue for filtering is not the rental depreciation rate (the decline in rents over time) but whether the rental unit is occupied in each successive round by a household whose income is lower on the income scale over time. He calls this “arriving occupant income” and points out that average rental length-of-stay in the United States is about 4 years. As renters move, the rental housing market is more responsive to price trends than is the ownership market, where average tenure is longer. Thus, filtering rates (successive occupancy by a household lower on the income scale with each new occupant) is much lower for owner-occupied housing than for rental housing.

⁸ Rosenthal, S. 2014. “Are Private Markets and Filtering a Viable Source of Low-Income Housing? Estimates from a “Repeat Income” Model.” *American Economic Review*, 104(2): 687-706.

Rosenthal demonstrates that the income filtering rate for rental housing is between 2.7 and 2.9 percent per year. In Rosenthal's national estimates (Figure 1, Panel A), the average Year-10 occupant income (the occupant income of a rental unit at year-10 post-construction) is 70 percent of the initial (Year-1) occupant income. By year 15, occupant income is 65 percent of initial-occupant income and by year 30, it is 40 percent of initial-occupant income.

Filtering means that as housing units age (absent re-investment, upgrading or redevelopment), they tend to have lower amenity levels compared to newer housing and therefore filter down the income scale. Observationally, we see this in every city including Madison: older housing units tend to have lower amenity levels and therefore rent (or sell) at lower price-per-square-foot levels. Or, to put it more simply: if you don't build new housing today, you won't have 30-year-old housing in 30 years from now.

Rosenthal, however, also includes estimates about the difference in filtering rates across different regions. Filtering rates are much lower in regions with significant supply constraints or that experience more rapid house-price inflation. This makes sense. If supply is constrained, there is less opportunity for housing units to filter down the income scale. In fact, in severely constrained markets with really expensive housing, some rental units "reverse filter" (where each successive occupant is higher up the income scale). Many would call this process (increased occupancy by higher-income tenants) "gentrification." Rosenthal's research would be consistent with the view that a prime cause of gentrification is the lack of new housing construction in high-demand areas.

Myers and Park (2020),⁹ researchers at the University of Southern California, study filtering in rental housing by "housing vintage" (the decade in which housing was built) in the largest 100 metros from 1980 to 2018 (nearly 40 years). Myers and Park measure filtering as the share of older housing units occupied by residents whose income is 50 percent or below of Area Median Income (AMI). They find that different decade-vintage apartments showed consistent filtering rates. The very-low-income occupancy share of apartments built before 1960, for example, increased from 52.5 percent in 1980 to 60.3 percent in 2011. Likewise, the very-low-income occupancy share of apartments built in the 1960s increased from 36.9 percent in 1980 to 55.4 percent in 2011. Or, consider 1990s vintage units: the very-low-income occupancy share in 2000 was 36.5 percent, which increased to 42.6 percent in 2011.

The researchers also examine the difference in filtering rates across metropolitan areas, controlling for age-vintage of units. Two key findings are worth highlighting. First, they find that overall housing supply in a metropolitan region is significant in explaining the rate at which older housing is occupied by very-low-income tenants: new construction is highly predictive of increased filtering. The second finding is that a 1 percentage point decline in homeownership rates for 25-34 year-old households reduced filtering rates 0.4 percentage points in each decade, highlighting the link between housing submarkets and between affordable homeownership and rental pressures. When young households of peak home-buying ages are unable to afford homes for purchase, they remain in the rental market and put pressure on the rental market. This has certainly been the case in the Madison region.

⁹ Myers, D. and Park, J. 2020. "Filtering of Apartment Housing between 1980 and 2018." University of Southern California: Population Dynamics Research Group and National Multifamily Housing Council. Available at: https://cpb-us-e1.wpmucdn.com/sites.usc.edu/dist/6/210/files/2020/04/USC_2020_Myers-Park_Apartment_Housing_Filtering.pdf

The third filtering paper is Mast (2019)¹⁰ which represents a unique data set. The researcher was able to get access to individual address history data for over 52,000 residents of newly constructed market rate (non-subsidized, non-student, non-senior) large apartment buildings (more than 50+ units) housing units in 12 major metros (New York City, Chicago, Dallas, Houston, Washington, Philadelphia, Atlanta, Boston, San Francisco/Oakland, Denver, Seattle, and Minneapolis). The researcher estimates what he calls “migration chains” that link new housing construction to the low-income rental market. As new housing is constructed, some people move out of existing housing into the new housing, creating a ripple effect through the housing market. As people move out of middle- and lower-income neighborhoods, this demand reduction reduces price pressures in those neighborhoods. He finds that building 100 new market-rate housing units in a city causes 45-70 people to move out of below-median-income census tracts and 17-39 people to move out of the bottom-quintile (lowest 20 percent) income census tracts.

