

THE PUBLIC PURPOSE

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**THE HOME FIELD DISADVANTAGE: GENTRIFICATION AND
DISPLACEMENT IN D.C.'S STADIUM NEIGHBORHOODS**

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**THE U.S. COUNTERMOVEMENT TO
SUSTAINABLE TRANSPORTATION**

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TEACHERS IN WASHINGTON, D.C.**

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LOT: LAND SPECULATION AS A DRIVER
OF URBAN INEQUALITY**

Kiley Yuthas



SCHOOL of PUBLIC AFFAIRS
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ABOUT THE JOURNAL

The Public Purpose Journal is a peer-reviewed interdisciplinary journal presenting the work of American University graduate students from the Departments of Government, Justice, Law, and Criminology, and Public Administration and Policy. Founded in 2002, The Public Purpose is supported by the SPA Graduate Student Council with the involvement and guidance of the Faculty Review Board, consisting of some of American University's most distinguished professors. In addition to an annual spring journal, The Public Purpose also manages an online public affairs publication (edspace.american.edu/publicpurposejournal). The journal is entirely student-run and currently has a staff of about 10 students.

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FROM THE EDITOR

Dear Readers,

We are honored to present the 24th edition of The Public Purpose Journal (PPJ). Led by graduate students from American University's School of Public Affairs (SPA), the PPJ is an academic journal dedicated to rigorous policy research and analysis. This spring edition features 13 articles spanning contemporary policy issues, from federal sentencing reform to Michigan's K–12 education system, and from cybersecurity to urban green space and the affordability crisis. Together, these pieces reflect both the depth of SPA's curriculum and the range of issues our students engage with.

As the PPJ approaches a quarter-century of publication, this edition builds on past volumes with a renewed emphasis on elevating submissions from policy description to scholarly argument. Our featured article, *The Home Field Disadvantage*, reflects this direction. It uses Navy Yard's gentrification history as a framework to evaluate the Washington Commanders stadium redevelopment, a project that has drawn significant public attention but limited sustained policy analysis. In doing so, the article fills a gap in the literature. Rather than offering the cautious, hedged conclusions common in policy writing, the author takes a clear and decisive stance. This is emblematic of this edition. We are proud to present a collection of articles that not only provide detailed policy analysis, but also challenge conventional wisdom, advance bold arguments, and make original contributions to the literature.

Future publications will have the opportunity to elevate the journal even further. The PPJ is situated not only within the School of Public Affairs, where the brightest students master their craft, but in Washington, D.C., where leading policy practitioners reside. I firmly believe the PPJ can continue to publish SPA student work while also serving as a venue for leading academics and practitioners to contribute to contemporary policy debates. This will not happen overnight, but if future editors can court the erudition of professors, think tank scholars, Hill and agency staffers, and practitioners across the policy world, The Public Purpose Journal may very well become the preeminent destination for policy scholarship in our nation's capital and beyond.

This edition owes its success to the many individuals who supported it. We are especially grateful to the SPA staff, including Heather Hamilton, Jocelyn Johnston, Yinuo Wei, and Dean Alison Jacknowitz, as well as the Faculty Board and Graduate Student Council. We also thank Managing Online Editor Zan Hussain and Communications Director Usua Fatima for their contributions, and extend special appreciation to Managing Print Editor Numa Khan, without whom publication would not have been possible. Thank you to Aidan Jacketta for the website design, Emily Williams for the cover design, our resident editors, and all contributing authors. Finally, we are grateful to our readers for their continued engagement and support.

Marc Steiner
Editor-in-Chief



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2025-2026

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Marc Steiner

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THE HOME FIELD DISADVANTAGE: GENTRIFICATION AND DISPLACEMENT IN D.C.'S STADIUM NEIGHBORHOODS

Sadie Arnett

Abstract

Washington, District of Columbia (D.C.), ranked second among metro areas with the most intense gentrification in the United States, with Black, low-income residents disproportionately being displaced as a result (Mitchell et al., 2025). This article analyzes the causes, consequences, and current state of gentrification-driven displacement of Black, low-income residents in D.C. The redevelopment of the Navy Yard neighborhood is used as a case study to examine how policy failures have enabled widespread displacement events within certain communities. The Navy Yard case is then used as a benchmark to evaluate the current Robert F. Kennedy (RFK) campus redevelopment project. This article finds that while the RFK redevelopment legislation includes more deliberate equity provisions than the plan that ruled Navy Yard, including stronger affordable housing requirements, local hiring mandates, and a Community Benefits Agreement (CBA), these important provisions lack enforcement mechanisms. Without strengthened accountability, the RFK project redevelopment risks reproducing the same pattern of displacement that shattered Navy Yard's Black community.

Introduction

Black, low-income residents in Washington, District of Columbia (D.C.) are being displaced at a disproportionately high level compared to Black, low-income residents in other U.S. cities (Mitchell et al., 2025). Gentrification is “an influx of upper-income people to low-income areas” (Hyra, 2016). In D.C., gentrification has most often resulted in the displacement of Black residents by higher-income White residents. Displacement in this analysis is defined as “the removal, relocation, or hindering of incumbent residents, who are typically lower income, from remaining or moving to gentrifying areas” (Freemark et al., 2025). The symptom of gentrification explored in this article is the displacement of low-income Black residents and Black-owned small businesses. The most prevalent consequences examined are the negative psychosocial and health impacts of displacement on residents and communities, which exacerbate other social issues and inequities.

Drivers of Gentrification in D.C.

The causes of gentrification are quite complicated and can be linked to many trends and policies over time. However, an overarching cause of the recent wave of gentrification is “the disproportionate movement of the educated Millennials, 20- to 30-somethings, to the central city” (Hyra, 2016). This influx of millennials followed a long period of urban blight and White Flight in the 1950s and 1960s (Voegeli, 2020). Hyra claimed that many millennials are moving to the city for convenience and business, but many can only afford to live in lower-income neighborhoods (Hyra, 2016). In other words, millennials' preferences have changed. While living in the suburbs used to be most desirable, D.C. and many cities are now experiencing a period of urban renewal as demand for urban convenience increases (Leinberger, 2012). This has caused a demand for investment in historically disinvested, majority-Black neighborhoods, the fallout of which has been a predominant cause of gentrification and later displacement in D.C. Government programs designed to stimulate economic development in underserved areas have further accelerated this trend. For instance, the “Opportunity Zones” (OZ) program offers tax breaks to corporations and individuals that invest in low-income communities. OZ incentivization, coupled with rising demand for urban living, has drawn developers toward investing in historically disinvested, majority-Black neighborhoods (Theodos & Meixell, 2018). However, rather than benefiting long-term residents, these investments have largely catered to higher-income newcomers, contributing to increased rates of gentrification and displacement in designated “OZs” (Kurban et al., 2022).

Can D.C. Invest Without Displacing?

There is often a divide among people regarding whether a government should invest in historically underserved communities, which are disproportionately Black and low-income in D.C. Many see investment as a positive way for the government to correct its past mistakes and negligence, and do not conflate investment with displacement (Flynn, 2020). On the other hand, many people view redevelopment projects as a negative that will cause displacement, regardless of the government's strategy. However, rather than accepting reinvestment as a zero-sum game, where existing residents lose, and developers and newcomers gain, and vice versa, it is time to hold developers and planners to a higher standard. The central failure of most redevelopment is not investment itself, but the fact that investment is often designed to attract outsiders rather than bolster existing residents. This is the difference between gentrification that is "imposed" on a community and "self-gentrification," development that builds economic wealth from within, retains local talent, and ensures that the benefits of redevelopment flow to the people who already live there (Carter, 2022). D.C. government and private investors should not continue to underserve the people and communities that they have intentionally segregated and disadvantaged for years – they should improve their strategies. In fact, D.C. leadership has a more significant obligation to serve the long-term residents of marginalized neighborhoods because past policies treated low-income and Black residents unjustly (MacKay & Huber-Disla, 2024). However, if D.C.'s leaders try to serve residents by treating investment as a panacea for years of negligence, long-term residents in lower-income neighborhoods will almost always pay the price. The failures of unjust policies make those impacted especially vulnerable to displacement, meaning that rather than simply pouring money into a neighborhood, policymakers must fully acknowledge the complex and individual needs and desires of a community. The following sections outline how redevelopment plans that fall short on justice create gentrification that fosters an environment for displacement.

Drivers of Displacement in D.C.

Rising Prices

As discussed, an important reason that revitalization/redevelopment has caused gentrification and displacement in D.C. is that new developments and investments are often not made with lower-income and Black residents in mind. Meaning, revitalized communities in D.C. have experienced rapidly increasing property values, rising taxes, and increasing housing prices (Mitchell et al., 2025). An increase in the demand for new developments in D.C. neighborhoods from middle- and upper-class millennials has mostly resulted in an increase in expensive housing that is affordable primarily to wealthy, White residents. This has left many Black renters disproportionately cost-burdened by rent. For example, from 2019 to 2023, more than half of Black renters and nearly half of Hispanic renters paid more than 30% of their income on rent, meaning they were cost-burdened by rent (Cohen & Zielinski, 2025). At the same time, only one-third of white, non-Hispanic renters paid more than 30% of their income on rent (Cohen & Zielinski, 2025).

However, gentrification does not only increase the price of rent. As newly developed areas become more desirable, demand increases, increasing the overall cost of living. Historically Black neighborhoods in D.C. that were disinvested for decades are disproportionately experiencing stark increases in property taxes as "extreme" gentrification increases (Mendoza, 2021). Residents in Ivy City, a neighborhood established as an African American community in the 1870s, have had to spend a growing proportion of their income on property taxes due to gentrification (Mendoza, 2021). Property taxes accounted for 2% of residents' income in 2000, 4% in 2010, and 5% in 2019 (Mendoza, 2021).

Lack of Affordable Housing Units

While White and wealthy people's demands are rapidly met by developers with support from the city, lower-income residents' demands for affordable housing are often not met. According to the National Low Income Housing Coalition, in D.C. in 2023, there was a shortage of at least 37,429 rental units for extremely low-income renters, meaning their income is either below the federal poverty guideline or 30%

of the area median income (AMI) (National Low Income Housing Coalition, 2023). Mayor Bowser and the Deputy Mayor for Planning & Economic Development have created goals to increase the number of affordable rental units in D.C. However, in December 2024, D.C. had only added 10,000 units that are affordable for households earning below 80% of the Median Family Income (MFI) (Office of the Deputy Mayor for Planning and Economic Development, 2024). This is below the 37,429 rental unit deficit and does not provide housing for extremely low-income renters.

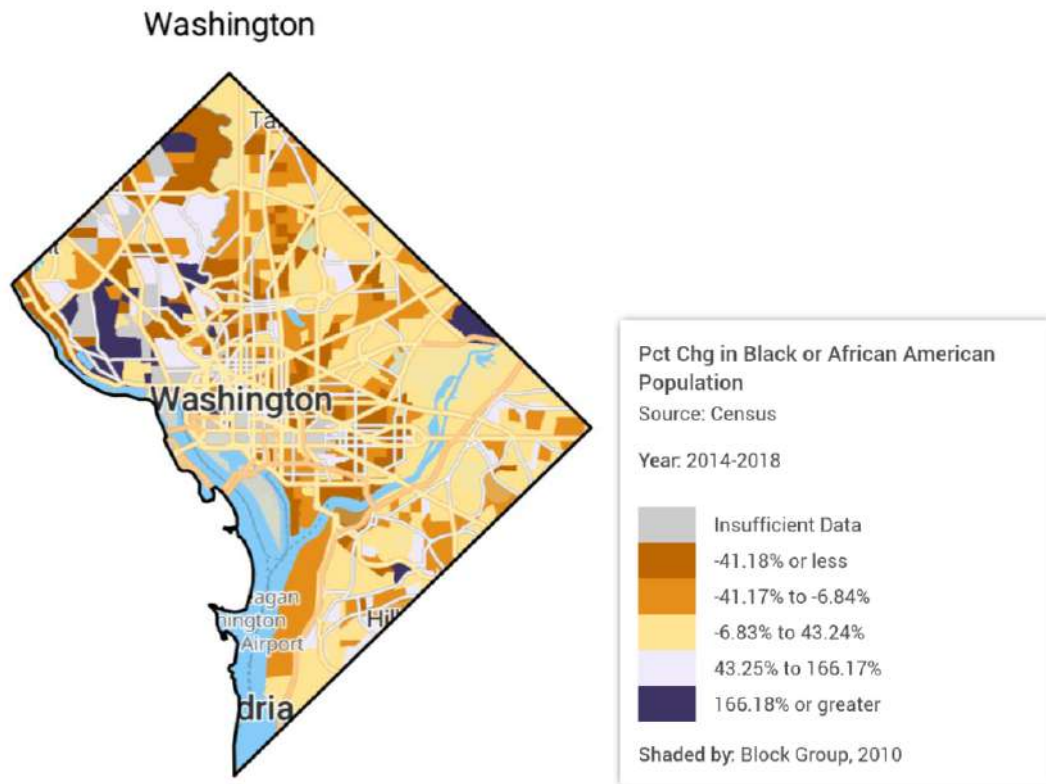
Cultural Replacement

This preference for new wealthier, White residents is felt by residents as both Black and White residents agreed in 2014 that gentrification is “mainly good for the rich, for Whites, and for those new to the District” (Holt et al., 2021). This perception can increase the displacement of Black residents who experience a loss of belonging, as redevelopment displaces culture. Similarly to how new residential developments often benefit wealthier residents, new business and commercial investments are often built to serve wealthy, White residents, which greatly changes a neighborhood’s culture (Holt et al., 2021). Holt found that White spaces in historically Black neighborhoods in D.C. often feel “off limits” to Black residents (Holt et al., 2021). New White residents and new developments that cater to “White tastes,” reportedly make Black men “feel unsafe or uncomfortable in their neighborhoods,” due to social exclusion. (Holt et al., 2021) Black residents are eventually pushed out of their communities as they perceive that their neighborhood no longer serves them (Holt et al., 2021). Thus, in addition to rising prices, gentrification causes displacement because of existing residents’ recognition that their culture has been replaced.

Measuring Gentrification and Displacement in D.C.

Displacement of Black, Low-Income Residents

The symptom of gentrification that is most relevant to this study is the displacement of lower-income Black residents by primarily wealthy, White residents in D.C. (Mitchell et al., 2025). The problem of gentrification in historically Black neighborhoods in D.C. is exemplified by data. A study by the National Community Reinvestment Coalition (NCRC) found that D.C. ranked second in the 2000s and 2010s for metro areas with the most intense gentrification in the United States (Mitchell et al., 2025). D.C. experienced more displacement and demographic change than any other metro area in the US. From the 1970s to 2020, in majority-Black neighborhoods in D.C., populations of Black residents declined by 61,000 while the population of non-Hispanic White residents increased by 54,000 (Mitchell et al., 2025). As seen in Figure 1 below, many Census Block groups in D.C. saw a decrease in the percentage of Black or African Americans from 2000 to 2014-2018 (PolicyMap, 2025).

Figure 1: *Estimated percent change in the number of Black people in D.C. between 2000 and 2014–2018.*

Zooming into Census Tract 72, which is known as the “Navy Yard” neighborhood, provides a clear example of this displacement. Figure 2 below outlines Navy Yard and shows that in 2000, 97% of residents were Black or African American (PolicyMap, 2025). Figure 3 below shows how the percentage of Black or African American residents in Navy Yard (Census Tract 72) went from 97% in 2000 to just 23% in 2018 (PolicyMap, 2025). At the same time that Black residents were displaced, 2,828 new White residents moved to Navy Yard (Fischer, 2019). Additionally, research has found that Navy Yard has experienced the strongest low-income displacement in D.C., as the percentage of low-income residents decreased from 76.9% in 2000 to 20.8% in 2016 (Fischer, 2019). Navy Yard exemplifies the extreme extent to which low-income, Black residents have been displaced in D.C. More on why and how this occurred in the sections below.

Figure 2: Percent of all people in D.C. Census Tract 72 who were Black or African American in 2000.

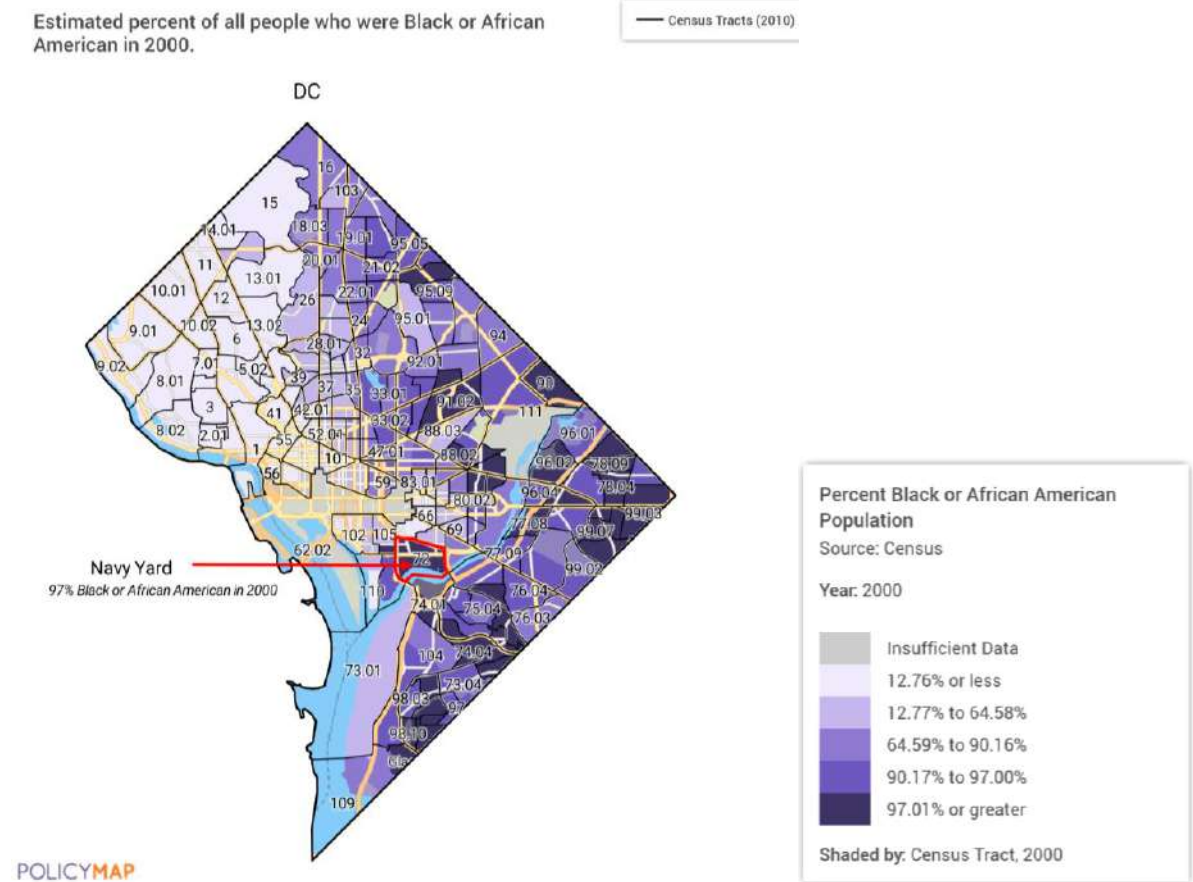
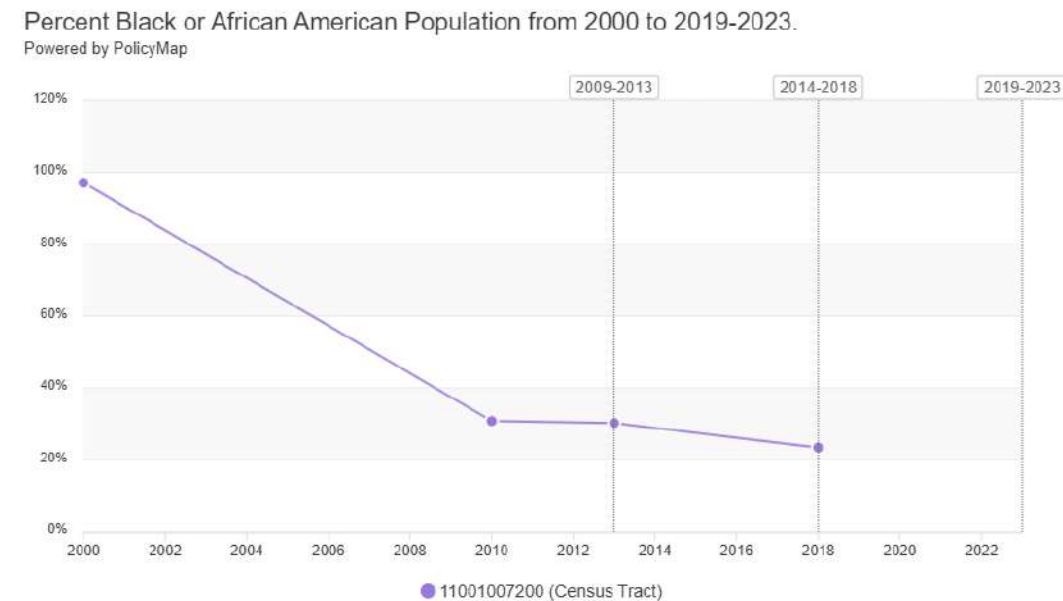


Figure 3: Decrease in the Percent of Black or African American Residents in D.C. Census Tract 72 (Navy Yard) from 2000 to 2018.



Displacement of Small Businesses

As gentrification increases housing prices, the overall cost of living, property values, and taxes, many residents can no longer afford to live in their neighborhoods. Black-owned businesses face a similar reality, which eventually leads to displacement and closures of these businesses. When a neighborhood experiences gentrification, small businesses suffer greatly (Lung-Amam, 2021, p.1). In D.C., the number of Black-owned businesses closing has increased as gentrification has surged since 2000 (Simon, 2019, p.1). One Southeast business owner said their rent increased 200% following new development in the neighborhood (“WJLA: Business owners affected by gentrification as new study shows D.C. has highest intensity,” 2019, p.1). Another iconic business that has been serving the community around Howard University since 1998, “Sankofa Video, Books, and Cafe,” is at risk of closing due to drastic spikes in property taxes (Simon, 2019, p.1).

Consequences of Displacement

In D.C., the displacement of Black, low-income residents by predominantly higher-income, White newcomers is altering neighborhood demographics, directly affecting community cohesion and residents’ well-being. Research has shown that wealthy, White gentrifiers often “take over political institutions and advocate for amenities and services that fit their definition of community” (Hyra, 2016). Over time, this results in a loss of culture and community for existing residents, who are often Black. Gentrifying neighborhoods often experience rapid and extreme changes in neighborhood racial demographics, as seen in Navy Yard. These shifts often cause negative psychosocial effects on residents experiencing gentrification.

Holt et al. (2021) found that the consequences of gentrification on residents include race-based social exclusion, restricted mobility, reduced social cohesion and sense of community belonging, loss of control, and internalized blame. Longtime Black residents are “left with fear, resentment, and civic withdrawal” when new middle and upper-income White residents gain “neighborhood political power” and “advocate for policies and amenities that cater to their [White] cultural tastes and preferences” (Holt et al., 2021). A study from Philadelphia found that over half of Black or Latinx residents in neighborhoods experiencing increases in the percent White population and decreases in the percent Black or Latinx population experienced above-average stress (Holt et al., 2021). This is a serious concern for D.C., as race-based social exclusion and stress cause increased anxiety, depression, and hostility, greater willingness to use alcohol, and poorer overall health (Holt et al., 2021). The negative health outcomes for individuals experiencing gentrification exacerbate inequalities and inequities in communities that have already been historically disadvantaged. Economic inequality has many harmful effects, including lowering economic potential and growth (Council on Foreign Relations, 2025).

Redevelopment of Navy Yard as a Case Study

D.C. has prioritized supplying the demands of new, wealthier White residents over existing Black and low-income residents. The redevelopment of Navy Yard exemplifies the extremes of this reality and the need for place-based policies that consider existing residents. Despite policy efforts to safeguard against displacement, like Inclusionary Zoning (IZ), leadership fell short in preventing displacement for the lowest-income residents of Navy Yard under the Anacostia Waterfront Framework Plan (AWI Plan) (District of Columbia, Office of Planning, 2003). While certain programs or policies are effective in some D.C. neighborhoods, they should not be arbitrarily applied to neighborhoods that differ vastly by key characteristics.

In 2009, D.C.’s Inclusionary Zoning (IZ) Affordable Housing Program was created to protect affordability by requiring 8-10% of new residential floor area to be affordable for those making 50%, 60%, or 80% of the Median Family Income (MFI) in development projects with ten or more units (District of Columbia DHCD, 2025). However, in reality, IZ excludes many very low-income residents, many of whom are Black residents. According to the 2018 IZ price schedule, the minimum qualifying

income for residents earning 50% MFI, the lowest income category, ranged from \$31,250 to \$53,700, depending on rental unit size (DHCD, 2018). Between 2014 and 2018, the estimated median income in Navy Yard was \$131,821 for White householders and \$21,250 for Black householders, a \$110,571 gap (PolicyMap, 2025). Because the median income of Black householders in Navy Yard was \$21,250, many Black residents were ineligible for IZ units, leaving many cost-burdened by new, expensive rents.

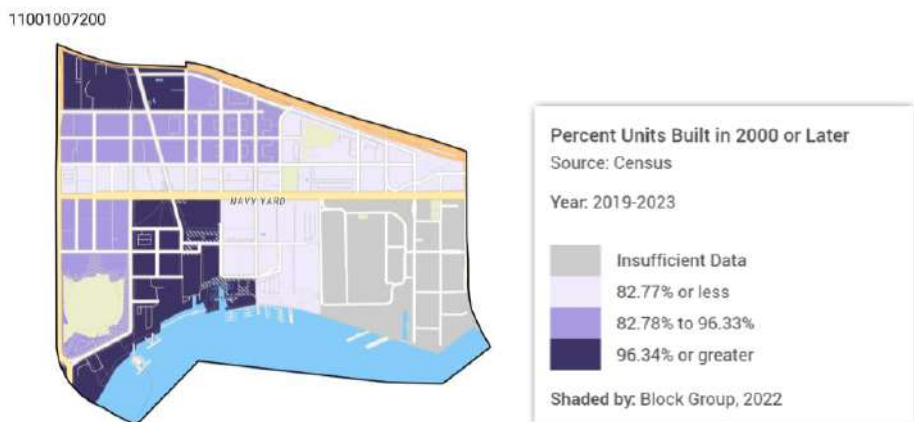
The median gross rent in Navy Yard between the period of 2014 to 2018 was \$2,076, up from the median gross rent of \$488 during the period of 2009 to 2013 (PolicyMap, 2025). According to the U.S. Census Bureau, households spending more than 30% of their income on rent are “cost-burdened” (U.S. Census Bureau, 2024). The median Black householder needed to spend about \$531 in monthly rent during the period of 2014 to 2018 to not be burdened by costs. However, only 10.25% of Navy Yard rentals cost less than \$750 per month between 2014 and 2018 (PolicyMap, 2025). On the other hand, with a median income of \$131,821, many White householders could afford roughly \$3,295 monthly without being cost-burdened. 77% of units in Navy Yard during this period cost \$1,500–\$3,500 per month (PolicyMap, 2025). This shows the wide disparity between Black and White residents’ needs being met in Navy Yard.

Navy Yard was almost fully redeveloped in the last two decades, given the fact that, as of 2019–2023, in nearly every census block in Navy Yard, over 82% of housing units were built after 2000 (PolicyMap, 2025). This is shown in Figure 4 below. This redevelopment provided a clean slate for the D.C. government to ensure affordable and inclusive growth. However, the city’s inadequate regulation of the IZ program allowed developers to almost exclusively cater to wealthier, White residents. This case highlights the need for D.C.’s government to address current housing and development policies that have continued to fail low-income Black communities.

It is important to note that D.C.’s IZ program uses MFI, the combined earnings of all people in a family household, while the Census data used above is median income by householder, the income of a single person. This mismatch means the gap between the median income for Black householders and the minimum MFI to qualify for IZ may be overestimated for low-income Black residents in multi-earner households. However, the analysis is still relevant because an estimated 50% of households in Navy Yard between 2014 and 2018 were single-person households (PolicyMap, 2025). This means the analysis is an accurate estimate for at least half of Navy Yard.

Figure 4: *Percent of housing units in Census Tract 72 that were built in 2000 or later, as of 2019-2023.*

Estimated percent of all housing units built in 2000 or later, as of 2019-2023.



Future D.C. Redevelopments: RFK Stadium Campus

D.C. fell short on protecting D.C. residents during the redevelopment of the Navy Yard neighborhood, which has led many to feel wary about new redevelopment projects. Currently, a plan for the redevelopment of the RFK Stadium campus and the surrounding neighborhoods (Kingman Park and Hill East) is underway in Northeast D.C. As it currently stands, the Washington Commanders (Commanders) football team has promised to return to RFK Stadium, and through a public-private partnership with D.C. government, redevelop the stadium's campus (Office of Mayor Muriel Bowser, 2025). Many have drawn parallels between the redevelopment of RFK Stadium and Navy Yard/Nationals Park, given that both projects center around a large sports stadium, leaving many worried that the same failures that affected Navy Yard will plague the neighborhoods surrounding the RFK campus (Razzano, 2023). Many fear that, similar to Nationals Park, the redevelopment of the RFK campus will bring economic prosperity to D.C., but at the expense of displacing existing residents (Lee, 2025). However, Navy Yard's revitalization plan (AWI) is over 20 years old now, and Navy Yard and the neighborhoods surrounding RFK, though similar in some ways, are distinct. Through evaluating current RFK redevelopment plans, I hope to begin to understand if the D.C. government has learned from its past mistakes or if RFK will truly mimic Navy Yard. Additionally, this is simply an examination of the existing deal – not an argument in support or against whether the redevelopment should even happen at all, though that is another hotly debated topic.

RFK Campus Neighborhood Characteristics

To be able to predict the true impact of the RFK stadium redevelopment, it is crucial to first examine the neighborhood characteristics of nearby communities, like Kingman Park and Hill East. As seen in Figures 5-8 below, the neighborhoods East and Northeast of RFK stadium are majority Black, have a higher proportion of renters, and have lower rents and incomes than those to the West and Southwest of RFK stadium (PolicyMap, 2026). Because renters and low-income residents are the most vulnerable to displacement, these neighborhoods are most likely to be negatively impacted by the redevelopment. In Figure 5-8 below, the project area is highlighted in red, with RFK Stadium marked in the middle. There are no housing units currently in the project area, so the data shown in Figures 5 and 6 are from the larger Census tract.

Figure 5: *Estimated percent of people who are non-Hispanic African American near the RFK campus in D.C., between 2020-2024*

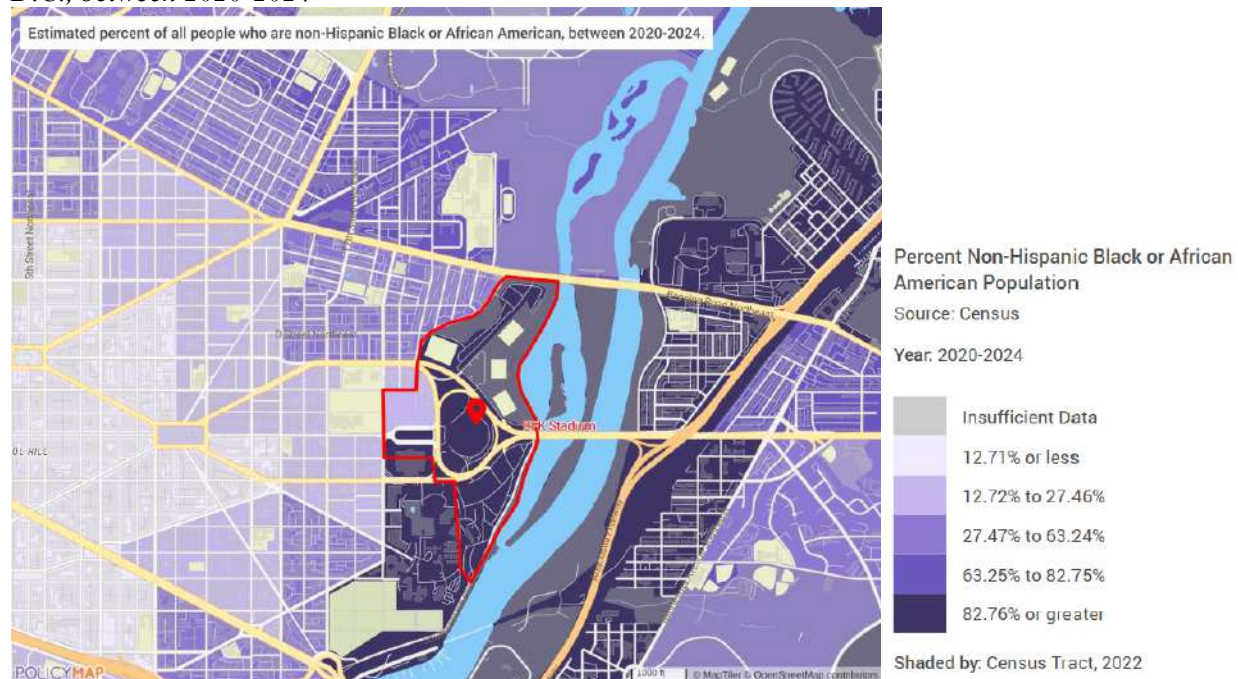


Figure 6: *Estimated percent of households that rented a home, near the RFK campus in D.C., between 2020-2024*

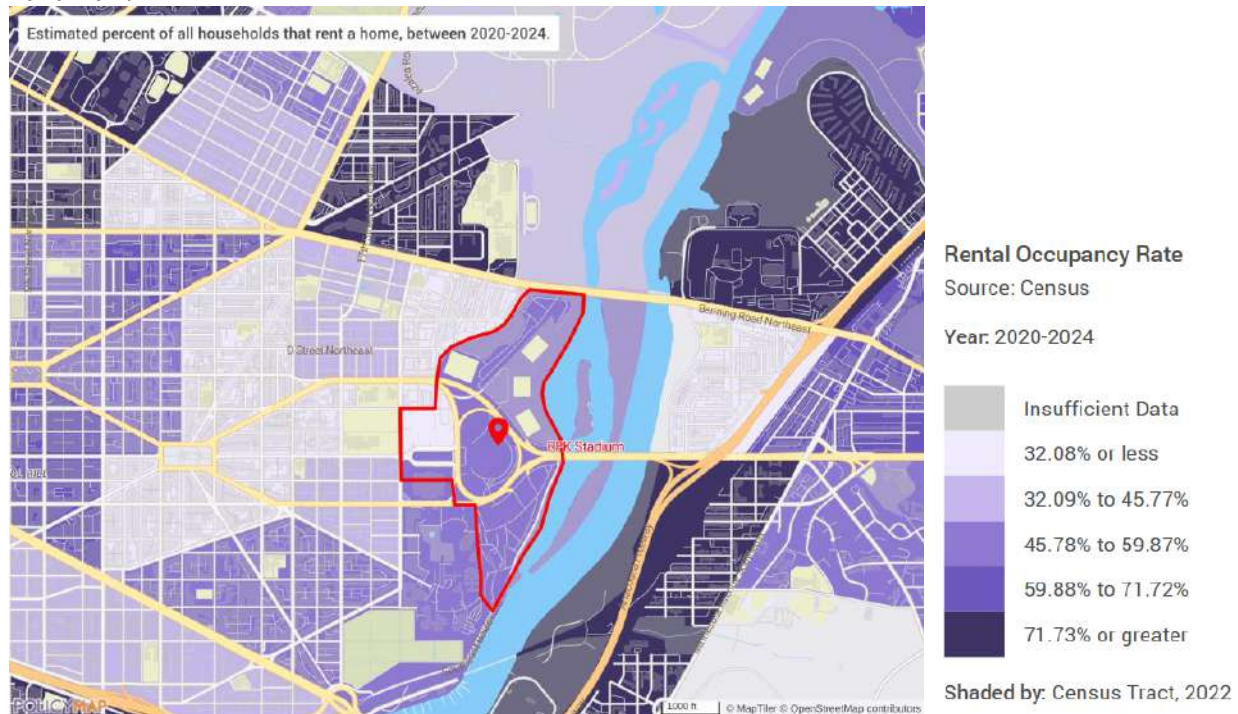


Figure 7: *Estimated median gross rent, near RFK campus in D.C., between 2020-2024*

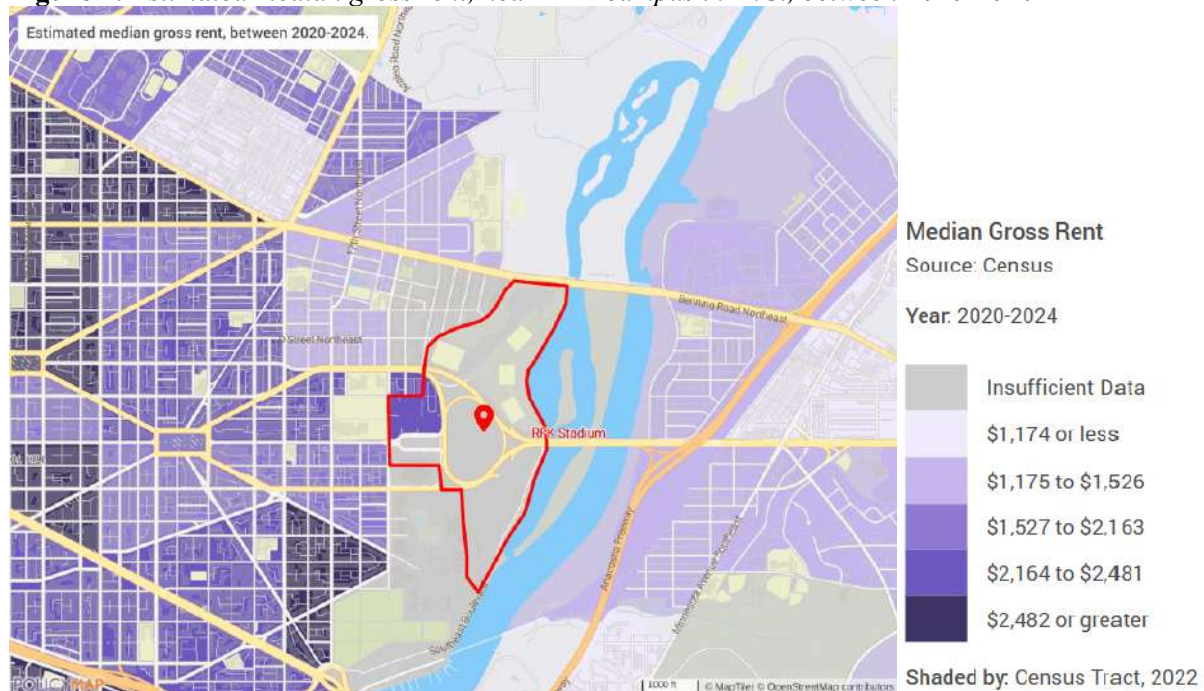
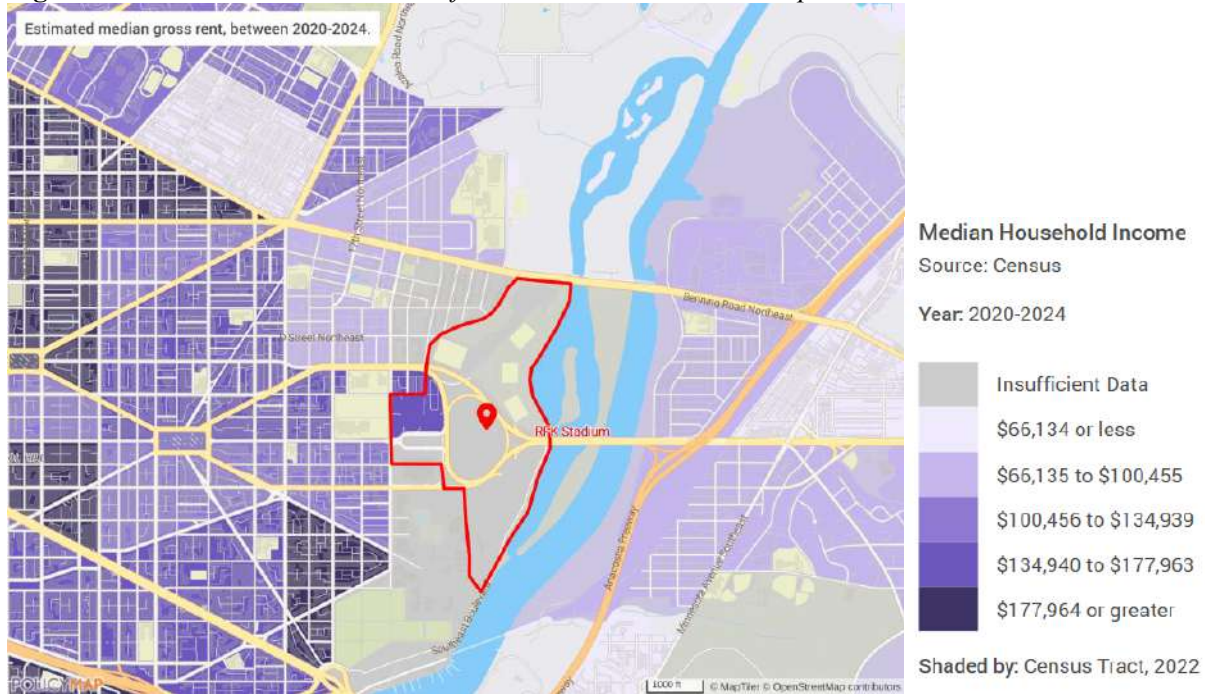


Figure 8: *Estimated median income of a household, near RFK campus in D.C., between 2020-2024*

However, despite some similarities, the neighborhoods surrounding RFK Stadium do not directly mirror Navy Yard’s neighborhood characteristics pre-revitalization. For instance, in 2000, near the creation of the AWI, Navy Yard’s median household income (MHI) was only 20% of the MHI of all of D.C. (PolicyMap, 2026). While Kingman Park and Hill East’s MHI were about 98% and 149% of the MHI for D.C. in 2020-2024. East of the river, Census tracts range from being 33% to 78% of D.C.’s MHI in 2020-2024 (PolicyMap, 2026). While it is clear that there are income disparities near the RFK campus, especially east of the river, the disparities are not quite as severe as it was for Navy Yard in 2000, particularly in the neighborhoods directly surrounding the RFK campus. This means that the existing residents near the RFK campus are likely not as vulnerable to displacement as those living in Navy Yard pre-redevelopment.

Another important distinction is that there are no housing units in the project study area directly surrounding the RFK campus (outlined in red) (PolicyMap, 2026). This is very different from Navy Yard, where there were 952 housing units (98% of which were rental occupied) before revitalization, many of which were demolished as a part of the redevelopment plan (PolicyMap, 2026). One of the most notorious structures demolished was the Arthur Capper/Carrollburg housing projects, which housed over 700 households (Collins, 2019). With the number of demolitions that occurred in Navy Yard, no matter what supplementary policies the government implemented to prevent gentrification and displacement, many residents were guaranteed to be displaced. However, since there are no homes in the RFK stadium study area, no homes will be demolished to make the stadium, meaning there will not be the same pattern of displacement from demolition. More concerning, then, is displacement from rising prices, changing demand, and culture.

RFK Redevelopment Amendment Act of 2025

An official comprehensive plan for the RFK campus has not yet been released. However, in September 2025, D.C. Council passed the “Robert F. Kennedy Campus Redevelopment Amendment Act of 2025” (RFK Campus Act), which finalized the legal framework for the RFK project (Robert F. Kennedy

Campus Redevelopment Amendment Act, 2025). This act includes several provisions that, on paper, seem to be a more intentional effort to protect existing residents compared to the Navy Yard redevelopment.

Promising Provisions

According to the RFK Campus Act, the Commanders are required to invest \$50 million over 30 years in local community benefits, which will be outlined in a Community Benefits Agreement (CBA). CBAs are potentially enforceable legal contracts negotiated directly between residents and developers. This means residents can help create CBAs directly by attending local community meetings (O'Neill Institute, 2025). The RFK Campus Act outlines that the CBA will promote job creation, youth education, cultural heritage, health equity, and cultural preservation (Robert F. Kennedy Campus Redevelopment Amendment Act, 2025). Another important provision of the act is the establishment of the Community Reinvestment Fund (CRF), which directs funds from the Commanders' donations (negotiated in the CBA) and excess annual infrastructure funds (up to \$2 million a year) into low-income communities in Wards 5, 6, 7, and 8. The CRF will be used for displacement prevention, housing stabilization, and small business and public health programs (Robert F. Kennedy Campus Redevelopment Amendment Act, 2025). These are very important measures because, as seen in the Navy Yard case, displacement is often driven by rising rents, increasing property taxes, and cultural replacement (Mendoza, 2021). The CRF, as outlined, will provide property tax relief and legal assistance to mitigate these pressures. If the Commanders keep their word, the CBA offers a rare opportunity for "self-gentrification," where existing residents are active participants in the redevelopment of their neighborhood. This works to ensure that benefits are dispersed across the community and protect culture (Carter, 2022).

