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Do austerity cuts spare police budgets? Welfare-to-carceral realignment during fiscal crises

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Abstract

Did governments shift funding from their social welfare functions to their criminal justice functions after the 1980s? Studies investigating this possible “punitive turn” have been inconclusive and have been conducted at the state or national scale. Cities, however, are increasingly important as government responsibility devolves downward and social movements target municipal police budgets. This study contributes to ongoing academic and political debates about welfare-state retrenchment and police department funding using data on 390 U.S. cities between 1990 and 2019. In contrast to conventional explanations for budgetary restructuring that foreground across-the-board cuts or macroeconomic causes, this study proposes a fiscal crisis model that emphasizes localized budget deficits, beliefs about policing's primacy, and police agencies' political power. Data reveal gradual and considerable municipal budgetary restructuring toward law enforcement between 1990 and 2019, with police funding growing 32% relative to social spending. Fixed-effects regression models with asymmetric predictors find that when municipal revenues fell by 10%, cities reduced police expenditures by an associated 1% and social service expenditures by 4%, with parks

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and housing seeing the biggest cuts. During austerity, municipalities cut police shallowly and temporarily while cutting social services deeply and enduringly, accelerating welfare-to-carceral realignment.

KEYWORDS

Austerity, carceral state, police funding, social service funding, welfare state

During the middle of the 20th century, the U.S. government devoted unprecedented funding to healthcare, old-age pensions, and cash assistance (Trattner, 1994). Cities, too, grew their social service provision during this time. The first municipal housing authority was founded in 1934, and by 1980, the median city was spending \$35 per resident on housing and \$200 per resident on parks, libraries, and healthcare (Marcuse, 1986; author's analysis of Census of Government [COG] 2021 data¹). Did these federal and municipal public welfare projects start to wane at the end of the 20th century as government capacity increasingly flowed toward criminal justice systems? Scholars of neoliberalism have argued that, yes, national and subnational governments transferred funding, capacity, and legitimacy from their welfare "left hands" to their carceral "right hands" during this time (Wacquant, 2009, p. 6; see also Garland, 2001; Gilmore, 2007; Hinton, 2016; Kohler-Hausmann, 2017; Simon, 2007). Social services were replaced by police, courts, and prisons, according to this school of thought. Welfare-state scholars, however, have disputed this account. They have argued that American social provision has proven resilient despite right-wing attempts to impose austerity (Desmond, 2023; Esping-Andersen, 1999; Lara-Millán, 2021; Pierson, 1994). Which is correct? Did criminal justice governance replace welfare governance in the United States?

Many of our current answers to this question analyze one side of the equation, either welfare or carceral spending, and focus on state or national governments (e.g., Greenberg & West, 2001; Pierson, 1994). This study analyzes social services and criminal justice jointly to understand welfare–carceral trade-offs. It also shifts the focus to city governments because welfare and criminal justice budgets vary widely by locality and because governmental responsibilities have increasingly devolved from federal to local jurisdictions (Brenner, 2004; Jensen & Lolle, 2013; Soss et al., 2011). Although consensus does not yet exist regarding the extent of welfare-to-carceral restructuring among state and federal governments, even less is known about municipalities. Concurrent with debates about governmental realignment, recent political disagreements regarding police budgeting have renewed attention to carceral spending at the local level. Advocates with Black Lives Matter have called for cities to decrease funding to their police departments and reinvest the savings in social services (Bell et al., 2021; Movement for Black Lives, 2016; Phelps, 2024; Reclaim the Block, 2021). This demand was simplified into the controversial slogan "defund the police" in the summer of 2020. Only two large cities, New York and Austin, reduced their police funding below typical levels in 2020, but fear of police defunding nevertheless generated a backlash and many elected officials later demanded that cities instead "fund the police" (Biden, 2022;

¹ Figures are the inflation-adjusted median spending per capita for 390 cities with greater than 50,000 residents, weighted by population.

Holder et al., 2020). This political attention to the city scale parallels recent scholarship positioning police as a key component of the carceral state² (Brayne, 2014; Rios, 2011; Skaathun et al., 2022). The present study will contribute to these ongoing academic and political debates by addressing the relationship between police budgeting and welfare retrenchment at the city level.

I first address the descriptive question of whether social service budgets gave way to police budgets after the 1980s. Then, I analyze the social and economic contexts of changes in city expenditures using data from 390 cities across 30 years in fixed-effects models with asymmetric predictors. I identify fiscal crises—unanticipated government revenue shortfalls—as pivotal moments for budgetary realignment. In response to fiscal crises, officials often cut budgets, reduce staff, and privatize city services (Maher & Deller, 2007; Warner et al., 2020). Because the constriction of municipal government resources initiates zero-sum trade-offs, budget shortfalls are key moments of city government reprioritization.

One common theory holds that during such fiscal crises, police departments will be subject to austerity cuts just as any other government function would be, and some recent examples support this view. The Great Recession of 2008–2009 reduced most cities' revenues, and many places—including Stockton, California, and Detroit, Michigan—reduced the size of their police forces and the wages of their officers in response to the economic downturn (Peck, 2012). At the state level, prison expenditures declined after 2008, especially as political conservatives began to view criminal justice budgets as another example of big government excess in need of trimming (Aviram, 2015; Pfaff, 2012; Schoenfeld, 2018). These anecdotes lend credence to the “across-the-board cuts” theory of austerity that expects similar belt-tightening among all government departments.

Rather than expecting equally distributed austerity cuts, other theorists expect economic recessions will be moments of carceral expansion, not of contraction. This view, espoused by many of the same scholars of neoliberalism who theorize the late 20th-century welfare-to-carceral transition, holds that the state undergoes a legitimacy crisis during recessions because the public questions the government's ability to provide economic security (Gilmore, 2007; Hall et al., 1978; Rusche & Kirchheimer, 1939; Wacquant, 2009). In response, the state reasserts its coercive criminal-justice capacities to maintain power and control recalcitrant groups.

Charting a path between these two positions, I argue that even though cities might cut their police expenditures during fiscal crises, they will not cut them as deeply as they do social service expenditures. This argument aligns with expectations of across-the-board cuts and contradicts expectations of police-budget expansion in so far as it predicts that police budgets will be cut, but it diverges from expectations of across-the-board cuts by predicting more severe social service cuts. After austerity, I expect cities will restore police budgets quickly and will replenish social service budgets only slowly. I distinguish between frequent, localized fiscal crises and sporadic, national economic crises because welfare-to-carceral restructuring is a long-term project that accelerates during routine revenue shortfalls, not just during global recessions. I build on the research showing many mayors and city councilmembers from both political parties and across many years share the belief that public safety is the first purpose of local government, which leads me to expect the municipal welfare-to-carceral transition will occur in cities led by both political parties. I also test theories of police departments' political and institutional power by assessing how cuts vary between cities with unionized and nonunionized police forces.

² Some researchers reserve the term “carceral state” for only jails and prisons, the incarcerative institutions of the criminal justice system (e.g., Rubin & Phelps, 2017). I follow Schoenfeld (2018), Beckett and Murakawa (2012), Skaathun et al. (2022), and others in using it to refer to all elements of the legal system, including police, courts, jails, and prisons.

In summary, I make two arguments: (1) U.S. municipalities are undergoing a slow and steady realignment from social services to criminal justice and (2) city officials' taken-for-granted assumptions about core municipal functions and police departments' political power combine with recurrent fiscal crises to expedite this realignment. After establishing the relationship between budget shortfalls and the expedited transition from social services to policing, I separate six constituent social services to explore how different municipal capacities vary during austerity. I analyze spending on police alongside that on housing, parks, hospitals, healthcare, libraries, and public assistance.

In developing my argument, I build on scholarship from criminology, economic sociology, political science, and urban studies. Criminologists have long asked why crime-control institutions grow and shrink (Greenberg & West, 2001; Travis et al., 2014). I combine that question with two questions central to economic sociology and political science: How does public finance structure society (Martin & Prasad, 2014; Schumpeter, 1919/1991), and has the welfare state grown or shrunk (Esping-Andersen, 1999; Pierson, 1994; Tach & Edin, 2017)? Analyzing social services and criminal justice together in this way follows a criminological tradition of joint study that is not only more comprehensive but also reveals trends that isolated analyses might obscure (Beckett & Western, 2001; Garland, 1985; Wacquant, 2009). Urban studies inform the scale of this article by prioritizing the municipality as a consequential site of social change autonomous from higher governmental levels (Craw, 2010; Fortner, 2016; Oates, 1999; Phelps, 2024). How cities respond to fiscal stress is also a perennial topic in public administration research (Lewis, 1984; Warner et al., 2020).