This research only examined new residential construction in census tracts which were above the median income for the region (i.e., higher-income areas). These results are consistent with the observations in Madison that new construction of market rate rentals is correlated with increased availability of housing for below-50-percent AMI households. Mast concludes, “My research suggests that new market-rate housing construction can improve the market for housing in low- and moderate-income neighborhoods, even in the short run.” However, he does find that new construction in higher-income census tracts may not significantly reduce rents in the lowest-income neighborhoods when existing lowest-income neighborhoods already have high vacancy rates and rents are near the marginal cost of providing housing.

So far, we have been talking about the macro-regional effects of housing supply, and the effects of housing construction on the filtering of units to lower-income households.

But we don’t build housing in “regions,” we build housing in neighborhoods. It is not really this “macro” effects that drives the debate in most cities, it’s the “micro” effect in any one particular neighborhood or even one street or building. Many are concerned that building new unsubsidized (i.e., market-rate) multifamily will produce 3 separate, but related, potential negative impacts on incumbent lower-income renters: 1) direct displacement as existing housing units are redeveloped for new construction; 2) induced rent increases in existing housing in neighborhoods around new construction, and/or 3) potential indirect displacement as neighborhoods experiencing rent increases become too expensive for incumbent lower-income tenants.

To think through the research in this area, it is helpful to develop a very-simplistic conceptual model, based on the housing submarket research literature. To keep it simple, imagine dividing households in Dane County into thirds (terciles) based on household income. A rough cut of the data on household income in Dane County would have about 1/3rd of households making less than 60% of AMI, about 1/3rd making between 60% and 110% AMI and about 1/3rd making more than 110% AMI. Again, those are rough number estimates.

¹⁰ Mast, Evan. 2019. "The Effect of New Market-Rate Housing Construction on the Low-Income Housing Market." Upjohn Institute Working Paper 19-307. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. <https://doi.org/10.17848/wp19-307>.

Also, calculate (conceptually) the price per square foot of all rental apartments in the county and divide into terciles (thirds). The distribution of rents per square foot is a standard way to identify different quality submarkets. The “quality” of a rental unit, reflected in its rent per square foot, includes unit-specific quality and amenities (size, age, quality of finish, etc.), building-specific quality and amenities (laundry, parking, elevator, fitness center, etc.), and neighborhood-specific quality and amenities (proximity to transit, grocery stores, schools, etc.). In Madison, as in most cities, the lowest tercile rent-per-square-foot units tend to be older and smaller units in older and smaller buildings with lower finish levels, fewer building or unit amenities like parking or laundry, and tend to be in neighborhoods with lower average rents.

Sorting of households into neighborhoods and the housing units that are (or are not) constructed in those neighborhoods is layered on a history of housing policy that includes historical and racist redlining and zoning policies. This produces the spatial pattern of housing and household income levels we see in Madison (and most cities) today. The 2019 Dane County housing study, for example, shows that even for households in the same income category, African Americans experience much higher housing cost burdens and lower homeownership rates.

We can likewise (conceptually) rank-order neighborhoods in terms of either neighborhood “quality” (access to transit, jobs, schools, parks, amenities, exposure to pollution or crime, etc.) or in terms of housing prices or median income. The correlations are never 100 percent, but higher-priced neighborhoods tend to have higher amenity levels and are occupied by higher income households.

It is worthwhile to take a little detour here and talk about why so much of policy regarding “affordable housing” and “affordability” is misleading and overly simplistic. Standard affordability metrics and affordability targets in federally-subsidized units focuses on the “30 percent of income” rule – that a unit which costs a family 30 percent or less of their income is “affordable” and one which costs more than 30 percent of income is “unaffordable.” As a rule of thumb, the 30-percent rule is not necessarily wrong, but the 30-percent rule completely ignores quality differences in rental housing units. To see this, consider the hedonics of rent and grocery stores. Hedonics refers to the statistical technique researchers use to identify the price of a particular characteristic of a housing unit, holding all other factors constant.

People of all income levels value being close to a full-service grocery store, and there is a high volume of research and policy literature discussing food deserts and access to grocery stores. Statistical analysis shows clearly that, all else being equal, having a full-service grocery store within 0.5 miles of your housing unit is a valuable feature that is capitalized into the value of housing or the price of rent. All else being equal, if you could statistically move an identical unit of housing close to a full-service grocery store (or put a full-service grocery store in the neighborhood), the price or rent of that housing unit would be higher than the statistically identical housing unit *not* within 0.5 miles of a grocery store. Same for transit, same for parks, same for good schools. Being closer to a full-service grocery store, a park, or public transit is a valuable feature that people are willing to pay for in terms of higher housing prices or rents.