The act also requires that at least 30% of residential units be affordable housing, split evenly between households earning at or below 60% and 30% of the MFI (Robert F. Kennedy Campus Redevelopment Amendment Act, 2025, § 4). Compared to D.C.'s IZ, this provision requires a substantially higher proportion of affordable units and is much more inclusive of "extremely low-income" (0-30% MFI) and "very low-income residents" (31-50% MFI) (D.C. Department of Housing and Community Development, 2012). For a reminder, exclusion of affordable housing for those earning below 50% of the MFI in Navy Yard greatly contributed to the displacement of many of Navy Yard's lowest-income, primarily Black, residents. This move away from a reliance on the standard IZ program to ensure the development of affordable housing in a large revitalization project is a hopeful improvement.

Relating to the local economy, the act requires that 51% of construction jobs from the redevelopment go to D.C. residents, with 20% reserved for Wards 7 and 8, and that 40% of the development budget be subcontracted to certified small businesses in surrounding wards (Robert F. Kennedy Campus Redevelopment Amendment Act, 2025). This is supplemented by a commitment of \$15 million in D.C. small business contracts by the Commanders (Jarvis, 2025). Throughout these provisions, workers and businesses in wards closest to the stadium are prioritized. While existing residents have historically been excluded from the economic benefits of neighborhood revitalization projects, prioritizing contracts and jobs for existing Ward 7 and 8 businesses and workers helps ensure that existing residents reap the economic benefits of the redevelopment (Mitchell et al., 2025). In addition to this, the Commanders also pledged \$20 million toward a Ward 7 Youth Academy that will offer tutoring, mentorship, and workforce training (Jarvis, 2025). This academy is a positive example of a talent-retention project that prevents outmigration of economically mobile residents, which is a prevalent issue in low-income Black neighborhoods (Carter, 2022).

Critical Shortcomings

Though the RFK campus act appears to be a more substantial effort to center existing residents and neighborhoods in revitalization, compared to the redevelopment plan for Navy Yard, the act is not foolproof. The biggest concern is that the positive provisions above are mostly just goals and promises,

making the act toothless. This means the future well-being of residents near the RFK campus depends almost solely on the Commanders' willingness to honor their commitment. This is quite optimistic, given developers' notorious reputation of prioritizing profits over people. For instance, in 2025, a Washington Post investigation found that developers with political ties to Mayor Bowser collected millions of dollars more than was typical for a publicly subsidized affordable housing project right next to the RFK campus (Thompson, 2025). At the same time, these developers are receiving substantial property tax breaks. This means D.C. taxpayers are overpaying developers while being shorted tax revenue, and therefore, public goods (Thompson, 2025). The Commanders will experience a similar benefit. They will owe D.C. just \$1 per year in rent for three decades, receive over \$1 billion in public subsidy, and are exempt from D.C. property taxes on the stadium and parking facilities for the full term of the lease (Robert F. Kennedy Campus Redevelopment Amendment Act, 2025). These benefits for the Commanders are justified by the goods and services they have "promised to deliver." However, the D.C. Fiscal Policy Institute argues that the CBA amount of \$50 million is not a sufficient amount to result in substantial benefits for the community (Markoff, 2025). Additionally, the CBA lacks an enforcement mechanism and a take-back provision in the case that commitments are not fulfilled (Robert F. Kennedy Campus Redevelopment Amendment Act, 2025). Historically, CBAs have most often been ruled by the D.C. Superior Court as unenforceable if they conflict with a developer's financial interests (Johnson, 2025). Residents' concerns that this is just a token policy to make the Council and Mayor look like they are working for the people and not developers are quite well-grounded.

Council members did push for amendments that would add penalties for failing to deliver affordable housing by the deadlines and other promised amenities (Lee, 2025). However, these amendments failed to make it to the final version of the bill after Mayor Bowser argued that existing penalties for development delays were strong enough to ensure the Commanders honored their commitments (Murillo, 2025). Councilmember White suggested that the mayor's faith in the Commanders is foolhardy, as he fears that without a dedicated "anti-displacement fund," low-income, Black residents living near the RFK campus will be disproportionately impacted negatively (Jarvis, 2025).

Conclusion

While the RFK Campus Act includes provisions that are more intentional than the policies that shaped Navy Yard, it risks repeating the same systemic failures. Similar to Navy Yard, many of the commitments in this act are insufficient in scale and unenforceable in practice. The strongest provisions in the act rely on good faith, which historically has led to the displacement of low-income, Black residents. If the campus redevelopment is to proceed without coming at the expense of existing residents, D.C. policymakers will need to amend the RFK Campus Act to include explicit enforcement mechanisms. Otherwise, low-income, primarily Black renters near the stadium face a significant risk of displacement, as past projects have shown. The greater economic diversity and higher rate of homeownership in the RFK area may mean the neighborhood will not be overhauled as completely as Navy Yard was, but displacement is unlikely to be prevented entirely. As the act stands, it is difficult to deny that the most vulnerable residents will feel the pressure of increased demand for their neighborhood, and eventually, many will be squeezed out. This is a pivotal moment for the D.C. government: the RFK redevelopment project can either become a model for equitable development or another chapter in D.C.'s long history of displacement. Though the act's current shortcomings make the latter outcome far more likely, I hope the Commanders and D.C. policymakers prove me wrong.

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THE U.S. COUNTERMOVEMENT TO SUSTAINABLE TRANSPORTATION

Micah Blake Allred

Abstract

The sustainable transportation movement in the United States has recently suffered dramatic political setbacks, as a unified Republican Congress and Trump Administration systematically dismantle federal electrification policies, reverse fuel economy standards, and challenge California's historic authority to set vehicle emission regulations. While the original opposition to sustainable transportation centered on claims of economic burden and technological feasibility, evidence from 2025 reveals that political partisanship, fossil fuel industry influence, and ideological opposition to government intervention have been the primary drivers for the mobilization of the countermovement to sustainable transportation in the U.S. This article analyzes the contemporary policy agenda of the countermovement against sustainable transportation, examining policy reversals under the Trump administration, and the successful use of the Congressional Review Act to overturn California emission waivers. By synthesizing recent policy developments, academic research, and journalistic investigation, this article demonstrates that the countermovement represents a fundamentally ideological battle over the role of government in managing market transitions. The analysis concludes that the countermovement's rhetorical framing, centered on consumer choice, affordability, and national competitiveness, obscures deeper political motivations: resistance to climate action and protection of entrenched fossil fuel interests.

Introduction

The sustainable transportation movement is viewed by many Americans as a critical component of the nation's fight against climate change. According to the Environmental Protection Agency, in 2022 the transportation sector was the largest direct contributor to greenhouse gas emissions in America, exceeding emissions from industry, agriculture, residential energy use, and power production (EPA, 2024). In December 2025, this political conflict reached a critical juncture. President Donald Trump signed the "Freedom Means Affordable Cars" executive order, fundamentally altering federal sustainable transportation policy by resetting Corporate Average Fuel Economy standards to 2022 baseline levels and abandoning the emissions reduction trajectory that had structured automotive manufacturing decisions for over a decade (White House, 2025). Six months earlier, the Republican-controlled Congress invoked the Congressional Review Act to overturn three Environmental Protection Agency waivers granting California authority to set its own vehicle emissions standards, a legal maneuver never before attempted in the statute's 29-year history and of profound significance for federalism (Yale Journal on Regulation, 2025).

These 2025-2026 developments represent the culmination of a sustained political campaign to dismantle the federal and state regulatory infrastructure supporting transportation electrification and emissions reductions. This article analyzes the contemporary countermovement against sustainable transportation by examining its history and evolution, the political and economic mechanisms through which opposition is mobilized, and the policy reversals that followed in 2025-2026. The analysis concludes by arguing that the main drivers for the countermovement have been political but are consistently disguised as economic, and that understanding contemporary opposition to climate action requires attention to the flow of fossil fuel industry capital into political campaigns and the policy outcomes that follow from it.

Overview and History: The Origins and Evolution of the Sustainable Transportation Movement

The sustainable transportation movement encompasses a diverse coalition of advocates promoting reduction of vehicle greenhouse gas emissions through stricter legislation, technological innovation, and voluntary climate-conscious moderation (Shah et al., 2021). In addition to electrification, it also regularly supports alternative fuels including biodiesel, ethanol, hydrogen, natural gas, and propane (U.S. Department of Energy, 2024). While modest advocacy for sustainable transportation has existed since the

inception of motorized transportation, the movement began in earnest in the 1970s, when pollution and smog became an increasingly visible public health crisis in American cities and energy dependence became a major national concern (Thebault, 2021). By diversifying into more environmentally friendly fuel sources, the movement sought to reduce smog and improve air quality, increase American energy independence, and reduce reliance on gasoline and diesel (U.S. Department of Energy, 2024). The movement remained relatively bipartisan through much of the late twentieth century. Republicans and Democrats alike recognized the public health concerns of urban air pollution and the national security implications of energy dependence on hostile regimes. The Clean Air Act of 1970 and its 1977 amendments passed with overwhelming bipartisan support and established the regulatory framework that would structure environmental protections and vehicle emissions standards for the next five decades. However, beginning in the 1990s and accelerating sharply in the 2000s, support for sustainable transportation and climate action more broadly began clustering along partisan lines. By the 2020s, support for or opposition to the sustainable transportation movement had become almost entirely predictable based on partisan affiliation and ideological positioning.

The Political Economy of Opposition: Fossil Fuel Industry Influence and Campaign Finance

Campaign finance data reveals extensive financial flows from the oil and gas industry to Republican politicians and political committees, with these contributions showing direct correlation to voting patterns on sustainable transportation legislation. According to *Climate Power's* analysis, the industry spent \$445 million during the 2024 election cycle specifically to influence presidential and congressional elections, including \$96 million directly supporting Donald Trump's re-election campaign (Inside Climate News, 2025).

More revealing than aggregate spending are the specific contributions to individual swing-district representatives and their subsequent voting patterns. *Climate Power's* investigation identified fifteen key swing-district House Republicans from states with major renewable energy industries who had collectively received \$3.3 million in oil and gas contributions immediately prior to voting to eliminate clean energy tax credits and subsidies that were generating 111,900 clean energy jobs in their home states (Climate Power, 2025). According to a 2025 report from *Climate Power*, Representatives Jeff Hurd and Gabe Evans from Colorado received \$98,100 and \$112,929 in oil and gas contributions, respectively before voting to support elimination of wind energy tax credits that supported 9,600 Colorado jobs and threatened rate hikes of \$170/year for their constituents (Climate Power, 2025). Arizona Representatives David Schweikert, Eli Crane, and Juan Ciscomani received roughly \$268,000, \$70,000, and \$193,000 from oil and gas contributors, respectively, before voting to eliminate solar energy subsidies supporting 18,000 Arizona jobs (Climate Power, 2025).

This pattern repeats across numerous districts, suggesting either that campaign contributions are purchased specifically to secure votes to eliminate renewable energy, or that the correlation is so robust as to indicate systematic exchange of capital for policy outcomes. Following Trump's 2024 election victory, his administration has methodically delivered on that arrangement, advancing policy reversals benefiting fossil fuel interests across multiple domains: reversing fuel economy standards, freezing EV charging infrastructure funding, promoting coal industry expansion, and attempting to shield fossil fuel companies from climate liability lawsuits (Inside Climate News, 2025; White House, 2025; Energy Innovation, 2025).

Fuel Economy Standards Rollback

In 2025, the Trump administration and Republican Congress implemented an aggressive agenda to dismantle federal sustainable transportation policy infrastructure and advance fossil fuel interests. This section documents the primary policy reversals and their legal and political implications. In December 2025, the National Highway Traffic Safety Administration formally proposed resetting Corporate Average Fuel Economy (CAFE) standards to levels achievable through conventional technology

improvements, specifically targeting the 2022 baseline established during Trump's first administration (White House, 2025). This rollback reverses the Biden administration's trajectory, which had set a path toward 50+ miles per gallon equivalent by 2032, requiring substantial efficiency improvements that incentivized vehicle electrification as a primary compliance mechanism. The proposed 2025-2026 standards require only 34.5 miles per gallon by model year 2031, essentially eliminating regulatory pressure for electrification by making fuel economy targets achievable through incremental engine efficiency alone (White House, 2025).

The Trump Administration framed this rollback as benefiting consumers through reduced vehicle costs. Yet independent analysis undermines their justification. *The International Council on Clean Transportation's* examination of the Trump Administration's initial 2020 CAFE rollback found that the agencies systematically underestimated benefits and overestimated costs through methodological errors and questionable assumptions regarding discount rates, technology costs, pollution valuation, and rebound effects (ICCT, 2020). Energy Innovation's analysis of the current 2025 rollback proposal projects it will cost the U.S. economy \$457 billion through 2050, increase emissions by 11 percent, and increase gasoline consumption by 20 percent through 2035 (Energy Innovation, 2025). Individual consumers would lose approximately \$35 billion in fuel savings over the lifetime of affected vehicle fleets (Center for Biological Diversity, 2025).

Congressional Review Act and California Emissions Waivers

In June 2025, the Republican-controlled Congress invoked the Congressional Review Act (CRA) to overturn three Environmental Protection Agency waivers granting California authority to enforce vehicle emissions standards more stringent than federal baselines. This action marked the first time in the CRA's 29-year history that Congress attempted to overturn EPA waiver decisions, despite the fact that Congress itself enacted legislation explicitly exempting waivers from normal rulemaking procedures (Baker Donelson, 2025; Yale Journal on Regulation, 2025). California's waiver authority traces to the Clean Air Act of 1970 and its 1977 amendments, which granted the state unique authority under Section 209(b) to establish its own vehicle emissions standards prior to federal preemption. The three waivers targeted in June 2025 included California's Advanced Clean Cars II program (requiring increasing percentages of electric vehicle sales, culminating in 100 percent EV sales by 2035) and two waivers addressing heavy-duty vehicle emissions standards for diesel trucks.

Legal scholars immediately contested the constitutionality and statutory authority for Congress's CRA action. The Government Accountability Office's formal analysis preceding the congressional vote determined that EPA waiver decisions do not constitute "rules" as defined in the CRA and are therefore outside Congress's authority to disapprove (Yale Journal on Regulation, 2025). California and ten other states filed suit on June 12, 2025, in the U.S. District Court for the Northern District of California challenging the legality of the CRA resolutions, contending that Congress lacked authority under the CRA to overturn waiver decisions, that the resolutions violate constitutional principles of federalism and separation of powers, and that California retains authority to enforce the affected standards regardless of the congressional action (California v. United States, 2025).

NEVI Funding Freeze and Federal Court Challenge

In February 2025, the Federal Highway Administration suspended approvals of state National Electric Vehicle Infrastructure plans and halted the disbursement of congressionally appropriated NEVI funds (Advanced Energy United, 2026). The NEVI Formula Program, authorized by the Bipartisan Infrastructure Law passed by Congress in 2021, allocated \$5 billion specifically for EV charging infrastructure deployment along interstate corridors and in underserved communities (Advanced Energy United, 2026). Legal scholars and clean energy advocates argued that the administration lacked constitutional authority to freeze congressionally appropriated funds.

Despite the strong legal position against the freeze, the administration persisted through February-May 2025, creating substantial uncertainty for state planning efforts and private sector investment decisions dependent on predictable federal funding. A federal judge issued a preliminary injunction on June 25, 2025, lifting the freeze on initial tranches of funding approved for distribution (Advanced Energy United, 2026). However, the underlying legal and political conflict remained unresolved, with some states continuing to face delays in plan approvals and funding disbursement as of January 2026. The NEVI freeze exemplifies how executive action, even when legally questionable, can function as effective policy reversal if sustained long enough to derail planning cycles and deter private investment decisions.

Truthful Criticisms of Sustainable Transportation: Acknowledging Legitimate Challenges

While the bulk of the countermovement's claims lack factual foundation, some criticisms of sustainable transportation policies contain legitimate substance and warrant serious consideration. Distinguishing between founded and unfounded criticism is essential for developing effective policy responses and maintaining the credibility of the sustainable transportation movement.

Perhaps the most salient and legitimate criticism of sustainable transportation initiatives concerns the reality that researching, manufacturing, marketing, and implementing new technologies is frequently more expensive and time-intensive than developing traditional products benefiting from existing streamlined production processes. California's high-speed rail project provides a case study in both the legitimate challenges of infrastructure development and the countermovement's selective invocation of these challenges. When California legislators passed the initial bill committing to high-speed rail in 2008, the project was projected to cost \$33 billion and be completed by 2020 (California High-Speed Rail Authority, 2024). Fifteen years later, as of 2025, cost estimates have dramatically increased, with projections exceeding \$130 billion, and estimated completion dates have receded to approximately 2050 (California High-Speed Rail Authority, 2024). These massive cost overruns and schedule delays are genuine policy and project management problems that deserve scrutiny and analysis.

Second, while high-speed rail projects have experienced cost overruns, similar problems afflict conventional transportation infrastructure development. Highway projects regularly experience cost escalations and delays (Levinson et al., 1996). Third, when cost-benefit analysis expands beyond construction costs to include operational benefits (reduced travel time, congestion reduction, emissions reduction, accident prevention), high-speed rail projects frequently become economically justified despite higher upfront capital costs (Levinson et al., 1996). The countermovement's approach to California's high-speed rail exemplifies its selective invocation of legitimate concerns. Rather than advocating for project management improvements, streamlined permitting, or evidence-based cost-benefit analysis, the countermovement primarily opposes the project entirely. This suggests that concerns about project execution function as post-hoc justifications for opposition to sustainable transportation rather than as genuine motivations for policy improvement.

Left-Wing Countermovement: Environmental Justice & NIMBYism

It is important to note that opposition to sustainable transportation initiatives has also emerged from groups on the political left, reflecting genuine environmental and social justice concerns that differ substantially from more prevalent countermovement criticisms. While most legislative opposition to California's high-speed rail originated on the political right, most physical protests were composed of members on the political left (Vartabedian, 2015). In 2015, three hundred mostly local protestors rallied in California's San Fernando Valley near the proposed rail construction site to voice their opposition to the project (Vartabedian, 2015). Although most protestors supported sustainable transportation in theory, they had serious misgivings in practice (Vartabedian, 2015).

Some opposition reflected simple NIMBYism (not-in-my-backyard), wherein residents approved of the rail project ideologically but protested primarily because of its proximity to their neighborhoods

(Vartabedian, 2015). However, more substantive concerns emerged regarding social impacts of the proposed route, which geographically split poor and rural communities while avoiding similar invasiveness in more affluent areas (Vartabedian, 2015). The most common criticism from the left was that the rail project, whose ostensible purpose was decreasing environmental degradation, did not go far enough in protecting local ecosystems (Vartabedian, 2015). These environmental justice concerns included recognition that the proposed rail route would cut through protected lands such as the Los Angeles National Forest and habitats harboring locally threatened wildlife such as California condors and mountain lions (Vartabedian, 2015). While extensive environmental impact studies were required before construction, many environmentalists viewed them as greenwashed rubber stamps for the project (Vartabedian, 2015).

These left-wing criticisms highlight genuine tensions in sustainable transportation policy: that environmental investments can carry environmental costs if poorly designed, that siting decisions reflecting power imbalances may impose infrastructure harms on vulnerable communities while sparing affluent areas, and that "sustainability" defined narrowly as emissions reduction may inadequately account for broader ecological and social justice concerns.

State-Level Resilience and Policy Continuity Despite Federal Reversal

Despite the Trump Administration's comprehensive federal policy reversal, state legislatures across the country continued pursuing sustainable transportation investments and policy innovation in 2025, suggesting that EV advocacy has achieved sufficient political constituency strength at state and local levels to partially insulate it from federal policy reversals. Advanced Energy United's comprehensive analysis of state legislative activity in 2025 identified multiple policy domains where states sustained and advanced EV policy momentum independently of federal direction (Advanced Energy United, 2026). State legislative activity focused substantially on practical policy questions emerging once EV infrastructure begins deployment at scale, rather than on basic advocacy for EV adoption. Legislators devoted substantial attention to EV charging infrastructure reliability and uptime standards, establishing requirements for real-time charger status reporting, annual equipment testing, and penalties for out-of-service chargers (Advanced Energy United, 2026). California's AB1423 exemplifies this evolution, setting uptime expectations and requiring reporting on charger availability, reflecting political recognition that EV infrastructure deployment has transitioned from pilot phase to systems-level integration requiring reliability standards (Advanced Energy United, 2026).

States pursued workforce development legislation supporting transportation electrification, battery recycling technology development, and equitable charging infrastructure deployment. Some states also began enacting registration fees and tax mechanisms to ensure EV owners contribute to transportation funding, addressing legitimate fiscal concerns about highway trust fund depletion as fuel tax revenue declines with vehicle electrification (Advanced Energy United, 2026). Indiana, Washington, and Utah all enacted or expanded EV-specific registration fees in 2025, while states like Colorado clarified regulatory authority over retail charging equipment standards (Advanced Energy United, 2026).

However, state-level policy momentum remains constrained by federal policy reversal. The preliminary injunction on NEVI fund disbursement similarly created uncertainty affecting state EV infrastructure planning, despite the ultimate restoration of partial funding. Federal policy thus functions as a coordination mechanism establishing baseline expectations for corporate and state government action; when federal policy signals reversal, even temporary reversals create planning uncertainty and deter private sector investments requiring multiyear planning horizons.

Conclusion

The contemporary countermovement to sustainable transportation represents a coordinated political effort to dismantle federal and state regulatory infrastructure supporting transportation electrification, emissions

reductions, and public transit investment. This assault proceeds through multiple mechanisms: congressional reversal of state regulatory authority via the Congressional Review Act; executive withdrawal from international commitments; administrative rule changes reversing fuel economy and emissions standards; budget deferrals and infrastructure funding freezes; and parallel promotion of fossil fuels through executive actions.

The countermovement reflects deep ideological opposition to government intervention in market operations, particularly government efforts to institutionalize environmental and health externalities through regulatory standard-setting. This ideological commitment transcends rational cost-benefit analysis; even when independent analysis demonstrates net societal benefits of sustainability standards, countermovement actors oppose the standards based on partisan principles. It demonstrates the political power of coordinated fossil fuel industry mobilization, with clear evidence of alignment between industry messaging and policy outcomes delivering immediate benefits to fossil fuel interests.

Fundamentally, the contemporary countermovement against sustainable transportation illuminates tensions between democratic processes and market logic in contemporary capitalism. Distinguishing between authentic popular opposition and elite-driven, industry-funded mobilization requires systematic analysis of financial flows, institutional structures, and policy outcomes. This analysis reveals that the countermovement is best understood as an economic elite-led political project enjoying genuine mass constituency support rooted in partisan identity and ideological commitment, unified by fossil fuel industry funding and coordinated through President Trump and the GOP's political infrastructure. The stakes of this political conflict extend far beyond transportation policy. The outcome of the struggle over sustainable transportation will substantially influence whether the U.S. successfully decarbonizes its economy, maintains its competitive advantage in transportation technologies, and addresses the public health crises of transportation-related air pollution and climate change. Understanding and ultimately overcoming these barriers represents one of the central political challenges facing democratic governance in response to climate change.

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EXPANDING CYBERSECURITY ACCESS TO SMALL BUSINESSES

Joseph Chi

Abstract

This article examines the benefits of treating cybersecurity as a public good and the need for government support in providing cybersecurity for small businesses. Although small businesses make up over 90% of U.S. firms, they are among the least likely to recover after a cyber-attack. Key barriers, including limited resources, a lack of expertise, and the undervaluation of cybersecurity, make small businesses disproportionately vulnerable to cyber-attacks compared to larger companies, posing risks to local economic stability and exacerbating economic inequality. The Small Business Administration's Cybersecurity for Small Business Pilot program currently operates as a discretionary, competitive grant program where the federal government provides funding to states to supply small businesses' cybersecurity training, counseling, and resources to strengthen their digital infrastructure and the networks they operate within. To expand access and ensure predictable support, this article argues for advancing the pilot program to a national, formula grant program specifically for small business cybersecurity support.

Introduction

As the U.S. economy becomes increasingly reliant and interconnected through digital platforms, incentives for cybercriminals have grown, leading to a rise in cyber-attacks across all sectors. Protecting information systems, or cybersecurity, is defined as “the art of protecting networks, devices, and data from unauthorized access or criminal use and the practice of ensuring confidentiality, integrity, and availability of information” (Cybersecurity and Infrastructure Security Agency, 2021). In the modern age, where most businesses operate within the digital economy, cybersecurity is essential for protecting individual businesses' data, ensuring operational capacity, and safeguarding the broader networks that businesses operate within. Despite the growing importance of cybersecurity, small businesses in particular are the most vulnerable to cyber threats. Due to limited financial resources, a lack of technical expertise, and operational priorities, small businesses are prone to having none or inadequate cybersecurity measures (Grants.gov, n.d.; Martins, 2023). This article argues that underinvestment in small business cybersecurity poses risks to both the local and broader economy, and that society as a whole would benefit if cybersecurity were treated like a public good.

While much of the existing cybersecurity policy discourse focuses on large firms and critical infrastructure, small businesses' cybersecurity remains largely ignored despite being a critical point of systemic vulnerability. This article contributes to the literature by identifying small business cybersecurity as a key gap in national cyber resilience policy and proposing a federal framework to address it through expanded and flexible funding mechanisms.

Literature Review

Cybersecurity is often considered a private good because it can be purchased in the marketplace. However, it also shows important characteristics of a public good that justify government involvement. Public goods are non-rivalrous and non-excludable. One person's use does not reduce how much others can use, and it is accessible to all, including those who do not pay for it. Cybersecurity can be non-rivalrous because increasing one's protection does not reduce the security of others. It is also non-excludable because securing one's cyber infrastructure benefits others, creating positive externalities.

A study published in the Simulation Modelling Practice and Theory journal by Kianpour, Kowalski, and Overby (2022) uses an agent-based simulation model to evaluate the implications of treating cybersecurity as a participatory public good. Their study showed that given the widespread impacts of strong cyber infrastructure, society would benefit if cybersecurity were treated as a shared responsibility.

The dynamics of cybersecurity closely resemble those in public health systems. Similar to infectious diseases, cyber threats can spread across interconnected networks, where the vulnerability of one organization increases the exposure of others. Research by Elaine Sedenberg and Deirdre Mulligan (2015) further supports this analogy, arguing that, similarly, in public health interventions, coordinated intervention is necessary to mitigate widespread harm (Kianpour et al., 2022; Sedenberg & Mulligan, 2015). This framing highlights why cybersecurity should not be treated solely as an individual business responsibility, but rather as a shared public concern that requires collective action and sustained investment across organizations to strengthen the resilience of the broader digital ecosystem.

Lessons from public health governance strategies further support the case for the need for coordinated cybersecurity policy. The COVID-19 pandemic showed that fragmented responses to systemic risks can exacerbate harm, particularly for vulnerable populations. Public health systems rely on a combination of federal funding, state-level coordination with local governments, and community outreach to ensure widespread protection (Maani & Galea, 2020). Applying this model to cybersecurity suggests that federal investment and state-level flexibility may be effective in addressing uneven cybersecurity capacity across small businesses. Much like vaccination strategies that aim to achieve population-level immunity, when enough organizations implement robust cyber defense measures, the ability of cyber-attacks to spread can be significantly reduced.

Despite the widespread benefits of cybersecurity, it also creates a free-rider problem. Since cybersecurity investments can be costly, businesses often rely on security measures implemented by larger companies, rather than investing in security solutions themselves. Research on the economics of information security highlights these inefficiencies in the cybersecurity market, where the private market fails to produce optimal levels of cybersecurity investments, creating significant vulnerabilities across the broader interconnected network. Information security researchers Tyler Moore and Ross Anderson (2006) find that misaligned incentives and negative externalities contribute to chronic cybersecurity underinvestment because businesses often do not bear the full consequences of a security failure. When a computer or network is attacked, it is often used as an entry point to hack into other connected individuals or organizations, meaning that more harm is imposed on third parties rather than the originally breached entity. As a result, businesses have weak incentives to invest in costly cybersecurity when much of the damage may fall on others (Anderson & Moore, 2006).

While these studies highlight issues with incentives that contribute to cybersecurity underinvestment, an economic analysis from the Journal of Information Security emphasizes how externalities influence businesses to underinvest in cyber infrastructure. Using the Gordon-Loeb model as an economic framework, researchers evaluated how businesses decide their cybersecurity expenditures and what the optimal levels of cybersecurity investment are for organizations. This model showed that network externalities distort businesses' cybersecurity investment incentives. Especially in highly interconnected digital business networks, the security of one organization depends on the cybersecurity posture of other organizations. However, when considering whether cybersecurity investments are cost-beneficial, businesses only internalize private costs and overlook externalities associated with operating within an insecure digital network, resulting in their cybersecurity investment levels being chronically lower than the "socially optimal level" (Gordon et al., 2016). Because markets alone do not correct these incentive issues or internalize the broader social costs of cyber risk, researchers find that government intervention may be necessary to bridge the gap between private incentives and the level of cybersecurity needed to protect the broader economy (Gordon et al., 2015; Anderson & Moore, 2006; Kianpour et al., 2022).

Given that responsibility for cybersecurity is shared across multiple organizations and levels of government, cybersecurity experts suggest that policy tools such as subsidies and public-private partnerships can help internalize externalities and raise cybersecurity investment closer to socially optimal levels (Bauer & van Eeten, 2009). Because various cybersecurity threats can emerge across different

systems from various sources, effective government intervention requires flexibility that allows organizations to tailor their cybersecurity strategies to local risks and adapt quickly to evolving threats (Project on Technology and National Security, n.d.). Together, this body of research suggests that cybersecurity underinvestment is not merely an individual firm's issue, but a systemic market failure with broad economic implications, particularly for small businesses.

Why Small Business Cybersecurity is a Public Problem

Although all sectors have experienced higher levels of cyber-attacks over the years, small businesses are disproportionately vulnerable and more sensitive to cyber-attacks than larger companies. While large companies have the resources to invest in robust cybersecurity infrastructure, small businesses face high costs, lack technical expertise, and have limited resources, leading them to underinvest in cybersecurity (Grants.gov, n.d.). Amid rising operating costs driven by inflation, small businesses struggle to justify investing in cybersecurity measures, particularly when the returns on investment are hardly visible (Swanek, 2025). Given that businesses evaluate cybersecurity investments based only on private costs and benefits, they often overlook the positive externalities of improving their cybersecurity posture, such as protecting customer data, reducing risk to partners, and increasing resilience across the supply chain. This incomplete valuation of cybersecurity results in chronic underinvestment. In turn, cybercriminals exploit these vulnerabilities, targeting small businesses as low-cost, high-reward opportunities and as entry points into larger networks connected to major companies. In these instances, the small business does not internalize the full costs of a cyber breach. Instead, the consequences fall onto customers as their privacy and information are lost, and business partners along the supply chain, thereby creating negative externalities that impact the broader economy (Anderson & Moore, 2006).

Small businesses make up the majority of the U.S. private sector, and most of the nation's critical infrastructure is owned and operated by small businesses or reliant on them for essential support (Under the Digital Radar, 2024). Despite their critical role in maintaining economic stability and supporting critical operations, more than 51% of small businesses report having no cybersecurity measures in place, leaving most small businesses disproportionately exposed to cyber threats (Martins, 2023). According to a 2023 report by the Small Business Administration, 41% of small businesses were victims of a cyber-attack, where the median cost per incident was \$8,300 (U.S. Small Business Administration, 2024). The consequences are often severe, with about 60% of small businesses permanently closing down within 6 months of a cyber-attack, 60-70% of victims lose critical data, and over half are forced to have operations down for a day or more (Cyber-attacks on small businesses, 2025).

Within small businesses that are directly tied to critical infrastructure or indirectly support essential operations, these organizations suffer longer recovery times than larger companies. After a cyber-attack, critical infrastructure and small businesses took about 8 months to recover operations, compared with larger businesses, which typically recovered in 90 days or less. Cyber incidents also erode customer trust. Within these incidents, about 46% of small businesses report losing customers due to reputational damage and concerns about data security (USTelecom, 2021). In addition, these attacks expose sensitive customers' information and disrupt the business's ability to operate normally (Cyber-Attacks on Small Businesses, 2025). These statistics show that not only are small businesses the most vulnerable targets for cybercriminals, but they are also more sensitive to cyber-attacks, having devastating impacts that often cripple small businesses, relative to larger companies that have the resources to recover and implement preventative measures after an attack.

The Economic Impact of Insecure Small Businesses

Local communities rely on small businesses for job creation, essential services, and economic growth. According to the International Economic Development Journal, small businesses "rival and often exceed the impact of large businesses when it comes to providing critical jobs," arguing that local and state governments need to redirect their investments into expanding small business communities rather than

exclusively supporting large companies (International Economic Development Council, 2017). Despite their critical role in the economy, they are the most targeted and most sensitive to the impacts of a cyber-attack. Recovery costs, such as restoring services and reinstalling software or paying off cyber-attacks that cost up to \$10,000, can be enough to shut down a small business (VikingCloud, n.d.).

Case Study: St. Margaret's Rural Hospitals Closed Due to Ransomware Attack

St. Margaret Health owned and operated the only two hospitals in Peru and Spring Valley, Illinois, providing essential services such as primary care for adults and children, specialty consultations, surgeries, imaging and radiology, and even an emergency department (St. Margaret's Health - Peru, 2021; St. Margaret's Health - Spring Valley, n.d.). However, a ransomware attack in 2021 eventually forced both facilities to close in an area already suffering from a shortage of healthcare services. Ransomware attacks involve cybercriminals using malicious software to prevent the organization from accessing and operating their electronic systems and networks while demanding payment for their return (Ransomware, n.d.). In this case, the attack held hostage both facilities' entire digital systems and networks for about 3 months, preventing them from billing insurers or allowing anyone to access their information systems, such as email, Electronic Medical Records, and patient portals, having a debilitating impact on their finances. Although both facilities underwent an 18-month recovery process by switching to paper systems, these already underfunded facilities could not sustain operations and had to close down both locations in Peru and Spring Valley, Illinois (How the Closing of Spring Valley's Only Hospital Impacts Neighboring Counties, n.d.; Cyber Defense Magazine, 2023).

When the only hospital in a rural community closes, it not only deprives a community of an essential service, increasing chances of poorer health outcomes and increased mortality rates, but it also harms the local economy. Closure of the sole hospital in a rural town led to a reduction in per-capita income and an increased unemployment rate. This decline in economic growth is because when the hospital closes, people lose their jobs, and many high-earning doctors and medical staff leave the community, which lowers the total income being earned in the community. In addition, hospitals are a major source of revenue for rural businesses. Rural businesses that used to work with hospitals, such as cleaning services, contractors, and medical suppliers, lose a major source of their revenue. This also poses challenges for future economic growth for that rural community, as the town is now less attractive to new businesses and potential residents if there is no local hospital for residents (Holmes et al., 2006). Ultimately, this incident showcases how insufficient cybersecurity within financially constrained institutions can deepen existing economic and healthcare inequalities, leaving already vulnerable communities to bear the consequences of cybersecurity failures.

Case Study: Fazio Mechanical Services Used to Breach Target

Fazio Mechanical Services, a small HVAC contractor that provided maintenance services to Target, had remote access credentials to Target's broader digital systems. A report by the U.S. Committee on Commerce, Science, and Transportation notes that due to minimal cybersecurity measures, cyber-attackers were able to exploit the contractor's weak cyber defenses, which allowed them to breach Target and steal customers' sensitive data. This cyber-attack resulted in the theft of 40 million credit and debit cards and the personal information of 70 million customers, including names, addresses, phone numbers, and email addresses. These were immediately sold through black market platforms known as "card shops", where individuals purchase stolen financial and personal data to steal identities, engage in fraudulent purchases, or attempt to decrypt PIN numbers for ATM withdrawals (U.S. Senate, Committee on Commerce, Science, and Transportation, 2014).

This incident showcases the critical role small businesses have in securing the broader economic environment and how the resilience of a system is determined by its weakest links. A single small vendor's cyber vulnerabilities created widespread economic harm and put millions of Americans at financial risk. It also highlights the systemic risks from unsecured small businesses that lack the resources

to strengthen their cybersecurity. This supports the view that cybersecurity is not only a private sector issue and should be treated as a public good, considering that underinvestment by one small business can impose costs on the general well-being of the public as well as the wider economy.

Policy Recommendation

With the aim of mitigating the disproportionate vulnerability small businesses face against cyber-attacks and to better align private incentives with societal needs, the Small Business Administration launched the Cybersecurity for Small Business Pilot Program in 2022. This is a federally funded competitive grant program, where each state is eligible to receive up to \$1 million to strengthen its small business cybersecurity posture. Rather than a one-size-fits-all standardized solution that ignores state differences, this program gives states flexibility on how to provide funding for cybersecurity training, counseling, subsidized hardware and software installation, and fixing existing security problems (U.S. Small Business Administration, 2022). This approach is consistent with public health policy models, where government funding supports preventative measures to reduce systemic risk. Given their proximity to regional economies and deep understanding of local cyber risks, states are well-positioned to respond quickly to the specific needs of their small business communities and leverage local networks, such as universities and Small Business Development Centers, to provide targeted cybersecurity support for various small business needs (The SBA's Small Business Development Centers Program, n.d.).

Since the pilot program began in 2022, only twelve states have received awards, each receiving around \$1 million (The Cybersecurity for Small Business Pilot Program, n.d.). However, according to SBA Associate Administrator Mark Madrid, the success of this program depends on how well it can expand access to underserved and underrepresented small business ecosystems (U.S. Small Business Administration, 2022). Currently, this competitive grant program prevents wide access and stable support for small businesses across the U.S. This article argues for expansion of this program by transitioning it from a pilot program to a national, categorical formula grant cybersecurity program where each state receives funding and the amount of funding allocated to states would be proportional to the state's small business population, number of high-risk industries (such as finance, healthcare, critical infrastructure and businesses that are part of large supply chains), and the number of small businesses lacking adequate cybersecurity capacity. This would provide equitable, predictable, and widespread support to improve the nation's small business cybersecurity posture while reducing economic inequality by enabling small businesses in each state to strengthen their digital defenses and maintain operational capacity.

Conclusion

Expanding the Cybersecurity for Small Business Pilot Program not only addresses the disproportionate vulnerability of small businesses to cyber incidents but also strengthens the resilience and stability of the broader economy. Since small businesses are deeply integrated into supply chains, local economies, and critical infrastructure, their cybersecurity vulnerabilities create systemic risks to larger companies, customers, and entire communities that rely on small businesses for economic stability and growth. When small businesses lack adequate cyber-defense systems, cybercriminals look to exploit these weaknesses as entry points to larger networks. These breaches can disrupt essential services, lead to job losses, and erode public trust in digital systems. Especially with the growing sophistication of cyber-attacks through artificial intelligence (AI) and society's increasing reliance on digital systems, expanding federal support to strengthen vulnerable cyber infrastructure is essential for protecting critical services, safeguarding sensitive information, and enhancing the resilience of the national economy.

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WHAT IS A GUN? AMERICAN AND GERMAN LEGAL DEFINITIONS OF FIREARMS AND POLICY IMPLICATIONS

Jacob Clemmer and James Phillips

Abstract

In the United States, a bare handgun frame, even if it is missing all of its other components, including the barrel and slide, is legally considered a gun. Although the process of purchasing a handgun frame requires filling out paperwork—which includes a background check—the process of purchasing a standalone handgun barrel or slide does not require any form of background check (27 CFR § 478.124). This predicament is the result of firearm laws in the United States centering around the regulation of frames, also known as receivers, that hold the major components of the firearm together. In Germany, firearm laws were written with focus on the regulation of pressure-bearing components, the critical parts of the firearm that contain pressure accelerating the projectile: the barrel, chamber, and bolt. The failure of American law to regulate pressure-bearing components has led to the proliferation of “ghost guns,” or firearms without serial numbers and firearm components resulting in the US becoming a major source of illicit firearms globally. The regulation of pressure-bearing components in German law is in large part the reason why German laws are much more effective and efficient in regulating illicit firearms trafficking than American laws. This article describes the role of pressure-bearing components, compares American and German firearm regulatory practices, and analyzes the policy implications of the US failure to regulate pressure-bearing components.

Receivers and Pressure-Bearing Components: Significance and History

The receiver, also known as the frame, is the structure that houses all of the other components (barrel, bolt, trigger group, grips, stocks, magazines, etc.) of a firearm together as mentioned in 27 CFR § 478.12. This firearm part is analogous to the chassis of a car or truck.

The pressure-bearing components (PBCs) are the parts of the firearm that contain the pressure of the gas that is responsible for accelerating the projectile (Jenzen-Jones, 2022, p.18). These important components include the barrel, breech, and the bolt/slide. The PBCs are exposed to tremendous heat, stress, and pressure during the operation of the firearm. PBCs need to be machined precisely out of metal alloys, usually steel, often with proper heat-treatment and surface finishing to ensure the firearm functions reliably and safely. These are the most difficult and expensive integral components of a firearm to manufacture.

Before WWII, the receiver was an expensive and relatively difficult component to manufacture, despite not always needing to withstand the heat, stress, and pressure from the operation of the firearm. Receivers were made out of complex shapes that are time consuming and expensive to machine out of steel. However, with improvements in manufacturing methods and material technology developed during WWII, receivers became easier and cheaper to manufacture, with many newer designs taking advantage of receivers made out of new cost-effective materials (Dallhammer, 2020, p. 39). Beginning in the late 1960s, there were experiments done in making receivers out of injection-molded thermoplastics, like nylon (Dallhammer, 2020, p. 89). By making the receiver out of plastic, manufacturers gain significant per-unit cost savings, even with increased investment needed in plastic injection-molding machines (Dallhammer, 2020, p. 10).

Individuals seeking to assemble firearms without any identifying markings or serial number, commonly known as “ghost guns,” benefit from the current legal environment. Today, firearms can be assembled from unregulated parts being sourced from a variety of stores with the receiver or frame being manufactured privately. Ever since the late 2010s, there has been a glut of additive manufacturing (AM) machines, more commonly known as 3D printers, which further lowers the barrier of entry. While the manufacture of receivers has become accessible, PBCs remain difficult to manufacture without

compromising on reliability, safety, and cost due to the skills and equipment necessary. These consumer-grade 3D printers are not capable enough to manufacture steel PBCs and likely will not improve due to the inherent limitations of the technology. Concurrently, the few designs of “ghost guns” that boast homemade PBCs make significant compromises in performance, reliability, and safety while still being too complex for most individuals to build (Hays et al., 2020, p. 15).

Overview of Firearm Regulations in the United States

In the United States, the foundation of modern federal firearm regulations is the Gun Control Act of 1968 (GCA), which addressed the shortcomings of the earlier National Firearms Act of 1934 (NFA) and the National Firearms Act of 1938 (FFA). While the NFA specified the inclusion of a “number or other identification mark” on the firearm, the GCA added clarification by requiring the serial number to be “engraved or cast on the receiver or frame or the weapon” by the manufacturer or importer (18 U.S.C. § 923(i)).

In current United States law, only the receiver is recognized as the firearm itself. As defined in the GCA, a firearm is legally defined as a weapon “designed to or may readily be converted to expel a projectile by the action of an explosive” or “the frame or receiver of any such weapon” in addition to also including firearm silencers and explosive devices (18 U.S.C. § 921(a)(3)). Due to this definition, a fully assembled and functional firearm and a bare receiver without any of the important PBCs are legally equivalent and therefore regulated the same. By themselves, PBCs are not regulated as firearms and can be easily purchased without any form of background check or processing from a Federal Firearms Licensee (FFL) dealer. A quick search on eBay brings up numerous pistol barrels and slides for sale from a variety of vendors (see Figures 1 and 2).

Figure 1
eBay Listings for Glock Slides

Note. Screenshot of *eBay* for Glock 19 handgun slides taken on February 9, 2026. (eBay, 2026).