Much of the extant welfare-state literature has focused on federal or state governments. This focus is understandable considering the size and public profile of programs like Social Security and Medicaid, but it neglects the considerable impact of local governments. Combined, municipalities spend \$1.6 trillion each year, accounting for more than one quarter of all government spending in the United States (Dreier et al., 2004, p. 180). These local expenditures have consequences for poverty, crime, and other measures of well-being (Beck, 2024; Urban Institute, n.d.). Municipal housing assistance can reduce homelessness, crime, unemployment, and negative health outcomes (Cohen, 2020; Cunningham et al., 2021). Libraries, green space, and recreation centers improve social cohesion, reduce isolation among older adults, reduce violence, and might even improve life expectancy (Klinenberg, 2018; Kondo et al., 2016). Childcare centers and community centers provide vital information and resources, mitigating the effects of concentrated poverty (Small, 2006). An increase in education spending improves wages across the life course (Jackson et al., 2016). Increases in police funding can reduce crime, increase police killings, and increase misdemeanor arrests (Beck et al., 2023; Chalfin et al., 2022). Any local budgetary restructuring is likely to affect poor, working-class, and non-White communities the most because they are the groups disproportionately involved with the police and disproportionately helped by social services (Kramer & Remster, 2022; National Research Council, 2001). These wide-ranging consequences underscore how municipal budgets are more substantial and consequential than is often assumed.

To understand how municipal budgets changed between 1990 and 2019 and to investigate the role of fiscal crises in that change, I analyze annual data on 390 U.S. cities. Descriptive findings reveal that, between 1990 and 2019, the typical city increased the share of its budget devoted to police by 25% and decreased the share devoted to social services by 5%. Fixed-effects regression models with asymmetric predictors find that when revenue declined by 10%, cities cut their police expenditures by a corresponding 1% and their social service expenditures by 4%, net of crime rates, the mayor's political party, and demographics. Parks and housing saw the largest reductions. During fiscal crises, municipal governments made shallow, temporary cuts to law enforcement and

large, sustained cuts to social services. Fourteen sensitivity analyses and four alternative measures of government spending demonstrate that the findings are robust to different methodological specifications.

As some advocates seek to reallocate police funding to social services and others seek to grow police budgets, this study can provide a guide to policymakers, making visible budgeting trends that might otherwise be overlooked or be taken as inevitable. It can help us understand when and why municipal budget priorities change. The data show that government restructuring away from social spending and toward police spending has considerable momentum. This shift is observable in a range of cities across the 30 years analyzed. The gradual trend of welfare-to-carceral realignment appears durable. The data, however, also show revenue shortfalls are key moments of budgetary flexibility that advocates and policymakers can use to either reverse or expedite the shift.

In the next section, I review debates regarding the welfare-to-carceral transition before describing possible explanations for how fiscal crises impact city budgets. Then, I develop my argument and describe the data and evidence for that argument.

1 | TRAJECTORIES OF SOCIAL WELFARE AND CRIMINAL JUSTICE BUDGETS

Scholars have disagreed about the extent to which governments' social service functions have been replaced by criminal justice ones. Some have described how, in the late 20th century, the Keynesian welfare project lost legitimacy. As the Great Society gave way to the War on Crime, state and federal lawmakers redirected government capacity away from social services and toward crime-control programs (Gilmore, 2007; Hinton, 2016; Kohler-Hausmann, 2017; Wacquant, 2009). The midcentury transition away from social programs represented a "vast reorienting of fiscal and administrative resources toward the criminal justice system result[ing] in a shift aptly described as a transformation from 'welfare state' to 'penal state'" (Simon, 2007, p. 6). Labor regulations, school funding, healthcare provision, and public housing were increasingly replaced by police, courts, and prisons (the three major components of the carceral state), according to these scholars of neoliberalism.

Some evidence supports this theory. The number of people incarcerated and the amount of money devoted to policing both grew to unprecedented heights in the late 20th and early 21st centuries (Beck & Goldstein, 2018; Travis et al., 2014). The United States quadrupled its incarceration rate after 1970 such that nearly 1% of all Americans were under correctional control by 2010 (Pew Center on the States, 2008; Travis et al., 2014). The carceral state's astounding growth has slowed recently, however. The number of people in prison and jail peaked in 2008 and has declined slightly since then (Kang-Brown et al., 2021). Police also make fewer discretionary, misdemeanor arrests than they did in the 1990s (Beck, 2019; Stevenson & Mayson, 2018). Despite some recent moderation, the growth of the U.S. carceral state has been tremendous.

Changes to the welfare state, on the other hand, are less clear. Despite perennial efforts to shrink social provision in the United States, it has not retrenched as much as conservatives hoped or liberals feared (Pierson, 1994). Welfare spending in the United States might be inadequate compared with the scale of poverty, and social programs have shifted who they serve, increasingly favoring middle-class workers at the expense of the unemployed poor (Clayton & Pontusson, 1998; Hacker, 2004; Tach & Edin, 2017), but the inertia and popularity of social programs have ensured that much of the social safety net has endured (Esping-Andersen, 1999; Iceland, 2013; Lara-Millán,

2021). Social Security and Medicaid, for instance, have either been preserved or expanded since the rise of fiscal austerity in the 1980s. Even the 1996 welfare “reform” law that cut cash assistance to the poor was counterbalanced by regular expansions of the earned-income tax credit (Lichter & Jayakody, 2002). Shifts have been made away from direct cash payments to the very poor and toward tax breaks for the working poor and middle class, but the welfare state has proved resilient. The welfare-state scholars who study trends in social provision have rarely discussed the carceral state, but their findings of the welfare state’s endurance during the 1990s complicate the story of a “vast” welfare-to-carceral restructuring (Simon, 2007, p. 6). The present study will extend this research on welfare provision to the local level.

Studies of the carceral and welfare states have analyzed each in isolation, leaving the joint welfare-to-carceral transition empirically underexamined. We do know, however, that the growth of one is related to the decline of the other. Incarceration rates grow when social provision declines, meaning places with less generous welfare programs have more people in prison (Beckett & Western, 2001; Edwards, 2016; Garland, 2024; Sutton, 2000). The same is true for city-level police budgets. Their growth is associated with a decline in municipal social spending (Beck & Goldstein, 2018). Although it is clear that social provision is often substituted for policing, and vice versa, it is not clear which has won out during the last 30 years or what might be causing any such trade-off.

The disagreement of whether government capacity is flowing from the welfare to the carceral state hinges in part on the scale analyzed and the measures used. Carceral-state analysts are more likely to examine states or provinces, and welfare-state scholars most often study federal governments cross-nationally. Differences also arise because some researchers measure welfare expenditure by governments and others measure welfare receipt by residents (Levy, 2010). The carceral- and welfare-state literatures cannot be easily compared because they cross different scales and use different measures. The present study analyzes social services and police simultaneously, pursues the question at the local scale, and uses four measures of spending to overcome these past challenges.

2 | REVENUE SHORTFALLS AND WELFARE-TO-CARCERAL RESTRUCTURING

Do municipal austerity cuts spare police budgets and target social spending? Several punishment scholars expect that, no, criminal justice will be just as susceptible as other government functions to belt-tightening. The material realities of deficits will compel balanced budgets, and no government function will be spared, according to these theories of across-the-board cuts (Aviram, 2015; Schoenfeld, 2018). Indeed, police and prison budgets might be especially susceptible because fiscal crises bring fresh scrutiny to ballooning criminal justice spending that both fiscal conservatives and justice-reform liberals want to slash.

A divergent school of thought expects police spending to *increase* when cities are subject to macroeconomic crises. During recessions, governments confront both financial and legitimacy crises. Stuart Hall et al. (1978) described how the British government manufactured a crime panic in the early 1970s to draw attention away from their inability to manage a recession. Ruth Wilson Gilmore (2007) found a similar change during economic crises in California when “the state can step up policing, under its mandate to maintain internal order, due to actual or imagined antisocial behaviors among idled workers or disenchanted youth” (2007, pp. 54–55). As California’s social welfare functions lost legitimacy during the second half of the 20th century, its criminal justice

role remained popular, so the state grew its crime-control apparatus in an attempt to “fix” the twin economic and legitimacy crises. This theory expects more criminal justice spending during times of crisis.