For example, Warsaw and Phaneuf (2019),¹¹ researchers at UW Madison, estimate the price impact of being within 0.5 miles of a full-service grocery store in Milwaukee. Using their estimated models

¹¹ Warsaw, P. and Phaneuf, D. 2019. “The Implicit Price of Food Access in an Urban Area: Evidence from Milwaukee Property Markets.” *Land Economics*, 95:4, 515-530.

and applying a rental capitalization model, I estimate that – all else being equal – a statistically equivalent rental unit in Madison that is within 0.5 miles of a grocery store would rent for about \$25-\$30 more per month per unit, all else being equal.

Think about it this way: Suppose I offered you two physically identical apartments in the exact same building (which controls for building-level and neighborhood-level amenities). One unit has laundry facilities within the unit itself, while the other unit has no laundry at all. The unit with laundry also includes a covered parking space (nice in winter), and the other unit does not have any parking space attached to it.

Of course, the physically identical unit that has in-unit laundry and covered parking will rent for more than the physically identical unit without laundry and without parking. Having access to laundry means that the tenant does not have to drive to a laundromat and pay for laundry. That is a valuable amenity that tenants are willing to pay for and for which they receive value. If a tenant is willing to pay \$50 more per month to have laundry in-unit and \$50 more per month to have covered off-street parking, that unit will rent for \$100 more per month. In standard affordability metrics, such a tenant might be considered “worse off” because their rent is higher. But are they actually worse off if they can acquire amenities (laundry and parking) that they value?

Suppose that a lower-income family rents a more expensive unit with better amenities located closer to their kids’ school or the parent’s job. This family pays more, so standard affordability analysis would suggest this unit is “unaffordable.” But is this family worse off? Reduced travel time to work or school, a higher-quality unit or proximity to amenities is something they are willing to pay for.

Incidentally, this is why I’m a big fan of the housing voucher program, despite its many problems and needed reforms. When a household receives a voucher, the voucher pays the difference between 30-percent of their income and the fair market rent. Many voucher recipients move to higher quality units and still pay less in total rent than pre-voucher. So, the voucher isn’t just an “income effect” (more net income after rent is paid), but also allows tenants to move to higher-quality units.

Absent a voucher program in strong-demand/tight-supply cities, lower-income renting households tend to be sorted into lower-quality rental units in lower-amenity neighborhoods. That is certainly the case in Madison. Again, the correlation between terciles of household income, rents, and neighborhood quality are not perfect: there are lower-tercile rent units in middle- and higher-tercile income neighborhoods. And, there are higher- and middle-tercile income residents and units in lower-tercile neighborhoods. In fact, all else being equal, lower-quality older rental units in higher-amenity neighborhoods might still rent for more per-square-foot than medium-quality rental units in lower-amenity neighborhoods. The end result is that in most cities, including Madison, our lowest-income renters pay a lot of money for lower-quality housing. Even the lower-cost rental units they can find are too expensive for their limited income. An overall lack of supply puts price pressure on the lower end of the rental market.

These stylized facts about sorting and zoning and the price/quality tradeoff are some of the deepest frustrations and conundrums for urban planners. Imagine a city where the planners want to do something about neighborhood or community development for historically disinvested neighborhoods. They examine maps and see lower-income neighborhoods that lack access to a full-service grocery store within 0.5 miles, a walkable bus stop within 0.25 miles, and a neighborhood park. So, as planners do, they make plans and within a year, they have acquired some land to build a

park, they provide TIF incentives to attract a full-service grocery store, and they add high-frequency transit to the neighborhood. In and of themselves, grocery stores, parks, and transit are good things. All persons, regardless of their income level, deserve access to the basic goods that make for the foundations of life – education, parks, transportation, food, health, etc.

However, the conundrum for planners is that each of these neighborhood investments will undoubtedly raise rents in that neighborhood because the value of neighborhood amenities is capitalized into housing prices and rents. However, are incumbent renters necessarily worse off if their rent increases when the quality of neighborhood amenities has also gone up? It is not clear. In standard affordability analysis with the overly simplistic 30-percent of income rule, incumbent renters would be declared to be worse off. But wouldn't this logic produce the nearly unconscionable result that therefore the city should not invest in that neighborhood to keep rents lower?