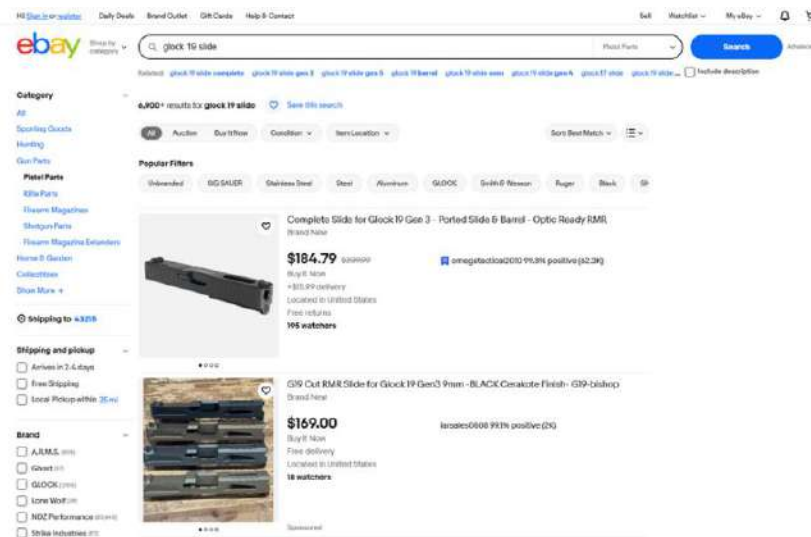
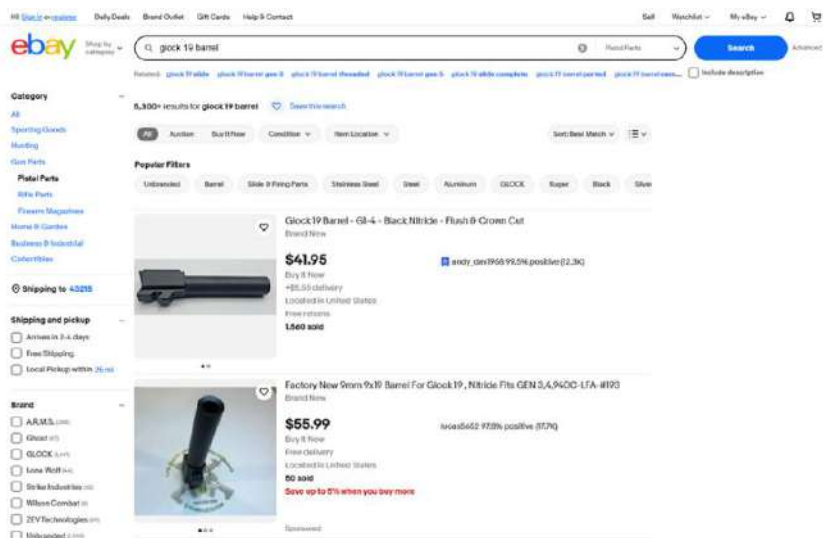


Figure 2

eBay Listings for Glock Barrels

Note. Screenshot of eBay for Glock 19 handgun barrels taken on February 9, 2026. (eBay, 2026).



Regarding imported firearms, United States regulations assess whether an imported firearm has a legal sporting or hunting purpose (27 CFR § 478.11). Handguns being imported into the United States must be “generally recognized as particularly suitable for or readily adaptable to sporting purposes” by the Attorney General under 18 U.S.C. § 925(d)(3). ATF Form 4590 is used in evaluating handguns for these purposes with a points-based system. Handguns are given points for each sporting individual characteristic listed in Form 4590. If a handgun fails in receiving enough points, that particular model of handgun cannot be imported into the United States. For rifles and shotguns, 18 U.S.C. § 922(r) prohibits “any person to assemble from imported parts any semiautomatic rifle or any shotgun which is identical to any rifle or shotgun prohibited from importation.” The “assembly of semiautomatic rifles or shotguns” is defined “as more than 10 of the imported parts.” The list of imported parts include pressure-bearing components but also non-essential components, such as stocks and handguards, which can be sourced cheaply from domestic sources (27 CFR § 478.39). The purpose of these regulations is to restrict the importation of certain types of firearms into the United States. In practice, the loopholes render these importation regulations toothless. The sporting purposes clause is especially vulnerable to tariff engineering tactics. In 2024, over nine million firearms were imported into the United States (ATF, 2024, p. 5).

Overview of Firearm Regulations in Germany

In 1969, West Germany became a signing member of the *Commission internationale permanente pour l'épreuve des armes à feu portatives* (CIP) or the Permanent International Commission for the Proof of Small Arms. The purpose of CIP was to streamline industrial cooperation in the manufacturing of small arms in case of another world war. One of the main goals of CIP was to standardize proofing which is the process of stress testing pressure-bearing components of a firearm to ensure the strength and safety of each firearm. Throughout most of Western Europe, government-owned proof houses proof-test each firearm submitted by private firms, usually for a fee, before it is allowed to be sold on the commercial market, a practice dating back to the sixteenth century. The passing firearms are marked with a symbol, called a proof mark, to visually show that the firearm has successfully passed the proofing test without failure. CIP mandated the standardization of ammunition technical data across different countries and for each signing nation to agree recognizing each other member’s proof mark as legitimate, while all

adhering to specific requirements for proof testing. One of the requirements included an agreement that each PBC needed to be proof-marked individually, which resulted in the signees legally agreeing to a system of regulating pressure-bearing components as clarified in Article 14 of CIP Decision XVII-11. Germany promulgated and ratified the 1969 convention agreements in the new *Waffengesetz* (WaffG) or Weapons Act in 1972 which completely replaced earlier laws. The Weapons Act was then further streamlined in 2003, following the reunification of Germany (Dickhoff, 2005).

Current German federal regulations consist of several components: the *Waffengesetz* (WaffG) or Weapons Act that focus on regulating the civilian ownership of firearms and the *Beschussgesetz* (BeschG) or Proof Testing Act which regulates the technical aspects of firearms and the proof testing requirements. The details of the Proof Testing Act are clarified for firearm manufacturers in the *Beschussverordnung* (BeschussV) or Proof Testing Ordinance.

Detailed in the Proof Testing Ordinance is the requirement that all pressure-bearing components, referred to as höchstbeanspruchte Teile (HBT) or highly stressed components, need to be marked with a proof mark and serial number (§3 BeschussV). Additionally, firearms are defined as “devices using ammunition or caseless propellants for propulsion, including their highly stressed components” (§2 BeschG). Overall, German federal firearm regulations specify the regulations for firearms and “including their highly stressed components” (§3 BeschG). Essential components, which include receivers and PBCs, are regulated as firearms and required to have both proof marks and serial numbers. For firearms made and imported from countries that are not CIP members, the importer is required to get the firearms proof tested before it is allowed to be sold commercially (§3 BeschG). If the pressure-bearing component is modified, the firearm is required to be proof tested again before it can be legally sold again.

Comparison of German and American Firearm Laws and Policy Implications

The United States is not a member of CIP and instead has a similar domestic organization of American firearm manufacturers called the Sporting Arms and Ammunition Manufacturers' Institute (SAAMI). In addition to offering different technical data, SAAMI standards are entirely voluntary, and there is no legal requirement for putting proof marks or serial numbers on all PBCs. Additionally, the United States has no history of operating federal proof houses for civilian firearms. Instead, each manufacturing firm that seeks to sell firearms in the United States proof-tests and inspects each firearm in its private facilities without any direct oversight, which has coincided with a significant decline in quality control in American firearms (Barton, 2026). The American legal definition of a firearm has also allowed manufacturers to label firearms as being manufactured in the United States when nearly all of the components of the firearm were imported with the exception of the domestically manufactured receiver.

Since each pressure-bearing component is regulated in Germany and other CIP member states, these regulations make building reliable and sophisticated “ghost guns” more difficult in Europe. Frequently, the “ghost guns” seized in police raids use American-sourced PBCs, but due to the lack of useful identifiable markings, the process of identifying the source and shutting down these illicit smuggling networks by identifying American straw-purchasers, individuals who legally buy firearms to sell to criminals, is extremely difficult. Documenting seized firearms and their ballistic data in large databases is helpful yet time-consuming. If each PBC were to have a serial number, it would be much faster to locate the dealers who sold these firearms and shut down these illicit networks. The United States has been an important source and distribution center for firearms, both for imported and domestically produced alike. A major reason why the United States has become a large source of black-market firearms for the global market is due to the ease of acquiring large numbers of firearms and pressure-bearing components (UNODC, 2020, pp. 73-76).

Conclusion

German firearm law is characterized by the separation of legal and technical considerations. Its structure accommodates the diverse interests of gun owners and other citizens. German firearm owners are able to enjoy the state-backed guarantee that their firearms function correctly and safely. Concurrently, the regulations also make it more difficult for firearms components to be sourced and sold by illicit arms smugglers. For American policymakers, it is recommended that the definition of a firearm, as defined in 18 U.S.C. § 921, be expanded to include pressure-bearing components. For imported firearms, 27 CFR § 478.39 can be amended by redefining “the assembly of semiautomatic rifles and shotguns” as the process of assembling a semiautomatic rifle or shotgun using any imported pressure-bearing component. The foundation of the German Weapons Act, with its focus on pressure-bearing components, allows for efficient and effective enforcement of firearm laws. Further research and study by policymakers into the necessary infrastructure and legal framework centered around pressure-bearing components is recommended.

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YOUR BODY, THEIR DATA: REPRODUCTIVE SURVEILLANCE AND THE LONG PROJECT OF AMERICAN CONTROL

Alyssa Langmeyer

Abstract

The Supreme Court's decision in Dobbs v. Jackson Women's Health Organization activated a pre-existing surveillance infrastructure of reproductive control that has long targeted marginalized bodies. This article argues that the weaponization of reproductive health data is not a policy gap or technological anomaly, but the modern manifestation of a centuries-old project to regulate bodily autonomy, particularly for women, people of color, and LGBTQ+ individuals. Through analysis of legal statutes, case law, and reported criminal cases, this article will demonstrate how the convergence of state trigger bans, an unregulated data broker industry, and advanced algorithmic inference operationalizes this project through digital means. The Health Insurance Portability and Accountability Act (HIPAA) and similar frameworks fail because they were designed for a world where privacy violations were the exception, not the rule. Today, surveillance is not a bug of the digital economy but its operating system. The article proposes the Digital Bodyguard Act not as a comprehensive solution, but as a necessary intervention that reveals the deeper truth: so long as our legal and political systems remain built on foundations of patriarchy and white supremacy, the state will always find new tools, from archaic laws to digital dragnets, to police, punish, and perpetuate its power.

Introduction: The Post-Dobbs Surveillance Landscape

The regulation of bodies has always been central to the American project. From the commodification of enslaved Black women's wombs (Owens & Fett, 2019, p. 1342) to the forced sterilization of Indigenous (Theobald, 2019) and disabled people (Métraux, 2025), the state has consistently asserted its power to determine whose bodies are autonomous and whose are subject to control. Reproductive surveillance is not a new phenomenon; it is the thread connecting chattel slavery's reproduction of property (Owens & Fett, 2019, pp. 1342–1343) to the eugenics movement's reproduction of whiteness (Bailey & Zita, 2007) to today's digital tracking of pregnant people (Bhuiyan, 2025). What has changed is the mechanism. Where control once required physical presence (the plantation overseer, the sterilization surgeon, the clinic door), it now operates through location histories, search queries, and algorithmic inferences that render the body visible to the state at all times. To understand how America arrived at this moment, this paper must first trace the long history of reproductive regulation in America, then examine the legal foundation that briefly protected reproductive rights and finally consider the surveillance infrastructure that *Dobbs* activated.

The Historical Roots

Consider what it meant to be a pregnant woman in the antebellum South. Her body was not her own. Under the doctrine of *partus sequitur ventrem*, codified into Virginia law in 1662 and replicated across the colonies, the child followed the condition of the mother, meaning that enslaved women's wombs produced property for their enslavers. Every pregnancy was an economic event; every birth added to the master's wealth. The state enforced this through laws that treated enslaved women as breeding stock and through the violence of the plantation, where overseers asserted control not just over labor but over reproduction itself (Owens & Fett, 2019, p. 1342). This was the most extreme form of a deeper truth: under patriarchy, women's bodies have never fully been their own. The law of coverture, imported from English common law, held that a married woman's identity was "covered" by her husband. She could not own property, sign contracts, or control her own wages. Her body, her labor, and her children belonged to him (Walsh, 2023). White women were not property in the same way enslaved women were, but they were also not fully sovereign over their own bodies.

Jump to the early twentieth century. The eugenics movement, embraced by leading scientists and

legitimized by the Supreme Court in *Buck v. Bell*, argued that the state had not just a right but a duty to prevent the "unfit" from reproducing. Carrie Buck, a young woman incarcerated at the Virginia Colony for Epileptics and Feeble-Minded, was sterilized against her will in 1927. Justice Oliver Wendell Holmes delivered the logic with brutal clarity: "Three generations of imbeciles are enough" (*Buck v. Bell*, 1927). That decision has never been overturned. It authorized the sterilization of some sixty-five thousand Americans, disproportionately poor, disabled, Indigenous, and Black (Burrus, 2016). But eugenic thinking was never only about race and disability; it was also about gender. Women deemed "unfit" were disproportionately targeted for sterilization because their capacity to bear children was framed as a threat to the nation's genetic future (Roberts, 2022). Prominent eugenicists argued that educated White women were not reproducing enough while poor and immigrant women reproduced too much (Jones, 2024). This concern reveals how anxieties about women's reproductive choices have always been central to the project of population control. The rationale was simple: some bodies threaten the genetic health of the nation. The state must intervene.

Jump again, to the 1960s and 70s. The welfare rights movement fought against laws that sent caseworkers into the homes of poor mothers, mostly Black, to inspect for the presence of a man. If a man was found, benefits could be cut. The state's logic was that poor women's reproduction required supervision, that their children were suspect, that their sexuality was a matter of public concern (Garrity, 2024). These "man in the house" rules were eventually struck down (*King v. Smith*, 1968), but the impulse behind them never disappeared. For middle-class White women, control took a different form: the denial of contraception and abortion, the expectation that they would leave paid work upon marriage, the medical establishment's routine performance of unnecessary hysterectomies without informed consent (Jones, 2024). Patriarchy does not operate uniformly, but universally. This history of control was briefly interrupted by a legal framework that recognized a constitutional right to privacy and, with it, a right to abortion.

The Legal Foundation

The legal battle for reproductive rights in the United States has historically been fought on the terrain of clinical access and physical liberty, not digital privacy. The 1965 case of *Griswold v. Connecticut* established a "right to privacy" within marital relationships, specifically regarding the use of contraception (*Griswold v. Connecticut*, 1965). This constitutional principle became the bedrock of later reproductive rights cases like *Roe v. Wade* (*Roe v. Wade*, 1973) and *Planned Parenthood v. Casey*, establishing a federal right to abortion (*Planned Parenthood v. Casey*, 1992). Within that legal paradigm, the primary threats were to clinical access, rendering an individual's digital footprint a largely irrelevant concern (*Planned Parenthood*, n.d.).

This legal foundation began to be dismantled in June 2022 when the Supreme Court overturned *Roe* and *Casey* with *Dobbs v. Jackson Women's Health Organization*, eliminating the federal constitutional right to abortion and returning its regulation to the states (*Dobbs v. Jackson Women's Health Organization*, 2022). This immediately activated a patchwork of laws across the country. In states like Texas and Georgia, so-called "trigger bans," pre-written, dormant statutes designed to take effect upon *Roe*'s fall, immediately criminalized abortion with limited exceptions, fundamentally altering the legal landscape for patients and providers (Guarnieri & Nash, 2022). This created a nation where a healthcare decision is a protected right in one state and a prosecutable crime in another. Critically, the *Dobbs* decision opened the door for states to investigate and prosecute individuals, not just providers, for obtaining or seeking an abortion.

The *Dobbs* majority rested its decision on an originalist reading of the Constitution. Justice Alito argued that a right to abortion could not be "deeply rooted in the Nation's history and traditions." Legal scholars have noted the obvious problem with this reasoning: women were excluded from the constitutional drafting process. The "traditions" the Court invoked were those of propertied white men. Justice Thomas's concurrence made the stakes explicit. He called for reconsideration of *Griswold*, which protects access to

contraception, and *Obergefell*, which guarantees same-sex marriage, on similar grounds (Center for Reproductive Rights, 2023). The decision thus threatened not only abortion access but the entire edifice of substantive due process, the principle that certain fundamental rights are protected even if not explicitly enumerated (Cornell Law School, n.d.). For this analysis, what matters is not merely the policy outcome but the worldview it encodes. The Constitution protects those who wrote it but bodies outside that frame (including women, queer people, and people of color) are subject to the states in a way that white men are not.

The legal environment has been further escalated by the proliferation of “fetal personhood” laws. Georgia’s Living Infants Fairness Equality Act demonstrates how a state recognizes “unborn children” as “natural persons” at any stage of development, creating a legal conflict between the rights of the pregnant person and the state’s interest in the fetus (Romo, 2019). In 2025, the consequences of fetal personhood laws became tragically clear when Adriana Smith, an Atlanta nurse and mother, was declared brain dead early in her pregnancy of her second child. Despite her condition being irreversible, the hospital kept her body on life support for months—against her family’s wishes and medical judgment—to support the gestation of the fetus inside her corpse (Mador, 2025). The hospital treated Smith as what legal scholar Dorothy Roberts might call a vessel rather than a subject, where her body’s value derived entirely from its capacity to gestate (Roberts, 1998). Here the logical endpoint of fetal personhood becomes plain: the pregnant person ceases to be a subject and becomes an object of state interest.

This logic has deep roots. *Partus sequitur ventrem* enshrined the principle that enslaved women’s wombs produced property for their enslavers (Owens & Fett, 2019, pp. 1342–1343). The forced sterilizations of the early twentieth century that were justified by eugenic fears of unfit populations treated Indigenous, disabled, and poor women’s fertility as a threat to be eliminated (Burrus, 2016). The welfare queen mythology of the late twentieth century constructed Black mothers as parasites whose reproduction required state discipline (Garrity, 2024). In each iteration, the state has asserted its power to determine whose bodies are autonomous and whose are subject to control. The digital surveillance documented in this article is simply the latest technology for executing that project. With this legal and historical context established, this paper turns to scholarly literature that frames the key understanding of these dynamics.

Literature Review

Scholars across disciplines have traced how the regulation of reproduction has always been central to American governance. This article draws together three bodies of work to frame the weaponization of reproductive health data as neither novel nor anomalous: Foucauldian biopolitics, critical race and feminist theory on reproductive control, and emerging scholarship on digital surveillance.

Michel Foucault’s concept of biopower provides a starting point. Foucault described how modern states govern not through explicit coercion alone but through the regulation of populations at the level of life itself. Reproduction emerged as a key site for this intervention (Cisney & Morar, 2015, p. 5). The population is rendered knowable, trackable, and controllable, first through censuses and clinics, now through data brokers and algorithmic inference. Recent scholarship has extended this framework to the post-Dobbs landscape. Ella Breiler’s analysis of abortion laws in Texas, Mississippi, and California shows how contrasting legal frameworks produce unequal realities. Some states have built what she calls “a model built on surveillance and public enforcement,” while others frame abortion as healthcare, though access remains shaped by structural inequality. Race, income level, immigration status, and access to transport all determine who can exercise reproductive autonomy and who cannot (Breiler, 2025, p. 3).

Where Foucault theorized the general mechanisms of biopower, critical race and feminist scholars have specified how those mechanisms operate along lines of race and gender. Dorothy Roberts’s foundational work, *Killing the Black Body*, documents a centuries-long project of regulating Black women’s reproduction. This project stretches from the commodification of enslaved women’s wombs to the forced

sterilizations of the twentieth century to the prosecution of pregnant women today. Roberts argues that reproductive control has never been merely about abortion. It is about determining which bodies are fit to reproduce and which are not (Roberts, 1998). Masters' analysis of welfare reform traces how policy has consistently constructed the sexual conduct of the racialized poor mother as a primary disciplinary target, from the "welfare queen" stereotype to marriage promotion mandates embedded in federal law (Masters et al., 2014). These constructions do not simply reflect prejudice. They authorize surveillance and intervention.

The eugenic roots of this project are not distant history but living precedent. The Supreme Court's 1927 decision in *Buck v. Bell* upheld the forced sterilization of Carrie Buck and legitimized the state's power to determine who is fit to reproduce (*Buck v. Bell*, 1927). Its logic echoes in contemporary fetal personhood laws, which treat pregnant people as vessels for rights that belong elsewhere. Andrew R. Lewis traces how abortion politics reshaped conservative Christian advocacy: opposition to abortion, rooted in anxieties about sexual morality and family structure, became the engine driving evangelicals' broader turn towards rights-based arguments, which transformed the culture wars from a contest of morality versus rights into a clash of competing rights claims. The contemporary pro-life movement is heir to this fundamentalist legacy, which shapes not only its content but its political style (Lewis, 2018, pp. 5, 7–8). The Southern Baptist Convention's recent vote opposing in vitro fertilization signals the movement's next frontier. If life begins at conception, then the destruction of embryos created during IVF is murder, and the state has an interest in regulating not just abortion but the entire reproductive process (Messerly, 2024). This logic extends seamlessly to digital surveillance. If every fertilized egg is a person, then tracking the bodies that carry them becomes not an intrusion but a protection.

That protection is not hypothetical. The legal and technical conditions for reproductive surveillance were already in place before *Dobbs*. Cohen and Mello document how The Health Insurance Portability and Accountability Act (HIPAA) has limited scope, applying only to providers, plans, and their business associates, leaving health data generated outside traditional clinical settings entirely unprotected (Cohen & Mello, 2018). This gap has become a crisis in the post-Dobbs era. Brynn Drury's analysis of reproductive data privacy argues that data from period tracking apps (which fall outside HIPAA's scope) can be accessed by law enforcement and used in abortion prosecutions, and that Fourth Amendment protections should be expanded to cover this data (Drury, 2025, pp. 128, 135–142, 147–155). Technical scholarship underscores the stakes. A seminal 2013 study by de Montjoye and colleagues found that 95% of individuals can be uniquely re-identified from location data using only four data points (de Montjoye et al., 2013). Advances in machine learning have only intensified this risk. As Gadotti and colleagues document, the concept of truly anonymized data is increasingly fragile as fragments of digital trails can be reassembled with alarming precision (Gadotti et al., 2024).

Recent empirical work confirms that these risks are not theoretical. Zadushlivy et al.'s (2025) analysis of reproductive health apps found that standard industry practices create a landscape where sensitive health inferences can be made at scale. These practices include pervasive data sharing with third-party advertisers and the collection of persistent identifiers like IP addresses. They conclude that user expectations for data privacy in reproductive health apps are not being met. They recommend that apps minimize data collection, exceed encryption and anonymization standards, and reduce IP address tracking (Zadushlivy et al., 2025). Yet corporate commitments to delete sensitive data have proven unreliable. A *Washington Post* investigation found that Google failed to honor its promise to automatically delete location data for abortion clinic visits in approximately half of test cases (Fowler, 2023).

What unites these literatures is an understanding that surveillance is not a technological accident but a political choice. The data broker industry collects and sells exhaustive profiles on virtually every U.S. adult, with law enforcement as a key client (Kempton, n.d.). Ayoub and Goitein detail how agencies secretly purchase data to bypass warrant requirements (Ayoub & Goitein, 2024). This is biopower operationalized

through code. Bodies are rendered legible to the state not through the overseer's gaze but through the algorithm's inference.

Drawing on these three bodies of literature—on the history of reproductive control, the evolution of anti-abortion politics, and the fragility of digital privacy—this article makes two interconnected arguments. First, the weaponization of reproductive health data after Dobbs is not a departure from American legal tradition but its fulfillment. It is a modern manifestation of the centuries-old project to regulate bodily autonomy, particularly for women, people of color, and LGBTQ+ individuals. Second, legislative reform like the Digital Bodyguard Act is necessary but insufficient. Such statutes are tools, not solutions. They can constrain the worst excesses of the surveillance state, but they cannot resolve the deeper conflict over whether bodies are sovereign or subject. That conflict requires not just policy change but structural transformation, a project this article locates within the longer arc of struggles for reproductive justice. This scholarship illuminates the stakes of the current political battle over reproductive health data.

The Political Terrain

The battle over reproductive health data is not a dispute between competing policy preferences. It is a conflict over whether bodies are sovereign or subject, and the coalitions that face each other across this divide reflect the stakes.

On one side stand reproductive justice advocates, civil liberties organizations, and medical associations. Despite their different missions, they share a core commitment to the idea that individuals should control their own bodies and the data those bodies generate. Organizations like Pregnancy Justice have documented the crisis (Pregnancy Justice, 2025), the ACLU litigated against surveillance (American Civil Liberties Union, n.d.-b), and medical organizations like The American Medical Association have grounded the argument in medical ethics (Mukkamala, 2024). In states like California (“California Code, Health and Safety Code - HSC § 123467.5,” n.d.) and New York (*SHIELD Act*, n.d.), they have translated this commitment into shield laws that block cooperation with out-of-state investigations. These are not abstract policy positions; they are assertions that some bodies—pregnant bodies, patient bodies—remain outside the state's reach.

Opposing them is a coalition unified not by a single ideology but by a shared interest in maintaining access to those bodies. For social conservatives and the architects of Project 2025, that access enables the enforcement of fetal personhood and conservative gender roles (National Partnership for Women & Families, n.d.). For the data broker industry, access enables a multi-billion-dollar market in human information, where location histories and search queries are packaged and sold to the highest bidder, including law enforcement agencies that use them to bypass warrant requirements. These interests converge in practice: ideologues and federal actors create the political and legal demand for surveillance, state actors translate those ideologies into state laws and investigations that create a market for data, and the data industry supplies the commodity, sensitive data, that fuels the entire system.

This coalition's theological commitments are not mere window dressing. As Andrew Lewis documents, evangelical opposition to abortion has long been inseparable from anxieties about sexual morality and the family and that these concerns have expanded over decades into broader conservative rights politics (Lewis, 2018, pp. 5, 7–8). But the current movement has grown more explicit about its ambitions. Project 2025, the 920-page blueprint drafted by the Heritage Foundation for the next Republican administration, is rooted in what scholars call Christian nationalism, which is the belief that the United States is and must remain a nation governed by a particular interpretation of Christian doctrine (Kobes du Mez, 2021). Its authors want to “restore the family as the centerpiece of American life,” and they define that family as a married father, mother, and children, with federal funds directed to support a “biblically based” definition of family (National Partnership for Women & Families, n.d.).

This vision is fundamentally about the status of women. The Heritage Foundation has argued that birth control pills feminize men, pollute the groundwater with estrogen, and make women "not as attractive to men" by suppressing menstruation (Yenor, 2025). These arguments sound absurd until we recognize what they are doing. They are constructing a world in which women's primary function is biological, their bodies exist for male desire and reproduction, and any technology that disrupts that function is a threat to the social order. Project 2025 calls for the deletion of terms like "reproductive health" and "reproductive rights" from every federal rule and regulation. It proposes using the Comstock Act, a 19th-century anti-vice law, to ban the mailing of abortion medication nationwide. It frames abortion not as a medical procedure but as a "brutal act that destroys the life of an unborn child," and it treats any attempt to protect patient privacy as "ideologically motivated fearmongering." (Bernstein et al., 2024, p. 2)

The logic extends beyond abortion. Project 2025 seeks to embed fetal personhood across federal agencies, requiring that every miscarriage, stillbirth, and pregnancy loss be reported to the government. It calls for data collection on every abortion, including the mother's state of residence, the gestational age, and the reason for the procedure (American Civil Liberties Union, n.d.-a). This Orwellian surveillance is designed to make every pregnancy visible to the state as a tool of enforcement.

The movement's hostility to contraception, IVF, and abortion are not separate campaigns. They are a coherent project to reassert male authority over female reproduction. What we are witnessing is not merely religious conservatism but religious fundamentalism. This is a project that seeks to elevate a single, literalist interpretation of Christianity to the status of a super-right, one that overrides women's liberty and equality claims at every turn. Justice Thomas and Justice Alito are not simply conservative jurists but religious fundamentalists whose opinions in *Dobbs* reveal a willingness to impose a particular theological vision on the entire country, indifferent to the human cost (Greenhouse, 2022).

This is the belief system that animates the surveillance state this article documents. If women are divinely ordained to be wives and mothers, if their bodies exist for reproduction, then any deviation (any abortion, any contraception, any assertion of autonomy) becomes not just a policy disagreement but a theological offense. And if it is a theological offense, then surveillance is not an intrusion. It is a sacred duty.

This coalition now holds power at the federal level. The repeal of the 2024 HIPAA Reproductive Health Care Privacy Rule, the dismantling of [womenshealth.gov](https://www.womenshealth.gov), and proposed CMS health data tracking systems are not isolated actions or administrative errors. They are the implementation of a vision in which the state's right to know supersedes the individual's right to be private, which is a vision that treats certain bodies as inherently subject to scrutiny.

Navigating this terrain requires recognizing that the conflict is not between two privacy frameworks but between two conceptions of personhood. In one, the individual is the basic unit of rights. On the other, some individuals are containers for rights that belong elsewhere—to the fetus, to the state, to the market. Bodily autonomy is the foundational right to have self-determination over one's own body and life while fetal personhood seeks to grant fertilized eggs and zygotes full constitutional rights, effectively treating the pregnant person as a state-regulated vessel. At its core, this is a conflict over the concept of bodily ownership: bodily autonomy asserts that an individual's body is their own, while fetal personhood effectively treats the pregnant person's body as a vessel that can be regulated and controlled by the state (Valenti, 2024, p. 3). This chasm is not merely philosophical but physical, underscored by the biological reality that a fetus requires gestation inside another person's body for approximately 24 weeks to achieve a chance of viability outside the womb (Breborrowicz, 2001).

At its core, then, the battle over reproductive health data is a battle over feminism itself. The conservative movement has learned that direct attacks on women's equality are politically costly, so it has developed a more sophisticated strategy. It appropriates the language of feminism while draining it of content. We

hear about "women's health" from officials who gut maternal health resources (Rosenthal & Jones, 2025). We hear about "protecting women" from the same administration (*Defending Women from Gender Ideology Extremism and Restoring Biological Truth to the Federal Government*, 2025) that tracks pregnant immigrants through labor and delivery (Bhuiyan, 2025). We hear about "dignity" (*Defending Women from Gender Ideology Extremism and Restoring Biological Truth to the Federal Government*, 2025) from advocates who would force a ten-year-old rape victim to carry her attacker's child to term (Cox, 2022).

This is not hypocrisy. It is an ideology. Today's conservatives have reconstructed a version of conservative feminism that celebrates women's distinct caregiving capacities while insisting those capacities bind them to home and family. Women are honored so long as they accept that their highest calling is motherhood, their bodies are not their own, and their reproductive decisions belong to God, to husbands, and to the state.

The surveillance apparatus described in these pages is the enforcement mechanism for that ideology. We cannot have a world in which women are subject without the means to track them when they stray. With this political landscape in view, we can now examine the specific surveillance infrastructure that these coalitions are fighting to control or dismantle.

The Surveillance Infrastructure

This new prosecutorial reality weaponizes the digital trail people leave in their daily lives. HIPAA left a significant loophole, as it only applies to healthcare providers, health plans, and their "business associates," not to the vast ecosystem of health and wellness apps (such as Flo or Clue), search engines, social media platforms, and data brokers that purchase and aggregate user data. Consequently, the digital trail people leave (such as text messages, search histories, period-tracking app data, and location data) is now potential evidence for law enforcement (Cohen & Mello, 2018). It creates a two-tiered system for health information: data within the traditional healthcare system is protected, while identical data generated by individuals through apps, searches, and devices is left vulnerable to collection by commercial entities and, by extension, law enforcement. Geolocation data revealing visits to clinics and purchase histories for pregnancy tests is stripped of federal health privacy safeguards the moment it leaves a doctor's office and enters the digital marketplace (Kohane, 2024).

In Nebraska, law enforcement served Meta with a warrant for the Facebook messages of Jessica and Celeste Burgess, who were charged with violating state abortion law. The company provided access to their private data, which was used in the prosecution (Jiménez, 2023). Similarly, a Texas sheriff's office used a network of automated license plate readers to track a woman based on a log entry stating, "had an abortion" (Alajaji & Maass, 2025), and in Idaho, police used cell phone location data to investigate a family traveling to Oregon for an abortion (The Associated Press, 2023). The data broker industry is central to this threat, as demonstrated when data broker Near Intelligence sold location data from nearly 600 Planned Parenthood clinics to anti-abortion groups (Gullo, 2024). Furthermore, a congressional inquiry revealed that major pharmacy chains have routinely turned over patient prescription records to law enforcement without a warrant (The United States Senate Committee on Finance, 2025).

The weaponization of digital surveillance extends beyond post hoc criminal investigation to proactive real-time monitoring of vulnerable populations. A 2025 investigation revealed that U.S. Immigration and Customs Enforcement (ICE) mandates pregnant immigrants in its "Alternative to Detention" program to wear unremovable smartwatches (VeriWatch) that track their location at all times, including during labor and delivery. Hospital staff reported that this surveillance caused medical delays and profound fear, with patients terrified that removing the device for necessary procedures like C-sections would trigger their detention (Bhuiyan, 2025). This exemplifies the direct pipeline from commercial monitoring technology to state control over reproductive bodies, creating a climate where seeking essential healthcare is fraught with the threat of punitive surveillance. Here, the surveillance state's targets are explicit: pregnant

immigrants, already positioned at the intersection of multiple systems of control, are rendered trackable through their very biology. The smartwatch is not a deviation from reproductive governance but its latest technology.

The numbers tell a stark story. A September 2025 report from Pregnancy Justice documents 412 pregnancy-related criminalization cases in the first two years after Dobbs. These cases do not fall evenly across the population. More than three-quarters involve low-income people, with Black women and Indigenous women disproportionately represented. Notably, most of these prosecutions have nothing to do with fetal harm or even with completed abortions. In nine cases, the mere consideration of an abortion—evidenced by possession of medication or attempts to obtain it—was enough to trigger charges. In 378 of those 412 charges, prosecutors were not required to prove any actual harm to a fetus or infant (Pregnancy Justice, 2025).

This data reveals something important about what these prosecutions are actually for. They do not require harm because harm is not the point. The point is surveillance itself, the assertion of state authority over bodies deemed insufficiently autonomous. This is biopower in its most literal form: the regulation of populations at the level of life (Cisney & Morar, 2015, p. 5).

The clinic is not the only entry point to this surveillance system. The same logic operates with even greater force in the commercial digital ecosystem. The data broker industry, which operates largely unregulated at the federal level (House Committee on Energy and Commerce, n.d.) and forms the backbone of the digital surveillance threat, aggregates and sells profiles on virtually every U.S. adult (Kempt, n.d.). The weaponization of this data is enabled by two foundational technical realities: the inherent limits of data anonymization and the power of algorithmic inference.

First, the inherent identifiability of so-called anonymized data: a seminal 2013 study found that 95% of individuals could be uniquely re-identified from their location data using only four geospatial data points (de Montjoye et al., 2013). This risk is operationalized in practices like the sale of location data from Planned Parenthood clinics (ACLU of Massachusetts, 2024) and the use of automated license plate readers in abortion investigations (Alajaji & Maass, 2025). Advances in machine learning and artificial intelligence (AI) have dramatically increased this re-identification risk and enabled sophisticated data linkage and inference (Pratt et al., 2025). AI systems now amplify specific privacy threats, most notably ‘identification’—the automated linking of identity across data sources—and ‘aggregation’—the combination of disparate data points to infer sensitive information. While the 2013 study demonstrated the theoretical risk of re-identification (de Montjoye et al., 2013), modern AI-powered tools have operationalized this threat at scale (Lubarsky, 2017). Companies now use machine learning to match “anonymized” location trails from millions of devices with public records and social media check-ins (PVML Team, 2024), effectively stripping away anonymity and allowing, for instance, the identification of every device that spent more than 30 minutes at a Planned Parenthood clinic on a given date. The power of these techniques is underscored by research indicating that with contemporary analytical methods, just four auxiliary data points are sufficient to uniquely identify 95% of individuals within a massive dataset (Gadotti et al., 2024). In the current digital ecosystem, the concept of truly ‘anonymized’ data is increasingly fragile, as fragments of a person’s digital trail can be reassembled with alarming precision.

Second, predictive algorithms can infer sensitive health status from seemingly benign behavioral proxies, a process known as algorithmic inference. Consumer technology like the Oura Ring can detect physiological changes that identify pregnancy before most people know they are pregnant (Borges et al., n.d.). Beyond wearables, machine learning models analyze patterns in purchase history, mobility routines, and app usage to create high-fidelity health profiles. A 2025 technical analysis of popular reproductive health apps concluded that standard industry practices—including pervasive data sharing with third-party

advertisers and the collection of persistent identifiers like IP addresses—creates a landscape where sensitive health inferences can be made at scale (Zadushlivy et al., 2025). This is particularly alarming given that approximately one-third of American women use digital apps to track their menstrual cycles (Kelly & Habib, 2023). This creates a surveillance landscape where a person can be profiled and targeted without ever typing a sensitive search term. The convergence of these technical capabilities—the ability to re-identify individuals from anonymous data and to infer private health status from behavioral traces—with the post-Dobbs legal landscape transforms the commercial data ecosystem into a forensic tool. Despite the clear risks, voluntary corporate measures have proven unreliable. A Washington Post investigation, for example, found that Google failed to honor its commitment to automatically delete location data for visits to abortion clinics in approximately half of all test cases (Fowler, 2023).

The federal government has enabled this surveillance environment. The Biden administration's 2024 HIPAA Reproductive Health Care Privacy Rule was repealed by the Trump administration and subsequently vacated by the courts in *Purl v. HHS*, removing heightened federal protections (Murray & White, 2025). Furthermore, the executive branch has actively reshaped the federal information landscape; a 2025 content analysis documented the systematic removal of evidence-based maternal health resources from [womenshealth.gov](https://www.womenshealth.gov), deleting content discussing structural racism as a cause of health disparities and promoting ideologies that frame women as vulnerable, thereby creating a perceived need for the digital surveillance evidenced in cases like Burgess (Homan & Short, n.d.). This ideological framing of women as inherently vulnerable or in need of protection is not merely rhetorical; it provides a justification for the very surveillance state documented in cases like Burgess. If women are constructed as incapable of making informed reproductive decisions without state oversight, then monitoring their digital lives, whether through data broker purchases, cell phone tracking, or smartwatch mandates, becomes framed as a protective measure rather than a punitive one. Compounding the problem, new federal initiatives, like a proposed Centers for Medicare and Medicaid Services (CMS) health data tracking system, risk creating large-scale targets for law enforcement subpoenas (Lee & Bennett, 2025).

The Supreme Court's decision in Dobbs activated a pre-existing but dormant surveillance infrastructure (Drury, 2025). The convergence of state trigger bans, personhood laws, the vast, unregulated data broker industry, and an active federal campaign to obscure health information has created a legal environment where personal digital data is weaponized to investigate, prosecute, and punish individuals for their reproductive choices. The federal government must enact a uniform standard to close the HIPAA loophole and prevent health data from being used as evidence in abortion-related prosecutions. It is in response to this crisis that the Digital Bodyguard Act is proposed.

Policy Proposal: The Digital Bodyguard Act

The Digital Bodyguard Act responds to a specific failure. Current law creates a two-tiered system for health information. Data generated within a hospital is protected. The same data generated by a person on their phone is not. This distinction made little difference when reproductive healthcare was a constitutional right, but it makes all the difference now.

The Act establishes a prohibited-by-default standard for sensitive health data. This means companies cannot collect, sell, or share such data unless the user gives explicit, informed, and easily revocable consent. The burden shifts from the individuals to the corporation. Your data belongs to you unless you say otherwise, not the reverse.

The Act defines sensitive health data broadly. It covers information related to reproductive health, menstruation, fertility, pregnancy, contraception, and abortion. It also covers data inferences, which is health information derived from non-health-related data, like inferring pregnancy from sleep patterns or location history. Precise location data near healthcare facilities is explicitly included. Search history and communications related to seeking this information are protected as well.

For enforcement, the Act creates a dual mechanism. The FTC can bring actions and levy fines, while individuals can also sue for statutory damages, creating a distributed deterrent that operates even when regulators lack political will. Data covered under the Act can only be disclosed to law enforcement with a warrant based on probable cause for a crime unrelated to reproductive healthcare.

The Act's path through Congress depends on electoral outcomes that remain uncertain. In the 119th Congress, unified Republican control forecloses any possibility of advancement. Should Democrats retake the House in 2026, champions like Representative Frank Pallone (Office of Congressman Frank Pallone, 2024) and Representative Sara Jacobs (The United States Senate Committee on Finance, 2025) could advance the bill. The Senate remains a steeper challenge; even with a House majority, the filibuster and Republican control of key committees would require moderate Republican support that is unlikely to materialize.

This political reality does not diminish the Act's importance. It clarifies it. Legislation alone cannot resolve a conflict rooted in competing conceptions of personhood. The Act is a tool, not a solution—a necessary intervention that, even if enacted, would require constant defense.

Implementation and Enforcement

A law is only as strong as its enforcement. The Digital Bodyguard Act's mechanisms matter not only for what they accomplish but for what they assert. A private right of action says that a person can sue when their data is weaponized. An exclusionary rule says evidence obtained through illegal surveillance cannot be used against you. These provisions affirm that your body's data is yours in a way that current law denies. That affirmation matters precisely because the legal system has so often treated some bodies as if they belonged to someone else.

The FTC will serve as the primary enforcer. Within 180 days of enactment, it must issue rules clarifying key definitions like “data inferences” and “granular consent”. Its Bureau of Consumer Protection will establish a dedicated task force to proactively monitor the data broker market, using subpoena power to compel testimony and document production. Fines will be levied on a per-violation, per-day basis, set high enough to deter profitable noncompliance. The Act requires dedicated funding, modeled on the \$1 billion over ten years proposed in Senator Elizabeth Warren's Health and Location Data Protection Act, to prevent enforcement decay.

For data brokers and tech companies, the Act creates a voluntary certification program. Companies that demonstrate compliance with the Act's standards benefit from a presumption of compliance and a market differentiator. Major data brokers must undergo independent, third-party audits every two years. These audits examine not only data inventories but also the models used for advertising targeting and user categorization, ensuring they do not illegally infer sensitive health data.

For law enforcement, the Act imposes clear limits. No local, state, or federal agency may use data under this Act to investigate or prosecute reproductive healthcare. Any evidence obtained in violation of this rule is subject to the exclusionary rule. This creates a powerful legal disincentive for prosecutors and police who might otherwise seek out this data.

Success will be measured by multiple metrics. A year-over-year decrease in data-based prosecutions for abortion-related investigations will signal real-world impact. A reduction in the volume of sensitive health datasets available for purchase on the data broker market will indicate that the Act is working before cases ever reach court. The FTC will track enforcement actions, private lawsuits, and audit results. It will maintain a public dashboard displaying key metrics, ensuring accountability to the public and providing data for researchers and advocates.

Every three years, the FTC and GAO will report to Congress on the Act's impact. This review will assess performance metrics, evaluate enforcement strategies, and identify emerging loopholes. Based on the findings, Congress can expand protected categories, strengthen penalties, or close new gaps. The goal is a law that evolves alongside the surveillance technologies it seeks to constrain.

The primary challenge will be sustaining political will and funding across administrations. Sunset provisions or locked-in trust funds could insulate the FTC from political pressure. Continuous vigilance will be required to adapt to rapidly evolving new privacy threats. But these challenges, however real, do not negate the necessity of the attempt.

Conclusion

The Digital Bodyguard Act is a response to a specific crisis, but the crisis it addresses is not an anomaly but the latest iteration of a project as old as the nation itself. From the commodification of enslaved women's wombs to the forced sterilization of the "unfit" to the prosecution of pregnant women today, the American state has consistently asserted its power to determine whose bodies are autonomous and whose are subject to control. The tools have changed but the project endures.

What *Dobbs* activated was not a new surveillance infrastructure but a pre-existing one. The data broker industry, the period-tracking apps, the license plate readers, the smartwatches on pregnant immigrants' wrists, these were not built in response to the decision. They were built for other purposes—profit, convenience, efficiency—but they were always available for this one, always waiting to be repurposed.

The women in the Pregnancy Justice report, the immigrants tracked through labor and delivery, Adriana Smith kept on life support against her family's wishes—these are not cautionary tales about what might happen if we fail to act. They are evidence of what is already happening. They are the present, not the future. And they are not distributed evenly across the population. They are concentrated among those who have always been targets: Black women, Indigenous women, women whose bodies were never fully theirs to begin with.

That is why the Digital Bodyguard Act, however necessary, is not enough. It can constrain the worst excesses of the surveillance state. It can deter some prosecutors, slow some investigations, and protect some data. But it cannot resolve the deeper conflict over whether bodies are sovereign or subject. It cannot overturn *Buck v. Bell* (1927) or the logic that produced it. It cannot dismantle the structures of patriarchy and white supremacy that have shaped American law from the beginning.

What it can do is draw a line. It can say that some data is off limits, that some bodies are not evidence, that the state's right to know stops at the bedroom door, the clinic door, the phone screen. It creates a small but contested space where people can seek reproductive healthcare without becoming visible to the state. It makes the surveillance apparatus work a little harder, cost a little more, catch a little less. This matters for the woman considering an abortion in Texas, for the immigrant tracked through labor in an ICE facility, for the girl who does not yet know she will need care. This space can mean the difference between prosecution and privacy, between being treated as a subject and being treated as a vessel. The Act cannot guarantee those outcomes, but it can make them possible.

The longer feminist project remains. From suffragists who knew the vote was never enough, to welfare rights activists who insisted poor mothers deserved dignity, to reproductive justice organizers who taught us that abortion access without childcare, housing, and healthcare is freedom for some but not for all. It is the project of insisting that all bodies are sovereign, that nobody is subject, that the state's power stops where the skin begins.