Which theory is more accurate? Do across-the-board cuts decrease criminal justice spending, or do macroeconomic crises increase it? Research from the public administration literature has found that budget cuts are more likely to be uniform, across-the-board reductions than targeted decreases, especially in the early days of fiscal stress (Lewis, 1984; Raudla et al., 2015). Looking only at criminal justice functions, prison and police spending are cut during economic downturns. State corrections spending decreased after the 2008 recession, although this continued a previous decline (Pfaff, 2012). Prison systems usually grow during economic booms and shrink during busts (Brown, 2012; Ellwood & Guetzkow, 2009; Greenberg & West, 2001; Jacobs & Helms, 1999; Stucky et al., 2007; Sutton, 2004). Research on cities has suggested recessions reduce local law enforcement as well. Police budgets declined after 2008, with municipalities reducing or furloughing staff, cutting officers’ wages, and eliminating services like sending officers to complete burglary reports (Office of Community Oriented Policing Services, 2011; Peck, 2012). Across hundreds of cities, police spending declined along with revenue (Beck & Goldstein, 2018; Zhao et al., 2010). Research on municipal social services, although limited, has suggested social provision, too, is cut during budget shortfalls and restored during budget surpluses (Hajnal & Trounstein, 2010). Extant studies of budgetary realignment have suggested that both the welfare and carceral states are subject to austerity cuts, but they have analyzed social and police spending separately and have focused on economic rather than on fiscal crises. In the next section, I describe how the present study extends past work to uncover how welfare-to-carceral budgetary restructuring accelerates during revenue shortfalls, and I explain why we need to distinguish between fiscal and economic crises.

3 | THE FISCAL CRISIS MODEL OF MUNICIPAL GOVERNANCE

In contrast to theories expecting across-the-board cuts, I hypothesize that city governments will cut their social service budgets more deeply than their police budgets. This fiscal crisis model builds on macroeconomic theories that highlight how economic and legitimacy crises expedite social service cuts. Those macroeconomic theories attribute the growth of the criminal legal system and the decline of the welfare state to widespread, epochal social and economic shifts like the emergence of new types of capitalism or new cultures of control (Garland, 2001; Gilmore, 2007; Wacquant, 2009). The fiscal crisis model refines these macro theories by focusing on more granular spatial and temporal scales: how cities experience change year to year. It also foregrounds a more mundane manifestation of social and economic crisis: recurrent revenue shortfalls. Frequent budget declines combine with two persistent characteristics of city government to reorder expenditure priorities: (1) the widely held belief that criminal justice is a municipality’s primary purpose and (2) police officers’ political and institutional power.

In the first of these two social forces, mayors and city councils—regardless of political party or geographic region—take for granted that police are their government’s core responsibility. They prioritize policing above all else. As a result, they shield law enforcement budgets from austerity cuts. A city councilperson in New Albany, Indiana, explained it this way during the 2008 fiscal crisis: “I don’t know how we can ever have a balanced budget without doing something drastic. Pretty soon we’re going to be down to police and fire and nothing else” (Suddeath, 2009, para. 10). Doing something drastic means cutting nearly everything except the police. This assumption is

the bedrock of local government: Police are *the* essential municipal service. The mayor of Miami Beach put it even more succinctly: “[T]he first job of a city government is to keep order” (King & Inskeep, 2021, para. 19). The reliance on police as the primary safety providers also stems from the belief that police are cheaper than housing, employment, and education, even if those social services might reduce crime in the long run by tackling its root causes (Beck, 2024; Phelps, 2024).

A large body of research has underscored the breadth of this law-and-order consensus. For instance, scholarship has shown that policing is well funded and intense in liberal cities, the places that might be expected to prioritize social services the most (Beckett & Herbert, 2009; Herring, 2019; Phelps, 2024; Rios, 2011; Stuart, 2016). A study exploiting quasi-random discontinuities in mayoral election results found Democratic and Republican mayors spend the same on police (De Benedictis-Kessner & Warshaw, 2016), and an observational study found liberal cities spend *more* on police (Einstein & Kogan, 2016). This public-order common sense is not limited to local governments. During the 20th century, liberals and conservatives in the U.S. federal government cooperated to promote law and order as “the first civil right” (Murakawa, 2014). At the state level, too, both political parties converged on similar corrections policies, promoting aggressive punishment until about 2008 and mild decarceration after that (Dagan & Teles, 2016; Gilmore, 2007; Page, 2013; Schoenfeld, 2018). This bipartisan convergence demonstrates the broad consensus in favor of large public safety budgets.

If local officials of either party wanted to resist the law-and-order consensus and cut police spending, they would encounter opposition from a second social force: the institutional and political power of police. Police exert considerable sway in budgeting decisions (Banerjee et al., 2024; Coe & Wiesel, 2001; Miller, 2008). This influence is in part because their unions are “a force to be reckoned with” (Skogan, 2008, p. 28; see also Anzia, 2022). Law enforcement officer unions can secure wage gains for their members and attract resources for their departments through collective bargaining and lobbying. Police departments also exert power in more subtle ways, for instance, by controlling the flow of crime data and by cultivating and elevating community-member spokespeople supportive of large police budgets (Cheng, 2024). Police are often the largest workforce in the city, which contributes to their power (Salanick & Pfeffer, 1977). In addition, their pensions are often more expensive than those of other government employees because they retire earlier (Munnell, 2012).

If police are unionized, well-staffed, politically powerful, and favored by elected officials, while social service workers are none of these, officers’ institutional sway, collective bargaining agreements, and pension obligations might prevent cities from cutting police expenditures and leave them no choice but to cut social service expenditures during revenue contractions. Any comparative analysis of police and social service budgets will need to account for this potential power differential. I do so by conducting separate analyses on cities with police officer unions and those without.

Police departments’ ideological, institutional, and political powers are necessary but insufficient preconditions for welfare-to-carceral realignment. Large police budgets are not inherently incompatible with large social service budgets (Bell et al., 2021). Cities could spend heavily on both. What’s more, police power is consistent and long standing, so it has little power to explain any recent fluctuations in budget priorities.

Recurrent fiscal crises are the crucial ingredient for welfare-to-carceral realignment. In response to deficits, city managers can try to avoid austerity cuts by delaying spending or raising revenue, but the longer fiscal stress lasts or the more severe it is, the more likely cities are to cut spending (Raudla et al., 2015; Warner et al., 2020). A survey of 1,800 city managers found that reducing staff was the third most common response to fiscal stress, after deferring capital

projects and increasing user fees (International City/County Management Association, 2019). I argue that fiscal crises initiate zero-sum trade-offs, putting officials on the defensive and requiring they make difficult decisions to balance budgets. As city leaders consider different budget mixtures, they often revert to first principles. For most city officials, these first principles are law and order, so urban austerity favors policing. Not only do municipal leaders cut police last and least during belt-tightening, they also restore police funding first and foremost during budget surpluses. Social spending, on the other hand, is exposed to the unexpected fluctuations of city revenue. The budget substitution away from social services and toward policing is repeated when revenue wanes, which is often. These frequent revenue shortfalls spur welfare-to-carceral budgetary restructuring.

I emphasize revenue shortfalls rather than economic recessions because fiscal and economic crises differ in their scale and therefore their consequences. Economic crises are geographically widespread (often global) recessions that affect businesses, households, and governments. They garner the kind of media coverage and public outcry that can delegitimize governments. Fiscal crises, on the other hand, might impact only one city. They are more frequent and less noticed (especially with the decline of local newspapers) than large-scale recessions. Fiscal crises might be caused by economic crises, but they might also be caused by highly localized changes like a downturn in a regional industry, a new restrictive state tax law, or the downgrading of a city's bond rating. Fiscal crises are more frequent and, therefore, more consequential for local governments. Although local crises are less likely to generate media coverage or political outrage than larger recessions, I argue they drive welfare-to-carceral realignment. Therefore, even though I build on theorists of the macro economy and society, I apply their approach to a narrower time (30 years rather than to long-duration epochal shifts like the transition to neoliberal capitalism) and apply them to a specific scale (the municipal government). I argue that routine and mundane fiscal crises are key moments of welfare retrenchment and carceral expansion.

Several hypotheses flow from the argument that welfare retrenchment and police expansion are caused in part by localized fiscal crises, by police political power, and by assumptions of criminal justice's primacy. First, cuts to police budgets will be smaller compared with cuts to total city spending, contradicting theories of across-the-board cuts. Second, municipal revenue declines will be associated with deeper cuts to social service spending than to police spending. Third, since the prioritization of criminal justice is so widespread, the relationship between fiscal crisis and budget restructuring will persist regardless of the political party of a city's leadership or the geographic region of the city. Fourth, and finally, in cities where the police are not unionized, and therefore have less institutional power, police and social service cuts will be more equal than in cities with officer unions. These hypotheses join my earlier expectation that police and social spending have diverged during the past 30 years to form my five hypotheses.