How does all of this relate to Madison's comprehensive plan and zoning ordinances? First, Madison's Comprehensive Plan – as per the state statute requirements for Wisconsin comprehensive plans – acknowledges the need to have land use policies that accommodate the projected housing unit demand in the planning period (20 years) in order to: “provide an adequate housing supply that meets existing and forecasted housing demand ... and provide a range of housing choices that meet the needs of persons of all income levels and of all age groups and persons with special needs ...”¹²

Like many comprehensive plans in recent years, Madison's puts new housing development into three “buckets”: 1) new planned neighborhoods on the outer areas of the city (east and west) with higher densities and a variety of housing types and sizes (including townhomes, multifamily, small lot clusters, etc.), 2) incremental infill or low-density infill in established neighborhoods, and 3) higher density redevelopment in activity centers and along higher-capacity transportation and transit corridors.

Madison's comprehensive plan, like many recent plans around the country, recognizes the history of exclusionary zoning, particularly in higher-amenity or higher-income areas of the city. Many higher-income neighborhoods are composed almost entirely of single-family-detached owner-occupied homes with zoning that excludes other forms of housing. Suburban versions of this single-family-only zoning generally have even larger minimum lot sizes than in the city. Comprehensive plans and zoning reform efforts across the country have focused on increasing housing supply, increasing density, and increasing the variety of housing that can be produced (including townhomes, condos, triplexes, ADUs, small- to medium-multifamily, etc.) in higher amenity neighborhoods to challenge and reverse exclusionary zoning. The research literature and policy theory that corresponds to this is the “moving to opportunity” research and the “open suburbs” and “anti-exclusionary zoning” movements that began during the civil rights era.

I believe it is in this spirit (and reflecting the recommendations in the Assessment of Fair Housing) that the proposed zoning reforms envision additional opportunities for small- to medium-multifamily (SMMF) housing construction in higher amenity neighborhoods. As above, the research cited above (and below) focuses on new construction of large multifamily buildings, those with more than 50 units. There is very little research on the effects of small- and medium-multifamily (SMMF) construction. In fact, the research literature that focuses on large multifamily (over 50 units) argues

¹² Wis. Stat. 66.1001(2)(b)

that only large multifamily units would be large enough to have any likely price effects (either positive or negative) on nearby existing housing.

The zoning ordinance reforms attempt to accomplish the expansion of opportunities for SMMF through 3 modest reforms. First, the minimum lot area required per housing unit is reduced in residential districts from 2,000 ft² per unit to 1,500 ft² per unit. As I argued in my letter to the alders (March 2021), this only changes the allowable *density* on a parcel, it does not in any way alter the height or parking requirements. On a 10,000 ft² lot in the SR-V2 district (as best I can tell, a common parcel size in that district), under the current ordinance 5 dwelling units are permitted, but under the change 6.7 units would be permitted.

Second, the proposal would increase the threshold at which a SMMF project becomes subject to the Conditional Use Permit (CUP) process rather than proceeding by-right. As I also demonstrated in my letter to the alders, the CUP thresholds only apply to the review process (conditional vs by-right) based on the number of units. The CUP process does not (and cannot) make changes to the height or the density requirements. I think that many public comments on the conditional use thresholds misunderstood that the CUP process cannot alter density or height requirements. Many of the buildings folks talked about were approved under a different zoning designation or were the result of a PDD rezoning process.

Connecting to the research, the proposed zoning changes do *not* permit large multifamily (over 50 units) in any of the affected zoning districts. The research cited here only identifies large multifamily as having any potential price effect on nearby properties (either positive or negative). If a developer wishes to build a large multifamily building (over 50 units), they would need to either seek a rezoning to a much higher density category or they would go through the PDD rezoning process. Either way, that rezoning process triggers public hearing processes and would be considered “discretionary” review by the plan commission and council. In a discretionary review, a wide range of affordability, displacement, and neighborhood concerns can be addressed in negotiating approval of a project. The common misunderstanding of this zoning proposal in news media reports was that this was reported as a blanket up-zoning of most of the city that would allow large multifamily by right nearly everywhere. That’s not an accurate representation of the proposal.

I’ll pause here to review the only recent empirical research on SMMF that is available. An et al. (2021)¹³ examine the price and rents in small- and medium-sized multifamily buildings using property-level microdata for 25 years for 11 large urban counties covering the major cities of Los Angeles, Chicago, Las Vegas, Atlanta, Cleveland, Miami, Seattle, Minneapolis, Pittsburgh, Phoenix, and Denver. They define small multifamily buildings as containing 2-4 units and medium multifamily as containing 5-49 units. As an asset class, SMMF housing houses 20 percent of the US population and is often the main source of “naturally occurring affordable housing” (NOAH). However, SMMF buildings have distinct investment, rent, property-quality, and management characteristics than the large multifamily asset class.