That project will not be completed by any single statute. Not by the Equal Rights Amendment, though we

should have ratified it decades ago. Not by the Digital Bodyguard Act, though we need it desperately. These are tools, not solutions. They create footholds and draw lines. But the work is bigger than any law. It requires organizing, litigating, legislating, and agitating for as long as the project it opposes endures. And that opposing project has centuries of momentum. It has the Constitution, interpreted by men who wrote it for themselves. It has data brokers, surveillance technology, and centuries of legal precedent treating some bodies as subject rather than sovereign. So, the question is not whether the fight will be hard. The question is whether we are willing to fight it.

So long as the fundamental principles of bodily autonomy and true gender equality remain unenshrined in our Constitution, the state will always find new tools of control. Driven by patriarchal and religious imperatives, it reaches for dormant archaic laws and builds digital dragnets to police, punish, and perpetuate its power. The pursuit of this statute is necessary precisely because the more profound, structural reforms that would guarantee equality remain, for now, a promise denied.

The promise can be redeemed, and the line can be moved. What was unthinkable becomes thinkable becomes law becomes precedent becomes tradition. The project of control is never complete. Neither is the project of freedom. The algorithm is new; the womb is not. The state's reach is long. The body endures.

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FUNDING THE FUTURE OF EDUCATION: TRANSPARENCY AND EQUITY IN THE MICHIGAN K-12 EDUCATION SYSTEM

Olivia Markham

Abstract

Education funding, particularly for K-12 schools, faces threats of underfunding across the United States. A depletion in state financial and physical resources for K-12 schools is affecting nationwide literacy rates and workforce shortages. Using Michigan as a lens, this article will examine how K-12 education funding can be reformed to better support students, teachers, parents, and economic prosperity. Through historical analysis of how these systems evolved, as well as an examination of how funding systems currently operate, we can enact effective reforms to improve literacy rates, teacher stability, and fiscal transparency, ensuring that proper resources are allocated to all school districts. This article presents a reform proposal that can be effective in Michigan and applicable to other states nationwide, which face similar historical and contemporary challenges to increase equity and equality within K-12 education.

Introduction

Education serves as the foundation for student success, workforce development, and social equity; however, these outcomes are increasingly dependent on state-allocated funding. There are persistent disparities in K-12 education within the United States, diminishing funding for marginalized communities and those who require extra assistance. Michigan highlights these challenges, with a history rooted in economic and social disparities that have led to long-lasting policy issues that have yet to be addressed or reformed. The Michigan Department of Education has long relied on property-tax-based funding and establishing budgets without consensus on how that money will be effectively allocated to school districts. Inequities appear within declining literacy and numeracy rates, teacher shortages, and limited economic opportunity for the future of countless Michigan students. With test scores declining and below the national average per-pupil funding, there is a need for policy reform that will improve the lives of countless students, teachers, and communities. Current policies fail to adequately account for students' needs, regional cost differences, and systemic inequalities rooted in historical and urban segregation. To address these issues, meaningful reform of Michigan's K-12 education funding system must be equity-based, with per-pupil funding formulas that are adaptable to economic changes, and fiscal transparency to ensure accountability. By examining the historical evolution of Michigan's funding policies, analyzing present-day educational outcomes, and evaluating political and social perspectives on reform, a framework can be established that reallocates resources more effectively to support students and learning opportunities. Restructuring education finance in Michigan is a framework that has national application, focusing on a strong state government that offers long-term economic stability and social justice.

Michigan's Historical Funding Depletion

By 1915, Michigan was the leading center of automobile manufacturing in the United States, which attracted Black Southerners migrating north for industrial jobs with the hopes of building financial stability and creating a foundation for generations (Hyde, 2001). Black and Hispanic families moved to Michigan with intentions of garnering the wealth that the American auto industry had promised, yet encountered segregation, redlining, and wage disparities (Caldwell, 2022). These factors led to the underfunding of K-12 education programs serving primarily Black and minority school communities, as Michigan's Public Policy Act 145 (Proposal A) relies on local property taxes to pay for public education (Caldwell, 2022). Beyond raising property taxes, Michigan's Proposal A (1994) also sought to increase taxes on cigarettes by \$0.50 per pack, raise real estate taxes to 0.75%, and reduce state income tax by 4.4% (Izraeli & Murphy, 2007). As a result, communities with lower property taxes often have underfunded education systems for their children to attend. The United States Supreme Court case *Brown v. Board of Education* (1954) ruled that separating children in public schools based on race was unconstitutional, seeking to provide students of color the same educational opportunities as white

students. In practice, desegregation was not immediate and ultimately had long-term educational inequalities across the United States.

Debates soon arose among the states. The United States Supreme Court case *Milliken v. Bradley* (1974) decided that further desegregation in Detroit public schools was unnecessary, arguing that there was insufficient evidence to justify cross-district desegregation remedies. Michigan's largest city, Detroit, the epicenter of the automobile industry, remains a majority Black city with significant Hispanic and immigrant communities who are also seeking the same promised opportunities of higher wages and better education (U.S. Census Bureau, 2025). The lack of funding and persistence of racial segregation in Detroit and Michigan communities produced declining enrollment in public schools, and poverty became concentrated in Black and Hispanic neighborhoods which collectively account for 81.3% of Detroit's urban population (Caldwell, 2022). The underfunding of Michigan K-12 schools has troubled Michigan for generations, leaving Michigan to have the fifth-highest learning loss in the nation (DeNeal & Pierce, 2025). Learning loss stems from students not retaining information, often related to their attention in and out of school, along with the effectiveness of the teacher (DeNeal & Pierce, 2025). Adequate funding could provide students and teachers with the tools and resources to ensure information retention and academic success. The need for change is evident, and the state must drastically change its focus on the funding budget for public K-12 schools to address high learning loss rates and unemployment (California Learning Resource, 2025). This self-reinforcing cycle of educational inequalities can be found in Michigan, in addition to various urban areas around the United States.

Michigan Public K-12 schools operate under the State School Aid Act of 1979, which establishes a per-pupil funding formula that attempts to close funding disparities among school districts in Michigan (Michigan Public Act 94, 1979). The established per-pupil foundation allowances do not account for students and districts that experience high levels of mental health needs, learning disabilities, and physical disabilities (Aryaman, 2020). This legislation does not account for inflation and still relies on local property taxes for facility funding that would provide students with a safe environment to learn (Michigan Public Act 94, 1979). The 2011 School Aid Budget (HB 4235/PA 62 of 2011) enforced extensive budget transparency and auditing, which, if not complied with, would restrict funding (Moss, 2011). When enacted into law, this removed the foundation allowance by \$470 per pupil and limited facilities funding to only 20% of the amount that schools were previously being provided to upkeep their facilities (Moss, 2011). These regulations had an uneven impact on largely Black and Hispanic school districts and placed compliance burdens on districts that were already experiencing staff shortages, making it harder to comply and receive funding (Murphy, 2024).

The Public Policy Act 145 of 1994, known as Proposal A, was intended to reduce property taxes, narrow per-pupil funding disparities, and limit property tax increases (Michigan Department of Treasury, 2002). However, while Proposal A aimed to create equity among Michigan K-12 school districts, it resulted in a \$7 billion reduction in public school funding during its first year (Caldwell, 2022). Because Proposal A based funding on attendance, districts with inconsistent attendance—often serving more vulnerable populations—faced budget shortfalls, while wealthier districts benefited from stable attendance and consequently greater funding (Caldwell, 2022). Since local funding for K-12 systems comes from property taxes, wealthier areas benefit from higher revenues and see their tax burdens rise further under Proposal A (Learning Policy Institute, 2025). These outcomes contrast with the original intentions of the policy and underscore the continued need for genuine funding equity in Michigan's public schools.

Education and funding disparities have only been amplified under Proposal A, continuing to provide an advantage to wealthy districts. Michigan's Enrolled Senate Bill No. 166, introduced by Senator Camilleri and operating under Section 31a of the State School Aid Act of 1979, claims to promote equity among school districts by providing roughly \$17-19 billion statewide stabilized funding for K-12 schools. However, its current implementation fails to allocate funding effectively to result in improved test scores

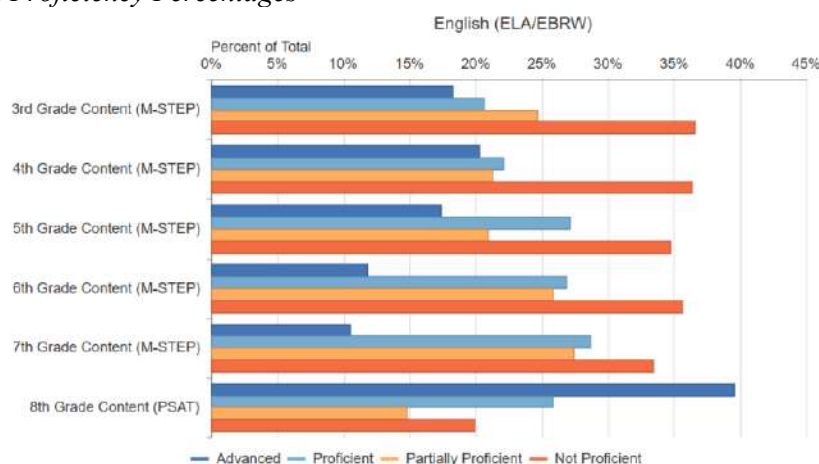
(Camilleri, 2025). Like prior legislation, this bill leaves middle-class families with inadequate financial support (Michigan League for Public Policy, 2023). The extensive compliance requirements further burden small districts, which often lack the necessary administrative capacity to manage them (Michigan League for Public Policy, 2023). Urgent changes are needed to ensure that reforms genuinely address inequity and do not perpetuate existing gaps.

Educational Outcomes and Underperformance

A majority of Michigan K-12 students struggle with English literacy and math, which is evident through the Michigan Student Test of Educational Progress (M-STEP) testing results—a standardized test provided to students from third to eighth grade. M-STEP testing is divided into English (ELA) and mathematics and is utilized to measure student achievement, evaluate curriculum, and assess student needs (Michigan Department of Education, 2023).

Figure 1

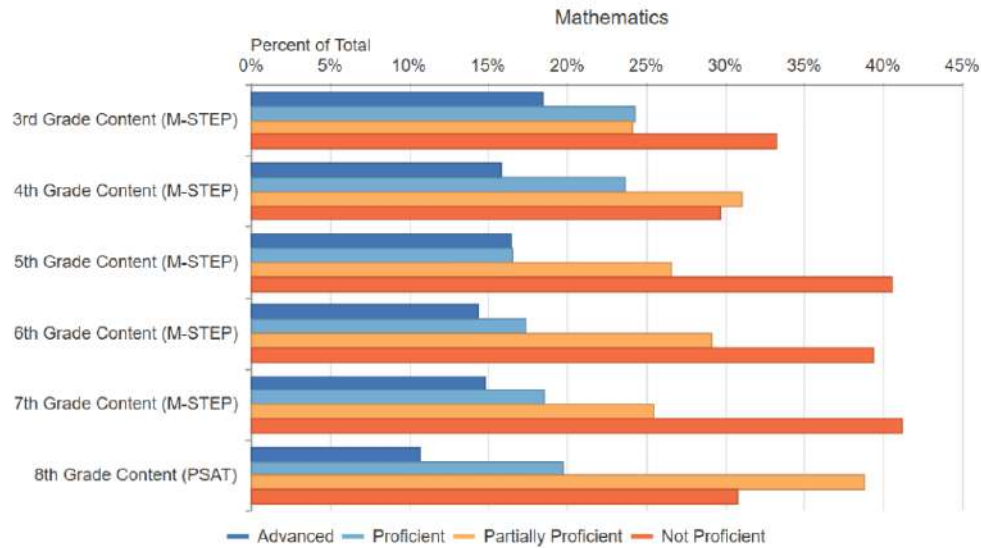
M-STEP English Proficiency Percentages



Note. Michigan School Data, operated under the Michigan Department of Education, provides data on Michigan third to eighth-grade M-STEP testing proficiency in English.

Figure 1 shows the percentage of students achieving each proficiency level in English from the 2024-2025 school year as collected by the Michigan Department of Education and synthesized by Michigan School Data (2025). Data reveals that third graders are 61.1% partially proficient or not proficient, and seventh graders are 60.8% partially or not proficient (Michigan School Data, 2025). These numbers are concerning, as most students are struggling with proficiency in English, a basic skill that would carry into employment. However, the data also shows that eighth graders, when faced with the PSAT, achieve higher levels of English proficiency. The PSAT is different from the M-STEP, as there are higher performance expectations, leading students to cram information resulting in short-term memorization rather than long-term retention (Vogel & Schwabe, 2016).

Figure 2
M-STEP Math Proficiency Percentages



Note. Michigan School Data, operated under the Michigan Department of Education, provides data on Michigan third- to eighth-grade M-STEP testing proficiency in mathematics.

Figure 2 shows higher rates of partial and non-proficiency in mathematics compared to English (Michigan School Data, 2025). Third graders are 57.3% partially or not proficient in math, while seventh graders show higher rates of partial or non-proficiency at 66.7% (Michigan School Data, 2025). Unlike the English scores, students taking the PSAT have a much lower proficiency rate in math skills compared to the English portion of the exam. Both data results demonstrate the alarmingly low rates of proficiency from third to eighth grade in both math and English skills, which are requirements for graduation and valuable skills for future employment. Michigan's K-12 Math scores demonstrate lower levels of proficiency in the subject, garnering greater concern for improving Michigan's education.

Only 18.5% of Michigan seventh graders are proficient in math testing, and only 10.5% in English, leaving Michigan educators, policymakers, and parents needing to amend school funding to provide adequate educational resources to students and teachers to address the high levels of learning loss in Michigan K-12 education (Michigan School Data, 2025). To address these challenges in the Michigan K-12 education system, a focus must be drawn to equity-based, per-pupil funding and reallocating the state education budget to provide teachers with higher pay and better resources that will allow them to better support their students. When teachers are provided greater professional training and resources, they produce students who demonstrate higher English and math proficiency skills (Hanushek et al., 2019). Teachers in the United States earn 22% less than other college graduates, leading to nationwide teacher shortages and fewer educators receiving higher education, which can negatively affect student academic outcomes (Hanushek et al., 2019). Without providing livable wages and financial incentives, teachers are leaving the teaching profession for a more sustainable career, leaving students ill-equipped and lacking foundational educational skills.

The Political and Social Landscape of Education Reform

To enact sustained reform in Michigan's K-12 education system, garnering broad stakeholder support is essential. Politicians, advocacy groups, and educators yield varying priorities in education policy, yet their support is critical to enacting long-term and effective reform. This long-standing issue affects not only under-resourced districts, which have been impacted by segregation and inequitable funding structures, but also wealthier districts that depend on well-supported teachers and adequate educational

resources to provide student success (Michigan, 2024). This leads to diverse perspectives from parent groups, teacher unions, and Michigan politicians. Implementing long-lasting and effective reform depends on the engagement and support of these diverse stakeholders.

Current Michigan Governor Whitmer, who has held office since 2019, and will conclude her last term in November of 2026, has been an advocate for education funding reform, as demonstrated by her release of a \$23 billion education budget that sought to provide high-quality education beginning at pre-K, increase per-pupil funding, and invest in teachers (Executive Office of the Governor, 2026). This historic budget allowed Whitmer to increase per-pupil funding by 26% since taking office (Michigan State Department, 2026), but it has produced limited improvements in student outcomes due to the allocation of those funds (Executive Office of the Governor, 2024). In a recent budget amendment, Whitmer approved further financial assistance for free school meals, literacy support, free pre-kindergarten education, and free community college for all (Executive Office of the Governor, 2025). Despite changes, Michigan still falls short of the national per-pupil funding average, and House Republicans are working to reallocate \$657 million towards other legislative priorities (Cleary, 2025).

Democrats in Michigan's House and Senate have also expressed support for education funding reform in Michigan through their passing of the 2025 School Aid Fund budget proposal (Michigan House Democrats, 2025). The School Aid Fund budget (Senate Bill 751) passed with a 20-16 margin, with four Republicans siding with Democrats to support change (Camilleri, 2024). Efforts to improve education for Michigan students are clear through the actions of Michigan's Democratic Senators and House Representatives due to their continued support of Governor Whitmer, along with their own attempts and success in passing legislation, such as Senate Bill 751, that will provide further funding for Michigan K-12 education.

One of the most outspoken voices for Michigan K-12 education funding reform has been teachers and teacher unions, who utilize lobbying efforts to advocate for teacher and student equity (Cowen & Strunk, 2015). The most prominent being the Michigan Education Association (MEA), alongside the American Federation of Teachers Michigan (AFT), which both seek to improve student and teacher resources through lobbying efforts (Delie, 2024). The MEA has stated that its strategic direction is to focus on advancing education opportunities for teachers and students, securing a pro-public education agenda, and highlighting public education as a common good (Michigan Education Association, 2021). AFT Michigan worked in collaboration with MEA to establish similar concerns and focuses within their own union (American Federation of Teachers Michigan, 2018). Both unions utilize similar rhetoric to push and focus on improving the education of Michigan K-12 students by providing proper resources and advocacy for teachers.

On the contrary, Michigan Republicans in the House and Senate have argued against budget changes that focus on tax increases (Michigan Senate Republicans, 2024). Senate Republicans introduced the Michigan Brighter Future plan that limited budget increases while attempting to create better teacher and student resources. Similarly, House Republicans introduced a 14-bill education reform that drew concerns about fiscal transparency (Greene, 2025). Representative Greene fails to mention budgeting financial support for K-12 education, including providing proper resources to teachers and students that would produce improved student test scores (Greene, 2025).

A balanced and stable budget that is not reliant on property or business tax is necessary to garner stakeholder support for reform. An efficient budget would seek an increase in equitable funding and specific allocations of funds to extra services and support for teachers and students (Vergari, 1995). This would alleviate reliance on business taxes that would harm economic opportunities in Michigan and lose stakeholder support. Rather, reallocating funding and increasing per-pupil funding based on the existing budget would provide substantial fiscal support to improve student results (DeWeese, 1994). It is critical

to formulate a budget that is agreeable with bipartisan support to ensure that reform is obtainable and long-term.

Reforming, Transparency, and Placing Funding Where It Matters

Michigan's Department of Education depicts low literacy and mathematics scores from K-12 children, with fourth graders being ranked 44th nationally in reading on the 2024 National Assessment of Educational Progress (NAEP) assessments (University of Michigan, 2025). With this acknowledgement, reform for K-12 education has been suggested and desired from political, social, and economic spaces. To confront these issues, it is essential to adopt a reformed budget that focuses on equity funding and fiscal transparency within the Michigan K-12 education system to improve student test scores, in conjunction with providing staff, schools, and teachers with the proper resources to encourage learning retention.

Michigan currently reports its per-pupil funding at \$14,489 per student total (Helmer, 2025), which is below the U.S. average (Colorado School Finance Project, 2025). Modern research from the National Bureau of Economic Research demonstrates the “robustness of the patterns across a variety of settings is compelling evidence of a real positive causal relationship between increased school spending and student outcomes on average” (Jackson, 2018). Other states like New York, New Jersey, and Vermont spend \$29,873, \$25,099, and \$24,608, respectively, on per-pupil funding (Colorado School Finance Project, 2025). The national average per-pupil funding is \$16,526, which places Michigan below the national average (U.S. Census Bureau, 2025). The Michigan Department of Education has argued that schools, despite recent funding and budget increases, are still underfunded by \$2 billion to \$6 billion per year (Wheaton, 2024). Per-pupil-based funding, in relation to the national average, is underfunded, but so are teachers and their salaries (Wheaton, 2024). The average Michigan teacher starting salary is \$41,600, ranking 44th in the U.S. and \$4,900 below the national average for the starting teacher salary (Burns & Mavrogordato, 2025).

Best practices found across states have focused their resources and state budgets to create greater equity through student-based funding formulas (Duncombe & Peisach, 2025). The Education Commission of the States defines how Arizona, Georgia, Kentucky, and Montana have seen education success through their usage of School Finance Equalization (SFE), which works to target low-income districts for equitable funding assistance (Duncombe & Peisach, 2025). Funding forms have also been found to be increasingly effective in states like Maryland, California, and Rhode Island (Griffith, 2020). California determines funding through a Local Control Funding Formula (LCFF), which better tracks funding and provides extensive grants to more than 55% of children who are non-English speakers, low-income, or students in foster care (Griffith, 2020). Arizona uses SFE to determine a property tax rate to serve as a baseline; if the state is unable to cover annual costs alone, then it will receive a statewide property tax or direct state appropriation (Griffith, 2020). Georgia has implemented an equalization program under House Bill 824, which balances funding disparities between low- and high-income districts through grants (Johnson, 2012). Through excluding the top and bottom per-pupil funding districts, the equalization program in Georgia sets a benchmark of \$492 million rather than \$832 million while still maintaining effectiveness and providing extra support for low-income districts (Johnson, 2012). Montana legislation set a base budget minimum for schools, using state and county equalization levies that provide even the lowest-income districts with the fiscal support that is equitable to higher-income districts (Montana Legislature, 2025). These programs set a baseline allocation for schools to ensure that their basic needs are met by the state, and policymakers incorporate further assistance to ensure that minority communities that are likely to reside in low-income districts are provided with additional resources to ensure equity in schools.

Non-governmental organizations (NGOs) and intergovernmental organizations (IGOs) provide further perspective and reform assistance on the topic. The United Nations Educational, Scientific, and Cultural Organization supports aligning the three main reporting systems, Common Reporting Standard (CRS), Financial Tracking Service (FTS), and International Aid Transparency Initiative (IATI), to increase fiscal

data and transparency regarding K-12 education funding (Global Education Monitoring Report Team & Education Cannot Wait, 2025). The Organization for Economic Co-operation and Development (OECD) advocates for funding formulas based on key funding factors: student-based, needs-based, curriculum-based, and school characteristics (Fazekas, 2012). Highlighting the importance of the number of pupils, learning disabilities, socio-economic disadvantages, and specialized programs, in addition to logistical aspects like size, location, infrastructure, and local costs (Fazekas, 2012).

Reform would include detailed amendments to the State School Aid Act of 1979, which establishes per-pupil funding for Michigan K-12 students (Michigan Legislature, 1979). This would incorporate a modern Student-Based Funding Formula/School Finance Equalization (Duncombe & Peisach, 2025), which will assist in raising per-pupil funding and teacher salaries above the national average (Burns & Mavrogordato, 2025). Incorporating further legislation that establishes equitable spending/funding across both wealthy and low-income districts provides the state with specific allocated funding for equalization grants that will seek further equitable funding for low-income, minority, and special needs districts. The implementation of reporting systems like Common Reporting Standard (CRS), Financial Tracking Service (FTS), and International Aid Transparency Initiative (IATI) will also assist in ensuring that the finances allocated to students and teachers reach them accurately (Global Education Monitoring Report Team & Education Cannot Wait, 2025). Furthermore, fiscal transparency in K-12 education funding will assist in making state budgets and targeting districts that need further financial support from the state (Global Education Monitoring Report Team & Education Cannot Wait, 2025). Reform will provide fiscal support to districts that are at a systemic disadvantage, along with providing solutions and adaptability in the fiscal budget.

Michigan's current political and social environment, as of 2026, with many Democrats in the House and Senate along with Democratic Governor Whitmer, has the best opportunity to enact K-12 education funding reform to see improved student scores (Jacob, 2025). Michigan State Republicans in both the House (Greene, 2025) and Senate (Michigan Senate Republicans, 2024) may disagree with these changes. However, the solution does not involve increasing taxes on budgets but rather places an emphasis on state and individual tax increases that will lessen economic stress while still providing further funding assistance to those districts in need. This will elevate pressure from local Michigan businesses and open opportunities for new economic development (Gross, 2025). Politicians may still disagree with any tax increases, but the support of local teacher unions, like MEA (Helmer, 2025) and Michigan AFT (Delie, 2024), and the public have continuously supported Michigan K-12 education budget increases and reforms. This gives Democrats the ability to make long-term policy changes, rather than just a budget, to give Michigan students higher-quality education (Growing Michigan Together Council, 2023).

Michigan's K-12 education system faces significant challenges, including low literacy and numeracy scores, underfunded schools, and teacher salaries below the national average. Reforming the State School Aid Act of 1979 (Michigan Legislature, 1979) through a student-based funding formula/school finance equalization (Duncombe & Peisach, 2025) and implementing fiscal transparency measures offers a clear path toward addressing these inequities (Global Education Monitoring Report Team & Education Cannot Wait, 2025). Coupled with the political and social support of Michigan K-12 education reform, there is a higher likelihood of passing effective and adaptive reform now than there would be if there were a larger Republican presence in Michigan state government. The adaptability of reform yields high importance due to potential challenges with Governor Whitmer finalizing her last term in 2026 and the Federal Department of Education under varying leadership (Minkin, 2024).

Conclusion

To summarize, this policy proposal advances an independent and state-strong approach to reforming Michigan's K-12 education funding system by centering equity, transparency, and accountability. First, it calls for amending the State School Aid Act of 1979 to implement a student-based funding formula that

allocates resources according to individual and district-level need, ensuring that low-income, special education, and historically underfunded communities receive adequate support. Second, financial allocation will allow for teacher salaries to meet or exceed national averages, directly addressing resource shortages and workforce instability within schools. Third, the proposal incorporates fiscal transparency measures through standardized reporting systems such as CRS, FTS, and IATI, ensuring that allocated funds are traceable, adaptable, and effectively utilized. Fourth, it strengthens accountability through state-led oversight mechanisms, including the Michigan Department of Education, CEPI data tracking systems, and public-facing tools like the Parent Dashboard, allowing policymakers, educators, and families to monitor outcomes with open accessibility. Finally, this reform prioritizes adaptability by embedding continuous evaluation through longitudinal data systems and allowing for iterative policy adjustments based on performance metrics. Collectively, these reforms establish a sustainable framework that not only addresses longstanding funding inequities but also ensures that Michigan's education system remains responsive to the evolving academic, economic, and social needs of its students.

Education reform, through the lens of Michigan, can inform the rest of the United States. The effectiveness of public education, especially in high-poverty districts, has had significant decreases due to correlating decreases in per-pupil funding nationwide (Wething & Bivens, 2025). States like Alabama and Delaware have similar historical backgrounds in education related to equity disparities and lingering effects of segregation that make this system of reform applicable (Fall & Forrest, 2025). Education reform shapes future generations, and the lack of funding provided to schools and districts leaves lasting impacts on students' literacy, critical thinking skills, generational wealth, and economic success. These systems need funding through obtainable methods, creating a baseline that is promised and ensured to students, transparent, accessible, and viable for both students and teachers to succeed. Reforming original per-pupil budgets and providing adaptability to those budgets to fluctuate with the economic changes set students up with stability and success.

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EQUITABLE URBAN PLANNING: ADDRESSING GREEN SPACE DISPARITIES IN UNDERFUNDED NEIGHBORHOODS

Cheyenne Phillips

Abstract

This article explores the systemic underfunding of green infrastructure in marginalized, high-poverty neighborhoods and the disproportionate effects of limited green space on the health, economic opportunity, and social mobility of Black residents. Historical policies, such as redlining, discriminatory urban planning, and urban renewal, have consistently denied these communities sustained investment, resulting in long-term neglect and little to no environmental infrastructure. The article evaluates four policy options developed by the author: Community-led Green Space Planning and Development, a Green Space Equity Fund, Public Health and Environmental Justice Legislation, and a Green Space Access Mandate for Housing Developments. Each option is assessed using a model also created by the author, revealing clear trade-offs across equity, feasibility, and speed of implementation. More equitable approaches, such as community-led planning, face feasibility challenges, higher administrative burdens, and slower implementation timelines. In contrast, more easily implemented policies, such as development mandates, risk excluding existing neighborhoods, reinforcing uneven investment patterns, and intensifying gentrification pressures. Based on these trade-offs, the article identifies a hybrid policy model as the preferred solution. This approach combines federal funding for large-scale investment with structured community participation to ensure projects meet local needs, increase accountability, and reduce displacement risks. By balancing top-down resource allocation with bottom-up engagement, the model addresses both financial barriers and the historical exclusion of marginalized communities from urban planning decisions. The article concludes with a targeted implementation strategy for Washington, D.C., focusing on Wards 5, 7, and 8, where environmental infrastructure disparities remain most pronounced.

Introduction

Residents of marginalized neighborhoods with high poverty rates suffer from the systemic underfunding of green infrastructure in their area, which can negatively impact health, economic well-being, and social mobility. Structural racism has been acknowledged to have limitations on the livelihoods of those who are affected, yet the measures that have been implemented have been ineffective. Efforts have primarily not focused on the importance that green spaces play, not just aesthetically, but on the well-being of residents within a community. Green spaces in low-income, Black areas are usually neglected or nonexistent, ultimately affecting their health, well-being, and social mobility. This gap is not simply due to a lack of funding; it is a purposeful disinvestment rooted in a legacy of systemic exclusion, one that actively withholds resources necessary for these communities to thrive. This cycle of disadvantage is exemplified in Anacostia, a historically Black neighborhood in Washington, DC. Decades of disinvestment have left the area's residents with limited green spaces to enjoy, compounding health inequities and economic decline.

Importance of Urban Green Spaces

Many characteristics influence the use of green spaces due to differences in social meanings and perceptions. Different user groups have different wants and expectations, ultimately shaping how the space is used. There is technically no wrong way to use a park, but there is a socially implied correct way. Generally, green spaces are used for physical activity, social interaction, and psychological restoration (Lee et al., 2015).

Accessibility, quality, security, facilities, and attractiveness all play a major part in encouraging green space use. It should be easily accessible, the optimal distance being less than five minutes of walking time with minimal obstruction (Negron-Poblete et al., 2016; Talen & Koschinsky, 2014).

Visible environmental decay in a neighborhood is perceived as being unsafe. These neglected public spaces are viewed as areas for illegal activities, such as drug dealing, prostitution, gambling, and vandalism (Holliday et al., 2020; Brown et al., 2004b). These perceptions would discourage women, children, and the elderly from participating in activities in that space. These perceptions could also influence the incidence of crime itself (Brown et al., 2004b). There have been reductions in gun crimes and vandalism after “greening” vacant land that did not previously count as green space (Lee et al., 2015).

Certain qualities and facilities in a green space will encourage different activities and uses. The presence of sports courts, walking paths, water fountains, playgrounds, shade structures, and open grass all influence the ways people interact with the green space.

The main public health issues resulting from the lack of well-maintained green space are obesity and mental health. Walkable access to parks and/or nature is linked to better self-reported well-being, lower obesity, better stress management, and increased physical activity (Saelens et al., 2003; Coombes et al., 2010).

Green spaces can improve the community’s environment. Plants can help counteract the urban heat island effect through shade, radiation deflection, and moisture release. Trees’ absorption of carbon dioxide can also help offset greenhouse gas emissions. Green spaces also help minimize pollution of air, water, and noise (Lee et al., 2015).

Lack of access to adequate green spaces limits the social opportunities for residents in the area. The formation of social networks is stunted because there is no natural chance for community bonding, recreation, and social mobility. Without these neighborly connections, residents cannot access networks and resources that could improve their livelihood (Lee et al., 2015).

Nature of The Issue

The underfunding and divestment in low-income, Black communities can create complex consequences for their residents in every aspect of their lives: health, social connection, economic opportunity, and racial justice. This constructs a cycle of disadvantage that will need targeted intervention to break it. A multitude of issues arise from the lack of a well-maintained green space: health, environmental, social, economic, and opportunity.

Building on Avni and Fischler’s (2020) analysis of the Anacostia River waterfront, this article argues that environmental injustice is not merely a product of spatial dynamics; it is the outcome of purposeful institutional choices. Discriminatory practices such as redlining, loan discrimination, and job discrimination have done irreversible damage to marginalized communities. These choices systemically exclude Black communities from green investments, while simultaneously leaving them vulnerable to displacement when pressures for investment inevitably increase.

The systemic underfunding and divestment in low-income, Black areas severely hinder the possibility of economic growth and opportunity, further contributing to generational poverty and reinforcing cycles of disadvantage. Urban greening projects are often pursued for financial reasons, such as boosting property values. The issue is how to identify ways to revitalize neighborhoods without encouraging displacement. With green spaces driving up property values, the residents in the area meant to benefit from the park are being displaced (Lee et al., 2015). This was an issue critiqued by Hyra (2017), who, in his analysis on neighborhood change in D.C., insisted that anti-displacement measures must be legally mandated, not

optional, components of green infrastructure policy.

The absence of green spaces misses the opportunity to create environments that foster community development, youth engagement, and overall community upliftment.

It has to be recognized that health benefits are not necessarily linked to the presence of green space but rather to its use. The amount of functionality an individual can gain from using green space is correlated with the number of reported benefits they experience from that use (Lee et al., 2015).

Trend Over Time

The issue of systemic underinvestment in low-income, Black communities traces back to Jim Crow-era policies such as redlining and discriminatory practices in urban planning. Throughout the late 19th and the majority of the 20th century, these areas were purposefully denied investment in their infrastructure, housing, and public areas. After the end of World War II, urban renewal projects pushed forward and pushed out Black residents from their neighborhoods. What replaced these neighborhoods were underfunded housing projects and industrial zones, leaving little room or care for green spaces. Even when parks were developed, they were poorly maintained or had limited access due to other conflicting structural planning.

As documented in the D.C. Office of Planning's Anacostia Waterfront Initiative framework and reinforced by Urban Institute research on the Anacostia River Corridor, this pattern of disinvestment created a persistent spatial divide: neighborhoods east of the river in Wards 5, 7, and 8 received a fraction of the public green infrastructure investments compared to wealthier, predominantly white areas west of Rock Creek Park.

This systematic underfunding continues over a century later. Green spaces are public goods, and because they are viewed as low priority compared to other infrastructure, such as housing and roads, private developers are taking matters into their own hands to raise property values. Developers currently investing in infrastructure in these neighborhoods are targeting affluent residents. This results in the displacement of long-term, low-income residents who can no longer afford to remain in their own communities. In many metropolitan areas, the gap in access to green spaces between higher and lower-income neighborhoods is growing. Cities like New York, Los Angeles, and Chicago have seen increasing gentrification, which tends to leave poorer, Black neighborhoods with little to no investment in public goods such as parks and playgrounds (Schnake-Mahl et al., 2020).

Scholars like Schnake-Mahl et al. (2020) emphasize the national pattern of green gentrification. This article shows that the District of Columbia is a unique case: decades of explicit policy frameworks, from the Anacostia Waterfront Initiative to the 11th Street Bridge Park Equitable Development Plan, have sought to reverse this trend of disinvestment in green infrastructure. Yet measurable disparities in park access persist. The Trust for Public Land's D.C. Park Score report consistently shows Wards 5, 7, and 8 lagging significantly behind in acreage, investment, and tree canopy.

Current Policy

It is assumed that investments in a community will directly improve the area. These investments can take place in various ways, such as investments from the local government, federal grant programs, and public-private partnerships (Holliday et al., 2020). It is pertinent that the processes related to the implementation of community development are examined to ensure that the structural changes can "trigger the revitalization of distressed, low-income urban neighborhoods" (Galster et al., 2008).

In certain cities, including Washington, D.C., the Green New Deal for Cities Act has been implemented. The bill allows the Department of Housing and Urban Development to provide funding to state and local governments for them to carry out projects such as "cleaning up pollution, climate adaptation measures,

or conservation projects.” (H.R. 2644, 2021)

There are also individual measures being taken by residents in these communities. Majora Carter is known as an urban revitalization specialist, recognized for her project “Greening the Ghetto” which focuses on urban redevelopment in low-income, Black neighborhoods. Carter’s ideology is that green spaces improve the desirability of a neighborhood, causing individuals to relocate and businesses to boom (Prigg, 2013). Experts believe that an important part of community development is the creation of economic diversity. With the influx of new businesses comes more job opportunities, like retail and service, which helps to break the cycle of concentrated poverty (Black, 2022).

Potential Solutions

This analysis considers four policy options for expanding green space access in historically underfunded, low-income Black neighborhoods: Community-Led Green Space Planning and Development, a Green Space Equity Fund, Public Health and Environmental Justice Legislation, and a Green Space Access Mandate for Housing Developments. The policy options are further expanded in the following section.

Community-Led Green Space Planning and Development prioritizes green space creation through a community-led process involving residents in planning, implementation, and maintenance via workshops and advisory councils. This policy redirects existing infrastructure funding toward long-term maintenance and forms public-private partnerships between local governments, non-profits, and urban planners.

The Green Space Equity Fund establishes a state or federal fund that provides direct economic support to marginalized communities for the creation and maintenance of green spaces. Resources are allocated based on underinvestment metrics, such as poverty rates, income, race, and access to green space, with grants provided to land trusts, local governments, and non-profit organizations.

Public Health and Environmental Justice Legislation introduces local or state legislation that links public health initiatives to environmental justice, mandating the creation of green spaces in marginalized communities through land-use and zoning requirements. A health equity and environmental justice impact assessment is conducted before development approvals to maximize physical, mental, and social benefits.

Green Space Access Mandate for Housing Developments requires all new housing developments, especially affordable housing in high-poverty areas, to include green spaces within walking distance. Minimum standards are set based on population density, with tax credits offered to developers who exceed the requirements, ensuring green space is integrated from the start rather than retroactively.

Community-Led Green Space Planning and Development

This policy would prioritize urban revitalization and the creation of green spaces in low-income, Black neighborhoods that have been historically underfunded primarily through a community-led planning and decision-making process (Baltimore Green Space, 2010). By involving local residents throughout the phases of development, from implementation to maintenance, it can be ensured the space is maximizing its functionality in the area and tailored to the needs of the community.

This policy would utilize community workshops and advisory councils to ensure that residents’ comments and concerns are considered and centralized in the discussions concerning the neighborhood’s needs and challenges. A portion of federal, state, and local infrastructure funding from existing urban renewal projects will be redirected to these green spaces. Resources would be allocated not just for initial development but also for long-term maintenance. Public-private partnerships would be formed between local governments, non-profit organizations, and urban planners.

This policy option helps address the lack of community involvement in urban planning in low-income areas. By involving the residents, this policy helps ensure that green spaces can maximize their benefits

for the community. This involvement empowers local residents to take control and have a say in how their neighborhoods are structured, maintained, and developed (Baltimore Green Space, 2010).

Green Space Equity Fund

A Green Space Equity Fund would be a state or federal level fund whose main goal is to provide economic support directly to communities for the creation and maintenance of green spaces in neighborhoods facing systemic underfunding (HB 503, 2023). A system would be put in place to ensure that this fund supports marginalized communities and that spaces are built in areas with the highest need.

To ensure that communities in need are being prioritized, funds would be allocated based on neighborhood metrics of underinvestment, such as poverty rates, median annual income, racial demographics, and their current accessibility to green spaces. State and/or federal departments would provide grants to land trusts, local government, and non-profit organizations that are working in conjunction to design and upkeep green spaces in these areas (HB 503, 2023). The fund would incentivize collaboration between municipalities and local organizations. Along with this, a system would be established to evaluate the impact the fund has had on the target community's health, economic mobility, and social engagement.

This policy directly targets the financial barriers faced by marginalized communities that prevent them from developing infrastructure. In turn, addressing the resource and equity gap in urban development.

Public Health and Environmental Justice Legislation

This policy proposes introducing local or state-level legislation that links public health initiatives with environmental justice, mandating the creation of green spaces as a part of a larger health equity effort (HB 503, 2023). The legislation would have a specific focus on the creation of green spaces in marginalized communities with concentrated poverty.

The legislation would include requirements for land use and zoning policies that not only ensure but prioritize the creation of green spaces in marginalized communities (H.R. 2021, 2021). Cities would have to set aside a percentage of land for being developed into green spaces in neighborhoods with little to no access to any. Before any development projects are approved, a health equity and environmental justice impact assessment will be conducted. Safeguarding the residents' livelihoods by considering potential health outcomes- both beneficial and harmful- and maximizing the physical, mental, and social benefits stemming from development. This legislation would help to encourage partnerships between public health organizations, urban planners, and community organizations.

This policy would connect both environmental justice and public health, acknowledging that lack of access to green spaces is a public health issue in low-income, Black areas (Rigolon, 2022). It shifts the narrative of urban development being solely an economic budgeting and efficiency issue to include the health disparities marginalized communities face.

Green Space Access Mandate for Housing Developments

This policy would require all new housing developments, specifically affordable housing projects in areas with concentrated poverty, to include the creation of green spaces within walking distance of the development (Jennings, 2017). This ensures that as cities grow, they are equitably being provided with infrastructural resources and creating spaces for social interaction, health, and recreation for all residents regardless of demographics.

Included in this mandate would be a requirement for developers to set aside a percentage of their land to be dedicated to creating green space in any new housing initiative, particularly in neighborhoods facing structural inequity (Nobles and Moore, 2023). There would be minimum standards set for green space access based on the area's population density, for example, larger parks would be required in

neighborhoods that are more densely populated and vice versa. These green spaces should be easily accessible by foot, without the need for public or private transport. Tax credits would be provided to developers who exceed the basic green space requirements, incentivizing them to integrate more green space into their development projects.

This policy ensures that, as cities develop and gentrify, needs are still being addressed in the lower-income areas. With this mandate, green space development would be implemented at the start of the development, rather than squeezed in retroactively. The incorporation of green spaces into housing development projects helps to provide the long-term solutions that are necessary to disrupt cycles of infrastructural discrimination.

Evaluation Criteria

To evaluate the strengths and weaknesses of each policy option, thirteen criteria divided into five categories were used for assessment. These criteria represent only a portion of the complexities surrounding disparities in green spaces. The ideal policy would tackle historical injustices through focused initiatives. Additionally, it would balance practicality and equity, consider potential unintended consequences, and stay responsive to community needs while avoiding overly strict or sluggish methods.

Table 1. Summary of Evaluation Criteria

Category	Measures	Summary
Effectiveness	<ul style="list-style-type: none"> - Targeted Intervention - Prioritization of Underinvested Areas - Systemic Change 	This framework measures a policy's effectiveness by assessing its targeted support for high-need neighborhoods.
Cost	<ul style="list-style-type: none"> - Cost of Implementation - Cost of Maintenance 	This framework measures a policy's cost by evaluating its budgetary feasibility and long-term sustainability for underfunded areas to ensure projects remain viable over time.
Feasibility	<ul style="list-style-type: none"> - Scalability - Political Alignment - Integration Ability 	This framework measures a policy's feasibility to integrate smoothly into existing urban systems. It focuses on implementation processes that hinge on community buy-in and existing infrastructure.
Side Effects	<ul style="list-style-type: none"> - Developer Resistance - Gentrification Risk 	This framework measures a policy's side effects by identifying unintended consequences. It ensures that green space creation does not inadvertently displace residents or face opposition that undermines its benefits.
Equity, Fairness, Justice	<ul style="list-style-type: none"> - Exclusion of Neighborhoods 	This framework measures a policy's equity by ensuring that high-need neighborhoods are not excluded from improved

green space access. It addresses historical inequities by holding policies accountable for reaching the most underserved communities.

Effectiveness

This category measures both physical changes and social outcomes.

Targeted Intervention

Analyze the policy's ability to address the unique needs of specific high-need neighborhoods. Measuring this would involve pre-and post-assessments to evaluate the participation and impact of the green space before and after creation.

Prioritization of Underinvested Areas

Emphasizes directing resources to communities with established records of disinvestment. It will be measured using a combined index of neighborhood needs and comparing fund distribution to areas that rank highest on this index.

Systemic Change

Potential to transform structural inequities. To measure this, reviews of legislative or institutional reforms, such as permanent changes to city zoning or shifts in municipal budgeting practices, would be conducted.

Economic, Social, and Health Impact

Ability to improve economic mobility, social cohesion, and health outcomes. Measuring this would include tracking employment trends in green sectors, crime statistics, and public health surveys.

Cost

This category determines budgetary feasibility and sustainability, especially in underfunded areas.

Cost of Implementation

Launching the policy requires an upfront financial investment. This would be measured by analyzing budgetary allocations for programs and calculating total spending per acre of green space developed.

Cost of Maintenance

Long-term expenses for sustaining green spaces. Measuring this would include tracking annual municipal expenditures on park maintenance, expressed as cost per capita for ongoing upkeep.

Feasibility

This category focuses on implementation processes and hinges on political alignment, existing infrastructure, and community buy-in.

Scalability

Ability to expand the policy across cities or regions depending on factors such as flexibility, adaptability, and integration. Measurement would assess replication rates in demographically similar areas.

Political Alignment

Compatibility with existing political priorities to secure legislative support. This would be measured through public opinion, public endorsements from elected officials, or funding commitments in bipartisan budgets.

Integration Ability and Speed

Ease of merging the policy into existing urban systems. Measuring this would evaluate the time elapsed between policy adoption and project completion.

Side Effects

This category focuses on unintended consequences that policies must mitigate to be sustainable and effective.

Developer Resistance

Risk of opposition from real estate developers due to added costs or regulations. To measure this, lobbying expenditures, lawsuits, or the frequency of challenges to zoning changes would be measured.