4 | DATA AND METHODOLOGY

To understand how cities change their budgets during fiscal crises, this study assembled a data set of U.S. municipalities between 1990 and 2019, measured annually. I excluded cities with fewer than 50,000 residents and those missing data for more than seven of their 30 years.³ This process generated a sample of 460 cities for the descriptive analyses (Table 1 and Figure 1). For the

³ The source of the city budget data, the COG, is only conducted every 5 years for smaller jurisdictions, so these restriction criteria omit cities for which data collection is infrequent.

inferential analyses (Table 2 and Figures 2–3), covariate availability reduced the sample to 390 cities, which generated a sample of 8,432 municipality-years, the unit of analysis for the regressions. In all analyses, cities are weighted by their 1990 population counts.⁴

4.1 | Dependent variables

The study's two primary outcomes are municipal governments' *police spending per capita* and their *social spending per capita*. These data come from the U.S. Census Bureau's Census of Governments, Annual Survey of State and Local Government Finances (COG), a regular assessment of subnational governments in the United States (Hogue, 2013; U.S. Census Bureau, 2006). All fiscal data are inflation adjusted to 2019 dollars using the "all urban consumers" price index from the Bureau of Labor Statistics. I omit capital spending to avoid large, atypical swings in expenditure. Police and social service expenditure figures include employee pension costs (U.S. Census Bureau, 2006, p. 5-84).

The *social spending per capita* variable includes all city expenditures on healthcare, hospitals, housing and community development, libraries, parks and recreation, and public assistance. I omit education expenditures from the main models because, in most cities, school budgets are controlled by school districts, not municipal governments, so money cannot be transferred between police and school budgets. I include education spending in several descriptive analyses and in a robustness check.

The debates concerning welfare-state retrenchment often hinge on how welfare spending is operationalized (Green-Pedersen, 2004). To ensure that my findings are not an artifact of my chosen measurement, I supplement the per-capita expenditure measure with four additional operationalizations of spending: (1) a ratio of police spending divided by social spending, (2) police and social spending each measured as a percentage of the city's total expenditure, (3) each adding spending from counties and school districts, and (4) each measured relative to need.

The first alternative operationalization divides each city-year's inflation-adjusted total police expenditure by its inflation-adjusted social service budget. The second divides each by a sum of all spending in the city-year. The third requires capturing how county, school district, and special district spending is distributed across city geographies. It captures what residents receive from all local governments, not just what city governments spend. Therefore, I analyze a subset of 150 cities between 1990 and 2016 that have been "fiscally standardized" by the Lincoln Institute of Land Policy. In this Fiscally Standardized Cities (FiSC) data set, spending from all local governments is allocated to city boundaries based on their share of the overlapping jurisdiction's relevant population. For instance, if a school district encompasses two cities, one with 40,000 school-age children and one with 60,000, the FiSC data set assumes that the school district spends 40% of its budget in the first city and 60% in the second (Langley, 2020). This measure captures all local government spending, including that on education, but sacrifices breadth as it includes fewer cities.

The fourth alternative operationalization, common to welfare-state studies, benchmarks spending to a city's "demand" for each government function rather than to its population or total expenditure (Clayton & Pontusson, 1998; Hacker, 2004; Starke, 2006). This approach has the same numerator as the primary approach (police or social spending), but the denominator is the number of violent crimes in a city-year for police spending and the number of families in poverty in a city-year for social spending. Crime and poverty are used to proxy the need for police and

⁴ The data and Stata syntax used to generate the following results are available at <https://doi.org/10.7910/DVN/BKTNTK>.

social services, respectively. Therefore, spending is placed in the context of the social force that might trigger it (Garland, 2024). Because police and welfare spending are on different scales in this measure, only their change over time can be compared.

4.2 | Explanatory variables

The primary explanatory variable is municipalities' *total revenue per capita* as recorded by the COG and decomposed into two component variables: *revenue decline* and *revenue increase*. These measures capture all revenue that municipalities collect from taxes, intergovernmental transfers, fines, and fees. Intergovernmental revenue captures any funding transferred from a city's county, state, or federal government, including grants made to cities in the 2009 federal stimulus package, grants to fund policing like those in the 1994 crime bill, and funding through the federal Office of Community Oriented Policing Services program (Mello, 2019; Vargas & McHarris, 2017; Worrall & Kovandzic, 2007). Although I am focused on government expenditure at the municipal—not state or federal—level, municipal expenditure is very much influenced by funding from higher jurisdictions, so I included such intergovernmental transfers in my measure of revenue. Police can generate revenue by issuing fines and fees, so a sensitivity analysis will test whether fine-and-fee revenue has a relationship to expenditures independent of other revenue sources.

Because I expect revenue shortfalls and revenue windfalls to affect expenditures differently, I decomposed *total revenue* into two “asymmetric” component variables (Allison, 2019; York & Light, 2017). *Revenue decline* captures all negative differences between one year of total revenue and the next, with increases in revenue coded as zero. Conversely, *revenue increase* captures growth, with all declines coded as zero. This approach allows me to analyze revenue's rise and fall separately and isolate fiscal crisis from fiscal surplus.

4.3 | Control variables

Because I argue that the consensus on police budgets is bipartisan, I need to control for the political lean of city leadership. To this end, I measure the mayor's political party with data from the American Local Government Elections Database (De Benedictis-Kessner et al., 2023). The resulting *Republican mayor* variable is measured annually and coded 1 if a city had a Democratic mayor that year and 2 if they had a Republican one. If police and social service spending changes are related to the mayor's party, that would undermine my argument of a widespread consensus, and a nonsignificant coefficient for this variable would support my argument.

Because police expenditures might be influenced by crime, especially high-salience crimes, I control for the *violent crime rate* (Jackson & Carroll, 1981). These data come from the FBI's Uniform Crime Reporting Program (UCR; Kaplan, 2020). The UCR data capture reported crime, which can diverge considerably from actual crime for some offenses because victims underreport crime to the police, because police enforcement intensity varies, and because of police misclassification (Lauritsen & Cork, 2016; Maltz & Targonski, 2002). This divergence is less of a concern in this study for two reasons. First, I use violent crime, which is reported to police with higher frequency than property or drug crimes and which depends less on police enforcement decisions (Berg & Lauritsen, 2016; Langton, 2012). Second, reported crime reflects perceived crime, the relevant figure for city officials who control budgets because true crime rates are unknown to them. A sensitivity analysis including property crime is presented below. Violent crime, as with all the control variables, is interpolated linearly for any years missing data.

Several demographic controls are included, using data from the American Community Survey's (ACS) 5-year estimates. Although police spending has not been found to be responsive to unemployment rates, social spending will likely increase as the demand for social programs rises, as during increases in joblessness or poverty (Clegg & Usmani, 2023; Starke, 2006), so I control for the *unemployment rate* and the *percentage of families in poverty*. Studies have regularly found that the racial threat Whites perceive from non-Whites is a strong predictor of police spending (Kent & Jacobs, 2005; Skaathun et al., 2022; Vargas & McHarris, 2017). Also, municipal budgets are shaped by racial segregation, with predominantly Black cities—even higher-income ones—frequently struggling to attract stable revenue (Pacewicz & Robinson, 2021; Simms, 2021). Therefore, I control for city-years' *percent non-Hispanic Black* and *percent Latino* to capture how racial threat and segregation relate to municipal budgeting. Young men are both more likely to commit crimes and more likely to be targeted by the police, so I control for municipalities' *percent young men*, the proportion of the male population 15 to 34 years of age. I control for *population* to capture any dynamics that might differ across places of different sizes. Because I hold municipality boundaries constant during the study window, *population* is also a measure of population density.

In subsequent analyses, I test the power of police and the breadth of the police-budget consensus by repeating the primary analyses on two subsamples, one differentiated by police unionization and one by geographic region. Data on whether cities' police departments are unionized come from the 2000, 2013, and 2016 Law Enforcement Management and Administrative Statistics (LEMAS) data set. The unionization status of police officers rarely changed between 1990 and 2019, so using 3 years of data reduces measurement error (Beck et al., 2024). I consider departments unionized if some or all of their sworn personnel have collective bargaining agreements and consider them not unionized if none of their sworn personnel do. I use the Census Bureau's four-category region variable (Northeast, Midwest, South, and West) to break out the sample by geographic areas of the United States.