The researchers find that, even when controlling for building-level and neighborhood-level amenities, SMMF units are less expensive and rent for less per square foot than comparable large multifamily buildings. They also find that the price discount on SMMF decreases as the number of

¹³ An, B., Bostic, R., Jakobovics, A., Orlando, A., and Rodnyanski, S., 2021. “Why are Small and Medium Multifamily Properties So Inexpensive?” *Journal of Real Estate Finance and Economics*, 62:402-422.

units in the building increases, clearly indicating economies of scale in property management and finance. The smallest properties, up to 9 units, face the deepest discount.

In many cities like Madison, existing older SMMF provides a significant supply of “naturally occurring affordable housing”. As older units, they have had time to filter down the income scale. And, as smaller properties, they experience a price discount (per square foot) relative to larger buildings.

Therefore, the research on SMMF buildings (the types that would be more easily developed under this zoning proposal) suggests that adding SMMF buildings in any neighborhood type (lower, middle, or upper income tercile) would unlikely be large enough to have any impact on neighborhood rents or prices.

There are two remaining issues in our conceptual model of housing submarkets relative to the proposed zoning changes. The first issue concerns what we might call direct displacement – that by opening additional properties for potential development, some of those potential parcels might currently contain lower-cost housing occupied by lower-income households that may disappear from the “naturally occurring affordable housing” stock through re-development of the parcel. There seems to be widespread agreement among both sides of this debate nationally that such direct displacement is an unintended negative consequence of zoning reform for affordability. The difference comes from estimates of its magnitude (how many people would be affected) and whether potential mitigation strategies (relocation assistance, right-to-return, building additional income- and rent-restricted affordable units in the same neighborhood, etc.) are sufficient from a cost-benefit standpoint.

To wrestle with these tradeoffs, consider the possible effects on existing rental housing in a neighborhood when the demand for housing in that neighborhood increases. Some combination of 4 possible outcomes occurs:

- 1) No new construction in that neighborhood and no reinvestment/upgrading/remodeling of existing housing stock. In this case, the price per square foot of housing in the neighborhood would increase because of a demand increase, but there would be no change in the quality of the housing stock. If the existing housing stock becomes more expensive without a supply response, over time higher income tenants will move into the neighborhood and lower income tenants will be indirectly displaced.
- 2) Existing housing providers respond to increased demand through upgrading or reinvesting in existing housing to increase its quality. Rents in buildings experiencing reinvestment increase because the quality increases. Higher income tenants move into the neighborhood and lower income tenants will be indirectly displaced.
- 3) New construction occurs in new buildings on parcels that are not-currently residential (such as parking lots, vacant lots, or commercial/industrial). New construction, by definition, is higher quality and higher price per square foot than existing housing. New residents move into the neighborhood, generally with higher incomes.

4) New construction occurs in new buildings on redevelopment parcels that currently contain lower quality housing. Occupants of those redeveloped buildings are directly displaced to other buildings, either within the neighborhood or outside of it.

In truth, some combination of all 4 of these effects occur in neighborhoods experiencing demand increases. We could potentially see some new construction, some upgrading/reinvestment of existing housing, and some redevelopment. If the supply response is inadequate to the increased demand, we could also see the price of existing housing increase without an increase in its quality.

If existing neighborhoods experiencing demand shocks successfully thwart new construction to meet that new demand, some of the in-migrants who would have rented the proposed new units will still move into the neighborhood, potentially displacing incumbent residents. And some of the displaced demand might move to the next nearest neighborhood, which puts pressure on rents in adjacent neighborhoods.

I think this is the point at which the national debate has often degenerated into conflict. In truth, each side imagines a different counterfactual of what would happen if new demand in existing neighborhoods is met with new construction or new construction is thwarted. Supply advocates would argue that failure to have a supply response to new demand in a neighborhood results in the continued displacement and price pressures for the lowest income incumbent residents in those existing neighborhoods, who are then indirectly displaced to either more expensive housing or further-away neighborhoods. Supply skeptics¹⁴ would argue that new market rate construction in existing neighborhoods increases rents for incumbent tenants in existing housing.

The argument from supply skeptics is that new construction might cause rents of nearby existing housing to increase through an “amenity signal.” Directly, the amenity signal comes from added amenities to a neighborhood from the new construction. Indirectly, the amenity signal might come in attracting higher income residents and new businesses. If attraction of higher income residents and new businesses signals future rent increases, this might also incentivize owners of existing housing units to reinvest in those existing units to upgrade the quality to seek a higher rent. The argument from supply advocates is that new construction might cause rents of existing nearby housing to decrease (or increase slower) due to the supply effect. The empirical research outlined below are all attempts to measure the relative “supply” and “amenity” effects.