Gentrification Risk

Likelihood of displacing residents due to rising property values post-implementation. Measurement would include tracking displacement rates, rent increases, and demographic shifts in neighborhoods with new green spaces.

Equity, Fairness, Justice:

This category addresses historical inequities and ensures high-need communities receive tailored resources.

Exclusion of Neighborhoods

There are risks that some high-need areas will remain underserved. Measurement would involve geographic analysis of green space distribution, quantifying the percentage of marginalized neighborhoods without improved access.

Outcome Projections**Table 2.** Outcome Scoring Matrix

Category	Community Planning & Development	Green Space Equity Fund	Public Health & Environmental Justice Legislation	GS Access Mandate
Effectiveness (+)	3.75	4.75	3.75	3.25
Cost (-)	3.5	5	3	3
Feasibility (+)	3	3	2.33	4.67
Side Effects (-)	1.5	1.5	4	3.5
Equity, Fairness, Justice (-)	1	2.5	3.5	4.5
Overall Score	12.75	16.75	16.58	18.92

Note. Scored 1-5. Categories marked with a (+) indicate that 5 is the best score, and categories marked with a (-) indicate that 1 is the best score. The target overall score is 13.

Effectiveness

The Community-led initiative excelled in increased targeted interventions in underinvested areas but did poorly in systemic change and overall impact (Cohen et al., 2016). Community-driven solutions are vital for segregated neighborhoods (Williams & Collins, 2001). Local control, unfortunately, does not have many measurable or significant systemic effects. Although it is effective in empowering residents, it does not reform systems, making its scaling feasibility weak (Karmeniemi et al., 2018).

The Green Space Equity Fund's scoring is somewhat flipped; it lacks targeted intervention but excels in systemic, economic, social, and health impact. Metrics prioritize underinvested areas, but limited

community input may reduce relevance (Karmeniemi et al., 2018). The policy targets underinvested areas but risks misalignment without grassroots input, addressing symptoms but not root causes (Wen et al., 2013).

Public Health Legislation did not score poorly in this category, but it misses key points crucial to the issue's foundation. Mandating equity in zoning/green space access is a step in the right direction, but top-down mandates may overlook hyper-local needs (Schulz et al., 2002). Although it may be able to instill systemic change and have a significant health impact, it lacks targeted intervention, prioritization, and economic and social impact.

The Green Space Access Mandate scored the least well in this category. It does not challenge the existing land-use policies. By focusing on the development of new housing, it risks excluding existing marginalized neighborhoods (Wen et al., 2013). This mandate would help to improve economic impact by boosting property value and having systemic change. However, it can risk displacing the residents of communities the mandate is meant to help.

Cost

Community-led Planning relies on redirected funds to implement and maintain the program. It has a reduced initial cost, but long-term maintenance would require sustained investment and community engagement (Holliday et al., 2020). Funding reallocation may also reduce resources for other projects. This could lead to a “fight for funding” in local communities, but overall, the cost of this policy option is lower than its counterparts.

The Green Space Equity Fund would likely have high upfront and maintenance costs. Sustained federal grants would assist in funding initial projects in marginalized areas and maintaining the program long-term. (Holliday et al., 2020; Wen et al., 2013).

With the Public Health Legislation, municipalities would absorb medium upfront and low long-term costs with the help of grants from the federal government (H.R.5376; H.B.503). When legislation mandates improvements, such as requiring green spaces in underserved areas, the local government is usually responsible for ensuring compliance. There would be municipal costs for zoning, compliance, and health assessments. Developers would be responsible for the development and maintenance costs of green space.

The Green Space Access Mandate would provide tax credits to incentivize developers to create green spaces (Holliday et al., 2020). Developers would manage the upkeep of green spaces as municipalities oversee standards. The tax credits could be costly to the federal government, but long-term other funding is unlikely to be needed, which would keep overall costs quite low.

Feasibility

The Community-led Planning policy is mediocre overall in this category. The foundation of its feasibility depends on local partnerships and community buy-in, making it challenging to be scalable and have bipartisan approval. Areas whose political views do not align with the goal will not adopt the policy. Its integration ability and speed could be slowed due to participatory processes, but that is dependent on the residents within a community (Caperon et al., 2022).

The matrix shows that the Green Space Equity Fund would do very well in its scalability. The fund would be at the federal level, ensuring it is enacted equitably in every state. Since it can build off existing grant structures, implementing it would be easier and faster (Wen et al., 2013). As for political alignment, the fund could bring bipartisan appeal for “green jobs” (Holliday et al., 2020).

Enacting Public Health Legislation would face significant pushback due to the need for political alignment, legal hurdles, and developer resistance. Governance and zoning issues would complicate its passage (Schulz et al., 2002).

The Green Access Mandate has performed exceptionally well regarding feasibility. It is a policy that can be integrated into housing permits, enhancing its expandability and speed of implementation (Wen et al., 2013). Tax credits would attract developer support and influence infrastructure development, which would help increase property values. This would help foster political alignment and support for the policy. Overall, the mandate is likely to perform very well in administrative implementation.

Side Effects

The Community-led Planning policy excelled, showing low chances of conflict with developers or causing gentrification and resident displacement. It fosters public-private partnerships among local governments, non-profits, and planners, easing developers' resistance to green space creation. As green areas grow, property values may rise, attracting developers who might buy out residents, but that is unlikely to happen with this initiative.

Similarly, the Green Space Equity Fund would encounter minimal resistance from developers because it mainly allocates grants to nonprofits, land trusts, and municipalities instead of imposing direct regulations or financial burdens on private developers (Baird et al., 2019). The fund is unlikely to encourage gentrification. Its design emphasizes community ownership, anti-displacement measures, and equitable access to ensure that improvements benefit existing residents without attracting speculative investment (Schulz et al., 2002).

The Public Health Legislation scored poorly in this category; it will likely bring developer resistance and gentrification in marginalized areas. Developers would oppose zoning changes, potentially stalling progress due to legal or practical obstacles (Swope, 2018). Additionally, the legislation would increase compliance costs, which developers might pass on to residents and displace those within the community due to unaffordability (Smith, 2020).

The Green Space Access Mandate scored similarly to the Public Health Legislation but is less likely to encounter resistance. While tax credits could help mitigate some resistance from developers, others may entirely withdraw from affordable housing projects as a form of protest. This will likely trigger a housing bubble; constrained supply and increased demand will increase prices and a greater displacement rate (Holliday et al., 2020).

Equity, Fairness, Justice

Community-led Planning excels in this category, proving to be unlikely to exclude existing neighborhoods or be so broad as to ignore community needs. Since the community is directly involved, it mitigates these risks without the need for additional clauses or oversight boards.

The Green Space Equity Fund performed mediocrely. It might exclude existing neighborhoods since metrics may overlook rural areas (Schulz et al., 2002). There is also a possibility of it generating “uniform projects” that are not tailored to community needs and may further enforce the “usage gap” (McEachan et al., 2018).

Public Health Legislation did not perform well in this category. It is very likely to exclude existing neighborhoods because although it mandates city-wide coverage focusing on marginalized communities, they are not involved with the planning or development of green spaces. This could lead to them not being used since they do not serve the community's needs (Wen et al., 2013).

The Green Space Access Mandate scored the worst, with a high likelihood of excluding existing neighborhoods and very likely to be an overarching policy that does not fit the needs of specific communities. Since it incentivizes new development, the existing communities in need will continue to be ignored, and the disparity will grow.

Trade-offs

The outcomes matrix reveals some interesting trade-offs between policy options. The most equitable policies face feasibility challenges like funding shifts and political resistance, whereas less equitable policies are easier to implement. The options with higher upfront costs deliver the most widespread, systemic impact.

Community-led Green Space Planning emphasizes tailored, community-driven solutions with relatively low upfront costs yet risks slower implementation and resource diversion.

The Green Space Equity Fund, while scalable and capable of delivering a broad systemic impact through targeted federal grants, may misalign with local needs due to limited grassroots input.

In contrast, Public Health and Environmental Justice Legislation could instigate transformative change by mandating improvements across underserved areas. However, it faces considerable political and legal hurdles, including developer resistance and a higher likelihood of gentrification.

Lastly, the Green Space Access Mandate offers a streamlined approach by integrating green space requirements into new housing developments, though it may unintentionally exclude existing marginalized neighborhoods and accelerate displacement.

Ultimately, these trade-offs show that policies promising extensive systemic change often will come with more significant implementation challenges and unintended consequences. At the same time, those that are easier to deploy may fall short of addressing the deep-rooted inequities in urban green space distribution.

Recommendation

Based on the aforementioned trade-offs, the preferred recommendation would be to adopt a hybrid policy model that combines elements of the Green Space Equity Fund with Community-led Planning and Development. This approach would leverage federal funding to ensure scalable, systemic improvements while mandating structured community engagement at the local level to tailor green space development projects to specific neighborhood needs (Roberts et al., 2016).

This ensures that federal resources are directed to underfunded areas using objective, quantifiable metrics while local input helps design relevant, sustainable green spaces that avoid gentrification. At the same time, incorporating Community-led Planning processes would help mitigate risks of misalignment with local priorities and limit the possibility of potential displacement by ensuring that projects are designed with direct resident input. This merged strategy seeks to achieve urban change alongside widespread economic, social, and health benefits while also still maintaining accountability and relevance at the local level.

However, a notable weakness is the potential complexity of coordinating federal oversight with decentralized community processes, which could slow implementation and require careful funding and resource allocation management (Corridan & Haggerty, 2024).

The proposed hybrid policy model effectively bridges the gap between systemic reform and targeted community intervention. Combining the extensive reach of federal funding with grassroots-led planning, the policy aims to address urban green space disparities while being specific to local needs and reducing displacement risks (Roberts et al., 2016). Although coordinating these two approaches presents implementation challenges, the potential benefits of promoting equitable, sustainable urban development make this a compelling path forward.

Main Insights

Four main insights are essential to consider during the decision-making process.

The hybrid policy model integrates top-down and bottom-up strategies. Combining government funding with local grassroots participation and initiatives reduces reliance on a single stakeholder. This approach mitigates risks, such as ‘elite capture’ and bureaucratic delays.

The center of this policy is the pursuit of equity, yet this equity is fragile. The success of this policy hinges on several high-risk assumptions (such as fair funding allocation, anti-displacement measures, etc.). Without adequate safeguards, this policy option could unintentionally harm the communities it was designed to help.

This policy would mitigate gentrification more effectively than alternative options and standalone policies. Community ownership models, such as land trusts and federal grants, have been shown to be beneficial by significantly reducing displacement. This can be seen in areas such as Portland, Oregon, where community ownership models helped reduce displacement, according to the City of Portland Office of Planning and Sustainability.

There is implementation complexity with this proposed policy model due to the hybrid approach. Federal-local coordination could slow progress. These delays risk eroding community trust and local and political support.

With this hybrid policy model, long-term sustainability is not assured. Without systemic funding and capacity-building, short-term grants and volunteer-driven engagement may struggle. Multi-year financing must be secured, alongside the institutionalization of maintenance responsibilities, to ensure this model can achieve lasting engagement and effects.

Enhancing physical and mental health and economic mobility represents the ideal outcomes of increasing green space usage. In this model, health and economic outcomes are interdependent. While health improvements, such as reduced asthma rates, rely on green space usage, they also depend on safety, accessibility, and cultural relevance. Siloed interventions, such as constructing parks without addressing the area’s crime issues, will fail.

Within the logic model, there are gaps where specific assumptions have been made, and possible risks have not been accounted for.

The hybrid policy model assumes that increasing green infrastructure will directly impact the community’s economic mobility. To improve economic mobility, green infrastructure must create explicit job opportunities, such as park maintenance or urban farming, or attract employers to the area. If there is no intentionality behind workforce development, the link between green space usage and economic mobility is tenuous, at best.

Another gap is that the model does not specify how community advisory boards influence funding or local policy decisions. To avoid tokenism, these boards require formal authority to make decisions like vetoing projects and budgeting. It also relies on volunteer-driven community advisory boards and workshops without addressing long-term burnout or possible funding for participation stipends. Some clarification could be needed on how engagement will be sustained beyond initial enthusiasm.

This model assumes seamless collaboration between federal grant administrators and community advisory boards but lacks details on reconciling priorities. It also aims for scalability; however, successful replication in other cities cannot occur without thoroughly addressing contextual differences, such as

variations in political climates and resource availability. A “replication toolkit” must include adaptive frameworks rather than rigid templates for the policy option to be scalable. The balance between federal criteria and the hyper-local needs identified by the community boards needs further development.

Assessment of Hybrid Policy Model

After a thorough assessment of the logic model developed for this hybrid policy, it was concluded that the proposed hybrid policy option is moderately strong but conditional. The model is holistic; it aims for equity by addressing economic, social, and environmental factors. It relies on community initiative and participation, embedding community action through advisory boards and development workshops, which help build ownership and resilience. Unfortunately, the theoretical policy depends on highly vulnerable assumptions for success, such as trust in institutions and anti-gentrification policies. A community’s lack of trust in the government stems from the belief that institutions are not working in their best interest, leading to lower engagement and political participation. Federal oversight may clash with decentralized processes, and green gentrification remains a threat without explicit anti-displacement policies.

Additionally, external risks, such as economic shocks or climate disasters, could derail the progress made in implementing the policy. The policy model is highly contingent on mitigating risks. Though it is not inherently weak, its success relies on proactive risk management, which should instill a sense of security and confidence in the audience.

Implementing this policy could pose significant risks if the client cannot fully address key concerns. It may be wise to reconsider the hybrid policy model or initiate small-scale projects first. To validate assumptions before expanding, a single park and a job training program could be introduced in a community. This could be tested in one or two high-capacity neighborhoods to refine coordination and engagement strategies before moving to larger-scale areas.

If the client can ensure risk mitigation, they should proceed with cautious optimism. The policy model's hybrid structure is replicable and equity-focused, with a high likelihood of reducing park inequities. For the policy to succeed, it is essential to implement monitoring systems to track gentrification risks and engagement fatigue.

Implementation Risks & Mitigation Strategies

The policy model outlines various ideas concerning potential implementation risks.

Bureaucratic delays resulting from federal-local collaboration could pose a significant challenge. To address this, negotiations concerning interagency agreements should occur at the outset, and a dedicated project coordinator or federal-local liaison should be established to facilitate approvals. It would be advantageous to adopt fast-track permitting expressly for community-backed projects.

Marginalized groups may still be excluded from these communities. Workshops and advisory boards might overlook individuals with disabilities or residents who do not speak the area's primary language. Allocating funds for translators, childcare, and accessible venues could prove beneficial. Some seats on community advisory boards could be reserved for underrepresented groups.

Legally mandated affordability measures, such as rent stabilization and right-to-stay clauses, should be included in funding agreements to ensure anti-displacement measures are in place.

Securing flexible funding should ensure federal grants allow for adaptive, community-driven spending rather than “shovel-ready” templates; this can be done by allocating fifteen percent of grants to local innovation funds managed by the community advisory board.

Residents participating in community boards and workshops may experience volunteer burnout and disengagement resulting from unpaid labor. To help prevent volunteer burnout and elite capture, these community boards should be trained in grant management, conflict resolution, and advocacy. Partnering with non-governmental organizations to provide stipends and support for the community board members can assist.

If funding instability exists during policy implementation, grants may expire before projects generate results. This would hinder scalability and replication, as it could be perceived as wasteful. This issue can be mitigated by diversifying funding sources, such as green bonds or public-private partnerships, to supplement federal grants.

The policy's strength lies in its dual focus on equity and community agency, but implementation risks must be addressed to avoid unintended harm or "red tape" delays.

Targeted Implementation Analysis

The recommended hybrid policy model, combining a dedicated funding stream with mandatory community-led planning, could be implemented in the District of Columbia with a focused effort on Wards 5, 7, and 8 by utilizing existing local assets, governance structures, and community organizations. This would involve creating a D.C. Community Green Space Equity Fund, financed through a combination of local budget allocations, developer impact fees, and actively seeking federal grants, with resources specifically directed to areas with the most severe environmental injustices.

The Anacostia River has long served as a symbolic boundary dividing the majority-Black communities east of the river from the rest of the city (Kratz, 2025), and data shows that Wards 5, 7, and 8 experience the highest rates of pediatric asthma emergency room visits, up to 25 times the average in some neighborhoods, along with higher mortality and chronic disease rates directly linked to historical redlining and transportation inequities (Wire, 2023).

Implementation would involve a formal partnership between District agencies and community-based nonprofits such as Building Bridges Across the River, Ward 8 Woods, and the Trust for Public Land. This coalition would focus on neighborhoods that meet multiple criteria for concentrated poverty, environmental justice concerns, and limited access to green space, ensuring that funds reach communities with the greatest documented needs. The community participatory design process required by the hybrid policy would follow engagement principles developed by the 11th Street Bridge Park, which hosted over 1,000 community meetings over more than 14 years to make sure resident priorities influenced every part of the project (Kratz, 2025). This process would compensate community members for their time and expertise, establish Community Advisory Boards with real decision-making authority in each targeted ward, and ensure projects address documented local needs related to health, environmental benefits, and community safety.

Importantly, implementation would include legally mandated anti-displacement strategies to address the gentrification risks inherent in green space development. Building on the 11th Street Bridge Park's Equitable Development Plan (Bernard, 2018), the initiative would invest in community land trusts such as the Douglass Community Land Trust, which now manages over 230 affordable homes, and replicate programs like the East of the River Homebuyers Club, which has already helped 182 families in Southeast D.C. purchase their first homes (Rumph, 2026). These measures ensure that increases in property value resulting from greening projects benefit long-term residents rather than displacing them.

Long-term maintenance and workforce development would be supported by linking green space projects with existing workforce training programs, such as the DC Green Corps, operated in partnership with the Department of Energy and Environment and the Urban Forestry Administration. This program offers

eight-week training cohorts in urban forestry and green infrastructure, creating pathways to green careers for residents and ensuring that newly developed parks and gardens are maintained by the communities they serve (Washington Parks & People, 2026).

Additionally, the initiative would leverage D.C.'s innovative Stormwater Retention Credit market, which has sold over 1.7 million credits since 2014 (Kane, 2024), to generate self-sustaining revenue streams for ongoing maintenance and to meet Clean Water Act requirements. This would position the District of Columbia as a national leader in equitable and sustainable urban development.

Conclusion

The hybrid green space policy model, which integrates the Green Space Equity Fund with Community-led Planning, offers a robust framework for addressing historical inequities in access to urban green space. By combining federal funding to target systemic underinvestment with grassroots participation to ensure culturally relevant design, this approach seeks to revitalize distressed neighborhoods while prioritizing equity. Its theory of change is rooted in balancing top-down resource allocation with bottom-up agency, where similar models have reduced displacement and increased park usage in marginalized communities. However, the policy's success is not guaranteed; it faces significant operational challenges that require proactive mitigation. For residents in historically marginalized neighborhoods, the research in this article translates into tangible outcomes: creating safe, culturally relevant green spaces while preventing the displacement of longtime residents. The green spaces can serve as true cornerstones within the community rather than signs of gentrification.

The model's viability depends on tackling the abovementioned challenges through enforceable safeguards, adaptive governance, and ongoing investment. While the hybrid model is innovative and theoretically sound, its real-world impact relies on adaptability, flexibility, and a commitment to balancing speed with justice. Applied effectively, this research offers a pathway to ensuring that public investment does not inadvertently displace the very residents it aims to serve. This turns policy goals into lived security and well-being for families who have long been overlooked. For the client, moving forward intentionally with a phased implementation, enforceable equity mandates, and community partnerships will be crucial to transforming this policy into a replicable blueprint for equitable urban renewal.

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A COST-BENEFIT ANALYSIS OF EXPANDING ACCESS TO AFFORDABLE HOUSING UNITS FOR PUBLIC SCHOOL TEACHERS IN WASHINGTON, D.C.

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Abstract

At less than 60% of the area median income (AMI), the base salary for first-year District of Columbia Public Schools (DCPS) teachers is insufficient to pay market-value rent on units within the district (Sayin, 2024). In the 2023-2024 school year, 12% of DCPS teachers left the district entirely (Office of the State Superintendent of Education [OSSE], 2024). This article evaluates whether Inclusionary Zoning (IZ) reform in the District of Columbia (D.C.) could serve as a cost-effective strategy to combat the teacher shortage and affordability crisis. Using a 10-year time frame, three policy alternatives were analyzed: 1) Expand D.C.'s IZ program to issue an additional tax credit and density bonus for developments that designate an additional 5% of units as "Educational Workforce Units." 2) Prioritize educators in the application process for affordable units without altering the current IZ tax benefits and density bonuses. The number of affordable units offered would not change, and no changes would be made to the type or amount of tax credits available. 3) Support the identification and redevelopment of abandoned or vacant buildings into affordable housing by local organizations, with resulting units being made available specifically for educators. Based on the findings, we recommend that D.C. expand its IZ program to issue an additional tax credit and density bonus for developments that designate an additional 5% of units, as it would be cost beneficial to the city and would result in the highest benefits to DCPS teachers.

Introduction

Low, stagnant wages have made it difficult for educators to afford rentals or purchase their first homes (Kruth, 2025). The National Council on Teacher Quality found that over the past six years housing costs have on average increased by 47-51%, outpacing salaries for first-year teachers (Bowser, 2025). Low wages for teachers in a market with high housing costs have contributed to high attrition within D.C. Public Schools (DCPS), which has negative implications for both the school district's budget and educational outcomes of DCPS students (Sparling, 2026). To combat this, three policy strategies were analyzed: 1) Expand D.C.'s IZ program to issue an additional tax credit and density bonus for developments that designate an additional 5% of units as "Educational Workforce Units." 2) Prioritize educators in the application process for affordable units without altering the current IZ tax benefits and density bonuses. 3) Support the identification and redevelopment of abandoned or vacant buildings into affordable housing by local organizations, with resulting units being made available specifically for educators.

Structural Link Between Housing Costs and Teacher Attrition

A first-year teacher in the city of D.C. earns an estimated salary of \$65,000 with a bachelor's degree, with an adjustment of 2% (Washington Teacher's Union [WTU], 2024). The Washington Teachers' Union (WTU) and DCPS collaborated to create a performance-based compensation and benefits system for D.C. teachers and Council of School Officers (CSO) called IMPACT *plus* (District of Columbia Public Schools [DCPS]). DCPS describes this system as "a groundbreaking-based pay system" program through which teachers and CSOs are paid more fairly (DCPS, n.d.). However, DCPS teachers' median salary remains at \$81,740, below D.C.'s 80% AMI for a single-person household (DCPS, 2023). Low wages for teachers relative to D.C.'s average household income (\$150,292 amongst all households) result in a higher cost burden for teachers in the District (District of Columbia Office of Planning, n.d.).

The most expensive neighborhood in D.C. is Woodley Park where rent ranges from \$3,749 to \$6,107 per month and the least expensive neighborhood is Anacostia where rent ranges from \$1,368 to \$1,942 per month, showing the differences in rent burden for teachers across the city (Blake, 2025). The Department

of Housing and Urban Development's (HUD) criteria for affordable housing sets the lower income level at 80% and very low-income level at 50% of the median income for each area (U.S. Department of Housing and Urban Development [HUD], 2021). According to the D.C. Policy Center, a teacher earning the median teacher salary would be considered rent-burdened in most parts of the city as housing costs would consume about 32.4% of their income (Newman, 2022). The high cost of living makes it difficult for teachers to live in the city, forcing many to commute from Virginia or Maryland.

For many first-year teachers, the high living costs in D.C. and the surrounding areas are not fiscally feasible. DCPS struggles with a high attrition rate among teachers: 12% of DCPS teachers left the district entirely in the 2023-2024 school year (OSSE, 2024). DCPS teachers cited low wages when testifying to the Council of D.C. on the reasons for this attrition (WTU's Official YouTube Channel, 2023). This high turnover rate comes at a significant cost to school districts in the form of offboarding, recruiting, hiring, and training expenses accrued when a teacher leaves.

The D.C. Department of Housing and Community Development (DHCD) reported that in fiscal year 2023, the IZ program produced 413 new affordable units, with 44% priced at 80% AMI, 35% priced at 60% AMI, and 21% priced at 50% AMI (Green, 2023). Since its inception, 2,400 units have been built: over half are priced at 80% AMI, while 26% are priced at 60% AMI (District of Columbia Department of Housing and Community Development [DHCD], 2023). This means first-year teachers in D.C. could only *qualify* for 26% of the affordable units built since 2006. As previously stated, estimated first-year teacher salaries fall *below* 60% AMI, bringing into question the affordability of these limited units.

Setup and Parameters

Standing

This cost-benefit analysis evaluated the impacts of expanding affordable housing for public school K-12 educators in D.C. The affected population is defined as anyone who has a connection to the D.C. education system. This includes teachers, students, families, school administrators and personnel, and community members, as they are all directly and/or indirectly impacted by the expansion of educational workforce affordable housing.

Parameters

A ten-year time horizon was used in the analysis to account for time and successful outreach, and a 7% discount rate was used as the primary rate for present value calculations in accordance with public investment evaluation guidelines. Sensitivity analyses were carried out at discount rates of 2% and 3% to test the benefit ratio of each policy alternative at different rates of economic growth.

The individual savings from reduced travel time for teachers were calculated by using the average commute time of workers in D.C. and the average salary of a DCPS teacher increased by 30% to account for fringe benefits. The value of the reduction in travel time was calculated by multiplying the individual travel cost savings by the expected reduction in attrition. The decrease in living expenses benefit was calculated by using the difference between average cost burden for DCPS teachers below median teacher income and the 30% rental cost cap imposed by the proposed policy. This difference was then multiplied by the number of DCPS teachers who would stay in the district if attrition were reduced by 10% in response to increased availability of affordable units. The benefits of teacher retention were calculated using an interactive tool from the Learning Policy Institute that calculates the estimated cost of replacing a teacher based on the size of the district. The savings reflect avoided costs of hiring, onboarding, and training new staff (Learning Policy Institute [LPI], 2024).

The cost of expanding the tax credit is assumed to be equal to the costs saved by teachers, as the tax credit proposed is equal to the amount of rent forgone by building owners as a result of pricing educational workforce housing (EWH) units at 30% of teachers' salary. Administrative costs to D.C.'s Office of

Zoning (DCOZ) and DHCD associated with the implementation of EWH were calculated by determining the number of additional staff needed for an additional number of units built, taking the average salary for each additional employee, and increasing by 30% to account for fringe benefits.

Limitations

Limitations apply to this analysis related to the availability of data and the limited scope of information available for the unique context of the D.C. area. Commuter information specific to educators is limited, and the information available about general commute times may be skewed since many workers in D.C. commute from outside the District, and may not be accounted for in data reporting average travel times of individuals living and working in D.C.

Estimates of housing cost burden reduction and benefits of teacher retention rely heavily on the readily available data of salary and pay of educators. This data may not fully capture variation in educator salaries given several factors such as levels of teaching experience and household composition. Similarly, teacher retention data may not account for behavioral responses such as external factors affecting one's decision to remain in the profession. Reasons for wishing to stay or leave can vary depending on schools and the unique challenges educators face in their district.

Summary Table of Costs and Benefits

Table 1 summarizes the costs and benefits estimated for the three alternatives analyzed. Discount rates of 2%, 3%, and 7% were used with a 10-year timeframe. Each alternative is discussed in further detail below.

Table 1: Summary table of costs and benefits for the three alternatives analyzed at discount rates of 2%, 3%, and 7%.

	Educational Workforce Inclusionary Zoning			Prioritize Teachers in the Affordable Housing Lottery			Educational Workforce Housing Development		
Discount Rate	2%	3%	7%	2%	3%	7%	2%	3%	7%
Costs:									
Expansion of Tax Credit	\$5.17 million	\$4.93 million	\$4.15 million	-	-	-	-	-	-
Administrative Costs - OZ	\$1.06 million	\$1 million	\$817.9 thousand	-	-	-	\$1.06 million	\$1 million	\$817.9 thousand
Administrative Costs - DHCD	\$3.3 million	\$3.09 million	\$2.41 million	\$1.03 million	\$987.49 thousand	\$831.38 thousand	\$3.3 million	\$3.09 million	\$2.41 million
Land, Labor, Materials	-	-	-	-	-	-	\$999.04 million	\$944.2 million	\$764.13 million
Benefits:									
Decrease in Living Expenses	\$5.17 million	\$4.93 million	\$4.15 million	\$2.58 million	\$2.47 million	\$2.08 million	\$43.08 million	\$40.27 million	\$31.15 million
Reduction in Travel Time	\$5.9 million	\$5.63 million	\$4.74 million	\$2.95 million	\$2.82 million	\$2.37 million	\$49.19 million	\$45.99 million	\$35.58 million
Teacher Retention	\$21 million	\$20.05 million	\$16.88 million	\$10.5 million	\$10.03 million	\$8.44 million	\$175.07 million	\$163.67 million	\$126.62 million
Present Value of Costs	\$9.53 million	\$9.03 million	\$7.39 million	\$1.03 million	\$987.49 thousand	\$831.38 thousand	\$1 billion	\$948.3 million	\$767.37 million
Present Value of Benefits	\$32.07 million	\$30.62 million	\$25.78 million	\$16.04 million	\$15.31 million	\$12.89 million	\$267.34 million	\$249.92 million	\$193.35 million
Net Present Value of Net Benefits	\$22.53 million	\$21.59 million	\$18.39 million	\$15 million	\$14.32 million	\$12.06 million	-\$736.06 million	-\$698.37 million	-\$574.02 million
Equivalent Annual Net Benefits	\$2.51 million	\$2.53 million	\$2.62 million	\$1.67 million	\$1.68 million	\$1.72 million	-\$81.94 million	-\$81.87 million	-\$81.73 million
Benefit-Cost Ratio	3.37	3.39	3.49	15.5	15.5	15.5	0.27	0.26	0.25
Internal Rate of Return	Very Low			Very Low			Very High		

Baseline Scenario

Under the current conditions, D.C. is experiencing significant teacher turnover, high housing costs, and a competitive but limited IZ affordable housing lottery system. These current conditions represent the baseline scenario in which the proposed expansion of IZ affordable housing for the educational workforce will be tested. Teacher turnover rates have been historically high in the D.C. area, especially for early-career teachers (Azimeraw, 2016). High teacher turnover negatively affects student performance and places a financial burden on school budgets (OSSE, 2024). The average cost of replacing a single teacher

is estimated to be roughly \$20,000 (LPI, 2024). This price considers the processes of hiring, onboarding, training, and loss of productivity.

Many educators in the D.C. area commute from neighboring areas such as southern Maryland and northern Virginia. This is in part due to high housing costs in D.C. and teacher salaries, making it difficult for teachers to live in the area. Teachers in D.C. public schools bear significant costs related to commuting. The average commute time for teachers is 30 minutes each way to and from work, and the average time cost of commuting annually is approximately \$11,240 (Azimeraw, 2016). Teachers with longer commuting times and who spend more money on commuting are more likely to leave their teaching positions (Dizon-Ross, 2019). Under the current conditions of the IZ program, 8 to 10 percent of new housing units constructed must be designated affordable housing units for low and moderate-income households (DHCD, n.d.). Eligibility for these newly constructed units is based on AMI. All applicants are entered into a random lottery system where there is currently no preference given to applicants based on their occupation or role in public service. The number of IZ units constructed annually is small compared to the demand for affordable housing in the area, and applications for these units are highly competitive. Another barrier teachers face regarding securing IZ housing units, especially early-career teachers, is that most units are geared towards income levels between 50% to 80%, which presents a challenge for teacher salaries because first-year teacher salaries are below 80% AMI (DHCD, 2023).

Analysis of Policy Alternatives

Alternative 1: Educational Workforce Inclusionary Zoning

To address the high attrition rates in DCPS, we propose an expansion of D.C.'s IZ program to issue an additional tax credit (equal to the annual estimated rent reduction for the units) and density bonus (10% additional residential floor area) for developments that include an additional 5% of units (in addition to the 8% required by the existing IZ code) as EWH. These units would give priority to D.C. teachers earning below 100% AMI and rent would be capped at 30% of the educator's household income, providing they still meet AMI income requirements (in cases where households have additional income earners who are not educators).

Table 2: Costs and Benefits of Educational Workforce Inclusionary Zoning

Costs		
	Tax Credits	\$4.15 million
	Administration Costs – Office of Zoning	\$818,000
	Administration Costs - DHCD	\$2.41 million
Benefits		
	Living Expenses	\$4.15 million
	Travel Time	\$4.74 million
	Teacher Retention	\$16.88 million
PV Costs		\$7.39 million
PV Benefits		\$25.78 million
NPV of Net Benefits		\$18.39 million
EANB		\$2.62 million
BCR		3.49

Administrative Costs

Administrative costs are assumed by both DCOZ, who must evaluate and approve all proposed IZ projects, and DHCD, which monitors compliance and administers the lottery system by which households are placed in affordable units. A report by the Lincoln Institute of Land Policy (2015) suggests that one additional full-time employee (FTE) is needed to administer every 150-300 units. This analysis assumes the addition of one additional FTE in both DCOZ and DHCD for every 300 additional workforce units created through the program. Using publicly available salary data from the City of D.C., we estimated each additional Zoning Specialist in DCOZ to be hired with a salary of \$101,290 (based on the salary of the most recently hired Zoning Specialist currently working for DCOZ) and each additional IZ Compliance staff in the DHCD to be hired with a salary of \$79,705 (based on the current salary for this job title at DHCD) (District of Columbia Department of Human Resources [DHR], n.d.). These compensation rates have been increased by 30% to account for fringe benefits. To estimate the anticipated number of units constructed under the program, we assume a growth rate of 25% of additional units constructed over the current baseline for IZ. In 2023, 413 affordable units were built using the IZ program (DHCD, 2023). Given that, this program requires that 8-10% of units constructed be affordable, and that our proposed policy requires an additional 4-5% (approximately 50% of the number required for normal IZ) of total units be designated as EWH, we based this calculation on an assumption that 50% of new developments constructed using IZ would take advantage of the expanded program and designate an additional 4-5% of units as EWH. This brought us to an estimated additional 25% of units constructed year over year, with an additional 11% growth rate for overall IZ development, which is averaged from information about the growth of affordable units between 2016-2024 (DHCD, 2023).

Decrease in Living Expenses/Expansion of Tax Credit

The tax credit offered for developers of EWH units will be equal to the amount of rent income forfeited by discounting the unit to an affordable rate. We assume this to be equivalent to the reduction in rental cost burden for teachers occupying these units, as the rent for EWH units will be capped at 30% of the teacher's monthly income. To estimate this figure, we used information available from the American Community Survey (ACS). According to Newman (2022), the average rent burden for teachers in the bottom quartile of teacher salary (below \$62,050 per year) is 42.7%; teachers in this quartile would therefore save a maximum \$7,880 per year if their rent was reduced to 30% of their income. In the next highest quartile below median teacher salary (\$81,740), average rent burden is 32.4% (Newman, 2022); teachers in this quartile would save a maximum \$1,962 per year in housing costs if their rent was capped at 30% of their income. To approximate estimated individual savings per year, we averaged these two numbers. We then chose to multiply that average individual savings by the expected reduction in teacher attrition expected with the implementation of this policy (10% reduction from current attrition rate).

Reduction in Travel Time

ACS data from 2016 shows that the average commute time for workers in D.C. is approximately 30 minutes in each direction (Azimeraw, 2016). Assuming that teachers are commuting to and from school 5 days a week, 44 weeks out of the year (the length of the most recent DCPS school year), and using the mean salary for DCPS teachers (\$81,740) plus a 30% increase to account for fringe benefits, we estimate the total annual value of an individual teacher's commute to be \$8,646 (DCPS, n.d.; Newman, 2022). With a 15-minute reduction in travel time in either direction, the value of time saved would be \$4,323 per teacher per year. To estimate the total value of the time saved by teachers living in more accessible affordable units, we multiplied this individual time savings by the expected reduction in attrition attributed to this policy (10% of total attrition, or approximately 105 teachers per year) (OSSE, 2024).

Teacher Retention

In 2024, 12% of DCPS's 8,767 teachers (or 1,052 teachers) left the district entirely (OSSE, 2024). The Learning Policy Institute estimates that the cost of replacing a single teacher in a large urban school district is approximately \$20,000, including offboarding the exiting teacher as well as recruitment, hiring,

and training of the replacement teacher (LPI, 2024). Considering that teacher retention is likely related to other factors in addition to D.C.'s high cost of living, we expect that this policy could help reduce turnover by 10% overall, which would reduce annual costs related to teacher turnover by \$2,104,080 in the first year.

Costs and Benefits

Over 10 years, with a discount rate of 7%, we estimate the cost of administration of this expansion to D.C.'s existing IZ program to be \$817,901 for DCOZ and \$2.41 million for DHCD. The associated tax credits issued to developers for the amount of foregone rent is estimated to be \$4.15 million. The total present value of costs for this alternative is \$7.39 million. Over 10 years, a 10% reduction in teacher turnover would save DCPS an estimated \$16.88 million in offboarding, hiring, and training costs. A 15-minute reduction in travel time for 10% of the expected teacher attrition rate in DCPS would result in an estimated \$4.74 million saved. The total value of rent saved by teachers is estimated to be \$4.15 million. Total present value of benefits for this alternative is \$25.78 million, and Net Present Value of Net Benefits for this policy is \$18.39 million. The BCR for this alternative is 3.49.

Alternative 2: Prioritize Teachers in the Affordable Housing Lottery

Instead of expanding D.C.'s IZ program, the city could instead prioritize educators in the application process for affordable units without altering the current IZ tax benefits and density bonuses. The number of affordable units available on the market would not change over baseline, and no changes would be made to the type or amount of tax credits available.

Table 3: Costs and Benefits of Prioritizing Teachers in the Affordable Housing Lottery

Costs		
	Administration Costs - DHCD	\$831,400
Benefits		
	Living Expenses	\$2.08 million
	Travel Time	\$2.37 million
	Teacher Retention	\$8.44 million
PV Costs		\$831,400
PV Benefits		\$12.89 million
NPV of Net Benefits		\$12.06 million
EANB		\$1.72 million
BCR		15.5

Administrative Costs

Because this alternative is not associated with an increase in the number of affordable units produced overall, we assume that there would be no need for increased staffing in DCOZ and that one additional staff member in DHCD could manage prioritization of teachers in the affordable housing lottery system. Using the salary levels and assumptions mentioned in Alternative 1, we expect that the annual cost of this additional staff member will be \$103,600.

Decrease in Living Expenses

Because this alternative does not increase the number of units produced, we expect that the implementation of this policy will reduce teacher attrition by less than Alternative 1, as teachers will still be participating in an already-competitive affordable housing market. Therefore, we assume a 5% reduction in attrition among DCPS teachers. The expected average rent burden saved multiplied by the 5% reduction in attrition would save teachers \$259,000 in the first year of implementation.

Reduction in Travel Time

Using the same assumptions about the cost of travel time listed in Alternative 1, we expect that the 5% of teachers who would have otherwise left DCPS would save an expected \$295,600 in the first year of implementation due to reductions in commute time.

Teacher Retention

A 5% reduction in attrition associated with increased access to affordable housing for DCPS teachers would save the school district an expected \$1.05 million in hiring, training, and offboarding costs in the first year.

Costs and Benefits

With a discount rate of 7%, we expect the total cost of this alternative (equal to the administrative costs assumed by DHCD) over 10 years to be \$831,375. Implementation of this alternative would save DCPS teachers an estimated \$2.08 million in living expenses and \$2.37 million in travel time over 10 years. DCPS would also avoid an estimated \$8.44 million in turnover, training, and hiring costs associated with teacher attrition. We expect the total present value of benefits to be \$12.89 million, and the Net Present Value of Net Benefits to be \$12.06 million. The BCR for this alternative is 15.5. Though this alternative has the highest BCR, it is also expected to yield the least benefits for teachers in DCPS.

Alternative 3: Educational Workforce Housing Development

This alternative aims to support the identification and redevelopment of abandoned land into affordable housing by local organizations, with all renovated units being made available specifically for educators. This alternative takes inspiration from the Baltimore Vacants Reinvestment Initiative, which provides capital to local development organizations to redevelop properties with Vacant Building Notices (Maryland Department of Housing and Community Development, n.d.).

Table 4: Costs and Benefits of Educational Workforce Housing Development

Costs		
	Administration Costs – Office of Zoning	\$818,000
	Administration Costs - DHCD	\$2.41 million
	Land/Labor/Materials	\$764.13 million
Benefits		
	Living Expenses	\$31.15 million
	Travel Time	\$35.58 million
	Teacher Retention	\$126.62 million
PV Costs		\$767.37 million
PV Benefits		\$193.35 million
NPV of Net Benefits		-\$574.02 million
EANB		-\$81.73 million
BCR		0.25

Land, Labor, and Materials

We used a comparable renovation project in D.C. to estimate the cost of production per unit of renovated affordable housing at approximately \$556,000 per unit (Cox, 2025). To estimate the cost to produce units over time, we used the same assumptions related to unit production from Alternative 1 (25% increase in units over baseline with an 11% increase in production per year). With these estimates, we expect this alternative to produce 2,020 new affordable units over ten years.

Administrative Costs

Because this alternative requires the construction of new units, we use the same assumptions from Alternative 1 to estimate the number of DCOZ staff needed to oversee any necessary zoning or planning associated with the renovation of vacant units for use by DCPS teachers. We expect that DCOZ staff costs will be \$817,901 over 10 years. Administrative costs for DHCD will also be the same as Alternative 1, as we assume that DHCD will oversee assignment of teachers to units and administration of the program once units are constructed. The staffing costs for DHCD are expected to be \$2.41 million over 10 years.

Decrease in Living Expenses

With rent capped at 30% of teachers' income in the units created by this program, and with every newly constructed unit filled by a DCPS teacher over 10 years, the expected housing costs saved by teachers are estimated to be \$31.15 million.

Reduction in Travel Time

Assuming that every teacher placed in a newly built unit saves an average of 15 minutes each way on their daily commute, this alternative is expected to save DCPS teachers a combined \$35.58 million in avoided travel costs over 10 years.

Teacher Retention

If every teacher placed in a newly constructed unit is one who otherwise would have left their position in DCPS, the school district would save a total of \$126.62 million in avoided turnover costs.

Costs and Benefits

With a 7% discount rate and 10-year time horizon, the total present value of costs for this alternative is estimated to be \$767.37 million. This includes administrative costs for OZ (\$817,901) and DHCD (\$2.41 million), as well as the cost of land, labor, and materials to produce 2,020 new units over 10 years (\$764.13 million). The present value of benefits is expected to be \$193.35 million, including reductions in living expenses (\$31.15 million) and travel time (\$35.58 million) for DCPS teachers housed in the newly constructed units. The Net Present Value of Net Benefits for this project is -\$574.20 million. The BCR for this alternative is 0.25, making it not cost beneficial. The internal rate of return needed to make this project cost beneficial is over 800%.

Distributional Considerations

The primary equity concern for our IZ-related policy proposals stems from the government's obligation to administer housing support in a non-discriminatory manner. Projects that have attempted to prioritize a specific workforce have faced challenges due to the inherent discrimination associated with prioritizing one group over another based on anything other than financial eligibility for the program (Council of Community Housing Organizations, 2019). In many states, government housing projects are required not to deny service based on source of income, which has been used as an argument against employment-specific workforce housing (Blatteis, 2021).

Additionally, distributional concerns arise when considering prioritizing teachers in housing programs and excluding other school staff (classroom aides, janitors, librarians, administrators, etc.). This analysis focuses on creating housing exclusively for teachers as there is less available data about turnover costs, salaries, and other key information needed to make estimations of the impact of including other types of employment in the program. Before implementation, DHCD should consider the breadth of employment types to be included in the program, recognizing that support staff are often paid less than teachers and are important contributors to the overall quality of schools.

Finally, it is necessary to consider the logistics for teachers leaving the profession to avoid creating additional burden on teachers who could be losing both income and housing by changing professions. We

propose the following strategy to address this turnover issue: if an educator leaves the profession while living in an educational workforce unit, they may carry out the term of their lease and have the option to “swap” their unit to a normal IZ affordable unit if they meet the income requirements for IZ units. In such cases, the next available affordable unit will be changed to an educational workforce unit to maintain the ratio of educational workforce and affordable units in the development.

Sensitivity Analyses

Alternatives 1 and 2 are robust to changes in discount rate. At a 2% and 3% discount rate, the benefit-cost ratios for both remain relatively stable. The Internal Rate of Return for both options is extremely low and therefore effectively not calculable in Excel. The BCR for Alternative 3 similarly remains stable at 2% and 3% discount rates, but has an IRR of 805%, meaning that it is unlikely to ever be cost effective without scaling benefits or identifying additional associated benefits.

Assuming costs for the program are consistent with prior analysis, Alternative 1 would need to reduce teacher attrition by 3%, or 263 teachers per year, for the project to remain cost beneficial at a 7% discount rate. To remain cost-beneficial, Alternative 2 would need to reduce attrition by 0.3%, or 29 teachers per year, due to its low administrative overhead. Alternative 3 does not rely on a percentage reduction in attrition and therefore is not suitable for sensitivity analysis on this parameter.