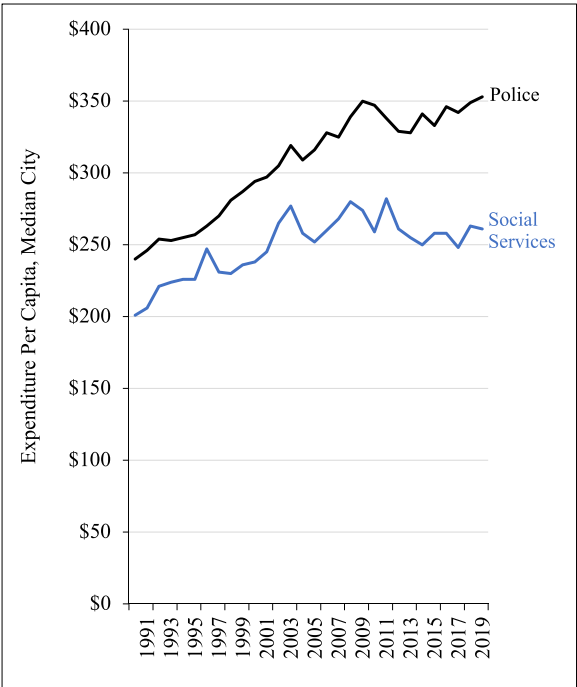
4.4 | Geographic scale

I take several steps to account for the dynamic interplay between governments of different levels. The city is a crucial scale for understanding law enforcement budgeting in the United States because municipal police forces account for more than two thirds of law enforcement agencies in the country (U.S. Bureau of Justice Statistics, 2018). County sheriffs, by contrast, make up only 17% (U.S. Bureau of Justice Statistics, 2018). The city is distinct from state and federal governments in its popularity, political activity, and structural constraints, differences that lead cities to “at times ... represent citizen interests better than other levels of government” (Miller, 2008, p. 175). These are some of the reasons budgeting trends might be different at municipal and supra-municipal scales. Nevertheless, we need to consider how other jurisdictions affect cities, and I do so in several ways. First, I use a city revenue measure that includes all funding transfers to cities from federal, state, and county governments and perform a sensitivity analysis omitting such transfers. Second, I use the FiSC data set to test the results with budget data from counties, school districts, and special districts. Third, as explained more below, all analyses include city fixed effects, which control for all time-invariant characteristics of a city, including which state it is in. This accounts for any constraints on a city inherent to their state's constitution or laws, so long as they did not change during the study period. These approaches reflect how cities are distinct and also embedded in a federalist system.

5 | TRENDS IN MUNICIPAL EXPENDITURE

Figure 1 shows the median municipality’s police and social service expenditures per resident between 1990 and 2019.⁵ The typical city spent \$240 per capita on police in 1990, as represented by the black line. That number grew steadily until the Great Recession, when it declined and then rebounded such that in 2019, the typical city spent \$353 per resident on police, the highest value on record. Social service spending, represented by the lighter blue line, displayed a similar growth trend in the 1990s, although at a lower level. In the 2000s, the two expenditure categories started to diverge, and that divergence accelerated in the 2010s. Social spending peaked in 2011 before declining to \$261 in 2019. Table 1 expands on these trends. The first two rows of that table reflect the values from Figure 1 and add the percent change over time in the final column. Per-capita police spending grew by 47% during these years and social spending by 30%. Table 1’s third row displays the median city’s total police expenditure. Spending on all city departments grew by 30% during these 30 years, meaning police spending growth outpaced total spending growth and social spending was in line with total spending. This finding contradicts the across-the-board-cuts theories that expected all city spending to move in tandem. Cities were gradually and persistently shifting funding away from social services and toward policing during this time.

FIGURE 1 Population-weighted expenditure trends.
[Color figure can be viewed at wileyonlinelibrary.com]
Note. Inflation adjusted to 2019 dollars. *N* = 460 cities.



Is the same trend observable if we use different expenditure metrics? The remainder of Table 1 displays the medians and changes over time for four alternative measures of city spending. All indicate the same pattern of welfare-to-carceral realignment. The ratio of police-to-social service spending reveals that the typical city spent 1.1 times more on police than on social services in

⁵ The distributions for city expenditures are strongly positively skewed, so medians are the most reliable measure of central tendency.

TABLE 1 Population-weighted medians of expenditure variables.

Measure	Median		% Change
	1990	2019	
Per-capita expenditure (real \$s)			
Police	239.81	352.87	47.15
Social	200.51	261.44	30.39
Total	1,890.91	2,517.71	30.15
Ratio			
Police-to-social expenditure	1.11	1.46	31.53
Percent total expenditure			
Police	12.77	16.00	25.29
Social	12.76	12.09	−5.25
All local governments' expenditures (real \$s per capita) ^a			
Police	332.36	449.71	35.31
Social and education	2,417.44	3,127.88	29.39
Ratio police-to-social and education	.12	.14	16.67
Relative to need			
Police spending per violent crime	20,309.42	66,152.23	225.72
Social spending per family in poverty	1,452.42	1,748.13	20.36

Note. All values are inflation adjusted to 2019 dollars. *N* = 460 cities.

^aFor these variables, the values in the "2019" column are measured in 2016 because of data availability and the percent change column reflects the change between 1990 and 2016.

1990 and 1.5 times more in 2019, an increase of 32%. The next measure, spending on police and social services as a percentage of the cities' total spending, shows both police and social services at approximately 13% in 1990 before diverging sharply during the next 30 years. Police spending increased by 25% as a share of all spending, and social spending as a share decreased by 5% during this time. The next measure includes spending from all local governments: municipalities, counties, school districts, and special districts. Although this measure is less intuitive because it combines different political entities that do not share budgets, it allows the social spending measure to include education spending. Including education reorients the absolute values of police and social spending because education by school districts is by far the largest local expenditure. The ratio of police to social and education spending in the typical city grew from 0.12 to 0.14 (i.e., policing was 12% and then 14% of social and education spending), a growth of 17%. Even when including school spending, cities were moving away from social services and toward police over time.⁶

The fourth and final alternative measure benchmarks spending to the amount of need for each spending category rather than to the number of people or the total expenditure in a city, an approach common to the welfare-state literature (Clayton & Pontusson, 1998). Here, police spending is denominated with violent crimes and social spending with families in poverty. The two values are on different scales, so only their growth rates can be compared. These rates are displayed in the far-right column and reveal a sharp divergence. Police dollars per violent crime grew

⁶ The FiSC data set that allows for the inclusion of all local government spending was only available through 2016 and for a more limited number of cities. This more limited data availability might account for some of the difference between this and the primary measure of government spending.

by 226% between 1990 and 2019. Cities did not reduce police spending when the need for it abated. Social spending, on the other hand, hued much closer to fluctuations in its need. Social service dollars spent per family in poverty increased by only 20%. When measured this way, police spending growth far outstripped social spending growth. All five measures of local government spending depict the same trend: Local governments restructured their budgets away from social provision and toward law enforcement between 1990 and 2019. Next, the study turns to the inferential question of whether such welfare-to-carceral restructuring accelerated during fiscal crises.

6 | ANALYTIC STRATEGY

To estimate the relationship between revenue shortfalls and municipal expenditures, I use city fixed-effects regression models with asymmetric treatment variables. This approach accounts for several elements of this study's central research question: Are police cuts shallower than social service cuts during austerity? The first element is the likely asymmetric nature of revenue's relationship to expenditure. I expect social spending will decline more during shortfalls than it will increase during windfalls, so I decompose the treatment variable (total revenue) into two variables, one captures cumulative revenue increases and is otherwise zero, and the other captures cumulative revenue decreases and is otherwise zero (Allison, 2019; York & Light, 2017). This asymmetric approach has been used to understand how positive and negative police interactions affect officer legitimacy differently (Thompson & Pickett, 2021), how neighborhoods' ecological characteristics relate to their crime levels (Hipp & Luo, 2022), and how countries' economic development affects their CO₂ emissions (Huang & Jorgenson, 2018), among other research questions. The decomposition into positive and negative variables avoids the typical assumption of treatment symmetry, allowing the central revenue–expenditure relationships to differ during fiscal booms and busts. It therefore requires two measures of change (cumulative revenue declines and cumulative revenue increases) to capture the lingering consequences of past fluctuations. York and Light (2017) demonstrated how using only one, symmetric change variable (e.g., the annual difference in revenue) or using two noncumulative variables (e.g., the annual increase and decrease in revenue) both generate inaccurate regression coefficients in the presence of asymmetry. This result occurs because such measures obscure the “ratcheting effect” that takes place when treatments affect outcomes more strongly during increases than decreases or vice versa (York & Light, 2017, p. 10). Such ratcheting can lead to partially irreversible (i.e., asymmetric) effects, and separating cumulative increase from cumulative decrease preserves such irreversibility through time, whereas symmetrical or noncumulative measures wipe it away with each new observation. For these reasons, studies assuming that associations are symmetrical might misestimate treatment coefficients.