Again, the literature suggests that only large multifamily buildings (over 50+ units) can induce potential rent changes in neighboring properties. This zoning ordinance proposal does not in any way change the development potential of large multifamily buildings.

But, since this topic comes up in many discussions, it is worthwhile to review 4 very recent empirical research projects that – for the first time in the literature – attempt to measure the effect of new market rate construction on the price (rent) of existing housing in proximity to new development. Previous research was hampered by the lack of good data, and was limited to correlations rather than causation modeling.

¹⁴ The term “supply skeptics” comes from Vicki Been, Ingrid Gould Ellen & Katherine O’Regan (2019) “Supply Skepticism: Housing Supply and Affordability.” *Housing Policy Debate*, 29:1, 25-40, DOI: 10.1080/10511482.2018.1476899.

Correlation, of course, is not causation because of endogenous sorting into treatment groups. In social science, we cannot undertake the “gold standard” of scientific research: randomized, placebo-controlled, double-blind studies. Especially in terms of housing and neighborhood change, we cannot imagine a research study where we randomly throw darts at a big map of the city and magically place new housing in random locations.

Developers don’t just randomly select parcels and randomly choose how many units to build, hoping (without research) that enough people will want to rent in their building at the targeted quality level to cover their operating costs and debt service. Development is risky and costly. Real estate development is driven by the demand for space.

Many residents observe both new construction and rents increasing. This is a correlation. But, as the research outlined below demonstrates, most new construction occurs in neighborhoods that were already seeing rents increase. Is the rent increase the “effect” of new construction, or its “cause”?

Four recent empirical papers provide very robust research design and property-level in some detail to inform policy discussion of zoning reforms.

The four papers are:

- 1) Asquith, B., Mast, E., and Reed, D. 2021. “Local Effects of Large New Apartment Buildings in Low-Income Areas.” Forthcoming in *Review of Economics and Statistics*. [Hereafter: Asquith, et al.]
- 2) Damiano, A. and Frenier, C. 2020. “Build Baby Build?: Housing Submarkets and the Effects of New Construction on Existing Rents.” Working paper: Center for Urban and Regional Affairs, University of Minnesota. [Hereafter Damiano and Frenier].
- 3) Pennington, K. 2021. “Does Building New Housing Cause Displacement?: The Supply and Demand Effects of Construction in San Francisco.” Working paper, University of California, Berkeley, Dept. of Agricultural and Resource Economics. [Hereafter Pennington].
- 4) Li, X. 2020. “Do New Housing Units in Your Backyard Raise Your Rents?” Working paper, NYU. [Hereafter Li].

Each of these four papers uses a nearly identical methodology, so there is some confidence that results across all papers are not driven by methodological differences. The methodology is a statistical technique to solve for the “correlation is not causation” problem. The first paper (Asquith et al.) has been peer reviewed and accepted for publication in one of the top economics journals, while the other 3 are currently available as working papers and not yet peer reviewed.

Imagine that you gave a “treatment” (for example, an experimental medicine) to one group of people and a non-treatment (i.e., placebo or control) to another group. You observe outcome differences between the treatment group and the control group. If you randomly sorted people between treatment and control groups and if the treatment and control groups were the same (age, weight, gender, race, income, previous medical conditions, etc.) you could reasonably conclude that differences in outcome between treatment group and control group were caused by the treatment. But if treatment groups and control groups are not the same and not randomly sorted, you couldn’t conclude that group differences in outcomes between treatment and control were caused by the treatment. If your treatment group, for example, is young healthy people but your control group is older and sicker people, the differences in outcomes may have nothing to do with the treatment. Likewise, because multifamily construction is not “randomly” assigned to neighborhoods, we cannot simply compare the outcome differences in “treated” and “control” neighborhoods.

All four researchers reviewed here use quasi-experimental techniques to separate neighborhoods into “treatment” groups and “control groups.” The “treatment” in this case is the construction of a large (more than 50 units) market rate (non-subsidized, non-senior, non-student) multifamily building. The “treatment group” is existing rental housing units immediately surrounding the new multifamily construction. The “control group” is existing rental housing very close to, but not immediately surrounding, the new building.