Policy Recommendation

Following the results of the cost-benefit analysis and subsequent sensitivity analyses of each alternative, we recommend D.C. expand its IZ program to issue an additional tax credit and density bonus for developments that include an additional 5% of units as EWH. This alternative is cost-beneficial in each sensitivity scenario analyzed, with its NPV of benefits ranging between \$18.39 million and \$22.54 million among the three discount rates used. Even though the alternative of prioritizing teachers in the affordable housing lottery yields a higher BCR, its range of NPV of Net Benefits is lower, ranging from \$12.06 million to \$15 million within the three discount rates applied. The teacher-specific housing development was not found to be cost-beneficial in any scenario, showing an estimated negative NPV of Benefits.

To account for the different time scales of each alternative, the EANBs of each alternative were estimated. From this, it is estimated that the IZ program expansion also yields the highest EANBs of all alternatives, with a range of \$2.51 million at a 2% discount rate to \$2.62 million at a 7% discount rate. In comparison, the highest EANB of prioritizing teachers in the housing lottery is \$1.72 million at a 7% discount rate, and teacher-specific housing development was again in the negatives.

Beyond the numbers, the inherent unfairness in prioritizing teachers in the affordable housing lottery without any affordable units being added to the system is another reason for our recommendation of the expansion of the IZ program. Solely prioritizing teachers in the housing lottery leaves other households in an even more disadvantaged position since their chances would be immediately lowered with the smaller amount of affordable housing they qualify for. Expanding the IZ program keeps the current amount of affordable housing non-teacher households qualify for and instead creates *more* affordable units specifically for public school teachers. This alternative is pareto-efficient, meaning it does not make non-teachers worse off while providing housing for teachers.

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A SOCIETAL FAILURE: ADDRESSING THE SEXUAL ASSAULT CRISIS IN THE UNITED STATES

Lima Shekib

Content Warning: This article discusses sexual assault and rape, including issues related to consent, victim-blaming, and cases pertaining to children. These topics may be triggering or distressing for some readers.

Abstract

Rape and sexual assault occur in the United States at a disproportionate rate, leading to detrimental outcomes for those affected. This article explains the cultural and social biases that lead to such a phenomenon, along with the policy shortcomings that perpetuate them. Rape culture leads to the attrition of cases, which is only bolstered by the dismissiveness and disbelief from various officials within the justice process, including law enforcement, prosecutors, and juries. This manifests in poor policing practices, barriers to prosecution, and numerous legal loopholes that survivors find themselves in. Recommendations are given at the end of the article to mitigate the issues presented by these policy shortcomings.

Introduction

About 423,000 people over the age of twelve are sexually assaulted annually in the United States (RAINN, 2025). This is about one out of every four women and one out of every 26 men (Basile et al., 2022). The prevalence of these cases warrants a deep look into the failures of the criminal justice system, which cause underreporting and attrition in court. It is estimated that 98% of perpetrators will not be held accountable (RAINN, n.d.). For every 1000 cases, 50 arrests will be made, with 28 leading to felony convictions, and 25 perpetrators being incarcerated (RAINN, n.d.).

One reason that lends itself to such abysmal numbers is the fact that survivors are too afraid to come forward to the police with their story. Approximately 46% of assaults were reported to law enforcement in 2023, but that number dropped to less than 24% in 2024 (Bureau of Justice Statistics [BJS], 2024). While reports came from people of all racial and ethnic backgrounds, it has been found that American Indian and Alaska Native women are disproportionately more at risk of being victimized, with 34% having self-reported a case (Tjaden et al., 2006). African American (18%) and mixed-race women (24.4%) are also unduly affected (Tjaden et al., 2006). It has been difficult to find statistically significant rates on Asian and Pacific Islander women, as rates of reporting are disproportionately low among said population (Tjaden et al., 2006). Law enforcement acts as a gatekeeper to justice. However, officers have been known to harass survivors into recanting their statement (Yung, 2014) through intimidation tactics, victim-blaming, intrusive questioning, and overall creating a hostile environment. They have also thrown out cases as “unfounded”, despite falsely reassuring survivors that the cases are being worked on, thus creating a misplaced sense of hope for said survivors (Yung, 2014). Law enforcement has also undercounted the number of cases reported to them due to political pressure to keep crime rates low (Yung, 2014). In the unlikely event that a case does make it to court, survivors are often retraumatized through an aggressive cross-examination that seeks to smear their character for the sake of reducing the perpetrator’s culpability. Extraneous characteristics are examined, such as alcohol consumption, reporting timeline, and survivor emotionality (Acquaviva, B. L., Meeker, K. A., & O’Neal, E. N., 2022). These factors ultimately affect the way that the justice system perceives the survivor and their case. For example, Seek (2018) noted her experience from law school, in which her class was taught how to discredit a survivor on the stand. She was told how to introduce a survivor’s sexual history into the case, to undermine the idea that they were assaulted, along with all of the probing questions to ask to discredit their story.

In order to find effective solutions to this issue, a closer look at the causes is needed. Cultural biases that lend themselves to rape culture permeate not only social interaction but also institutions of justice and law. Rape culture is a social framework of myths and culturally held beliefs that determines who can be raped and who can rape, which hides forms of victimization and renders some survivors unworthy of care (Kessel, 2025). Common myths include the ideas that “husbands can’t assault their wives” and “provocatively dressed women are ‘asking for it’” (Acquaviva, B. L., Meeker, K. A., & O’Neal, E. N., 2022). Such notions come from a lack of true understanding around the idea of consent, reducing it down to a single, binding moment and a myriad of “assumptive touch”, in which consent to one kind of act implies consent to all kinds of acts at the same level or below (Kessel, 2025; Troost, 2008). However, consent needs to be understood as an ongoing process in which an affirmative “yes” is freely given and reversible (Planned Parenthood, n.d.). Rape culture and purity culture (the idea that a woman’s sexuality is linked to her inherent “goodness” [Valenti, 2008]) lead to victim-blaming from not only the people that the survivor knows, but also law enforcement, prosecutors, and policymakers.

Research states that rape and sexual assault lead to detrimental consequences for survivors, in terms of mental health outcomes, physical health, and economic cost. These incidents lead to mental health issues such as anxiety, depression, increased feelings of anger and vulnerability, loss of self-image, self-blame, and self-harming behaviors (Walker, Archer, & Davies, 2005). They have also led to physical injuries, pregnancy, and other medical conditions, such as HIV and other sexually transmitted diseases, disability, and asthma (Basile, Kathleen C. et al., 2022). It also goes without saying that the economic costs do not hold as much weight as the mental and physical effects, but it is worth mentioning that the estimated lifetime cost of these cases is \$122,461 per survivor, or \$3.1 trillion among the population of survivors over their lifetimes (Peterson et al., 2017). These costs include \$1.2 trillion in medical costs, \$1.6 trillion in lost work productivity, \$234 billion in criminal justice proceedings, and \$36 billion in other damages, such as property loss (Peterson et al., 2017).

Dysfunctions of the Criminal Justice System

The criminal justice system presents a host of shortcomings that contribute to the disproportionate number of cases in the United States. One could argue that the abuse of guidelines and bad actors are to blame. While this is true, it does not encompass the entire issue. Legislation within every step of the criminal justice system, from arrest to sentencing, is so fraught with dysfunction that the same loopholes are consistently used by perpetrators to escape accountability.

Policing

Law enforcement plays a substantial role in whether a case will be tried or not. An officer’s actions determine whether an incident will be formally reported, what resources will be used in the investigation, the charges listed, whether the suspect is arrested, and if the case is passed to prosecution (Acquaviva, B. L., Meeker, K. A., & O’Neal, E. N., 2022). In an ideal world, this setup would be optimal for survivors and officers alike. After all, per the Human Rights Watch, “international human rights laws require police to investigate reports of sexual violence and take steps to protect individuals from sexual assault” (2009:7, as cited in Campbell, 2018). However, law enforcement has been known to cut corners to ensure that crime rates stay low, even without having done the full scope of their duty. This is quite common throughout the United States, per the research done by Professor Corey Rayburn Yung at the University of Kansas School of Law. He found that approximately 22% of the 210 police departments that he studied had statistical irregularities with their rape case data, which indicate substantial underreporting of cases (Yung, 2014). Police departments were found to have used a variety of under-the-table methods to eliminate these cases from official records, such as writing a complaint off as “unfounded” with inadequate investigation, classifying the incident as a lesser offense, and outright refusing to create a written complaint (Yung, 2014). Due to this, Yung argues that there is a hidden crisis—while police departments are reporting a decrease in crime, a significant number of cases are being cloaked without

any oversight (2014). Not only are untrained officers making decisions on classification, but there is also no second review of those decisions (Yung, 2014). Once the misreported numbers have been sent to the FBI to be reported in their Uniform Crime Reporting (UCR) program, there is very little oversight from said bureau. Understanding the methods that officers use to underreport cases is paramount to grasping the acute nature of the issue at hand.

To dismiss a case as “unfounded”, an officer must have first conducted a thorough investigation (Yung, 2014). However, officers have increasingly reported cases as unfounded without having done the appropriate investigation, and there is no safeguard or accountability to address this (Yung, 2014). While less than 5% of cases make it to law enforcement, one in five cases is reported as unfounded (Murphy-Oikonen et al., 2022).

Reporting a case to the police often includes callousness, disbelief, and blame. There is already a widely perceived mistrust of the police and a hesitation to report among survivors who feel as though the system would be unhelpful or harmful to them (Lorenz, 2021). This is especially the case for survivors from marginalized groups (Lorenz, 2021). In many cases, a survivor considers the circumstances under which the case happened and how the police will perceive them, which they feel will impact the way that their complaint is handled (Lorenz, 2021).

One would believe that given these qualms, law enforcement would at least attempt to assuage some of the survivors’ fears, and some may argue that these fears are an exaggeration. However, it becomes abundantly clear that these fears are an unfortunate reality for many survivors. Officers tend to give more regard to cases that are perceived as a “real” rape. In other words, they pay more attention to cases that involve characteristics such as “...stranger perpetrator, forcible penetration, weapon use, or evidence of physical force” (Acquaviva et al., 2022). Cases that fall outside of the perception of a “real” case tend to receive not only less involvement from officers but also negative assessments of survivor characteristics, such as credibility and culpability (Acquaviva et al., 2022). Extralegal characteristics based in myths from rape culture are often considered, such as “survivor ‘risk-taking’ behaviors, survivor credibility, survivor and suspect substance use, the survivor/offender relationship, survivor emotionality, and survivor and suspect age...” (Alderden & Ullman, 2012; Bouffard, 2000; LaFee, 1981; Meeker et al., 2021; O’Neal et al., 2019; Schuller & Stewart, 2000; Tasca et al., 2012, as cited in Acquaviva et al., 2022). In a study of sex crime detectives from Los Angeles, detectives were skeptical of a complaint if the survivor suffered from mental illness, used drugs, or accused somebody that they knew (Goldstein, 2014). As one stated, “Because someone comes in...and says they were sexually assaulted, does not mean we have to believe them” (Goldstein, 2014). Survivors may not receive the full legal protection of the criminal justice system, because some officers blame them for characteristics that are not even legally relevant.

During the process of filing a complaint, survivors can be met with dismissiveness and disbelief. In a qualitative study done on “unfounded” sexual assault cases, survivors expressed that while reporting a case, the police appeared as though they did not want to be there (Murphy-Oikonen et al., 2022). One survivor recalled being told to “stop lying and quit making up stories” (Murphy-Oikonen et al., 2022). Lines of questioning from the police implied that the survivor held responsibility for the crime that happened to them. Survivors are often asked about what they were wearing, why they were at a certain location, use of drugs and/or alcohol, and what they did to stop the assault (Yeung et al., 2018). Communication was perceived as mechanical while lacking empathy and compassion, and the questions and comments directed at survivors regarding their characteristics made them come off as even more insensitive (Murphy-Oikonen et al., 2022). To make matters worse, the study found that police refused to take the steps to complete a full investigation, despite the survivors following up and providing them with avenues to further pursue such an investigation (Murphy-Oikonen et al., 2022). Survivors also reported being made to feel as if they themselves were a perpetrator, having been asked invasive questions and being warned about making false reports (Murphy-Oikonen et al., 2022). It may be understandable for

law enforcement to refrain from action due to limited resources, but they were provided with all the necessary tools and information to make an arrest and file a case. It was readily available for their use, and in the majority of cases, the survivors were cooperative. Nevertheless, law enforcement chose to dismiss the experiences of the survivors and throw out the case as being “unfounded” (Murphy-Oikonen et al., 2022).

Another piece of legal jargon that tends to arise regarding police officers failing to perform their duties is “exceptional clearance”. Exceptional clearance was originally defined by the FBI as an instance during which extenuating circumstances prevent an officer from being able to arrest and formally charge the offender (Federal Bureau of Investigation [FBI], 2013). This would be used in instances such as the death of the offender, a survivor refusing to cooperate with prosecution, or the offender already being prosecuted for another offense in a different jurisdiction (FBI, 2013). These instances are few and rare. Any amount over 9% of cases is a high number of exceptionally cleared cases, per Dave Thomas, with the International Association of Chiefs of Police (11Alive, 2024). The law dictates that four conditions must be met in order for a case to be exceptionally cleared. The police must have identified the offender, gathered enough evidence to support an arrest and make a charge, identified the offender’s exact location, and encountered circumstances beyond their control that prevented the offender’s arrest (FBI, 2013). Exceptionally clearing the case holds as much weight as having solved a case (11Alive, 2024). When police indicate that a case is closed through this provision, the offender may continue to walk free amongst the community. Reports have found that officers are dismissing cases using exceptional clearance without having done an adequate investigation to meet such conditions.

One example of a report documenting the misuse of exceptional clearance is a study done by ProPublica, which analyzed more than 70,000 cases in the largest law enforcement agencies across the country and found that nearly half of the agencies that provided records cleared more cases through exceptional clearance than by arrest (Yeung et al., 2018). The Baltimore County Police Department claimed that they had cleared 70% of cases but only made arrests in 30%, thus clearing the rest of the cases through exceptional clearance (Yeung et al., 2018). Another study done with the LAPD and Los Angeles Sheriff’s Department (LASD) shows that 88.9% and 45.7% of cases were cleared, respectively (Walfield, 2016). When it came to clearance made by arrest, the figures dropped to 12.2% and 33.9% (Walfield, 2016).

Exceptional clearance is meant to be a provision for rare occurrences, but officers have been readily dispensing this judgment. To make matters much worse, these judgments are often passed without the survivors’ knowledge, putting them under the impression that their case is still being pursued, according to the findings of an investigation done by 11Alive news channel, a news channel located in Atlanta, Georgia (11Alive, 2024). A common excuse given for such a misstep is that there was not enough probable cause (through a lack of sufficient evidence or the belief that the story was fabricated) (11Alive, 2024). This is even more infuriating in the context of the true provisions that must be met. At no point did the FBI indicate that the lack of probable cause was grounds to implement exceptional clearance, and there cannot be a lack of probable cause when an adequate investigation is not carried out to determine such. The law is quite transparent in its ruling on this matter. Officers in Gwinnett County, Georgia, questioned the impact of misusing the exceptional clearance guidelines, going so far as to ask, “What’s the harm?” (11Alive, 2024). Erroneously dismissing cases under such provisions carries grave consequences, not only for the survivors of these cases, but for the public at large. The offenders are allowed to walk free without so much as having been questioned, thus running the risk of reoffending. In addition, discrediting one survivor is sometimes treated as enough to discredit survivors at large, given the existing stigma involved in coming forward with their cases.

Additionally, police officers often refuse to take down a written case report. In these cases, the only one with knowledge of the complaint’s existence would be that individual officer. Some have been known to jot down short memos instead of formal reports, while others have simply not written anything down

while speaking to survivors (Yung, 2014; Lorenz, 2021). Other times, officers have used harsh interrogations to silence and intimidate survivors, as reported by survivor support advocates in Baltimore (Yung, 2014). This may seem like an unbelievable exaggeration. However, retired NYPD Captains and Commissioners have confessed to sending officers to the scene of a crime to dissuade survivors from pressing charges (Yung, 2014).

Another way in which police departments fall short of their responsibilities is by leaving thousands of rape kits untested. A rape kit, otherwise known as a Sexual Assault Kit (SAK), is a collection of biological evidence that is taken from the survivor of a sexual assault through an extensive and invasive examination (University of North Carolina School of Government, 2018). Using such evidence is key to a sexual assault case by identifying the offender and corroborating the accounts of sexual assault survivors (Wallenborn, 2022). However, there is a backlog where thousands of SAKs sit untouched in police departments across the United States. Estimates show that there are between 300,000 and 400,000 untested SAKs nationwide, some of which are over 30 years old (Strom et al., 2021).

There are two central focal points of this issue. Firstly, police practices behind testing criminal evidence, which involves a lack of resources and DNA evidence being perceived as prohibitively costly, are related to the value that they offer (Wallenborn, 2022). Many police departments quoted high testing costs and limited resources as the reason for such a massive backlog (Wallenborn, 2022). A few separate studies have shown that it is much more cost-effective to test every SAK within a police department compared to the costs of allowing offenders to reoffend (Wang & Wein, 2018; Davis & Wells, 2019). Averting future sexual assault cases saves roughly 11.4 million dollars from future costs for survivors, the criminal justice system, and society (Wang & Wein, 2018; Davis & Wells, 2019).

The second focal point of this issue consists of police practices around investigating sexual assault cases, which often involve preconceived biases influencing whether or not an officer chooses to test a SAK (Wallenborn, 2022). In order to extend as many resources as possible to every case, police look at the credibility of the case, the cooperation of the survivor, and the presence of evidence (Campbell, 2018). Decisions on how to use limited resources are likely made based on whether a case involves a “real” survivor (Campbell, 2018). As mentioned earlier, survivor characteristics (such as age, gender, race, socioeconomic status, etc.) and case circumstances (such as whether the survivor knew the offender and the survivor’s behavior during and after the assault) are used in police decision-making in testing SAKs (Frohmann, 1997; Jordan, 2004; Kaiser et al., 2017; Kelley & Campbell, 2013; Morabito et al. 2016; Murphy et al., 2014; Schwartz, 2010; Spohn & Tellis, 2011; Spohn et al., 2014; Tasca et al., 2013; Venema, 2016, as cited in Wallenborn, 2022). Marginalized people are especially disenfranchised by police decision-making here. Police have shown to be distrustful of survivors who are of an ethnic minority, poor, have a criminal history, and/or are believed to be sex workers (R. Campbell, Fehler-Cabral et al., 2015, as cited in Wallenborn, 2022). When it comes to adolescent survivors, police reports, and interviews contained the stereotype that they only made a claim to cover bad behavior (Campbell, 2018). In these cases, the police would extensively explain the criminal justice system to them in “deliberately scary terms”, while warning them about the negative consequences of lying (Campbell, 2018). These are but a few examples of survivors being let down by the very system that was supposed to protect them.

The nationwide backlog adversely affects survivors, whose perspectives are also key to understanding the severity of this issue. Even though medical forensic exams are highly invasive and retraumatizing, survivors consent to the procedure with the understanding that it would be used to help prosecute the offender (Campbell, Feeney et al., 2017; Patterson & Campbell, 2010, as cited in Bach et al., 2022). Many trusted the system enough that they believed that the DNA evidence would play a valuable role in their case (Bach et al., 2022). SAK testing can not only corroborate a survivor’s experience, but it can also help them through the healing process. However, they were unaware that their kit would go untested

or that communication between them and the detectives investigating their cases would cease (Bach et al., 2022). This kind of dismissal often leaves survivors with a sense of betrayal, mistrust, and unanswered questions that can interfere with their mental health and recovery. Trust in the legal system is shattered. To make matters worse, survivors feel as though collecting the evidence for the SAK had been for nothing, as the procedure is known to be retraumatizing (Bach et al., 2022).

As it pertains to rape law, the statute of limitations (SOL) is intended to encourage quick action from law enforcement and to protect a person from being prosecuted for a crime after physical evidence has deteriorated (FBI, n.d.). There is a fraught imbalance between law enforcement's desire to quicken proceedings versus their actual timeliness with investigations. SOLs are determined at the state level and vary throughout the United States. 34 states, along with Washington D.C., have SOLs that range from 3 to 30 years (Mother Jones, 2014). Some of the time limits are completely unrealistic given the nature of these cases. In New Hampshire, a survivor has six years to report their case (Mother Jones, 2014). In Connecticut, a report must be made within five (Mother Jones, 2014). It is worth noting the language used in Connecticut's SOL, as it presents a glaring issue. It states that there is no statute of limitations, so long as the survivor reported the crime to a police officer or state attorney no more than five years after the crime was committed and the perpetrator was identified through DNA collected at the time of the offense (Conn. Gen. Stat. § 54-193b, 2024; Orlando, 2017). For many survivors, the supposed "lack" of an SOL is rendered questionable at the very least because of how it could take much longer to come forward. Some cases come to light decades after the offense occurred.

Washington D.C.'s SOL also presents a case in which the supposed lack of SOL is brought into question. In D.C., there is no statute of limitations for felony sexual abuse (RAINN, n.d.). This is not the case for misdemeanor sexual abuse charges, which must be reported within 3 years after the commission of the offense (RAINN, n.d.). The law is murky when deciding between a felony and a misdemeanor charge. One D.C. law firm defines misdemeanor sexual abuse as a "catchall" charge, in which a potential felony charge could get dropped down to a misdemeanor charge if there is not enough proof or the conduct is not clear (Platinum Criminal Defense Law Firm, n.d.). This clearly presents a loophole that is detrimental to the survivor. If the prosecutor determines that there is not enough proof (which often happens due to arbitrary reasoning, as will be discussed in the following section), then the survivor only gets three years to report the offense, despite how they would have received unlimited time had the prosecutor decided to implement a felony charge.

Significant complications arise from this level of varying SOLs as they are currently applied. Pushing for immediacy of response is illogical when one considers the burden of pursuing a sexual assault case. Given the traumatic nature of such a crime, it may take months, if not years or decades, to even acknowledge sexual abuse to themselves, let alone report it. Shame, humiliation, and fear also play a large role in the psychological burden that survivors bear. From there, a survivor may fear the possibility of reliving their experiences while pursuing justice, as they may be met with blame or disbelief. Given the police misconduct stated earlier and the attrition by the court to be discussed further in this article, it would not be surprising that a survivor would hesitate to come forward. By the time a survivor feels empowered enough to report the incident, the statute of limitations may have already passed, thus barring them from attaining justice.

Despite scientific advances that allow for physical evidence to be preserved and accurately tested decades after the offense (Larsen, 2019), states without a DNA exception to their SOL pose a barrier to admitting SAKs into evidence when prosecuting a crime. Some jurisdictions even prevent the SAKs from being processed for DNA or uploaded into CODIS, the national database that matches SAKs with one another at the national, state, and local levels (FBI, n.d.). Texas state law presents an argument as to why SOLs should be lifted in the presence of DNA evidence. Texas Code of Criminal Procedure Art. 12.01(1)(C)(i) defines specific parameters for which the SOL is lifted, including the requirement that the identity of the

perpetrator is unknown. The limitations applied through this piece of legislation are unnecessarily restrictive, given how reliable modern DNA evidence is. Such evidence could be enough to potentially prove the offender's guilt beyond a reasonable doubt, in ways that the case might not have previously met court-defined standards.

Prosecution and Sentencing

Prosecutors also hold a large role in whether an offender has charges filed against them or not. To do so, the prosecutor must be able to prove the offender's guilt beyond a reasonable doubt (RAINN, n.d.). If they are not able to do this, then they are unlikely to file charges (RAINN, n.d.). In terms of decision-making, prosecutors may be more concerned with whether a case can be convicted, rather than attaining justice itself (Henry & Jurek, 2020; Spohn & Hemmens, 2012, as cited in Campbell, 2018). In sexual assault cases without physical evidence and/or available eyewitnesses, prosecutors must decide what can be convicted by a jury (Spohn & Holleran, 2004). They will often do this by assessing a survivor's character, behavior, and credibility (Spohn & Holleran, 2004).

On the surface, this may sound reasonable. However, the same biases that are present in police decision-making also live within the prosecution. While prosecutors are predicting how a survivor will be perceived by a jury, they are often relying on stereotypes about "real" survivors and what their behavior should be (Spohn & Holleran, 2004). This is especially the case when it comes to crimes involving somebody that the survivor already knew. Researchers found that in cases involving friends, relatives, and/or acquaintances, prosecutors were much less likely to charge a crime if the survivor had engaged in risk-taking behavior or if their character was put into question (Spohn & Holleran, 2004). These biases not only affect prosecution but sentencing as well. Several loopholes prevent offenders from facing the full extent of the law for their crimes, including plea deals, a lack of clarity around post-penetration assault, and definitions of consent that are insufficiently comprehensive.

Before beginning, it is worth noting that prosecutors also play a role in testing SAKs. In some instances, if a prosecutor does not believe that a case is winnable, they will advise the police officer involved not to get the test processed. In some cases, the prosecutor may even reach out to crime labs directly to avert the testing of a SAK (Campbell, 2018). However, there is further research to be done into the prosecutor's role in the SAK backlog. While there is a considerable amount of research done on the police's role, the prosecutorial role tends to be overlooked (Campbell, 2018).

Federal and state law have defined mandatory minimum sentencing guidelines for sexual assault cases, all of which depend on the degree of the crime. However, offenders have the option of taking a plea deal in exchange for a lighter charge and/or reduced sentence. One law office mentions an example in which one can plead guilty to a misdemeanor charge with a lighter sentence as opposed to serving years for a felony charge (Gorin, 2025). In some states, such as California, a plea deal can even reduce the number of years that an offender has to be listed in the sex offender registry (Gorin, 2025). Oftentimes, these plea deals are given because a prosecutor feels as though they will not have enough proof to prove that an offender is guilty beyond a reasonable doubt in front of a jury (Grinberg, 2018).

To provide an example of plea deals leading to much lighter sentences, a former student of Baylor University pleaded guilty with no contest during his trial, dropping the charges from rape to unlawful restraint (Grinberg, 2018). Due to this, he received a deferred adjudication probation, meaning that he would not spend any time in jail. He would even have his record expunged if he paid a \$400 fine and submitted to psychological, alcohol, and drug treatment (Grinberg, 2018). Some may raise objections to survivors coming forward, claiming that false reports may affect the accused's life. However, even when the offender pleads guilty, thus literally confessing to the crime, they are met with minimal sentences and essentially a slap on the wrist. The aforementioned case raises the issue of criminal trials being highly unpredictable, from the offender's perspective (Gorin, 2025). What of the survivors involved in such

cases? Would the trial not be highly unpredictable for them, considering the intrusive and disparaging nature of the adversarial legal process? One could only imagine the retraumatization that such a court case would evoke. Yet, the disappointment and betrayal resulting from a minimal sentence would be profoundly overwhelming.

In many instances, a judge may pass a minimal sentence due to their perception of the offender's positive traits, such as race, socioeconomic status, clean record, and/or support from the community. Consider the outcome of the case involving Brock Turner, in which he was charged with three felonies for sexually assaulting an unconscious woman. He was sentenced to six months in jail (Gagnon & Grinberg, 2016). Per a CNN report, there is little to no time in prison for college athletes who have a first-time sex offense (Gagnon & Grinberg, 2016). Oftentimes, they are not even convicted (Gagnon & Grinberg, 2016). This only emphasizes the fact that we must move away from minimizing a survivor's experiences while lauding an offender's positive traits. Even while an offender is proven guilty, they are lauded for extrajudicial aspects, while a survivor is simultaneously judged unfavorably for circumstances beyond their control. Survivors would largely benefit from an educational campaign aimed at judges and prosecutors to implement the proposed shift to approaching these cases.

This brings us to the issue of the mental and emotional toll that cross-examinations and testimonies can have on the survivor during a trial. Some survivors can be reluctant to go through with a trial because of how invasive the case may become and how their experiences may be dissected (Wood, n.d.). Much like questioning from the police, an aggressive cross-examination can be traumatizing and debilitating to a survivor's mental health and sense of worth. By the time the trial has been completed (usually 8-14 months after the assault), a survivor is likely to have told their story countless times after having met with all of the players within the legal system (Wood, n.d.). The defendant of a case typically presents one of three arguments: that no penetration occurred and therefore there was no rape, that they weren't the one to commit the crime, or that the intercourse had been consensual (Wood, n.d.). The third defense is the most common one and is the most difficult to fight in court, as some jurors tend to be very skeptical of a survivor's behavior (Wood, n.d.). One lawyer recalls encountering older women jurors who believed that a survivor had "put [themselves] in that position" for having consumed alcohol the night that the attack occurred (Wood, n.d.). When it comes to making a verdict, juries want near certainty in the case and have come to expect DNA evidence in order to make a conviction (Wieberneit et al., 2024). In one study, jurors were more likely to acquit an offender due to a lack of physical injury, citing the belief that a "real" survivor would have fought back (Leverick, 2020). This is contrary to the fact that survivors can experience different kinds of trauma responses during an assault, some of which do not involve fighting back. Other reasons that have been cited for acquittal include the idea of false allegations, along with the idea that male offenders were not in control of their sexual drives and not able to register the act that they were committing (Leverick, 2020).

This perspective is utterly reprehensible and unacceptable. An offender should be able to exercise self-control and be held accountable for their actions. All offenders should, and must, be held accountable for their actions without placing blame on the survivor for legally irrelevant reasons. Juries must be educated on various rape myths so that they may stop perpetuating such horrific misgivings in courts. One study focusing on the effect of education on a jury's decisions found that education around a survivor's behavior and delayed reporting had a significant effect on the jury deliberations, but education around the lack of resistance did not (Leverick, 2020). While there needs to be further research, these findings further necessitate additional education for juries concerning this subject. Delivering education and instruction regarding consent and dispelling rape myths during trial would be highly advantageous and yield significant benefits.

Rape myths are also the reason why cases in the "gray zone" are notoriously difficult to bring to trial. Cases involving coercion and post-penetration assault are challenging to prove to a jury as convictable.

From a legal standpoint, the definition of consent has evolved to encompass that it must be enthusiastically and freely given. While jurisdictions had previously relied on common law rulings that denied the reality of retracted consent, most have developed language around coercion and post-penetration assault in their legislature. Numerous studies have been done regarding the legal aspects and previous case law on post-penetration rape, but there is a need for more up-to-date research in this area (for reviews, see Bohn, 2004; Davis, 2005; Lyon, 2004; Sanchez-Moyano, 2020; Vetterhoffer, 2005).

Post-penetration rape happens when sexual intercourse begins with consent, but one party withdraws consent and the other continues, thus forcing intercourse against their will (Huff, 2009). Previously, until the 2010s, 42 states had been left in a gray area regarding this area (Bess, 2017). These states formerly adhered to the common law idea that once intercourse began, the offender could not be prosecuted for assault even if the survivor withdrew their consent during the act (Bess, 2017). Per North Carolina's decision in *State v. Way*, "if the actual penetration is accomplished with a woman's consent, the accused is not guilty of rape" (Huff, 2009; Vetterhoffer, 2005). That ruling has since been overturned, and reform has allowed more states to recognize the nature of withdrawing consent after being given. However, these cases are difficult to prove beyond a reasonable doubt, given the current state of the legal system and the victim-blaming that occurs within it. In a study, juries were instructed that there did not have to be evidence of force or struggle to establish non-consent, but they still cited various rape myths surrounding physical resistance in their decision-making (Leverick, 2020). This further underscores the importance of educating juries and the public at large about rape myths, as I previously indicated. In addition, there must be a shift away from physical force and resistance. Instead, the focus must be brought to a paradigm of ongoing and affirmative consent. Rather than asking if the survivor resisted the act, the court system should be asking whether the perpetrator had ongoing consent.

The U.S. Department of Justice (DOJ) proposed a framework regarding how prosecutors should approach sexual assault cases, in which they make trauma-informed and survivor-centric recommendations (Abdelnour, T. et al., 2024). These recommendations involve shifting the perspective of the case to the survivor's account, along with meeting them where they are in an accessible way (Abdelnour, T. et al., 2024). According to the DOJ, prosecutors should also deploy legal tools in a more comprehensive manner, rather than relying on the assumption of what a hypothetical jury would rule on (Abdelnour, T. et al., 2024). This framework is highly relevant as it addresses many of the barriers that survivors face when having their cases prosecuted and supports much-needed reform around how we view these cases.

An additional loophole in prosecuting cases that must be recognized is the one exemplified in the case of Summer Willis and the subsequent law that was passed to address it. Ten years ago, Willis attended a fraternity party at her college, where she was drugged by one man and assaulted by another (Norris, 2025). When she attempted to get her case to trial, she ran into a loophole within Texas law (Mascarenhas, 2025). Previous Texas law specified a list of circumstances in which consent is legally absent, such as force, threats, and/or unconsciousness (Larman Law, 2025). It also specified instances in which the offender has intentionally impaired the survivor through any substance, which left a gaping loophole (Texas Legislature, 2025). In this case, because she had been given a drink by one man and subsequently assaulted by a different man, Willis fell within the gray area and did not see her case go to trial (Mascarenhas, 2025). In 2025, Texas signed a new bill, called the Summer Willis Act, into law to clarify that consent is "...legally absent if the actor knows or reasonably should know that the other person cannot consent because of intoxication or impairment by any substance" (Larman Law, 2025). This is regardless of who gave the substance. To further cement this, Texas law now states that a sexual assault has occurred if "the actor knows or reasonably should know that the other person cannot consent because of the intoxication or impairment by any substance" (Texas Legislature, 2025). Other states should also adopt such legislation to close any loopholes that their consent laws may currently present. States that have stricter SOLs and a lack of DNA exceptions are the most important to consider for such reform. It is paramount that no survivor is left behind in the cracks of legalese and that their case is

brought to justice should they wish to do so.

A limitation to address regarding the prosecutorial and sentencing stages of sexual assault cases is the limited amount of research conducted on the matter. Legal barriers prevent a similar volume of research from being done on prosecutorial and jury decision-making as there is on police decision-making. Research has been done on publicly available court sentences and on mock trials/juries, but privacy laws prevent researchers from accessing the jury's deliberation on many cases (Wieberneit et al., 2024).

The Children's Loophole

An important issue to consider is the treatment of cases involving children within the legal system. While child survivors often face the same kind of biases as adult survivors, there is a legal loophole that uniquely affects the treatment of their cases. This loophole consists of the legality of child marriage within the United States. Myths from rape culture perpetuate the false notion that one cannot rape their spouse, which bleeds into cases about child marriage. This allows the criminal justice system to look the other way and enables the perpetrators of these cases to walk away with impunity.

There is no federally mandated minimum age for marriage, so the matter has been left up to the states to determine. 34 states currently allow child marriage through legal loopholes, while the states of California, Mississippi, New Mexico, and Oklahoma set no minimum age (Equality Now, 2024). These pieces of legislation legalize what would otherwise be considered statutory rape. It is self-evident how detrimental this set-up is for children. Child marriage has been considered a human rights violation by the United Nations Population Fund (Equality Now, 2024; United Nations Population Fund [UNFPA], 2012; Van Roost et al., 2022). Instruments of human rights passed by the United Nations, including the Convention on the Rights of the Child (CRC) and the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW), outlaw child marriage (UNFPA, 2012). It is also a widespread issue—between 2010 and 2014, more than 78,000 children were either married or already divorced (Van Roost et al., 2022). Thus, I will discuss the legal exemptions that permit such occurrences.

More than half of the U.S. states allow children between the ages of 16 and 18 to be married based on parental approval (Tahirih Justice Center, 2019). 15 states allow children under 16 to be married, depending on court approval, and ten states do not set a minimum at all (Tahirih Justice Center, 2019). Laws within 33 states have statutory rape laws that exempt intercourse between married persons from the legal definition of crimes (Van Roost et al., 2022). Child marriages that occurred in 14 of these states actually violated statutory rape laws (Van Roost et al., 2022). These marriage exceptions ignore the child's inability to consent, along with concerns regarding their maturity and vulnerability to manipulation and coercion (Baxter, 2019). Statutory rape laws were designed to protect minors from such coercion, but if the child is married, intercourse would no longer be prohibited (Baxter, 2019).

Current legislation requires a parent or the court to approve marriage because children are incapable of consenting. The law needs to remove the distinction between married and unmarried children, as both fall under a group that is vulnerable to deception, manipulation, and coercion (Baxter, 2019). If a child is not able to consent to marriage, then there is no reason why they should be able to consent to sexual intercourse (Baxter, 2019).

Such an exemption also serves as the foundation for perverse incentives for child marriage. It is difficult to discuss such matters, but they must be addressed. One reason a parent may consent to their child getting married is due to an extramarital pregnancy (Baxter, 2019). States like Arkansas, Maryland, New Mexico, and Oklahoma allow for exemptions to their laws around the minimum age of marriage if there is a pregnancy involved (Equality Now, 2024). As parents and courts are more likely to permit a marriage if the child is pregnant, predators may be incentivized to impregnate them to fall outside the definition of statutory rape (Baxter, 2019).

Legal restrictions may prevent children from leaving these marriages, given that they may have difficulty in retaining a lawyer, filing for divorce, or obtaining a protective order (Equality Now, 2024; Van Roost et al., 2022). They may also have difficulty in renting an apartment or accessing a domestic violence shelter as a minor (Van Roost et al., 2022; Equality Now, 2024). If children are not of age to facilitate such actions, then they are most definitely not of age to be bound in a legal marriage.

Four states currently have a minimum age set to 18, with no exceptions. Seven other states require parties to be legal adults, with only an exception to court-emancipated minors (Tahirih Justice Center, 2019). It is of the utmost necessity to ensure that all states set the minimum age for marriage to 18, with no exceptions whatsoever. Child marriage must be banned outright, and the government must at least exercise some oversight into the matter. Only then will this insidious loophole be closed.

Policy Recommendations

To confront the pervasive issue of rape and sexual assault in the United States, it is imperative to implement interventions that address the underlying causes and the systemic barriers that prevent survivors from attaining justice.

Modifying Existing Law

It is key to overturn outdated laws to begin undoing the criminal justice processes that harm survivors. To start, policymakers should implement DNA exceptions to the SOL at the federal level to reach all 50 states. As stated earlier, scientific advancements have extended the lifetime of DNA evidence and its admissibility in court. States that lack a DNA exception in their SOL maintain a barrier to survivors seeking justice, for which there is no scientific support. The lack of a DNA exception is based on outdated information regarding the function and value of DNA evidence.

Alternatively, policymakers could eliminate the SOL. These cases are notoriously difficult to report, not only from a psychological standpoint but also due to barriers presented by the criminal justice system. Some survivors may take several months, years, or even decades to come forward and report their case. The law should be written in a way that accurately reflects this reality.

Policymakers should consider applying the Summer Willis Act and its provisions to all 50 states, to close the loophole around whether an offender intentionally impaired the survivor through a substance or not. As mentioned in a previous section, this act states that a sexual assault has occurred if the offender knew or should have known that the other person was not able to consent due to intoxication. This applies regardless of whoever provided the survivor with a substance, whether that was the offender themselves or somebody else. Other states would benefit from such a law, as it would remove survivors from any area of ambiguity, thus allowing them to pursue justice in court.

Lastly, policymakers should repeal the legality of child marriage because of the undue harm that it causes, as mentioned in the previous section. In its place, a minimum age of 18 should be implemented across all 50 states with no exception. Some states currently have different exceptions to their minimum age for marriage, but this further endangers children and should be repealed.

Education and Public Awareness

To combat the myths that are perpetuated by rape culture, policymakers should invest in widespread educational campaigns and training about what consent and rape truly are. These campaigns should be dispersed not only by the general public, but by the actors within the criminal justice system (i.e., law enforcement, prosecutors, judges, juries, etc.). Through the decision-making of these state actors, rape culture has brought undue harm to survivors nationwide by preventing them from obtaining justice in court while retraumatizing them in the process. This decision-making has also allowed offenders to walk away with disproportionately light consequences that do not accurately reflect the nature of the crime

committed.

When investigating and trying these cases, significant attention is given to the survivor's characteristics and behaviors during and/or after the incident. Conversely, the perpetrator receives considerably less scrutiny. A comprehensive education campaign could aid in shifting the paradigm from emphasizing a survivor's characteristics and potential blameworthiness (as is prevalent in many cases) towards holding perpetrators accountable for their actions. While this would be a large shift, it would provide an immensely needed change in the way that rape cases are handled.

Accountability for State Actors

There must be an improved means of accountability for state actors as it pertains to these cases. For a significant number of state actors within the criminal justice system, it is not enough to simply say that they have been blinded by their own biases. As discussed in previous sections, members of these institutions have acted against survivors in egregious ways due to the falsehoods that they learned through rape culture.

As such, policymakers should invest in enacting stricter oversight over police departments through mandatory risk-based and/or randomized audits, along with performance reviews. The findings of these audits could be sent to their respective state's Office of the Inspector General. Submitting these findings to the state would allow for an agency free from the influence of law enforcement to oversee these cases, providing much-needed impartiality and clarity. Policymakers could also hold police departments accountable by investing in the implementation of transparency boards and requiring public disclosure of cases that are dismissed, along with the reasoning behind such decisions.

To further hold state actors accountable, policymakers should ensure that plea deals do not diminish potential sentencing to the point of effectively nullifying any form of reasonable punishment for the perpetrator. This can be done through similar measures of oversight, such as transparency boards that not only flag disparities in sentencing but also analyze and publish the data behind said sentencing. Disparities in sentencing are particularly prevalent when the offender belongs to a privileged class, such as a white male, and the survivor belongs to a marginalized class. Implementing transparency boards in the judicial setting would help identify patterns and promote consistency across the board.

Conclusion

Together, these policy recommendations work to dismantle the systemic barriers to justice that survivors face, while taking apart the rape myths that led to them in the first place. The provided framework addresses these objectives through the reworking of existing law, implementation of educational campaigns, and adding measures of accountability for state actors within the criminal justice system.

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THE MISSING LINK OF THE AFFORDABILITY CRISIS: HOW INEQUALITY EXACERBATES COST DISEASE

David Widdowson

Abstract

Many competing explanations have been presented as the cause of the affordability crisis financially straining the average United States household; however, popular analysis has neglected the most systematic driver of the phenomenon, cost disease. Introduced by economist William Baumol, cost disease describes how differing rates of productivity growth leads to higher relative costs and prices between various service sectors and manufactured goods. High-skill, labor-intensive services such as healthcare and education must increase wages, and thus prices, over time to stay competitive in the labor market. Baumol assumed that productivity gains would increase per capita income by at least as much as costs, but he failed to consider the distribution of that income. As capital owners have captured an outsized amount of productivity benefits over the last several decades, the real income of average workers has decreased relative to the cost of critical services, causing the standard of living to decline. This article argues that the affordability crisis is a manifestation of the productivity-pay gap lowering the standard of living for a significant segment of the population. It then refutes unsatisfactory approaches to addressing cost disease before arguing for labor support to increase the median wage and increased taxation of the wealthy to fund subsidies. Classical economics argues that the economy is not “zero-sum,” that economic growth can make everyone better off, but a lack of government intervention has actually caused many U.S. households to be worse off because services have become more expensive while their incomes have remained relatively stagnant.

The Affordability Crisis

The increasing inability of the average United States household income to pay for critical goods and services has come to be popularly known as the affordability crisis. While the crisis was surely worsened temporarily by consumable good supply shocks stemming from events such as COVID and tariffs, it has not abated either. On the contrary, the conversation around it has only grown and evolved by reflecting on trends that have been accelerating over the past several decades. Medicare For All, the “abundance” movement, the push for universal childcare, calls to reshore manufacturing, and the “property tax revolt” are all attempts to address affordability for the average American in some fashion. They all recognize that the price of critical services such as healthcare, education, housing, and childcare has far outpaced most wages. Because these services are all economic necessities, the average household cannot easily forgo them without a significant drop in quality of life. Thus, pundits, politicians, and policymakers of every persuasion have attempted to diagnose and ameliorate these cost increases. While popular hypotheses and policy recommendations have had varying success, current discourse has largely ignored the phenomenon most responsible, cost disease. These necessities are all labor intensive and thus cannot be significantly reduced in cost without creating entire sectors of workers with subpar pay. The only alternatives are raising the income of workers near the bottom of the wage distribution and increasing service subsidies by raising more revenue from those near the top.

Defining Cost Disease

Having been absent from popular economic conversations thus far, perhaps cost disease has been overlooked as an issue due to its complex definition creating a barrier to entry, as it involves several causal relationships. Ideally, this explanation will be approachable enough to understand while being detailed enough to avoid confusion.

Cost disease, or the Baumol Effect, was coined by economist William Baumol in 1967 and views the economy as split into two diverging sectors. The progressive sector regularly sees high productivity

growth through technical innovation, capital accumulation, and economies of scale, and traditionally involves manufacturing and technology, whereas the nonprogressive sector usually has stagnant productivity growth and is composed of labor-intensive services. Productivity growth allows workers to complete more tasks in a given period of time, increasing the value of their labor, and theoretically, their wages. Firms with increasing productivity growth can maintain current employment levels and increase output, or they can reduce employment and leave total output unchanged. The latter case reduces input costs because wages are paid to fewer workers to make the firm's product, lowering prices paid by consumers. However, as an increasingly smaller fraction of the labor force is needed in the progressive sector over time, more workers are forced to move to the labor-intensive service sector. Baumol theorized that as wages in the progressive sector increase, nonprogressive wages will keep pace with them in the long run to remain competitive in the labor market. While the total costs and prices of manufacturing and technological fields decline, the fixed labor inputs that define the nonprogressive sector cause ever-increasing wages to balloon the costs and prices of their services (Baumol, 1967).