This study's primary research question asks whether budget reallocation varies within cities over time rather than between cities at one time, so the research design requires a longitudinal analysis. To this end, I employ fixed-effects models that include a parameter for each city, constant through time, reflecting the average value of the dependent variable for that city across all years after controlling for all independent variables, capturing within-city change (Wooldridge, 2019). The city fixed-effects strategy is useful here because it allows for asymmetric predictors and it controls for all time-invariant city characteristics like the city's unique history, the type of municipal government (e.g., council-manager or mayor-council), the state laws governing the city's autonomy, baseline (i.e., pre-1990) expenditure levels, and all other variables that were constant between 1990 and 2019 (Allison, 2009). Since very few police forces either formed or dissolved a

labor union during this time, the city fixed effects control away variation by unionization status, but in a subsequent analysis below, I conduct analyses on subsamples of unionized and nonunionized police forces. The primary fixed-effects models take the following form:

$$y_{it} = \alpha + \beta^- x_{it}^- + \beta^+ x_{it}^+ + \beta_1 z_{it} + v_i + \varepsilon_{it},$$

where y_{it} is the outcome variable (the natural log of police or social spending per capita) in municipality i at time t , α is the intercept, β^- is the primary coefficient of interest, x_{it}^- is the primary explanatory variable (the natural log of cumulative revenue decline), x_{it}^+ represents revenue increase and β^+ is its coefficient, z_{it} is a vector representing the changes in the control variables with β_1 as its coefficient, v_i is the city-specific fixed effect, and ε is the error term.

Because this approach draws multiple years of data from each city, observations might be serially autocorrelated and standard errors might be artificially deflated. To address this, I cluster standard errors by city. This approach is akin to nesting panels (i.e., years) in cities. I also weight the cities by their 1990 population sizes using analytic weights to account for large variations in city size. As a result, small and large cities contribute to the results in proportion to their populations.

All continuous variables are converted to the logarithmic scale to account for outliers and non-normal distributions. Table 2 displays the variables' linear and logarithmic means and standard deviations. The means in Table 2 are the within-city (i.e., across-year) means reflecting how the fixed-effects models analyze within-unit differences. After running the primary models, I conduct a series of robustness checks to ensure the findings are not artifacts of modeling and data management choices. In the [online supporting information](#),⁷ I break the revenue variable into seven categories to better understand outlier conditions and to ensure the log-log and asymmetrical variable transformations are reasonable. This categorical variable design validates the main modeling approach and indicates that extreme revenue fluctuations correspond to extreme spending fluctuations.

I am interested in how police and social service expenditures differ in their relationship to revenue declines, so I analyze them in separate models. This analysis will indicate how much the funding for each function changes during budget shortfalls. I also want to understand, however, how the two functions jointly relate to revenue declines. Which changes *more* during austerity? To address this question, I regress each city's ratio of police-to-social service spending on the same covariates as in the main models. This ratio is each city's police expenditure divided by their social service expenditure. A positive and statistically significant coefficient for revenue decline in the ratio models would indicate that the ratio's numerator (policing) was cut less than its denominator (social services), a negative coefficient would indicate policing was cut more, and a nonsignificant coefficient would indicate no difference was found in policing and social service cuts. Together, the separate and joint models will reveal how much each function is cut and which is cut more.

7 | FIXED-EFFECTS PANEL MODEL RESULTS

Figure 2 plots the regression coefficient estimates from three fixed-effects models. The black dots represent the coefficient estimates from the model regressing police spending on the covariates.

⁷ Additional supporting information can be found in the full text tab for this article in the Wiley Online Library at <https://onlinelibrary.wiley.com/doi/10.1111/1745-9125.12385>.

TABLE 2 Population-weighted descriptive statistics.

Variable	Linear Scale		Log Scale	
	Mean	SD	Mean	SD
Municipal expenditures (real \$s per capita)				
Police	375.08	151.93	5.85	.40
Social service	730.31	1,157.60	5.88	1.07
Healthcare	93.70	200.68	3.18	1.92
Hospitals	123.03	334.04	1.07	2.39
Libraries	29.81	25.06	2.71	1.59
Public assistance	246.91	648.33	2.04	2.70
Parks and recreation	99.96	70.91	4.35	.86
Housing and community development	136.91	166.24	4.24	1.31
Ratio of police-to-social service	1.36	4.17	.77	.38
Revenue (real \$s per capita)				
Total	4,371.42	3,609.78	8.13	.67
Decline	2,305.51	3,108.10	.56	.53
Increase	3,021.29	3,898.50	.71	.56
Crime, politics, and demographics				
Violent crimes per 1,000	9.16	5.65	2.17	.56
Republican mayor ^a	1.32	.47	—	—
Unemployment rate	8.67	3.08	2.22	.30
Percent families in poverty	18.64	5.92	2.92	.35
Percent Black	21.93	18.07	2.77	.93
Percent Latina/o	22.50	17.82	2.80	.93
Percent men 15 to 34	16.09	2.20	2.83	.12
Percent vacant housing units	9.34	4.32	2.26	.39
Population	1,538,708	2,436,815	13.18	1.45

Note. All revenue and expenditure variables are inflation adjusted to 2019 dollars. *N* = 390 cities, 8,432 city-years.

^aCoded 1 for a Democratic mayor and 2 for a Republican mayor.

The blue, lighter dots represent the coefficient estimates from the model regressing social services on the covariates. The third, green dots represent the coefficient estimates from the model regressing the ratio of police-to-social service spending on the covariates. Because the variables (except Republican mayor) are on the log scale, their coefficients are elasticities interpretable as the percent change in the outcome variable associated with a 1% change in the independent variable. The regression coefficients are statistically significant when their confidence intervals do not cross the red zero line.

The first coefficient estimate (the top black dot) reveals that a 1% decline in revenue was associated with a 0.14% decline in police spending. The second coefficient estimate (the blue dot) shows that a 1% decline in revenue was associated with a 0.4% decline in social service spending. Cities cut social services about three times ($-0.4 / -0.14 = 2.9$) more than police during fiscal crises. Both coefficient estimates are independently statistically significant. To test whether the observed difference between police and social budget cuts was itself statistically significant, the third model combines both outcomes in a ratio. It shows that revenue decline was associated with a statistically

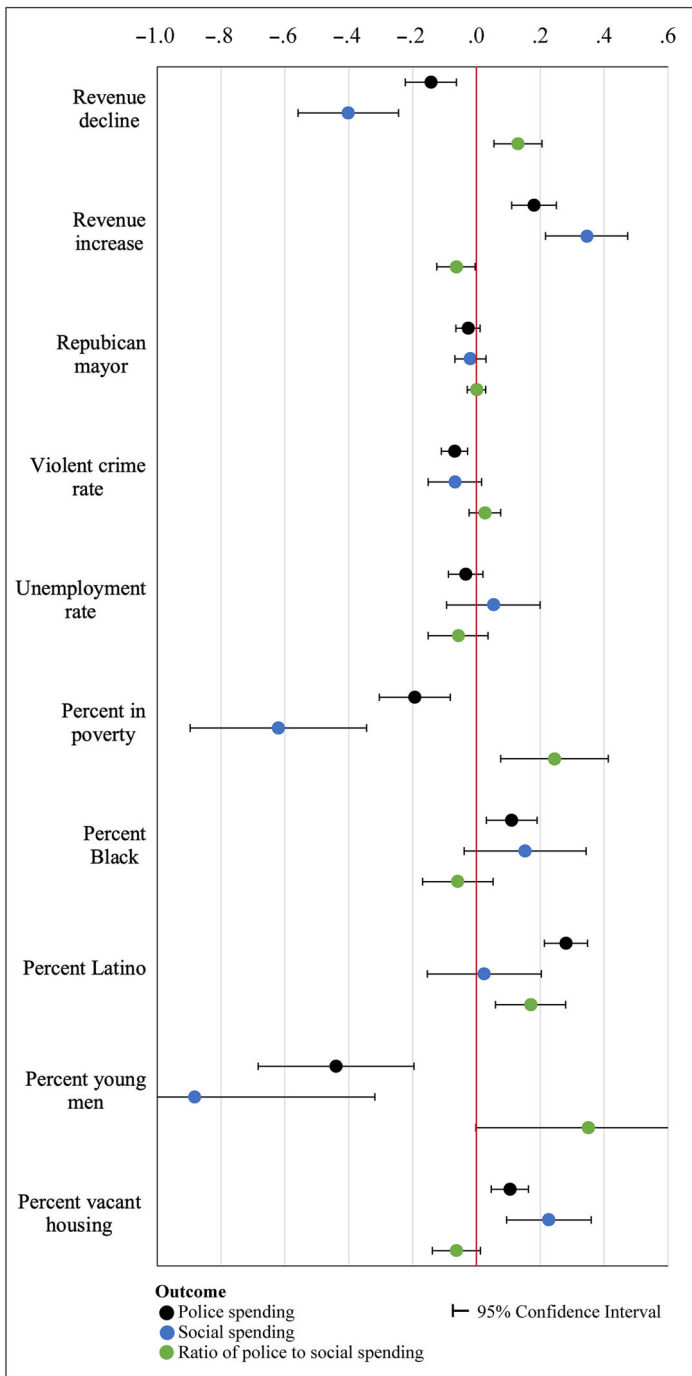


FIGURE 2 Fixed-effects regression coefficient estimates from three models.

[Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1745-9125.12385)]

Note. All models include 1990 population weights. *Ns* = 8,432 city-years.

significant increase in the ratio, meaning the police-spending numerator was cut less than the social-service-spending denominator. When read together, these three models reveal that police budgets are cut during austerity, but social service budgets are cut more.

Converting the estimates from percent terms to absolute dollars reveals that the magnitudes of these cuts are meaningful. The typical (i.e., population-weighted median) revenue decrease for a

city during the study years was a loss of \$63 million from \$1.3 billion in total revenue. The typical police and social service budgets were \$153 million and \$141 million, respectively. These models suggest, therefore, that the typical city cut its police budget by \$1 million and its social service budget by \$2.7 million during the typical revenue decline.⁸

In reading down Figure 2, the coefficient estimates for the revenue increase variable reveal that when city budgets grew by 1%, police budgets increased by approximately 0.18%, a slightly higher level than they were cut during shortfalls. Social services increased by approximately 0.35%, a slightly lower level than they were cut during shortfalls. When looking at the green point estimate, the ratio of police-to-social spending decreased during revenue windfalls, confirming that the police-spending numerator increased less than the social-spending denominator. In other words, social services saw bigger budget increases than the police during revenue windfalls. Does this negate the cuts seen during shortfalls and mean that even though police budgets are shielded during revenue shortfalls, they are also neglected during revenue windfalls, evening things out?

To answer that question, I calculated a replenishment rate, the amount police and social spending would change after a hypothetical 2-year period in which revenue decreased and then increased. I divided the typical loss during a shortfall by the typical gain during a windfall, revealing that the typical police budget was replenished 129% ($0.18 / 0.14$) and the typical social service budget was replenished only 85% ($0.35 / 0.4$) when revenue shrank and then grew. Put differently, after a year of revenue decline followed by a year of comparable revenue growth, these models predict police spending would be 29% higher than their prefluctuation levels and social spending would be 15% lower. Although funding for social services increases more during windfalls than funding for police does, those increases do not fully restore the social service spending lost during shortfalls. Policing, on the other hand, is more than made whole. This finding supports the fiscal crisis model that expects revenue shortfalls to be key moments of welfare-to-carceral realignment and underscores the need to model asymmetry in the revenue–expenditure relationship.

I expected that revenue shortfalls would be necessary but insufficient conditions for government restructuring, and that a broad consensus on the importance of policing would also be required. The third independent variable, Republican mayor, can speak to this dynamic. The coefficients for this variable indicate that Republican mayors were no more or less likely to cut police or social service than Democratic mayors, as indicated by the error bars for this variable crossing the zero line in all three models.⁹ Conversely, Democratic mayors were no more or less likely to cut or restore funding than Republican mayors. In other words, no statistically significant relationship exists between a mayor's political party and whether their government increases or decreases police or social service budgets. The inclusion of this variable in the models also reveals that the relationship between budget shortfalls and welfare-to-carceral restructuring observed with the first two variables persists no matter the mayor's political party. This finding supports the theory that shielding police budgets is a widespread, bipartisan effort.

The remaining control variables reveal other dynamics of local budgeting. An increase in violent crime was associated with slightly smaller police budgets but with no change in social service budgets. Changes in unemployment were unrelated to budget changes for either spending category, whereas more families in poverty were associated with smaller police and social service

⁸ The calculation for police: $(\$63,840,530 / \$1,323,847,000) \times 0.14 \times \$152,675,400 = \$1,030,755.81$ and for social services: $(\$63,840,530 / \$1,323,847,000) \times 0.4 \times \$141,193,100 = \$2,723,529.94$.

⁹ Because it is dichotomous, this variable is the only one not converted to the log scale, which partly explains the smaller point estimates and narrower confidence intervals for its coefficients. The direction and statistical significance of the variable are still interpretable.

budgets. Cities spent more on police when their Black or Latino populations grew, which is in line with racial threat theory, but social service budgets were unchanged during such demographic shifts. More young men in a city were associated with smaller budgets and more vacant houses with bigger ones.

7.1 | Social spending disaggregated

To better understand which government functions were cut the most during austerity, I analyzed the six component social services separately by regressing each on the same covariates and using the same analytic strategy as in the main models. Figure 3 depicts the coefficient estimates (again elasticities) for revenue decline, the primary explanatory variable, in each of the six models. The coefficient for police expenditure is duplicated here from the previous figure for comparison. The coefficient estimates for revenue decline are not statistically significantly different from zero when predicting spending on public assistance, libraries, hospitals, or healthcare. Revenue declines are, however, statistically significantly associated with less spending on housing and community development and with less spending on parks and recreation. Cities cut their housing and parks budgets by an average of 0.45% and 0.47%, respectively, during revenue declines of 1%. Models regressing the ratio of police spending divided by each of the social service spending categories here (omitted for space but available by request) confirm that cuts to housing and parks are statistically significantly lower than cuts to policing. These results indicate that not all government functions were cut equally during austerity. Cities cut parks and housing the most.

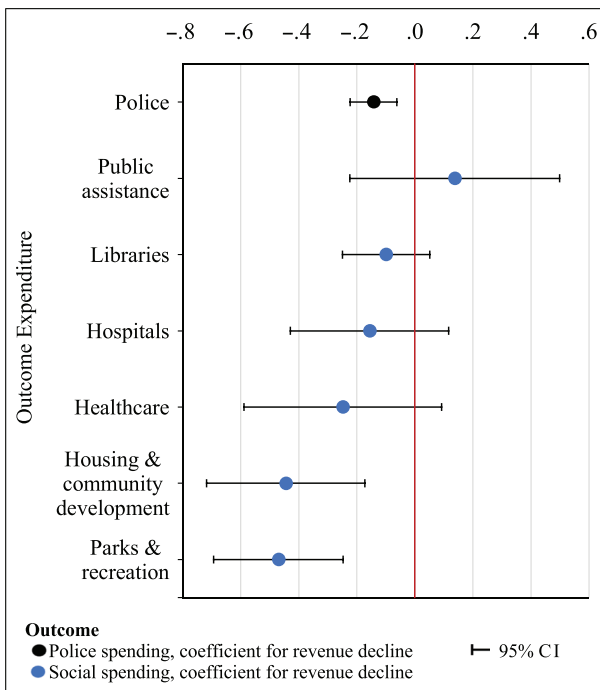
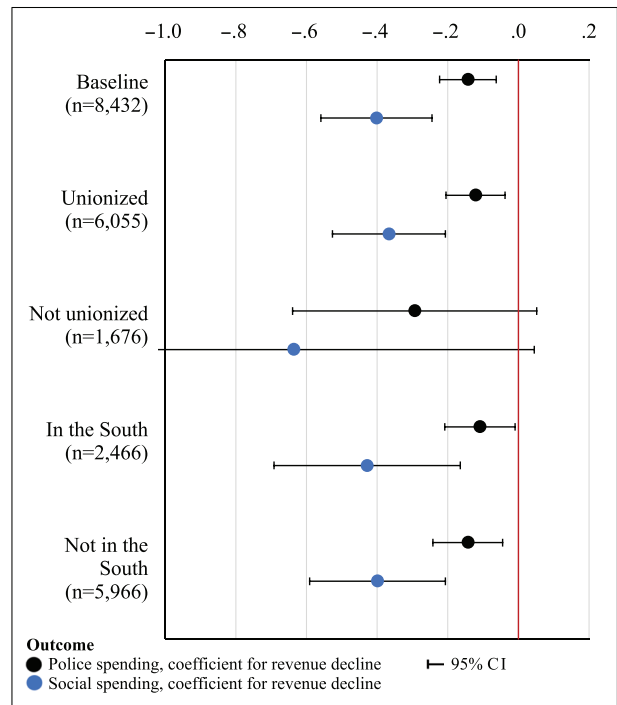


FIGURE 3 Outcome expenditures decomposed by social service.

[Color figure can be viewed at wileyonlinelibrary.com]

Note. All controls are included but not displayed. All models include 1990 population weights. Fixed-effects regression coefficient estimates for revenue decline variable from seven models. $Ns = 8,432$ city-years.

FIGURE 4 Subsamples by officer unionization status and geographic region.
[Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1745-9125.12385)]
Note. All controls are included but not displayed. All models include 1990 population weights. Fixed-effects regression coefficient estimates for revenue decline variable.