Imagine a new multifamily building. On a map, draw a circle of radius 200 meters (Asquith, et al.) or 300 meters (Damiano and Freiner) or 100 meters (Pennington) or 500 feet (Li) around each new multifamily building constructed during the study period. Asquith et al., do this for 12 major US Cities (Atlanta, Austin, Chicago, Denver, Los Angeles, New York City, Philadelphia, Portland, San Francisco, Seattle, and Washington, D.C.). Damiano and Frenier do this analysis for Minneapolis, Pennington studies San Francisco Li analyzes New York City.

Also, imagine drawing another circle around each new multifamily building that is close but not super close. For example, Asquith et al. draw a second circle between 200 meters and 600 meters of each new large multifamily building. Damiano and Frenier draw another circle between 300 meters and 800 meters around each new large multifamily building. Similarly with Li and Pennington NY and SF.

Here’s the idea: all buildings within a near radius (like 600 meters which equals 0.38 miles or 800 meters which equals 0.5 miles) should be subject to the same underlying rental market trends, demographics and prices. If there is a statistically significant difference in rent effects in the really close circle (like 200 or 300 meters or 500 feet) and the near circle (like 600 meters or 800 meters, etc.), then one can conclude that the rent effect is likely ***caused*** by the new construction and not a spurious correlation that reflects property market trends in the area in general. So, the measure of the treatment-effect is the differences in outcomes between the treatment group (very close) and the control group (near).

This method allows the researchers to distinguish between the rent effects caused by new construction relative to trends *already present* in those neighborhoods and markets. For example, if rents were increasing in New York or Chicago or San Francisco in some neighborhoods 5 percent per year for the past couple of years, and the post-new-construction very close circle saw a 4 percent increase after construction while near but not very close (second circle) properties continued to see a 5 percent increase post-new-construction, then we could conclude that the new construction reduced rents for nearby properties by 1-percentage-point relative to trend. This does not mean that nominal rents in the nearby properties declined because housing prices (especially in strong-demand cities) were going up everywhere.

The *main question* in this empirical research literature is whether the supply effect (increased supply in a neighborhood reduces rents for nearby existing properties or slows the rate of growth of existing rents) is larger than the amenity effect (attracts new higher income in-migrants and businesses). If the effect of new construction of market-rate large multifamily buildings is *increased* rents in existing nearby housing relative to trend, then we can say that the *amenity effect* is larger than the *supply effect*. The supply effect is simply the idea that new construction absorbs rental demand and reduces prices of existing housing because it relaxes a supply-constrained submarket. If, however, the effect of new construction of market-rate large multifamily buildings is *decreased*

rents in nearby existing housing relative to trend, then we can say that the *supply effect* is larger than the *amenity effect*.

First, however, some observations about what the studies find in terms of descriptive statistics. Asquith et al, and Damiano and Frenier both find that new construction of large market-rate multifamily buildings occurs in neighborhoods that *already* saw increases in rents, house prices, and median incomes in the period before construction. That is an important observation in the “correlation is not causation” research concern. Many folks, anecdotally, observe rising rents and house prices and increasing income of residents at around the same time they observe lots of construction activity. When not subject to rigorous statistical controls, some might conclude that new construction “causes” rents and incomes to go up, rather than the fact that new construction largely “follows” incipient rises in land values and incomes. It’s certainly understandable why incumbent neighborhood residents could conflate cause and effect given that only in the past 2 years have academic researchers have been able to collect enough data and apply statistical techniques to try to disentangle cause and effect. The evidence seems to be that increasing land prices induces new construction, not that new construction causes increasing land prices.

Turning now to the results of the research. Asquith et al. (12 cities), Li (New York) and Pennington (San Francisco) all find statistically significant results that the *supply effect* is larger than the *amenity effect*: new market-rate construction reduces rents (or reduces rent growth) of nearby properties. Asquith et al. (12 cities) find that new construction reduces the rents in nearby buildings 5-7 percent relative to trend. Li (New York) finds that a 10 percent increase in the housing stock reduces rents 1 percent relative to trend in nearby properties. She does find some amenity effects in the attraction of new restaurants which indirectly increases neighborhood amenity levels, but the supply effect overwhelms the amenity effect. Pennington (San Francisco) finds that rents in nearby buildings fall 2 percent relative to trend for buildings within 100m of new construction.

All three researchers find that there is a statistically significant difference in effects for very close properties (within their first circle) and nearby properties (control group). These results show a pattern consistent with theory that increasing supply of housing reduces rent price growth.

Damiano and Frenier, however, studying Minneapolis present different empirical specifications that show some conflicting results. New construction increases nearby rents in some of their models, but new construction also lowers nearby rents in some of their other models. Because their results have been touted in the media as somehow disproving the “supply-reduces-rents” argument, it is worth taking a closer look.