Baumol's use of the term "services" does not exactly match its typical meaning in economic parlance, as the progressive sector's qualifications of technical innovation, capital accumulation, and economies of scale can be applied to a number of traditional services. Thankfully, Helland and Tabarrok (2019) provide a more detailed definition of the nonprogressive sector through the stipulations of "labor intensive, intangible, and produced at the moment of consumption" (p.45). Services can also experience productivity growth, but it is sporadic, whereas it is consistent in the progressive sector. There are also many business services used as inputs for manufactured goods, so "services" usually refers to only final products for consumers. In *Baumol's Cost Disease in Times of Rising Inequality*, Hartwig and Krämer (2022) provide the most direct definition of the service sector, which is industries in which "capital goods cannot replace the reliance on human labor" (p.29).

Baumol's classic example is musicians performing in a concert hall. Their pay must be increased over time through higher venue prices or else the profession will be increasingly foregone for ones that pay more (Baumol & Bowen, 1966). If sectoral pay does not increase, in the long run, more potential musicians will select career paths that provide higher income for similar amounts of training. Say that a venue books a popular musician for an exclusive annual residency paying \$100,000. After a decade, the musician is considering retiring from her residence to devote more time to social media influencing, as she expects it to draw an annual income of \$200,000. The venue discovers that it cannot find a quality replacement at the same cost because many other artists have already transitioned to influencing, which they find is more lucrative and uses a similar skillset. The venue wants the musician to stay but cannot make a profit if it doubles her wage, so it must also double ticket prices to compensate. Today, a concert can be recorded, digitized, and broadcast, but the resulting product does not provide the same live show experience; these alternatives are simply different products. Of course, concerts are a luxury good with an elastic demand, and consumers will accept low-cost substitutes relatively easily, but using inferior alternatives to critical services such as healthcare, education, housing, and childcare leads to a significantly lower quality of life. Thus, if economic productivity increases over time as expected, the labor cost and final price of critical services will continually rise as well. The solution is not to prevent cost disease, an impossibility, but to redistribute the increased income created by productivity gains.

Proving Cost Disease

Cost disease is not simply a novel theory; it has been continually proven through the statistical trends in cost, price, and size of the country's most critical services. Healthcare spending went from accounting for 5% of U.S. GDP in 1960 to almost 18% now (Bates & Santerre, 2013; Rakshit et al., 2026). The country's number of physicians and nurses per capita more than doubled in that time, with the number of teachers and instructional aides per student approximately doubling as well. It is worth noting that the cheaper option in both cases, nurses and instructional aides, increased at a greater rate. This was obviously an attempt to curtail labor costs, considering that between 1950 and 2016, productivity in

manufacturing increased over sixfold more than that of healthcare, education, and government services. The real price of both lower and higher education increased fivefold, and healthcare prices increased over threefold. While the average good nearly halved in price, the average service saw its price rise by over 50%. New vehicles more than halved in price, clothing and telecommunications almost quartered in price, and household appliances plummeted to a tenth of their price. Only food, drink, and air travel remained largely unchanged (Helland & Tabarrok, 2019). Just as Baumol theorized, services have become more expensive as consumable goods become cheaper. Goods require fewer workers to produce, but the ones remaining are more specialized and receive higher wages as compensation. Unless services pay more, people will attempt to select out of them and into higher-paying fields for their skillsets in the long run.

These price trends have also visibly materialized in the consumption habits of U.S. households. Comparing 2014 to 1984, bottom income-quintile households spent 2% more of their income on healthcare and over 5% more on housing, and middle quintile households spent approximately 3% and 4% more respectively. Meanwhile, household budget percentages for food, clothing, and transportation have dropped for both groups (Schanzenbach et al., 2016). All this is to be expected under Baumol's model, but wage stagnation is not, which is the issue at hand. While workers will always attempt to move to high-paid progressive sector positions, by the nature of the problem, many will be unable to because of the increasingly small number of those positions that exist. Over the past several decades, the strength of the labor market and movement that allowed much of the service sector to maintain competitive wages slowly degraded.

How Inequality Exacerbates Cost Disease

Baumol assumes that, because nominal wages rise exactly as much as productivity in the progressive sector, and because nonprogressive wages equally rise to compete in the labor market, the growth of real per capita income will always outpace the growth of costs. The single mistake that Baumol makes is that he assumes full employment. Without this crucial factor, capital owners can exploit labor market flexibility to capture an increased percentage of the benefits of productivity growth. This phenomenon has been quantifiably observed in what has been dubbed the productivity-pay gap, which has been increasing over time. The divergence between productivity growth and production/nonsupervisory worker compensation began in the 1960s but was insignificant until the early 1980s, when productivity skyrocketed while wages remained unchanged. Wages began to rise again in the late 1990s, but the rate at which they did was still much lower than that of productivity. Between 1979 and 2025, productivity grew 87.3% and hourly pay only grew 32.7% (Economic Policy Institute, 2025).

The definition of production/nonsupervisory employees, those not in management positions, is designed to represent the "average worker." Between 1964 and 2011, their salaries as a percentage of GDP fell approximately 10%, while management, supervisory, and other nonproduction employees saw theirs rise more than 5%. These "average workers" made up an approximately constant percentage of private employees during that time, while their share of private payroll fell by about 20% (Magdoff & Foster, 2013). Of course, there are management positions in both progressive and nonprogressive industries; these statistics are just meant to be analogous to income brackets. In more straightforward terms, the share of annual U.S. income accruing to the top 1% of earners went from about 11% in 1980 to over 20% in 2015, while that of the bottom 50% went from 20% to nearly 12% (Hartwig & Krämer 2022). The expenditures of bottom income-quintile households decreased by more than 4% between 1984 and 2014, while those of the top quintile rose by almost 10% (Schanzenbach et al., 2016). American income and spending power have transferred from the average worker to the rich over the past several decades.

While real median income increased approximately 25% between 1960 and 2016, it rose about 200% for doctors and nurses (Helland & Tabarrok, 2019). The tight labor market for these careers more accurately reflects the full employment that Baumol assumes, allowing them to collect wages more proportionate to progressive sector productivity gains. The issue here is less so that healthcare professionals earn too

much, but rather that most workers earn too little. The wages of healthcare professionals, and thus healthcare costs, have increased at eight times the rate that wages of the average worker have, causing relative incomes to plummet. Notably, this is not inflation-indexed real income, but income indexed to specific services, thus “relative income” is the correct term. Closeness to full employment in the sectors most afflicted with cost disease causes inflation for their services to rise faster than that of the rest of the economy, and that higher rate of inflation being tied to critical services is the central issue of the affordability crisis, so it is more appropriate to compare incomes to them directly. Combined with rising prices, if purchasing power moves from workers to capital owners, the demand for critical services remains constant, but relative wages decline. The more substantial the level of inequality, the more cost disease decreases relative income for the majority of workers. In simple terms, inequality redistributes the burden of inflation from the rich to the poor. In Baumol’s own words from *The Cost Disease* (2012), “the cost disease disproportionately affects the poor” (p.59).

Where Cost Disease Is Most Prevalent

Low productivity growth sectors like movies and fine dining have increasingly become luxury niches due to cost disease, but because they are not critical goods, consumers have foregone them and found alternatives. However, the most prominent services of the affordability crisis, healthcare, education, housing, and childcare, are seen as critical to quality of life, and while their price inelasticity and government subsidies allow them to be sustained, their markets have become increasingly deleterious. The American standard of living will continue to degrade without policy action.

When considering where action is most necessary, the defining characteristic is labor skill level. The elasticity of demand for labor is lower in high-skill professions, meaning that workers have more bargaining power and can earn more, which increases costs and prices. For this reason, while healthcare is the most common example of the Baumol Effect, education is actually more important to the proposed dilemma. Cost disease and productivity growth are the results of technical innovation, which also increases the demand for high-skill workers to satisfy new labor requirements and produce more innovation. Teaching, being labor-intensive, is cost diseased, however, it is a crucial component to producing high-skill workers. Especially if relative wages decrease and households are forced to prioritize even more critical goods and services, increased costs will deter workers from education, creating a skill mismatch that constrains supply in high-skill sectors while creating a glut in low-skill ones. The result is an endless loop of cost disease.

This can already be seen when observing which sectors suffer most from the affliction. Housing and childcare are both cost diseased but not to the drastic extent of healthcare and education. The primary reason for that gap is the skill level of required labor, as low-skill workers can be more easily replaced and thus have less bargaining power. Of course, this means that these workers are more affected by cost disease themselves. Policy action needs to change the result of cost disease from creating big winners and losers to ensuring that everyone incrementally achieves small wins, as Baumol originally speculated. Whether this is done before or after the economic stage in which wages are doled out does not matter.

Discussing Alternatives

Cost disease is not all-encompassing; there are many other issues at hand in the affordability crisis. It is the primary problem though, and solutions that do not address its conjunction with significant inequality will not provide lasting economic benefit to the public. In their paper *Cost Disease Socialism*, Teles, Hammond, and Takash discuss several such policies, examples of which include expanding healthcare supply and using AI to replace teachers (Teles et al., 2021). However, both cases fail to understand cost disease. The former does not contend with the extremely tight healthcare labor market and high cost of the necessary education. Considering that there is currently a nursing shortage, that effort is already underway and not yet successful. The latter refuses to acknowledge that AI education, like remote education before it, leads to worse educational outcomes and is an inferior product. The combination of

social development, critical thinking, and required focus necessary for proper childhood development can only be provided by a real person. A recent Brookings Institute study analyzed these and many other factors, and ultimately concluded that currently, “the risks of utilizing AI in education overshadow its benefits” (Burns et al., 2026). Both these points aside, neither suggestion actually solves cost disease. Rather, they further concentrate its benefits among capital owners by weakening the power of labor. Teles et al. also believe that administrative bloat and superfluous investment in durable capital are responsible for rising prices in higher education, but this hypothesis has been proven false. The administrative share of spending at public institutions of higher learning has remained constant for decades, and the share of spending on durable capital has actually decreased. While tuition has increased significantly faster than expenditures per student, this is likely because the share of costs borne by students, as opposed to taxpayers, has spiked by over 20% since 2000. Further proof that cost disease is at play is the fact that the real price of higher and lower education has increased at the same rate despite their different market structures (Helland & Tabarrok, 2019). Perhaps their different sources of funding have made this trend difficult to notice.

Though they fail to properly address the core issue, Teles et al. do have good ideas. Reducing permitting requirements, streamlining the tax code, punishing anticompetitive behavior, and eliminating artificial physician caps are all policies they suggest that would reduce prices. Their recommendations on housing and childcare also do much more to address core costs. Despite the professionalization of childcare, the majority of Americans still prefer community-oriented solutions like family members, friends, and neighbors (Teles et al., 2021). However, the current lack of such options suggests that wages are too low for those individuals to afford the free time to do so. Decreased housing production and the regionalization of expenditure increases also suggest that this issue is more so demand outpacing supply (Teles et al., 2021). However, housing is a peculiar case for two reasons. First, a significant portion of housing unaffordability is due to COVID, which caused the average sale price to spike about 41% between 2020 and 2022 (U.S. Census Bureau and U.S. Department of Housing and Urban Development, 2025). Second, housing costs are an ambiguous term, as they are sometimes used to refer solely to sale prices and sometimes mean rent or mortgage payments, property taxes, and utilities. Property taxes may be considered a stand-in for cost diseased education inputs in states that use the funding system, which might explain some regionalization of expenditure increases. Between 2001 and 2020, real housing costs rose approximately 24% while real property tax revenue rose 42% (U.S. Bureau of Economic Analysis, 2025; U.S. Census Bureau and U.S. Department of Housing and Urban Development, 2025). Various federal educational spending cuts, combined with cost disease, are likely to blame for the discrepancy. But this is what makes the core issue of cost disease so difficult to properly identify and ameliorate: it can be hidden behind several causal layers of economic activity.

Policy Recommendations

The problem of mingling cost disease and inequality is twofold: first that wages for the “average worker” are too low, and second that the prices of critical services are too high. The solution also then should be dual-pronged, using pre- and post-hoc avenues.

Policy recommendations for the former issue include raising the minimum wage, increasing union membership, and creating new government jobs. The first directly raises wages, the second does so indirectly by increasing labor’s bargaining power, and the third also indirectly does so by tightening the labor market and creating competition. Because both the real minimum wage and union representation have significantly declined over the past several decades, the first two options are more broadly accepted in popular political discourse, but the importance of the third solution cannot be overlooked (Mishel et al., 2015). Any economic policy that wants to properly address cost disease should focus on achieving full employment and matching the circumstances under which Baumol sees it being a positive force and thus should include some sort of jobs program. Full employment will allow workers to capture more of the gains of productivity growth, and any potential inflation will be offset by increased relative wages for

average workers in comparison to critical services. In economic terms, standardizing labor market elasticity between sectors redistributes the impact of inflation from low earners to high earners. A jobs program would require significantly increased government spending, which is but one reason why raising revenue is necessary.

The latter avenue, post-market solutions, can be defined as redistributive transfer payments that promote economic equality, or in layman's terms, taxing the wealthy. The continued unaffordability of critical nonprogressive services requires, if not outright government provision, at least subsidization at much higher rates than currently provided in the U.S. In either case, redistribution of the income gains created by productivity growth is needed. Hartwig and Krämer (2022) succinctly state that cost disease "requires taxing the winners of technical progress – and of globalization – and providing commensurate compensation to the losers" (p.41). If full employment cannot be achieved and everyone cannot share incremental benefits from cost disease, then those reaping significant benefits must have their winnings redistributed. Yes, there are many inefficiencies in the U.S. healthcare structure that would be removed under a nationalized system, but enacting one would require tax increases, and the same is true of the nation's current subsidization model.

Conclusion

In 2023, Hartwig and Krämer revisited their previous paper and provided a stark warning, "if society does not want an ever-larger low-wage sector to develop, lawmakers must realize that cost increases in low-productivity services are unavoidable and must be adequately financed by the public sector" (p.6). As the owners of capital have captured an outsized portion of the benefits of productivity growth, the relative wages of the average worker have plummeted, creating the foundation of the affordability crisis. The issue is not that services are too expensive but that median wages are too low. Reducing labor costs not only fails to solve cost disease, but it also further contributes to inequality and exacerbates the problem. To solve this dilemma, legislators must promote wage increases for average workers to boost their relative income and raise taxes on the wealthy to subsidize critical services at levels greater than baseline policy. The argument that economic growth makes everyone better off no longer applies. As the metaphorical pie gets bigger, most workers become worse off if capital owners capture most of the benefits. Redistribution is the only long-term solution to the affordability crisis. That redistribution can be before or after wages are doled out, but given the extent of inequality in the U.S., both are likely necessary.

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MANDATORY MINIMUM SENTENCING: FAILURES, DISPARITIES, AND POLICY ALTERNATIVES

Emily Williams

Abstract

The American criminal justice system has long relied on punitive sentencing policies to answer concerns about public safety. Although crime has been declining since the 1990s, policies such as mandatory minimum sentencing have persisted. Decades of evidence, however, point to their failure in achieving the intended goals of uniformity and deterrence. Instead, these policies fueled America's mass incarceration, deepened racial and socioeconomic disparities, and ignored the root causes of crime. This article examines mandatory minimum sentencing policies through a policy analysis framework. It evaluates five different policy alternatives to disrupt the status quo: repealing mandatory minimums at the federal level, reforming them to include only violent offenses, directly supplying diversion and treatment programs as alternatives to incarceration, providing federal funding to states for rehabilitative programs, and launching a public awareness campaign. Each option is assessed against four criteria: effectiveness, cost, fairness and equity, and unintended consequences. The analysis finds that directly supplying diversion and treatment programs to federal courts is the strongest policy recommendation and targets the sources of criminal behavior like drug addiction, mental illness, housing instability, and unemployment. Research on current state diversion programs demonstrates promising results, showing a reduction in recidivism and improved reentry outcomes. The primary tradeoff is upfront implementation cost, which is outweighed by projected long-term social and fiscal benefits. Ultimately, the meaningful implementation of such reform depends on a broader shift towards a more rehabilitative approach to criminal justice.

Introduction

America's judicial system and its ability to deliver justice effectively and fairly has been the subject of intense debate and disagreement, especially in terms of crime deterrence. In an attempt to address crime, various policies, including mandatory minimums, hot spots policing, grant programs, community collaborations, three strikes penalties, capital punishment, and others have been written into law in hopes of suppressing the criminal behavior occurring throughout the country. Despite public perceptions of concern and anxiety surrounding crime in America, studies suggest that crime overall has decreased since the 1990s (Gramlich, 2024). Additionally, property crime is reported to be much more prevalent than violent crime (Gramlich, 2024). However, this data is difficult to gather due to the barriers in reporting crime statistics, such as victims' willingness to report, fear of the offender or backlash, a lack of trust in law enforcement, etc. (Gramlich, 2024). This limitation must be considered when developing crime-reduction policies, particularly given the complexity in addressing a problem whose true magnitude cannot be precisely quantified.

Politicians have answered the public fear and belief that crime is on the rise with "tough on crime" policies and rhetoric, which have largely proven ineffective in reducing crime (Luna, 2017, pp. 119-120, 128). The media often heightens fears surrounding crime by broadcasting the most heinous and vicious incidents, forcing politicians to demonstrate their commitment to community safety. These "tough on crime" laws, however, have been shown to increase incarceration levels while providing little evidence of reducing crime rates (Santucci, 2024). A major aspect of the inability of these policies to deter crime is that the logic behind most illicit activity is not rational and often involves various contributing factors (Santucci, 2024). Many of these laws simply put the criminal in prison for a longer time period, further driving mass incarceration, the disruption of families, and the negative impacts on marginalized communities – all without addressing any of the root causes of crime like drug addiction or unemployment (Santucci, 2024). These methods have largely been punitive in nature, attempting to deter crime with punishment rather than using research-based crime prevention tactics as crime deterrence. Overall, the "social consequences of America's punitiveness are substantial," and "certain areas

(especially poor, mostly minority communities) suffer utter devastation from the loss of people, resources, and respect for law” (Luna, 2017, p. 137).

Tough on Crime, Weak on Results

In 2020, over five million people were subject to some form of correctional control, with almost two million in prison or jail (Nellis, 2024). Though many advocates argued that longer prison sentences would deter crime, research has proven that they “are unlikely to deter future crime” and “may actually have the opposite effect,” as incarcerated persons may share crime strategies and grow desensitized to imprisonment and violence (Nellis, 2024). Long term incarceration exacerbates inequality and poverty, leaving those who are reentering society post-imprisonment with fewer opportunities for success. Formerly incarcerated people are often subject to hiring and housing discrimination and weaker social support networks (Brennan Center for Justice, 2019).

A large number of criminal justice experts are now pushing for a more balanced approach, grounded in reducing recidivism for technical violations, and concentrating on “expanding alternatives to prison for persons convicted of low-level offenses” (Nellis, 2024). This strategy would hopefully reduce prison admissions, while still holding convicted persons accountable who have committed higher level offenses.

Research suggests that some of the most effective forms of deterrence are those that focus on the root causes of crime rather than what happens after a crime is committed (Johnson, 2019, p. 2). With crime being disproportionately concentrated in areas that are experiencing economic distress, evidence shows that reducing poverty can also reduce crime (Johnson, 2019, p. 2). This correlation also extends to drug addiction, with studies indicating that access to dependency treatment is particularly effective in reducing property crime rates (Johnson, 2019, p. 2). Some of the most widely known causes of crime that are also recognized by the Federal Bureau of Investigation (FBI) include population density, degree of urbanization, youth concentration in population, economic conditions (poverty level, job availability, median income), family conditions, law enforcement effectiveness, etc. (FBI, 2012). This evidence, however, directly contrasts with current methods of addressing crime which include mainly enforcement and punishment (Johnson, 2019, p. 2).

Deterrence at a Theoretical Level

There are various theories in an ongoing debate about the best way to support public safety while deterring future crime. Incapacitation theory suggests that keeping certain individuals incarcerated would prevent them from committing any new crimes. Rehabilitation theory holds that treatment programs would change the individual, therefore preventing them from committing future crimes. Denunciation theory combines several frameworks, outlining how public punishment prevents others from committing the same offense by creating a negative stigma around it, while also serving as a form of retribution.

Deterrence theory operates on the idea that criminal penalties not only punish the offender but also discourage others from committing similar offenses. It “posits that punishments should be swift, certain, and proportionate to the crime in order to appropriately deter individuals from violating the law” (Tomlinson, 2016, p. 33). This theory also calls for clearly written laws and public awareness of the legal ramifications of any deviant behavior (Tomlinson, 2016, p. 33). Applied during the 1970s crime boom, deterrence theory assumes that “a message is relayed to a target group”, “the target group receives the message and perceives it as a threat,” and that “the group makes rational choices based on the information received” (Tomlinson, 2016, p. 33).

The problem arose that, while most people understood that crimes such as stealing or murder are wrong, the latter two assumptions of the theory proved far more difficult to sustain. For some, criminal sanctions

are either unknown or non-threatening, with prison viewed as an accepted part of life rather than a punishment to be avoided. For young people from the most disadvantaged backgrounds, criminality can often feel like an inevitable part of their future when looking at role models around them and society's overall low expectations of them. Additionally, most criminals do not go through a rational thought process when choosing to commit a crime, especially when drugs or alcohol are involved (Tomlinson, 2016, p. 33).

Current Policy and its Flaws

In our current criminal justice system, punishments are hardly swift, certain, or proportionate, and the sanctions in place frequently violate all three of these components. In many instances, convicted criminals wait years in jail for their sentencing, and are given a lengthy sanction that is often disproportionate to the crime committed (Tomlinson, 2016, p. 35). While increasing the maximum potential sentence for a crime appears to have little deterrent effect – with research instead pointing to policies that increase the certainty of being caught as more effective – the U.S. justice system continues to enforce policies that hand out lengthy sanctions (Johnson, 2019, p. 1). An example of a current policy in place that fails to deter crime is mandatory minimum sentences.

Historians trace the origins of mandatory minimums back “to an increasing punitiveness in the American approach to criminal justice” (Luna, 2017, p. 119). They were passed as a result of what some argue was a series of “moral panics” where emotion overtook rational deliberation (Luna, 2017, p. 119). This led to an overestimation of a perceived threat in tandem with the demonization of a particular group (criminals) which then stirred public demand for hasty and rigid government action (Luna, 2017, p. 119). Politicians then exploited this anxiety through the declaration of a “war on crime” or a “war on drugs” with the help of a frenzied national media portrayal, overall intensifying the push for punitive policies. This political cycle “provides an incentive for lawmakers to create new crimes and increase punishments in order to be seen as ‘tough on crime,’” and win the next election (Luna, 2017, p. 120).

Modern mandatory minimum sentences are based mainly on deterrence and incapacitation, focusing largely on handgun and drug offenses (Parent et al., 1996, p. 2). These laws require a judge to administer prison terms of a certain length for people who are convicted of certain crimes, taking the power away from the judge and placing it into the prosecutor's hand (Congressional Research Service, 2023, p. 2).

As seen in Appendix A, however, many thought of these laws as promoting uniformity in sentencing – reasoning that “it doesn't matter how strict or lenient your judge is, as the law and the law alone determines the sentence you receive” (Cullen, 2018). It provided a solution to personal bias through the reduction in judicial discretion over sentencing decisions and sought to hand out the same harsh punishment to any criminal who violated that law. In practice, though, mandatory minimums had the opposite effect. They stripped judges of their sentencing discretion and gave prosecutors unchecked power to pursue charges carrying a mandatory minimum at any time (Cullen, 2018).

Mandatory minimums also do not achieve the certainty and predictability components of deterrence because some officials may attempt to circumvent them if they believe the sanction is too harsh, or rather, push for a certain sanction if they believe that the defendant's crime requires it (Parent et al., 1996, p. 3). This also “may occasionally result in an unduly harsh punishment for a marginal offender” (Parent et al., 1996, p. 3). A large portion of mandatory minimums are applied to nonviolent drug offenders, which forces “judges to harshly punish those who pose the least physical danger to communities” and can cause the defendant to feel pressure to plead guilty for fear of being subject to a mandatory minimum prison sentence (Cullen, 2018). Although the goal of these laws may have been well-intentioned, these laws instead have “caused an imbalance in the courtroom that has helped drive mass incarceration,” which can also be seen in Appendix A (Cullen, 2018).

The effects of mandatory minimum sentencing on racial and ethnic minorities have been especially disproportionate, specifically when looking at drug cases, as displayed in Appendix A. African Americans received longer sentences than those who are white because they made up a large majority of crack cocaine convictions, “a crime Congress had singled out for especially harsh mandatory penalties” when the Anti-Drug Abuse Act of 1986 was passed (Parent et al., 1996, p. 4). The Fair Sentencing Act attempted to eliminate this injustice; however, it only lowered the disparity rather than completely eradicating it (Nellis, 2024). These laws, along with the three strikes and truth-in-sentencing legislation – which touted a reduction in judicial discretion and an increase in penalty severity – have had no significant deterrent effects, and may have actually increased crime (Tomlinson, 2016, p. 34).

The United States Sentencing Commission produced research revealing that people of color are more frequently charged with mandatory minimum offenses than those who are white and also reported that people of color “were the most likely to have been sentenced under a mandatory minimum than any other group...despite equal rates of using drugs” (Nellis, 2024). Some analysts speculate that these laws are likely ineffective because they do not account for any other factors that may have been correlated with the criminal conduct like age, impulsivity, gender, mental illness, etc. (Tomlinson, 2016, p. 34). Mandatory minimum sentences overall have shown to “deepen racial disparities in the criminal legal system,” and “cause far-reaching harm to individuals, families, and communities” (Nellis, 2024).

The focus on punishment through laws that require mandatory minimum sentences has made America the “single most punitive nation in the Western world” and has not proven effective in deterring future crime (Luna, 2017, p. 117). This policy failure has led to the proposal of various reforms attempting to better address the root problems of poverty which will be explored further in the following section of this article.

Public Safety as a Public Good & Evaluative Framework

When examining the root problem behind the implementation of mandatory minimum policies, the identification of public safety as the “market good,” provides a new, but quite abstract, perspective on how to analyze the policy. Public safety would be identified as a purely public good, simply due to its non-rivalrous and non-excludable nature. In terms of rivalrous consumption, the consumption of public safety does not reduce the quantity available for other people. In addition, people cannot be excluded from good public safety even if they do not pay directly for it, making it non-excludable.

The violation of the rivalry and excludability characteristics makes public safety an undesirable good for the development and operation of a market within the real-world context. With purely public goods in general, there is a market failure or absence of a market because there is no charge for the good, it is available to everyone, and therefore a market does not naturally occur. It provides no incentives for buyers or sellers of the goods. This is where government intervention comes in and attempts to create a market where there is a missing one; in this case, it would be federal and state legislation that codifies mandatory minimum sentencing in an effort to produce a supply of public safety. Markets in this way can be thought of as handling efficiency, while society is largely looked to in terms of any equity issue.

When mandatory minimums were first implemented, they were thought to be a tangible way the government could intervene within the criminal justice system to reduce crime as well as disparities in sentencing through “tough on crime” legislation (Luna, 2017, p. 136). However, as outlined in this article, they ended up having quite the opposite effect, creating other market failures.

When evaluating policy and potential reforms, this article uses criteria to assess the effectiveness, cost, fairness, equity, and justice, as well as the unintended consequences. Looking first at effectiveness and outcomes, the alleviation of overcrowding in prisons, or a decrease in the prison population, is an

especially important effective target for any policy option concerning mandatory minimums. This measurement would simply be a count of the incarcerated population around the country (federal and state level). Another effective criterion would be a reduction in the average prison length time for offenders, measured by the number of months a convicted person is sentenced to. The policies should aim to reduce the number of prisoners who are in prison for an exceptionally long time. Successful reentry increase would signal effectiveness of the policy as well. It would be measured by the formerly incarcerated person's ability to establish residence, secure employment, and reunify with their friends or family after incarceration. Lastly, a lower recidivism rate would be an outcome that counts how many formerly incarcerated people are convicted of another crime.

In terms of cost, this criterion would be the amount of money needed from the government to implement the policy option. A reduction in sentence disparities would be a criterion for the fairness, equity, and justice aspect of the policy options presented. It may be measured by analyzing whether racial sentencing gaps narrow following the implementation of reform. This criterion focuses on making the justice system equitable to people of all races. An unintended consequence for many of these policies is a burden on the court systems. There would be an increased caseload due to longer trials and more cases going to trial, whereas previously they may have involved a guilty plea to a mandatory minimum, which expedited the process. It will likely increase the amount of time the accused will be in jail awaiting their trial while placing a heavy burden on judges.

Policy Options

Repeal Mandatory Minimums at the Federal Level

In terms of options to foster a more equitable justice system, the first policy option proposal is to repeal all mandatory minimums at the federal level. "Prosecutors' use of mandatory minimums in over half of all federal cases disproportionately impacts poor people of color" and has been a main contributor to the rapid growth of the federal prison population over the past few decades (Siegler, 2021). With all fifty states, as well as Washington, D.C., having mandatory minimums, repealing federal mandatory minimums would aid in setting a precedent that the states could follow. There is a slowly shifting conversation about mandatory minimums, as its injustices are revealed, that may aid specifically in making the general approach to drug policy based more on public health rather than the punitive model that is currently in place (Siegler, 2021).

Repealing mandatory minimums would be a huge, progressive step towards a more rehabilitative sentencing model by taking away their ability to incur any further damage. If retroactive, this repeal would be even more powerful and help to alleviate the strain on the prison system as well as begin to remedy those class and race inequities in sentencing.

In Appendix A, this policy option would seek to interrupt the status quo itself, hopefully eradicating the effects that flow from the policy, such as harsh punishments for non-violent crimes, racial inequities in sentencing, failure to deter crime, as well as a lack of judicial discretion. Sentencing without mandatory minimums in place would work in the same way that crimes not subject to mandatory minimums are sentenced. It would give judges greater discretion to consider mitigating circumstances and the individual, allowing them to tailor the sentence to the individual case.

Reform Mandatory Minimums to Include Only Violent Offenses

A second policy option, which is very closely tied to the option above, would be to reform mandatory minimums so that they are only applicable to violent offenses. 72.3% of all cases carrying a mandatory minimum penalty were drug trafficking, speaking to how radically the effects of mandatory minimums would be changed if they were no longer applicable to drug crimes (United States Sentencing Commission, 2024). When looking at Appendix A, one can see how this option seeks to mitigate the

harsh punishment for non-violent crimes as well as decrease the prison population. It would also likely lead to lower rates of recidivism and reduce the amount of people in prison for longer sentences, also referred to in Appendix A. The policy inspiration for this option is the Smarter Sentencing Act of 2021. It proposed the reduction of mandatory minimum penalties for some drug offenses and required reporting on the impacts of the “cost savings from the reductions” with an “establishment of a public database of federal criminal offenses” (*Smarter Sentencing Act of 2021*, 2021).

The required reporting of “reduced expenditures on federal corrections,” and “cost savings from the reductions in mandatory minimum sentences” would reveal how this policy could reduce recidivism and overcrowding in prison, while also using those savings to invest in law enforcement and crime prevention (*Smarter Sentencing Act of 2021*, 2021). It provides an important element of government accountability which ensures this approach is effective and accomplishes the goals that mandatory minimums were set to achieve in the first place.

These analyses would provide the public with statistics on how the government is implementing data-driven policy reform and using it to positively reallocate the resources where they would be more impactful in reducing crime. It forces conversations about the true ways the government can fund entities that would prevent, reduce, or reframe criminality so that it seeks to be fair and just, as well as effective. Appendix A visualizes how this has been a missing piece of the United States’ ability to deter crime. The Mandatory Minimum Reform Act of 2017 is another example of a bill that sought to eliminate most federal mandatory minimums for drug offenses “imposed on a defendant who imports, exports, manufactures, distributes, or possesses with intent to distribute a controlled substance” (Mandatory Minimum Reform Act, 2017). This bill sets an example of how simple and purposeful the reform can be, yet how massive the implications and impact would be.

Alternatives to Mandatory Minimums: Diversionary and Treatment Programs

A third policy option would be providing alternatives to punitive incarceration like diversion programs or treatment for those with drug convictions to put a larger focus on rehabilitation. This would provide the resources needed to those with mental health or drug addiction struggles, as well as assist in reentry as shown in Appendix A. These segments on the systems map are visualized as contributing to the recidivism rate as well as the failure to deter crime. Targeting this crack in the correctional system seeks to address the root of the criminality in the offender – often either their drug addiction or mental health issues. A diversion program would typically require participants to fulfill certain conditions, for example, “completing treatment, paying restitution, or performing community service,” in place of being incarcerated and branded with a criminal record for life (Kubic & Pendergrass, 2017).

Another upside to diversion programs is that they are “many times cheaper than incarceration” which means it will save even more money that can be better reallocated (Kubic & Pendergrass, 2017). Additionally, concerning drug treatment specifically, “every dollar invested in drug treatment yields \$12 worth of savings in terms of reducing future crime and health care expenses” (Kubic & Pendergrass, 2017).

These programs contribute to public safety by focusing on the individual’s well-being, and “provide ways for individuals who have broken the law to be held accountable without disrupting their ability to lead productive lives and contribute to their community” (Fair and Just Prosecution, 2024). Given the overrepresentation of people with mental illness in the justice system, the solution points more towards “robust mental health crisis response systems” and “investments in alternatives to incarceration,” like diversion programs (Fair and Just Prosecution, 2024). This option also minimizes one’s exposure to the criminal legal system by offering alternatives, which can lead to a reduction in recidivism rates as well.

These programs target the fundamental drivers of criminality, as pointed to in Appendix A, such as

“food and housing insecurity, joblessness, lack of educational resources, and unmet mental health needs” (Johnson et al., 2022). It helps to engage the community through relationship-building, volunteer service, and restoration, which can work to mend the neighborhood cohesion that is so often fractured by mass incarceration, also visualized in Appendix A (Johnson et al., 2022).

Treatment courts, another example alternative, are “specialized court docket programs that allow individuals to enter long-term drug treatment and agree to court supervision rather than receive a jail sentence” (Office of Justice Programs, 2024). These courts allow those who complete the program to have their charges dismissed or expunged, but failure of the program results in the case moving forward in the criminal justice system (Office of Justice Programs, 2024). This provides motivation for the offender to complete the program and honors their personhood with an opportunity to get real help for a public safety issue, rather than sending them to prison where the issue would likely continue or worsen.

“Treatment courts recognize addiction as a disease and aim to treat the chronic disease affecting behavior and impulse control,” which is a very restorative approach to drug crime, and a stark contrast to the current mandatory minimums in place (Office of Justice Programs, 2024).

Provide Federal Funding for States to Adopt Rehabilitative or Diversionary Programs

A fourth option to target the negative effects of mandatory minimums goes alongside the above option, in that it is providing federal funding for states to adopt rehabilitative or diversionary programs. This option is fairly straightforward, especially because the federal government would be incentivizing the state governments to find alternatives to mandatory minimums. This allows a state to more easily reap all of the benefits of diversion and treatment programs that were described in the above option without having to adjust their own budget.

This policy option was inspired by Arlington’s justice diversion program which just received a federal grant of \$1 million in hopes of “expanding the program’s staff, [connecting] participants to treatment for substance abuse and mental health issues, [helping] participants procure vital documents, [connecting] participants to housing and job and vocational training, [supporting] participants’ fitness and physical wellbeing,” as well as “[expanding] participants’ pro-social support networks” (Egitto, 2024). These grants could be funded using federal savings generated by the reduction in mandatory minimum sentences and the number of people incarcerated. These grants aid local communities in increasing the stability of their community, as well as “connecting program participants to the supportive services where they live” (Egitto, 2024). This option elevates and increases the availability of resources and alternative programs to prison around the country, specifically targeting multiple points on Appendix A, like a lack of mental health and addiction resources, weak reentry and rehabilitation programs, or higher rates of recidivism.

Public Awareness Campaign Regarding Drugs and Drug Policy

A final policy option is a public awareness campaign to educate citizens about the negative effects of drug use and consequences of illegal use. Although this policy option may sound similar to D.A.R.E. (Drug Abuse Resistance Education), this campaign would have stark differences from the largely unsuccessful and widely criticized education program. This effort would not be targeted at young people specifically and would rather target the general population. It would incorporate statistics regarding drug use and arrests/convictions correlated with the most popular illicit drugs (cocaine, heroin, fentanyl). It may also list negative side effects of the drugs or highlight personal stories of those affected by their use. This information would be targeted at making people more aware of the punishments, like mandatory minimums, which have detrimental effects on one’s life should they choose to partake in illicit drug use or possession. This may also include how mandatory minimums are affecting their community, how much taxpayer money is being circulated in the prison system, as well as what drug use looks like in

their community. It could highlight any local organizations or nonprofits that may be aiding in their communities' efforts to lower crime or drug use.

This campaign may also help to change the rhetoric and dialogue surrounding drug use or criminals in general, being a call to action for those who could help financially or physically in bettering their community. It can also motivate those individuals to contact their local politicians to get policies changed, or advocate for funding that is better allocated to fit their community's needs. In the same way that public fear and the media helped to exacerbate the "tough on crime" rhetoric, leading to immensely powerful legislation, it also has the potential to turn the attitudes to a more rehabilitative approach that is concerned with public health.

It may look like an infographic or an interactive website, such as the Drug Enforcement Administration's (DEA) campaign "One Pill Can Kill" website that brings awareness to the danger of fentanyl pills (DEA, n.d.). The campaign uses clear, concise, and engaging visuals, as well as interactive initiatives such as a video game tournament and a collaboration with the NFL to raise awareness surrounding opioid use (DEA, n.d.). Incorporating this website into something more like an advertisement, where one does not just have to visit the DEA website to see it, is a tool that has yet to reach its full potential in informing citizens and reframing drug use as a public health concern. In terms of the Appendix A, this policy option seeks to interrupt the public pressure and media-driven fear surrounding crime and replace it with a focus on public health. It also may intercept the community cohesion breakdown, unifying the community to be more aware of the dangers, potential consequences, and ways to help their fellow community members who may be struggling.

Distributive Justice Failures

When viewed through a distributive justice lens, mandatory minimum sentencing reveals significant inequities in how punishment is allocated across different populations. These disparities reflect a broader imbalance in how legal consequences are distributed, rather than a failure tied to any single market good.

Baehler identifies both inequality of opportunity and inequity of outcome as distributive justice failures (Baehler, n.d.). In terms of mandatory minimums, this looks like a discriminatory policy that largely targets low-income people of color and is used primarily for low-level drug offenses (Nellis, 2024). Mandatory minimums also largely handed power from the judges to prosecutors, and with this shift, prosecutors are able to charge the accused with a mandatory minimum offense which often carries an extremely harsh penalty that does not match the magnitude of the offense (Siegler, 2021). Mandatory minimums are not implemented fairly across race and class, and the disproportionate incarceration of people of color represents an astounding equity failure for our society at large (Siegler, 2021).

A violation of fundamental human rights is another distributive justice failure that is highlighted when viewing this policy through a failure framework lens. In the UN's Universal Declaration of Human Rights, Article 10 states that "everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal..." (United Nations, 1948, p. 3). The United States puts this human right into danger with the implementation of mandatory minimums because they take away the judge's ability to consider the circumstances of the crime, as well as the level of the offense during their trial (Siegler, 2021). Even if the judge thought that the accused would benefit more (as well as society at large) from an alternative program, such as a drug treatment program, they may find themselves uncomfortably forced to hand out a prison sentence of 25 years.

Article 7 states that "all are equal before the law and are entitled without any discrimination to equal protection of the law" which contrasts directly with the disproportionate impact that mandatory minimums have on racial minorities, as well as low-income individuals due to systematic inequities in

prosecution (United Nations, 1948, p. 3) (Siegler, 2021). One may also argue that mandatory minimums violate Article 5 of the Universal Declaration of Human Rights, which states that “no one shall be subjected to torture or to cruel, inhuman, or degrading treatment or punishment” due to the often-harsh punishment given for a relatively minor offense (e.g. 20 years for drug possession) (United Nations, 1948, p. 2). This could be argued to be cruel punishment because prison time is not proportionate to the offense.

Traditional Market Failures

Mandatory minimum sentencing can also be analyzed through a traditional market failure framework, particularly in how it distorts the provision of public safety by underinvesting in rehabilitative and diversionary services. In this context, the relevant good is the provision of treatment and diversion programs offered by nonprofit organizations and court-based alternatives. These services would be purely private because they are excludable as well as rivalrous, in some cases, the program spots are likely to be extremely competitive for those who may have the option to apply for or enroll in the program. These resources are highly needed and heavily underfunded, causing the market failure of a positive externality. Their benefits extend beyond just the “buyers” (program participants) and the “suppliers” (the organizations contracted by the government), to families and the broader community through reduced recidivism, improved reentry outcomes, and increased public safety.

The market underprovides these services relative to their full social value because these social benefits exceed private incentives. The good in the market is not priced at its true or full social value, and the benefits seen are external to the internal parties of the transaction (Baehler, n.d.). Applying this lens to mandatory minimum sentencing highlights how the current system underinvests in rehabilitative services and fails to account for the broader social benefits they produce.

Outcomes Projections

The following matrix (Figure 1) compares each policy alternative across the evaluation criteria, allowing for a structured assessment of their relative performance and tradeoffs. Against all of these criteria, the status quo, or mandatory minimum policies, would be projected to have no change.

GOALS	CRITERIA	POLICY OPTIONS					
		Status Quo: Mandatory Minimums (MM)	Repeal MM	Reform MM to Violent	Direct supply of Alternative Programs (AP) to federal court	Federal Funding to states for AP	Public Awareness Campaign
A. Effectiveness	Decrease in prison population	no change	very high	medium-high	medium-high	medium	low-medium
	Reduction in average prison length time	no change	very high	high	high	medium	low
	Increase in successful reentry	no change	high	high	very high	very high	low
	Lower recidivism rates	no change	high	high	very high	very high	low
B. Cost	Amount of money needed from govt	no change	low	medium	high	high	medium
C. Fairness, Equity, and Justice	Reduction in sentence disparities	no change	high	medium	medium	medium	low
D. Unintended Consequences	Burden on court systems	no change	high	medium-high	medium	medium	low

Figure 1: Outcomes Matrix

The Effectiveness of Incarceration Policies

This article evaluates effectiveness through four main criteria: a decrease in prison population, reduction in average prison length time, increase in successful reentry, and lower recidivism rates. First looking at a decrease in prison population, the policy option that scores the highest is repealing mandatory minimums at the federal level. This would drastically reduce the number of people that are currently being automatically sent to prison for over a decade. It would also prevent disproportionate punishment for non-violent crime convictions. Reforming mandatory minimums to include only violent crimes is a close second in the ranking of these criteria. It scores a high, considering that the majority of mandatory minimum sentences are for non-violent crimes, including handguns and drugs. Providing a direct supply of alternative programs to federal courts scored a medium-high ranking for

decreasing prison population. Increasing the number and availability of alternative and diversionary programs at the federal level would lead to an indirect decrease in prison population in comparison to the two policies above because the defendant still has to be charged with crime in court, recommended for the program, and eligible in order to evade the prison sentence. Inevitably, some of those who would have been a good fit for the program would slip through the cracks and go to prison anyways, meaning it would not decrease the prison population as much as the others. Another difficulty in projecting this outcome for this policy is that it is hard to know how often a judge would offer the program in place of a prison sentence, so this too contributes to its slightly lower rating. In terms of federal funding to states and the public awareness campaign, these options do not intercept at the court level and therefore are slightly more indirect ways to tackle the problem. It would likely eventually decrease the prison population, but not nearly as fast or as directly measurable as some of the other options.

The next criterion is average prison length time, measured by the number of months a person spends in prison post-conviction. Repealing mandatory minimums again scored the highest against this criterion, due to its immediate alleviation of the cases where there is a very lengthy predetermined prison sentence set by law. Reforming mandatory minimums to only include violent crimes and direct supply of alternative programs both scored high, also due to the interruption of the current policy. Amending the current policy directly reduces the number of crimes eligible for a minimum time in prison, and the alternative programs directly avert a prison sentence completely, making them projectably effective in reducing average prison length time.

In terms of the lower recidivism rate criterion, this would measure the ability of a policy option to lower the number of formerly incarcerated people who were convicted of another crime. The highest scoring policies against this criterion were the direct supply of alternative programs to federal courts, as well as federal funding to states for the programs. Similar to the successful reentry criterion, these policy options seek to ensure that the offender does not continue deviant behavior and is able to reenter society post-conviction or post-program. They look to prevent a relapse into criminal behavior after receiving a sanction and are therefore projected to produce substantial reductions in recidivism.

The other policy options are all ranked as low in this category. Repealing and amending mandatory minimums would both rank low due to their reduction in the number of people who even had the potential to contribute to the recidivism rate after they have been incarcerated; in other words, it would reduce the initial conviction rate rather than the recidivism rate. The public awareness campaign may prevent some people from reoffending if they are reminded of the potential consequences; however, there is no feasible way to prove that this campaign prevented crime due to the difficulty in quantifying nonexistent crimes.

The Cost of Incarceration Policies

The cost criterion was defined as the amount of money needed from the government to implement the policy. Overall, this criterion is difficult to quantify, making the projections more generalizations regarding the estimated cost to implement the following policies. The two policies that ranked the highest in terms of cost to the government were the direct supply of alternative programs to federal courts and federal funding to states for those alternative programs. These policies require the government to fund some aspects of the alternative programs, either to implement or supply the programs directly, likely through contracting a non-profit. Federal funding to states would require the government to give money directly to states, hopefully helping to even out any inequality in terms of rural or impoverished areas. Reforming mandatory minimums to only include violent crimes was projected as medium-high in terms of cost due to the inherent nature of costly legal fees. The cost of an alteration or amendment of any policy is not sourced or readily quantifiable and can vary greatly depending on the nature of the policy, as well as the complexity surrounding the changes. The costs would come mainly from legal staff time to

research, draft, review, and analyze the amendment (including unintended consequences), legal challenges that would force the government to defend its position in court, as well as any negotiations or lobbying needed for its passing. Additionally, non-violent crimes make up the majority of mandatory minimum offenses, so it would not be a simple, minor change. Repealing mandatory minimums was also projected as medium-high against this criterion because of many of the same reasons – legal fees, the lobbying surrounding the policy, public campaigning, etc. The public awareness campaign was rated as the lowest scoring policy option against the cost. Much of the most expensive research that the campaign would be presenting has already been conducted, and the goal of the campaign would be to effectively communicate those statistics to the public. The most expensive aspect of this policy option would be payment to the few people who concisely put together the information to make it more readable to the public and customize it, making this policy the least costly.

How a Policy Promotes Fairness, Equity, and Justice

In terms of the Fairness, Equity, and Justice goals, the main criterion is a reduction in sentencing disparities, measured by an analysis of the gaps in sentencing based on race. Repealing mandatory minimum sentencing would score a high against this criterion because it would entirely eliminate the policy contributing to the discrepancy. Reforming mandatory minimums scored a medium-high against this criterion. Including only violent crimes may interrupt the race-based discrimination for nonviolent crimes, but there likely would still be some persisting sentencing disparities with mandatory minimums for violent crimes. Supplying alternative programs to federal courts and federal funding to states for alternative programs both scored a medium against this criterion. Although the direct supply of programs reduces reliance on incarceration, it does not fully resolve sentencing disparities. Eligibility and referral decisions can introduce new points of discretion that are also subject to biases. The federal funding and public awareness campaign are projected to have the lowest impact on sentencing disparities because they are the furthest removed from the court system.

Potential Unintended Consequences

The last criterion that the policies were analyzed against was the burden on court systems. The highest scoring policy for this criterion was repealing the policy, because without an automatic sentence, more cases would go to trial. This would take a longer amount of time and require judges to exercise more discretion for each individual case. With fewer guilty pleas and a greater need to evaluate the specific circumstances of each case rather than applying a predetermined mandatory penalty, court proceedings would likely be more complex and time-consuming. Reforming the policy to include only violent crimes would have a remarkably similar effect in terms of the burden on the court systems, just to a slightly lesser degree, as non-violent offenses would be removed from the scope of mandatory minimums. The direct supply of diversionary programs as well as the federal funding for those programs scored a medium on this projection. They would also increase the workload and discretion of the judges in comparison to the status quo, but not as much as repealing the law completely. Under these policies, judges would have greater discretion in determining both a defendant's eligibility for an alternative program and which program they must complete to satisfy the court. The public awareness campaign would score the lowest against this criterion because it would not directly affect the burden on court systems, and if it did, it would likely lessen the burden (if it successfully deters people from committing crimes, reoffending, etc.).

Key Tradeoffs and Takeaways

When viewing the outcomes matrix as a whole, the option that ranks the highest on the effectiveness goal is the direct supply of alternative programs to federal courts. This program's lowest rating for this goal was medium-high, with another high, and then two extremely high projections. The tradeoff for this policy option would be that it ranks very high on the cost criterion as well, which may lessen its appeal to government officials with tight budgets. The federal funding to states for alternative programs also ranks highly for the effectiveness goal, yet high on the cost criterion. These options are trading off

effectiveness for cost. Repealing and reforming the status quo are highly effective in two of the criteria, including decreasing prison population and reducing the average prison length time, yet were both ranked low for the other two effectiveness criteria (increase in successful reentry and lower recidivism rates). These policies also both were projected to have the highest burden on the court systems.

Investing in Rehabilitation: The Path Forward

After analyzing how these potential policy options will perform against these criteria, the direct supply of alternative programs policy option scores the best. There have been variations in this policy implemented, and research has found them to be extremely successful. One of the first alternatives to incarceration for youth in America, the Avenues for Justice reported that their organization spends “an average of \$6,300 per person, as compared to the nearly \$450,000 the city would spend incarcerating that same person” (Corbett, 2023). Another source also found that alternatives to incarceration are much more cost-effective, saving taxpayers from paying, on the low end, “over \$28,000 to keep one person in federal prison for one year” (Families Against Mandatory Minimums, 2011, p. 1). These numbers make a convincing fiscal argument for a switch to a rehabilitative outlook on crime.

In California, a drug court program was implemented that offers defendants the option to enroll in a rehabilitative program in lieu of incarceration, with the potential for the charge to be expunged upon successful completion (Bailey, 2003). This program reduced recidivism by a considerable amount, with reports of arrest rates declining by 85% for those who completed the program (Bailey, 2003). One former psychologist, now politician, described how “it is cheaper to provide outpatient services than to pay for their confinement in a prison,” and how even more importantly, they are human beings with inherent value, deserving and “worthy of receiving appropriate interventions and treatment” (Bailey, 2003).

Homeboy Industries is another organization located in California, focused specifically on giving “hope, training, and support to formerly gang-involved and previously incarcerated people,” providing therapy sessions, tattoo removal, anger management courses, as well as parenting classes (Homeboy Industries, 2021). These services would help those who have untreated or undiagnosed mental illnesses or drug addictions and improve the economy and society at large. This policy option ranked the best overall, in effectiveness, cost, fairness, equity, and justice, with the tradeoff of a costly implementation. This outcome matrix projects that the tradeoff would be worth it for the tens of thousands of lives that could be rehabilitated and the overall benefit to our society.

Implementation Challenges

Implementation challenges for this topic include public support and endorsement issues. Advocating for an alteration to a preexisting law requires a lot of public campaigning and lobbying, and likely an abundance of evidence to convince the public, as well as government officials, that the policy has such negative effects that it needs to be repealed or amended. The negative outcomes of the status quo, including mass incarceration, sentencing disparities, depletion of resources, etc., are issues that some Americans might still see as insignificant. America has a strong history of a very punitive outlook on crime and criminals in general, which is what first led to mandatory minimum sentencing. A turn to a more rehabilitative attitude towards deviancy would ease the application of these policies. In order to implement any of the policy options above, the adverse consequences of mandatory minimums must be acknowledged by the government, and the public must prioritize and advocate for change.

Tracing the Logic of Reform

The logic model in Appendix B is a visual representation of the assumptions and risks associated with the implementation of the policy option to directly supply alternative programs to federal courts. Assuming that the political and governmental atmosphere is ideal, and the policy is implemented to its fullest extent, the first intermediate outcome (IO) would be that alternative programs are available.

With this IO, the assumption would be that the programs exist and are plentiful across the U.S. The subsequent risk would then be that there was a lack of programs in impoverished and rural areas. With the availability of programs, judges would then offer the program to defendants instead of a mandatory minimum sentence. This rests on the assumption that all judges would identify a need in the defendant and act on it, providing the program as an option. An inherent risk of this assumption is that there are judges who do not believe in rehabilitation and inevitably would not offer the program to a person who needs it.

The next IO would be that with fewer people incarcerated; there would be an increase in enrollment in the diversionary programs. This assumes that defendants are eligible for the program, and that there are spots available to those who are eligible. Defendants who would face eligibility complications would then be at risk with this IO. With more people in rehabilitative organizations, drug addiction would lower. Successful reentry would then come as the next intermediate outcome, defined as the person's acquisition of a job, a stable home, as well as reunification with their community. These two IO's share the assumption that the program is successful, effective, and helpful to the person enrolled. Therefore, the risk would be that the program is ineffective, unhelpful, and unsuccessful.

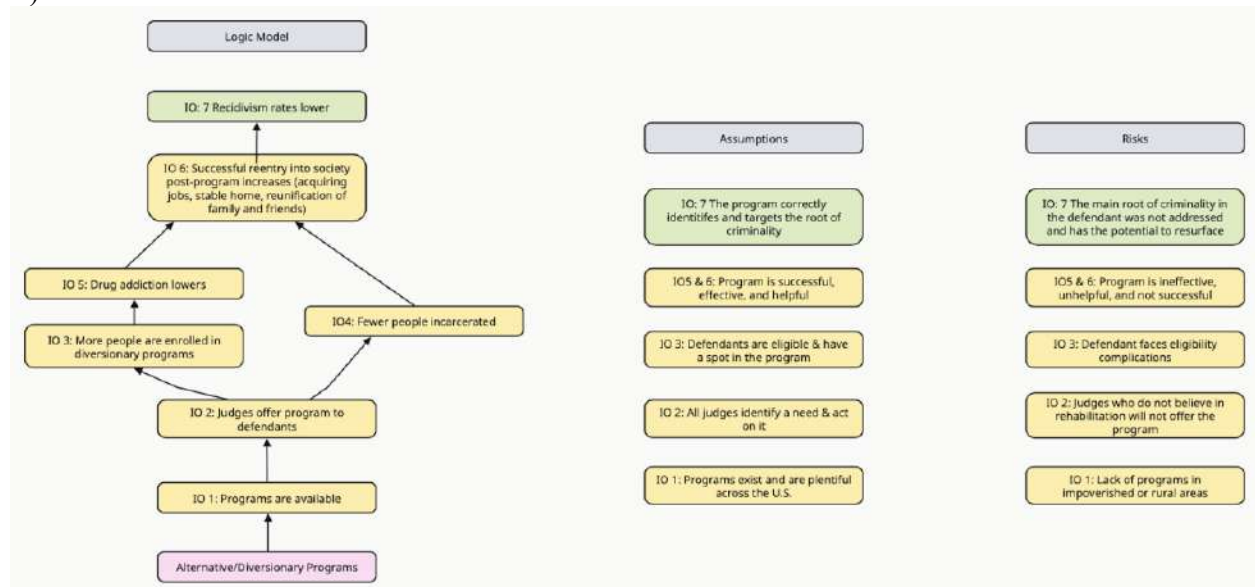
The last outcome in the logic model is the lowering of recidivism rates, which would occur after the success of the other intermediate outcomes. The assumption here is that the program correctly identifies and targets the root of criminality within the defendant, and the risk is that the root was not addressed or misidentified, potentially leading to the resurfacing of deviant behavior in the future. One potential suggestion for more effective implementation would be to concentrate programs in areas with the highest rates of mandatory minimum convictions to ensure greater availability. Additionally, training judges on implicit bias, mental illness, and drug addiction may help prevent personal beliefs about rehabilitation from influencing their decisions, while also aiding in the identification of defendants who may be eligible for a program. A standardization of program goals across the country would help to ensure the effectiveness of the program and would also make it measurable against a rubric that could be reviewed annually. Ultimately, the success of this policy option hinges on thoughtful implementation, judicial accountability, and a sustained commitment to addressing the root causes of criminal behavior rather than defaulting to punitive measures that have proven ineffective.

Appendix

A)



B)



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WHEN THE CHECK STOPS: HOW EXECUTIVE GRANTS AND ACTIONS UNDERMINE NONPROFIT SERVICE DELIVERY

Maria Yiannouris

Abstract

This article examines how executive actions that restrict, delay, or terminate federal grant funding threaten the stability of nonprofit organizations and the broader U.S. social infrastructure. Using Memorandum M-25-13 as a case study, it shows how abrupt funding freezes create immediate liquidity crises and amplify longer-term vulnerabilities in service delivery. Drawing on Resource Dependence Theory and evidence about reimbursement-based grant practices and contractual arrangements, the analysis finds that heavy reliance on federal grants, thin financial reserves, and reimbursement payment models leave nonprofits exposed to sudden policy shifts. Consequences cascade across programs and communities through staff layoffs, program suspensions, lost matching funds, weakened local economies, and disproportionate harm to smaller and minority-serving organizations. Short-term federal savings are often offset by costs shifted to state and local governments and by greater long-term social expenditures. The article concludes with a multi-level strategy to reduce risk: rapid judicial and administrative relief, statutory guardrails for multiyear and indirect-cost protections, grant-design reforms (timely reimbursements, streamlined reporting), and organizational capacity-building measures (reserve incentives, revenue diversification). Institutionalizing predictability and accountability are essential to preserve public goods and the federal–nonprofit partnership.

The Grant Freeze Heard Around the Sector

Nonprofit organizations play a central role in society; they provide essential services from healthcare to food support and beyond. They serve as a third arm of the public sector, filling the gaps that the government cannot. That said, a significant portion of nonprofit organizations' funding can be attributed to federal grants and contracts. Approximately 66% of nonprofits received some form of government funding, with an average of 25% of nonprofits' total revenues coming from the public sector (Martin et al., 2025). The interdependence between the nonprofit and public sectors reflects the importance of federal support to nonprofit sustainability.

During the second Trump term the administration attempted to curb federal funding. On January 27, 2025, the administration issued Memorandum M-25-13, temporarily halting the distribution of federal funds, reflecting Project 2025's broader ideological goals of shrinking the federal government's capacity and depriving funding for programs the administration deemed inconsistent with its values (Vaeth, 2025). Such disruptions undermine the foundation of the federal-nonprofit partnership, where the government relies on nonprofit organizations to deliver essential social, health, and educational services, and nonprofits depend on the federal government for a portion of their funding. Executive actions that introduce instability not only risk the continuity of nonprofits but weaken trust and fiscal resilience within the sector (Van Slyke, 2007).

The repercussions of M-25-13 are immediate and severe for nonprofit organizations, particularly federally funded organizations with limited financial reserves, which face threats of bankruptcy. Two days after the memorandum was released, Judge Loren Ali Khan issued an administrative stay blocking the administration's order, forcing the Office of Management and Budget to rescind the memorandum under M-25-14 (National Council of Nonprofits v. Office of Management and Budget, 2025). In February 2025, Judge John McConnell then issued broader injunctions protecting state grants (New York et al. v. Trump 2025), and by May 2025, permanent injunctions had restored most frozen grants. Although the court's injunction offered momentary relief, the brief freeze exposed how dependent nonprofits were on immediate federal disbursement. Even after funds were unfrozen, many organizations continued to report

financial instability and a loss of trust in the predictability of government contracts and fund disbursements (Tomasko et al., 2025).

Fiscal constraints and political bargaining over debt and appropriations often shape the government's capacity to sustain stable funding commitments (Wagner, 2005). These vulnerabilities have been exacerbated during debt ceiling standoffs and funding freezes, disrupting grant disbursements to nonprofits (Tomasko et al., 2025). Together, these dynamics highlight that funding uncertainty is not merely administrative but reflects structural features of how the U.S. manages debt and allocates public money. Federal budgeting is not just technical but political; debates over debt ceilings, appropriations, and deficit reduction can create uncertainty for even programs that have already been authorized. When negotiations stall, agencies may delay or suspend grant disbursements, leaving nonprofits to absorb the instability through cash-flow interruptions, delayed reimbursements, or program cuts.

Episodes like M-25-13 raise critical questions about the effects of executive action on the sustainability of nonprofit service delivery. Specifically, how do executive orders and administrative directives that restrict, delay, or terminate federal grant funding affect nonprofit capacity to deliver essential services, and which fiscal, legal, and institutional mechanisms best mitigate those impacts? The answer requires assessing how much nonprofits depend on predictable government funding and how abrupt policy changes can produce cascading organizational crises.

This article argues that executive actions that freeze, tighten conditions on, or outright cancel federal grant funding produce immediate liquidity shocks and longer-term structural weaknesses in nonprofit service provision. This forces program cuts, layoffs, and reductions in service coverage, especially among organizations heavily dependent on federal grants. We have seen organizations like the Appalachian Center for Independent Living forced to lay off staff (Willingham, 2025), other organizations face service suspensions, and, in some cases, a complete halt to essential service programs. In both instances, citing M-25-13 cash flow disruptions (Tomasko et al., 2025). Although legal challenges, philanthropic interventions, and state bridge funding may mitigate immediate impacts, long-term sustainability requires comprehensive reforms to legislation and grant design that minimize funding volatility, safeguard indirect cost recovery, and maintain multi-year funding commitments. By examining both the fiscal and institutional dimensions of these disruptions, this article highlights how policy stability is essential to the resilience and effectiveness of the nonprofit sector.

When Funding Freezes Meet Social Infrastructure

Government investments in nonprofits are a part of the nation's social infrastructure as they are crucial for sustaining economic growth and community well-being (Gould-Werth et al., 2023). Governments fund nonprofits because they bridge gaps in services that the government cannot take on. The social benefit of nonprofits is vast as they generate positive externalities that extend beyond the direct service recipients, aiding society as a whole.

When the government supports nonprofits in delivering services, the government internalizes these externalities by ensuring that these benefits are distributed equitably across communities (Samuelson, 1954). Similarly, when nonprofit funding is reduced or withdrawn, these public goods become underprovided, resulting in welfare losses and increased inequality. Nonprofits provide essential services, such as housing assistance, mental health services, and climate programs. A lapse in funding can lead to long-term social costs that exceed the short-term fiscal savings from spending reductions (Musgrave & Musgrave, 1989).

As of early 2025, one-third of nonprofits reported experiencing some form of government funding disruption; around 21% reported losing at least some government funding, while 27% reported delays, pauses, or freezes, and another 6% reported receiving stop-work orders (Tomasko et al., 2025). These

same nonprofits were more likely to report reductions in staff, programs/services, locations, and hiring outlooks. We can see why nonprofits are particularly vulnerable to federal funding freezes: most nonprofits depend on external sources for critical resources, with around 70% receiving some form of government funding (Miller et al., n.d.). This resource dependence creates a power disparity between the dependent (nonprofit) and the giving (government) party (Pfeffer and Salancik, 1978).

Nonprofits' reliance on government grants faces significant financial and operational risks when resources are restricted or terminated (Carroll and Stater, 2009). This vulnerability reflects Resource Dependence Theory (Pfeffer and Salancik, 1978), outlining how organizations become vulnerable when they are heavily reliant on external actors for essential resources. For nonprofits, federal grants are a critical resource that shapes nonprofit operations and service delivery. Many organizations are financially constrained, with only 20% of nonprofits having sufficient funds to cover six months of expenses (Miller et al., n.d.). Resulting in policy changes such as M-25-13, opening organizations to shifts in resource flows that threaten organizational stability and force cuts to programs, staff, or operations altogether.

While the government might receive short-term gains from cutting funding, these budget cuts have cascading fiscal impacts on state and local governments, in addition to the nonprofit sector. When federal funds are withdrawn or frozen, local governments often bear the burden of compensating for lost services, leading to increased fiscal strain or a reduction of welfare services (Gould-Werth et al., 2023). In practice, state and local governments have been able to provide some bridge funding and other short-term relief, but available evidence suggests these efforts only partially offset federal cuts and were insufficient to replace federal support at scale (Das, 2026). This strain creates a form of contingent liability in which federal retrenchment shifts fiscal risk downward, thereby amplifying local resource vulnerabilities. Models, such as cost-benefit and value-for-money analyses, emphasize not only financial efficiency but also social returns on investment. Nonprofits that deliver essential services have benefits that extend beyond quantifiable economic metrics. They include benefits that enhance equity, civil participation, and long-term human capital development. When deciding whether to cut funding for nonprofits, these policy decisions should consider the broader societal losses that would result from reduced nonprofit capacity.

The Domino Effect on Nonprofit Operations

Fiscal freezes or cancellations affect nonprofits through multiple channels: liquidity and reimbursement timing issues, loss of matching funds and program leverage, increased administrative and compliance costs, labor market and local economic impacts, and geographic and equity disparities. Many federal grants operate on a reimbursement basis, requiring recipients to cover expenses upfront and receive payment from federal agencies afterward (Levin, 2025). When disbursements are delayed or frozen, organizations can experience cash-flow shortages that quickly become an operational crisis: when federal funding is interrupted, nonprofits are forced to cut staff to survive (Pfeffer and Salancik, 1978).

After M-25-13, numerous nonprofits reported being unable to access funds for grants that had already been awarded to them (Grants Office LLC., n.d.). Because many nonprofits operate with limited resources, these disruptions can necessitate immediate program cuts or layoffs. Federal grants frequently serve as a base funding, with states, local governments, foundations, and other private-sector organizations matching funds to enhance program leverage. When federal funding is reduced or suspended, this multiplier effect is lost, diminishing the overall capacity of affected programs (Tomasko et al., 2025).

When the federal government imposes new conditions, compliance requirements, or stricter oversight as part of executive actions, nonprofits must reallocate staff time and overhead resources to meet these demands rather than deliver promised services. This mechanism is often overlooked but is particularly significant when financial and human resources are already constrained. If nonprofits are compelled to reduce staff or close programs due to funding disruptions, these effects extend to local communities,

resulting in job losses, decreased purchasing of goods and services, and a weakened local economy. These impacts are particularly pronounced in regions where the nonprofit sector is a major employer, such as cities like Washington, DC.

Not all nonprofits are equally equipped to absorb financial shocks. Small organizations and those led by or serving minority populations typically have fewer resources at their disposal, less diversified funding, and limited access to political capital (Mumford, 2022). As funding disruptions become increasingly politicized, these groups are disproportionately affected.

Short-Term Savings, Long-Term Costs

Executive actions that restrict or delay federal grant funding often alter fiscal exposures across all levels of government. Looking at this issue from the budgetary standpoint, federal funding reductions transferred immediate financial responsibility to both state and local governments, who, in turn, incurred higher costs to maintain essential welfare services that are usually supported by the federal government. While federal expenditures may decline in the short term, these savings translate into increased costs for state and local agencies, which will either bolster nonprofit capacity or directly address unmet service needs. After a while, the lack of federal investment can intensify local fiscal pressures, leading to reduced or cut services and increased demand for safety-net programs, emergency interventions, and crisis-related spending to address welfare needs. This transfer of costs to states and localities demonstrates the negative externalities of these funding shifts and the ripple effects across the entire service delivery system that depends on federal resources. Resource Dependence Theory shows how federal cuts create ripple effects: when nonprofits lose their primary funding source, state and local governments must absorb the resulting service gaps.

This underscores the opportunity costs linked to federal funding disruptions. When funding is reduced, the loss of services such as food assistance, workforce development, education, and public health programs results in large social welfare deficits that are difficult for state and local governments to compensate for. The pennies saved are greatly offset by increased long-term public expenditures related to homelessness, chronic illness, unemployment, and related social needs. The defunding or removal of nonprofits increases reliance on state-funded emergency programs that most of the time simply do not exist. Nonprofits serve as preventative infrastructure; the removal or defunding of these organizations has a negative impact on public costs that surpasses any money saved in the short-term (Heckman, 2006; Tomasko et al., 2025).

From a risk-based perspective, we can evaluate policy decisions by weighing immediate benefits against long-term consequences and their cumulative costs; in doing so, we can see the disparities between short-term budgetary gains and long-term social costs. When accounting for diminished nonprofit capacity through employment losses, reduced community stability, and increased poverty—the fiscal benefits of federal funding cuts become minimal. Federal budgets often frame grant reductions as immediate deficit improvements, what they fail to consider is how the delayed and dispersed effects of service affect the long-term structural outcomes of services lost on society. This tactical approach encourages political decisions that emphasize immediate appearances over sustained social welfare.

This highlights how fiscal policy decisions disproportionately impact marginalized communities, which are less equipped to offset federal funding losses, whether due to weaker tax bases or systemic challenges. When nonprofits serving these communities face funding cuts, the resulting costs fall on individuals with limited political influence and little financial resources. Ultimately, federal grant reductions function as regressive fiscal mechanisms that yield minimal savings to the federal budget and impose significant burdens on marginalized communities and the state and local governments that support them (Lav and Leachman, 2017).

Mitigating the Shock

Rebuilding federal program capacity after disruptive executive actions like M-25-13 requires a multi-faceted approach. In the immediate aftermath of funding suspensions, judicial and administrative injunctions through the Administrative Procedure Act and other emergency motions play a critical role in halting or delaying harmful directives like M-25-13. These injunctions can help restore funding flows and reaffirm statutory requirements to impose procedural limits on executive discretion.

Beyond the judicial route, congressional action is a critical pathway to rebuild program capacity. Key legislative priorities for mitigating executive overreach should include codifying protections for multiyear grant agreements that clarify conditions under which grants may be terminated or restricted by unilateral executive action and establishing statutory guardrails to prevent abrupt service disruptions. Creating a statutory framework would not only improve predictability for nonprofits but also promote consistent coordination among all levels of government.

To strengthen resilience against funding disruptions, nonprofits and their key stakeholders should implement the following strategies. During transition periods, state and local governments act as short-term stabilizers by deploying emergency funds to maintain essential programs. While these measures do not replace federal funding, they address immediate service gaps and provide nonprofits time to adjust to funding shortfalls. Alongside these state and local government stabilization efforts, nonprofit organizations must strengthen their own resilience to funding shifts by diversifying revenue streams, building contingency reserves, and negotiating for full indirect cost recovery. Through these measures, nonprofits will be able to stabilize their organizations and reduce exposure to shifts in federal funding. To build longer-term resilience, nonprofits need to consider reforms to grant design proposals that offer a structural path forward - whether through multiyear commitments, clear or indirect cost policies, timely reimbursement mechanisms, or streamlined reporting requirements (National Council of Nonprofits, 2023). These mechanisms would reduce administrative burden and enhance cash flow stability across the sector, helping ensure continuity even during periods of political or fiscal uncertainty.

Balancing Politics and Policy

Executive actions like M-25-13 are political and reflect the broader political and ideological considerations of our time. While many administrations vary in fiscal priorities, we see a willingness from the Trump administration to use budgetary policy as a tool for advancing partisan objectives. In doing so, these freezes reaffirm a commitment to conservative budgetary restraints that reshape the policy landscape by advancing ideological priorities concerning the appropriate role of the government and welfare.

One of the key trade-offs resulting from federal funding freezes is the reliance on private philanthropy to address the funding gaps they create. Ideally, people would have charitable inclinations, yet giving can only temporarily sustain certain programs, raising significant accountability concerns. Many philanthropic contributions are made on a donor-by-donor basis and follow donor-driven priorities, which are highly discretionary and may divert nonprofits from their core mission as they are forced to market themselves to potential funding streams (Frumkin and Kim, 2000). By diverging to various funding streams, nonprofits face the risks associated with substituting private funds for public commitments, increasing risks for programs serving low-income or marginalized groups. Another consideration is the potential moral hazard associated with increased federal protections, making it important for effective policy to balance the need for predictable funding with the need to maintain incentives for judicious financial management.

There are many implementation barriers that further complicate reform efforts. Expanding grant protections or transition mechanisms requires addressing budget constraints, political gridlock, and administrative feasibility across varying federal agencies. As we've seen, political polarization has intensified, and even widely supported reforms have stalled due to a lack of bipartisan agreement or sufficient appropriations. With this in mind, it is important to take a multi-tiered strategy that addresses

short, medium, and long-term objectives.

The short-term solutions follow an administrative approach: suspending sudden freezes and ensuring timely reimbursement for approved expenditures to maintain and enforce indirect cost allowances, allowing nonprofits to cover their operational expenses in the meantime while the issues are addressed in court. Following this, it will be important to use policy to legislate limits on unilateral executive grant terminations, require transition funding windows for programs facing reductions or cancellations, and to increase transparency in grant decision-making and data sharing as recommended by the National Council of Nonprofits. To support these recommendations, it will be important to address systemic barriers by strengthening nonprofit balance sheets through reserve matching programs or federal-state stabilization funds (Negari, 2025). This will aid in reforming grant structures to support overhead and multiyear planning horizons through flexible expenditure categories and adopting broader changes, such as federal grant rules that reduce administrative burden and promote durable, federal nonprofit partnerships. Collectively, these strategies address both the political dynamics and structural vulnerabilities that make nonprofits susceptible to federal funding volatility.

The Next Era

Cases like M-25-13 highlight how deeply nonprofits are intertwined with the federal government and how vulnerable they are to abrupt policy shifts. Funding disruptions affect local communities, economies, and social infrastructure, while disproportionately affecting marginalized communities. Because many nonprofits operate with thin reserves and reimbursement-based grant models, even short interruptions cascade into programmatic loss, local economic harm, and a shifting of costs onto state and local governments and private philanthropy, neither of which fully compensates for the social value lost when public programs are scaled back or canceled.

This analysis yields three linked findings and a set of actionable responses. First, resource dependence between the federal government and nonprofits makes the sector uniquely vulnerable to political and fiscal instability; funding unpredictability is therefore a governance problem as much as a budgetary one. Second, the fiscal “savings” from abrupt grant reductions are misleading: short-term federal spending reductions produce downstream public costs (higher local expenditures, intensified safety-net needs, and long-term human-capital losses) that frequently outweigh near-term budgetary gains. Third, the harms are imbalanced: smaller organizations and those serving marginalized communities face disproportionate risk, deepening equity gaps. A sustainable solution to the volatility the sector is experiencing must be rooted in the reality of how polarizing American politics is and balance predictability with mechanisms that incentivize effective financial management.

Ultimately, protecting nonprofit stability is not simply a matter of organizational survival but is an investment in the social, economic, and moral fabric of society. By ensuring nonprofit continuity, we strengthen society, preserve public goods, and safeguard the delivery of essential services.

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EVERYBODY WORKS BUT THE VACANT LOT: LAND SPECULATION AS A DRIVER OF URBAN INEQUALITY

Kiley Yuthas

Abstract

This article discusses how speculative land markets work in cities, how the practice impacts land and housing prices, and how speculators benefit from publicly subsidized improvements to communities while passing negative externalities to residents. It then explores speculative landownership as a contributor to displacement caused by gentrification. Speculators often target disinvested areas and contribute to inflated land prices by restricting supply until land values reach the appropriate level to return the desired profit. These practices contribute to existing economic and spatial inequality by making secure tenancy inaccessible, concentrating wealth among affluent landowners, and stagnating economic productivity in developing urban areas. Unchecked speculative land markets allow outside private investors to capture the capitalized value of public investment while negative externalities of underutilized land are borne by residents. Government intervention is justified to mitigate the negative externalities and information asymmetry that define speculative land markets. This article proposes three tiers of intervention for local governments and examines efficiency and equity trade-offs associated with each.

“Everybody works but the vacant lot.”
— Henry George (NYPL, 1865 - 1899)

Introduction

American cities are confronting an unprecedented housing affordability crisis, with prices rising far faster than wages, increasing the burden of housing costs on U.S. households (National Alliance to End Homelessness [NAEH], n.d.). This crisis is due in part to a surge in the price of land over the past several decades, with increases in land prices explaining about 80 percent of the boom in global house prices since World War II (Knoll et al., 2017). Growth in the market for land has also meant growth in speculative pressures associated with land markets, particularly in geographically constrained urban areas. While, as Glaeser (2013) points out, land speculation has been foundational to the history of the United States, it has also become a significant contributor to an increasingly unequal and inaccessible housing market.

Speculative landownership—the practice of buying and holding land not to develop, but to profit from anticipated price increases—is a significant contributor to these increases in land prices, particularly in urban areas where geography and regulation restrict supply. Speculative landowners also capture the capitalized value of government and entrepreneurial investment in neighborhoods undergoing economic change. Further, they are not impacted by negative externalities associated with underutilized property and therefore have little incentive to sell the land so long as they expect its value to increase. This article proposes three tiers of intervention for state and local governments to reduce speculative pressures on land markets, which may contribute to increased economic inequality and risk of displacement.

How Urban Land Markets Work

Urban land is essential for housing production and business creation but is not itself productive. It increases in value when improvements are constructed upon it, and, importantly, can also gain value without improvements when government and private entities invest in the surrounding area (Condon, 2024). Land is not only an input to production but also an asset that can be held (Eckart, 1983). Because it can increase in value due to surrounding improvements, landowners have financial incentives to hold property as an asset so long as the property tax and carrying costs are lower than the increase in value. The supply of land, particularly in geographically constrained urban areas that have restrictive zoning

regulations, is highly inelastic (Goodman & Thibodeau, 2008). Supply cannot easily be increased in response to an increase in demand, because of geographical limits and the fact that parcels typically cannot be subdivided without a lengthy approval process. As a result, urban land prices are extremely sensitive to changes in demand (Goodman & Thibodeau, 2008), and investment in land can return large profits for investors.

Demand for housing remains high in markets across the United States (Joint Center for Housing Studies, 2024). The combination of inelastic supply and stable demand means that even a small leftward shift in the supply curve caused by speculation-driven restrictions generates significant price increases for consumers. Goodman and Thibodeau (2008) demonstrate that markets with these characteristics are particularly vulnerable to speculative bubbles, as prices can become increasingly disconnected from the fundamental value of the land. Land prices are largely “untethered,” based on the expected future value of the land rather than present potential profits from improvements (Stiglitz, 2015; Eckart, 1983). Because supply is limited, many investors buying and holding land in an area can cause prices to balloon, making it infeasible for developers to purchase and improve. This can create boom-bust cycles in land markets (Glaeser, 2013), where optimism about future value drives up the price of land for developers, who then pass costs on to tenants.

Impacts of Land Speculation

When land is held by speculators, or priced too high to justify improvement, it remains unproductive, creating deadweight loss (Condon, 2024). During booms, property values rise, benefiting existing homeowners and speculators while pricing out first-time buyers and burdening renters with higher costs or risk of displacement when their landlord decides to sell. During subsequent busts, foreclosures are typically more concentrated in lower-income and minority neighborhoods, taking wealth from those least able to absorb those losses. Speculators with more capital and information exploit these patterns, buying during busts and selling during booms. This article argues that speculation-driven cycles systematically transfer wealth from poor to rich, and from existing residents to outside investors.

Communities are further impacted by the negative externalities of underutilized land. Property vacancy has been linked to an increase in criminal activity—an effect that increases the longer a property is vacant (Cui & Walsh, 2014). Areas with high incidences of vacant or underutilized land also miss out on economic benefits related to higher density, known as agglomeration economies. In higher-density areas with closer proximity between firms and workers, average wages and productivity are higher, and residents have increased access to a wider variety of amenities (Glaeser, 2010).

Conversely, economic growth and government investment in a neighborhood create positive externalities. These benefits are captured by outside private interests in speculative land markets; when the government invests in inelastic markets, the value of the property increases sharply, and investors benefit. Without government intervention, speculators capture the value of positive externalities of economic development and government investment and do not bear the negative externalities of vacant or underutilized properties.

Developing neighborhoods are of particular interest to speculators. In areas at the beginning stages of economic growth or receiving an influx of community development funding, land is often relatively inexpensive. The prospect of increased economic activity and government improvement, as well as the highly inelastic nature of land supply, all but ensure that speculators will be able to capture a large increase in property values. Smith (1987) posits that “gentrification is likely to happen in areas experiencing a sufficiently large gap between actual and potential land values.” When land values increase in a place (whether through speculation or otherwise), wealth increases via property value, spurring increased investment in public goods. Land speculators profit from these community investments when they are capitalized into land value (Hilber, 2011). Upon sale, this higher land price is assumed by

the developer and therefore passed on to the consumer in the form of higher rent or sale prices. Renters in neighborhoods that experience sudden increases in land prices may be priced out of their current rental when landlords attempt to capture the increased value of the property and may not be able to stay in place due to a scarcity of affordable units associated with high cost of land and limited housing supply (Zuk et al., 2018).

In 2024, 23% of homeowners (U.S. Census, 2024a) and 51% of renters (U.S. Census, 2024b) in the United States were housing cost burdened, spending 30% or more of their household income on housing. Because many American households are already precariously housed (Bhasin et al., 2024), small changes in property taxes or rent associated with increased land value can have significant impacts on household finances, particularly in lower-income households. Most American households are already burdened by housing costs (Bhasin et al., 2024), in part because wages have not kept pace with the rising housing costs in most American markets (NAEH, n.d.). Wealthy individuals and corporations are most likely to engage in the purchase and sale of land, which allows them to capture the returns on place-based economic development. This comes at the expense of consumers who bear the additional cost in the form of higher rents and mortgages.

Wealth inequality is at historic highs both between and within American cities, with wealthier areas enjoying more investment in public goods (Kemeny, 2025). The practice of land speculation increases wealth for already wealthy individuals while passing additional costs and other externalities on to less-wealthy consumers. This increases existing wealth gaps between the rich and poor, and the practice of targeting speculation in disinvested communities contributes to widening racialized and place-based wealth inequality.

Market Failure

Speculative land markets represent a market failure created by information asymmetry and externalities. Speculators who have better knowledge of the market can anticipate and profit from public investment, while residents who typically do not have the same access to information or capital bear the cost of inflated land prices through displacement, opportunity cost of vacant property, and high housing costs. This gap between private incentives and the welfare of residents justifies government intervention. Because there are few federal policy levers that can target land speculation, state and local governments must act to protect vulnerable neighborhoods, especially those with high rent gaps, from speculative pressures. They can do so by intervening at three tiers: by limiting the value of the property and reducing incentives to hold it as an asset (i.e., forcing investors to absorb negative externalities of vacant land); by limiting the amount of profit that can be made from improvements to the land (i.e., addressing distributional or equity concerns around who has access to land ownership); and by capturing additional tax revenue generated from increased property values and directing it to affordable housing development (i.e., using an ex-post market-based solution to attempt to reallocate returns on economic growth). Table 1 provides an overview of these strategies.

Examples	Efficiency	Equity	Political Feasibility
Tier 1: Limit property value through taxation			
<ul style="list-style-type: none"> • Land value tax (Arnott and Stiglitz) - Vacant/blighted property tax (Washington D.C.) - Differential tax rates on land vs. improvements (Pittsburgh) 	High - minimal market distortions, improves land allocation	Moderate	Low - faces landowner opposition
Tier 2: Limit profit potential of improvements			
<ul style="list-style-type: none"> • Limited-equity co-ops & land trusts (Houston post-Harvey) - Downzoning (San Francisco Chinatown) - Rent control - Subdivision/rezoning 	Lower - may reduce development incentives	High - directly protects vulnerable residents	Low - real estate/developer lobby opposition
Tier 3: Capture tax revenue for affordable housing			
<ul style="list-style-type: none"> • Tax Increment Financing (TIF) - Maine statewide affordable housing initiative - Portland, OR (30% TIF to affordable housing) 	Moderate - allows normal market operation	Depends on political will to prioritize affordable housing	Higher - less disruptive to existing interests

Table 1: Intervention Strategies

Tier 1: Limiting the value of property and reducing incentives through taxation

Economist Henry George advocated for taxing land returns and capital gains accrued from land appreciation (Stiglitz, 2015). A land tax effectively lowers the value of land to speculators and reduces incentives to buy and sell land solely to capture the change in property value. In 1979, Arnott and Stiglitz formalized the “Henry George Theorem,” arguing that “a confiscatory tax on land rents is not only efficient, but is also the “single tax” necessary to finance the pure public good” (Arnott & Stiglitz, 1979). They argue that because the supply of land is highly inelastic, the incidence of a land value tax falls entirely on landowners. Unlike taxes on improvements, which can be shifted to renters through higher prices, a tax on the value of the land without improvement cannot be shifted because the supply of land cannot be reduced in response to increased taxation. They posit that land value taxes are highly efficient, generating tax revenue without creating additional market distortions or deadweight loss. However, a Georgian land tax has never gained sufficient political traction to evaluate its effectiveness in practice.

A more politically feasible intervention could include a tax on vacant or blighted (“unsafe, insanitary or otherwise threaten[ing] the health, safety, or general welfare of the community (Department of Buildings, n.d.).”) property, as implemented in the District of Columbia in 2010. The District imposes an additional tax proportional to assessed land value on properties classified as vacant or blighted (District of Columbia, 2010) to increase costs to property owners who hold land without making improvements. Alternatively, local governments can implement differential rates of taxation on land and improvements to reduce speculative pressure and incentivize building. When the city of Pittsburgh, PA, restructured its system of property taxation to one in which land was taxed at more than five times the rate on structures, it experienced a dramatic increase in building activity (Oates & Schwab, 1997). Because land values largely reflect capitalized public investments and local economic activity rather than landowner effort, increasing the rate of taxation on land itself captures socially created wealth while avoiding increased taxes on productive improvements. These types of interventions, which increase taxes on the land and reduce incentives to hold it as an asset, attempt to reduce speculation by forcing the investor to internalize

negative externalities and limiting their incentives to capture capitalized value from place-based government investment.

Tier 2: Limiting the profit potential of improvements to the property

Limiting the earnings potential of the structures or capping potential equity reduces developer demand for land, reducing the amount of profit that speculators can make from its resale. Limited-equity co-ops and land trusts have been used to control the amount of equity that any individual can gain as the value of property increases. Houston, TX, created one of the nation's largest land trusts in response to speculation in the wake of Hurricane Harvey, when investors began to purchase abandoned and blighted properties in the interest of capturing increased value associated with post-disaster restoration (Next City, 2023). The Trust's ownership and management of many parcels in the area served both to calm the speculative boom and ensure that structures on the land remained affordable.

In San Francisco, CA's Chinatown, neighbors rallied behind an effort to "downzone" the neighborhood by setting lower height limits for construction, which effectively limited the profit potential for developers in an area that had been experiencing an increase in the production of large office buildings (Montejo 2015). By capping the potential for profitable development of land, the community successfully reduced gentrification pressures for several decades. Other interventions aimed at reducing profitability of land could include rent control measures and subdivision or other strategic rezoning of existing parcels. Interventions at this level aim to address distributional concerns associated with land investment as an exacerbator of wealth inequality or attempt to deter specific types of economic development that may displace vulnerable communities.

Tier 3: Directing additional tax revenue to affordable housing development

Instead of limiting the profitability of urban land, local and state governments can implement policies aimed at capturing the increased tax revenue from developing neighborhoods and directing that money into affordable housing development. This mechanism, called Tax Increment Financing (TIF), can be leveraged in two ways: by refunding the development costs of building affordable housing in a designated area, or by reallocating captured tax revenue to fund new affordable development projects.

In Maine, a statewide initiative was implemented in 2004 to finance affordable housing development. It allows municipalities to designate Affordable Housing TIF districts to capture tax revenue generated by the production of additional affordable housing and use those funds to repay development loans (HUD, 2009). The City of Portland, OR, mandated in 2007 that 30% of tax revenue captured in TIF districts be directed toward preservation and creation of affordable rental housing in Urban Renewal Areas (City of Portland, n.d.). Though TIFs do not limit speculation, they can help mitigate the effects of economic change and resulting land value increases in communities for lower-income people.

Policy Considerations and Tradeoffs

Municipalities must balance efficiency and equity considerations when selecting policies to mitigate the negative impacts of speculation. Tier 1 policies (increased taxation of land value) are highly economically efficient; they cause minimal distortions in markets and can improve land allocation by preventing speculation. However, they face political obstacles, as landowners hold significant political power and typically benefit from current systems of property taxation. Tier 2 policies (limiting profitability of land) are designed to directly address equity concerns and protect economically vulnerable residents but may reduce incentives for developers and create other inefficiencies. Real estate and development lobbies with considerable political power are often opposed to interventions that limit the expected returns on development, making such interventions politically challenging. Tier 3 policies (tax increment financing) allow markets to operate normally while redirecting additional tax revenue to affordable housing. Though this model has been implemented in many American cities, few have explicitly prioritized affordable housing within the TIF structure. The effectiveness of tax revenue reallocation on housing affordability is

largely dependent on the ability to not only capture adequate revenue, but also the political will to prioritize affordable housing over other potential uses for that revenue.

Conclusion

Unchecked speculative investment in land distorts housing markets and allows investors to capture value created by government and community investment while avoiding the negative impacts of underutilized land. Only the wealthy can participate in land speculation, and speculation contributes to higher housing prices for non-wealthy people, so the practice as it exists in most American cities serves to further exacerbate existing wealth gaps between and within urban areas. Disinvested areas are particularly vulnerable to speculative pressures, and residents are more likely to be displaced when investments are made in their community because land speculation drives up the cost of housing. Local governments are uniquely positioned to reduce incentives associated with land speculation and should intervene to correct tax structures that allow private investors to capture value created by economic development in urban communities.

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