Damiano and Frenier apply the same methodology as Asquith et al., to data from Minneapolis. One methodological difference between the Minneapolis piece and the 12-city piece is which neighborhoods and housing ranks they use. Asquith et al in their 12-city study *only* look at new construction in low-income central-city neighborhoods, specifically census tracts with median incomes below the metropolitan median. Damiano and Frenier, alternatively, do not limit their sample to only low-income neighborhoods but include new construction in all income neighborhoods. Asquith et al. look at the rent effects of all buildings within the very close and near neighborhoods, while Damiano and Frenier sort the existing housing units they study into different quality submarkets. Specifically, they sort their existing housing units into quartiles (25 percent) of rent (lowest, middle 2, highest) within each neighborhood and then within the city overall.

When Damiano and Frenier run the analysis for housing quality submarkets *within each neighborhood*, they find that new construction causes rents for existing lowest-quartile housing units within the neighborhood to increase 6.42 percent and rents for existing highest-quartile housing units within the neighborhood to decrease 3.16 percent. However, when they run their analysis based on existing lowest-quartile housing units *relative to the city as a whole*, they find results consistent with the other 3 papers that new construction causes rents of nearby existing lowest-quartile units to decline 6.6 percent relative to trend.

The differences in results between the paper that looks only at new construction in lower-income neighborhoods, and the paper that looks at all construction relative to existing housing's rank in the neighborhood quality and overall city quality submarkets can be connected to our previous conceptual model of different types of neighborhoods in Madison.

What happens if the anti-exclusion pro-opportunity supply argument results in new construction of market rate multifamily buildings in higher income, higher cost, higher amenity neighborhoods? Because land prices are high and construction costs are high, this market rate new construction is likely to rent at the top of the price-per-square-foot quality submarket. The exception to this is when the city's Affordable Housing Development Fund leverages city resources to develop LIHTC-funded new affordable homes in higher-amenity neighborhoods. Although incumbent homeowners in many of these neighborhoods resist multifamily development (whether market rate or affordable), there is very little evidence that new multifamily construction in higher income neighborhoods affects property values of incumbent homeowners. The Asquith et al. paper and the Damiano and Frenier paper, as well as the Mast (2019) paper all show that this new construction draws in in-migrants to the neighborhood from existing lower-income neighborhoods. This promotes income integration across neighborhoods and reduces price pressure on moderate- and lower-cost neighborhoods.

But many public concerns expressed concerning this zoning ordinance proposal argued that new construction in existing lower-income neighborhoods will cause rents to increase and displace current residents. My argument in the letter to the alders was that the SMMF under this zoning ordinance change would not be economically viable as a market-rate redevelopment effort if developers had to purchase parcels that contained existing housing. If this zoning ordinance proposal facilitates redevelopment of non-residential or vacant parcels, it is unlikely to have any impact at all on existing rents in nearby buildings, for reasons outlined above.

There was a related concern that the proposal to allow some residential-only (without commercial) buildings in mixed-use districts would potentially cause a loss of lower-cost commercial space. As I described in my letter to the alders, this is unlikely to be the case because the height and density limits combined with the conditional use threshold would not make residential only buildings economically viable in a linearly-successive pattern in existing commercial strip developments. Nearly all larger-scale redevelopment of older auto-oriented commercial developments in Madison takes place during the rezoning process, which allows for more discretionary review and public input.

Conclusions.

Housing is a bundled good. When someone access a housing unit (ownership or rental), that person or family accesses the unit-specific amenities (age, size, quality, etc.) but also the building-specific

amenities and the neighborhood-specific amenities and quality. Because of this bundled nature of housing, improvements in neighborhood quality are capitalized into increased housing prices and rents in that neighborhood. Reinvestment in existing units that increases their quality also results in increased rent. But if a household faces a higher rent for a higher quality unit, are they necessarily worse off? Conversely, a household's housing costs could be reduced by moving to a lower-quality unit and/or a lower-quality neighborhood. But are they, therefore, necessarily better off?

We cannot solve our housing crisis without more supply. Madison is going to add more than 20,000 housing units within the next 10 years. The overall urban region housing market likely needs to add 50,000 or more housing units within the next 20 years.¹⁵ Demand is coming whether or not supply responds – up to some point where overall housing gets so expensive that people and businesses no longer want to live here.

But supply alone cannot solve our housing crises. Regardless of whether this zoning ordinance update is passed or defeated, the need for affordable housing (both demand-side vouchers and supply-side construction and acquisition/rehab/preservation) is large and growing.

¹⁵ Author's estimate.