7.2 | Variation by unionization and region

As argued, the consensus on protecting police budgets is widespread. Above, I demonstrated that the consensus was bipartisan. Next, I discuss whether it varies by the unionization status of a police force or by the city's region of the country (i.e., Northeast, Midwest, South, or West), two possibly salient axes along which the police funding consensus might vary. Very few cities' police forces changed their unionization status between 1990 and 2019, and a city's geographic region never varies over time, so these variables require separate analyses from the longitudinal models, above, that analyze change over time.

Police officers are among the largest and most politically powerful workforces in city government (Banerjee et al., 2024; Cheng, 2024; Coe & Wiesel, 2001; Salanick & Pfeffer, 1977). A major manifestation of this power is the success police officer unions have in negotiating favorable labor contracts (Skogan, 2008). Do such collective bargaining agreements prevent cities from cutting officer salaries and therefore compel them to concentrate austerity cuts in nonpolice functions like social services? To test this, I divided the sample into cities with unionized police forces and those without them. Then, I analyzed how the relationship between revenue and expenditure differed between the two subsamples using the same analytic strategy as in the main models. Figure 4 reports the coefficients for the primary explanatory variable, revenue decline, from those analyses. The results reveal that the association between revenue decline and budget cuts in cities with unionized police departments is very similar to the relationship in the baseline model (duplicated from Figure 1). A murkier picture emerges from cities without police officer unions. The relationship in those cities is similar to the baseline model insofar as the point estimate for police cuts is shallower than the point estimate for social service cuts (-0.3 vs. -0.6 during a 1% revenue decline). The 95% confidence intervals are much wider in the nonunionized cities, however, and include zero, so we cannot say these cuts are statistically significant. This lack of statistical

significance could be due to the smaller sample size of nonunionized departments, greater heterogeneity among them, or the lack of a true revenue–spending relationship in such places. With unclear findings like these, I cannot say whether unions are playing a role in shielding police budgets. Although this does not undermine the study’s main findings because the primary fixed-effects models control for unionization, future research might study this relationship after more years of data have accumulated to better determine whether police unions are central to budgetary restructuring.

What about region? Is the consensus on protecting police budgets geographically widespread, or does it vary by location? The U.S. South is distinct in many respects. Its politics are more conservative, its crime rates are higher, and more people own guns there (Ousey, 2000). Perhaps police budgeting is distinct in the South as well. The last two lines in Figure 4 disaggregate the main sample into one subsample of cities in the South and a second subsample of cities outside the South. They show that the pattern of cutting social services more deeply than police is consistent regardless of whether a city is Southern. Police budgets are shielded in Southern cities and non-Southern cities, further underscoring how the consensus on protecting police budgets is widespread.

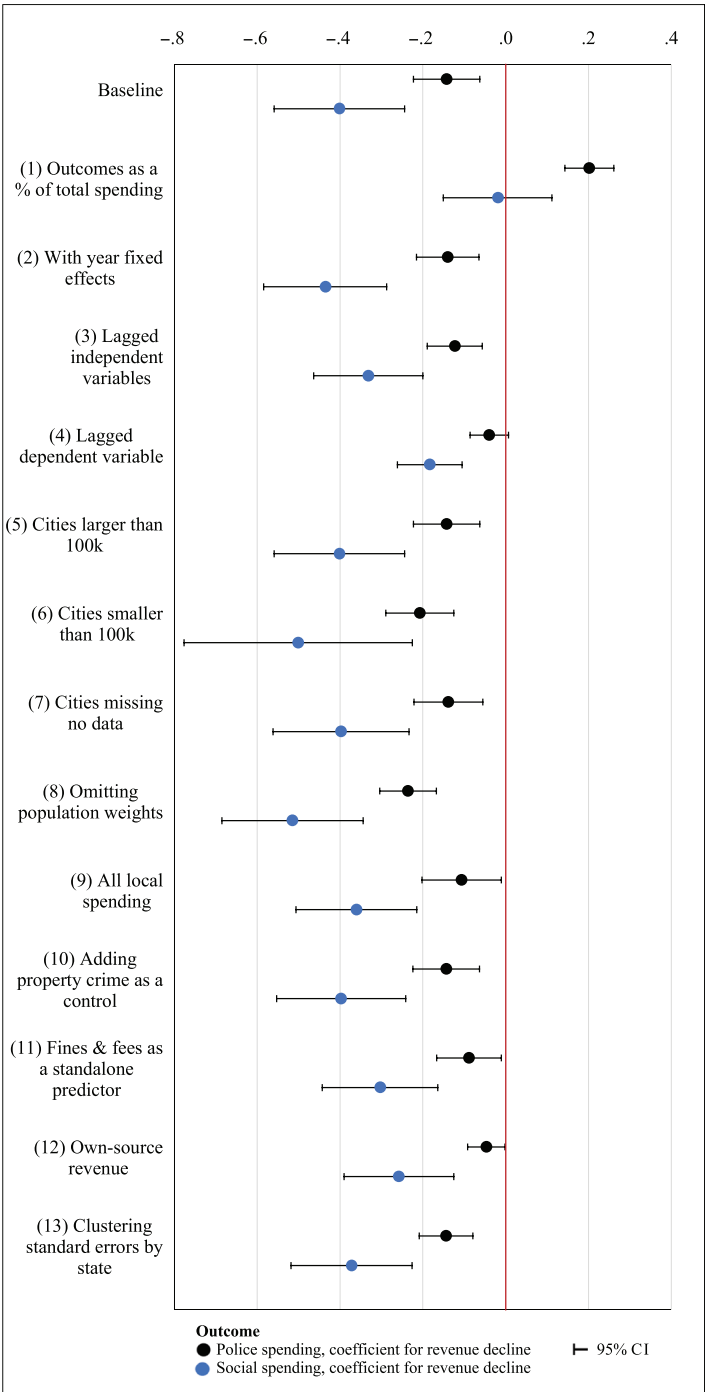
7.3 | Sensitivity analyses

The main analyses found that the transition from social services to police accelerated during austerity. To ensure this result was not driven by sampling choices, modeling specifications, or data management decisions, I conducted 14 robustness checks. The coefficient estimates for revenue decline, the primary explanatory variable, from each of these models are shown in Figure 5. The baseline results presented at the top are duplicated from Figure 1. In 13 of the 14 specifications, the same pattern of results was observed: Social service cuts were bigger than police cuts during revenue declines. The consistency of these results provides reassurance that the results are accurate, and the one outlier robustness check provides important nuance to the findings.

The first test replaces the baseline model’s per-capita measures of police and social spending with measures of each as a percentage of the total city expenditure. Here, we see that during a 1% revenue decline, cities *increased* police spending as a share of all spending, and social service spending was unchanged, evidence that police are cut less not only than social services during austerity but also less than most government functions. The second robustness test controls for major, national events like the Great Recession or Black Lives Matter protests by including year fixed effects (a dummy variable for each year save one). This test removes the influence of unique years and secular trends. The results are substantively identical to the baseline. The third test lags the independent variables 1 year. This approach might provide better causal ordering because it measures the treatment (revenue decline) before the outcomes. The results are unchanged. Model 4 adds a 1-year lag of the outcome variable to the right side of the equation, which can account for path dependence and trends in the dependent variables. Revenue declines are not statistically significantly related to police spending in this specification, although they are with social spending. Models 5 and 6 use a different population threshold than the baseline models’ 50,000-person cut-offs. The results in cities larger than 100,000 are the same as baseline, but the difference between police cuts and social service cuts in cities smaller than 100,000 is not statistically significant.¹⁰ As with the unionization finding, this result could occur for several reasons that will require further

¹⁰ The lack of joint statistical significance was determined by modeling the police-to-social spending ratio. Those results are omitted here for space but are available by request. The coefficient for revenue decline in the ratio versions of all other sensitivity check models was statistically significant.

FIGURE 5 Sensitivity analyses.
[Color figure can be viewed at wileyonlinelibrary.com]
Note. Coefficient estimates are those for revenue decline from fixed-effects models. All controls are included but not displayed. All models include 1990 population weights.



research to parse, but it means some caution should be used when applying the study’s findings to smaller cities. Model 7 includes only cities that had no missing data; model 8 omits population weights; model 9 includes spending from counties, special districts, and school districts (using the FiSC data described above), which includes spending on education; and model 10 adds a control variable for property crime. The results in these four models were unchanged from the baseline.

Models 11 and 12 use different constructions of the revenue variable. People who receive public assistance are more likely to owe fines and fees (Sykes et al., 2022), so social expenditures might have a relationship to fine-and-fee revenue independent of their relationship to taxes or inter-governmental transfers. Relatedly, police can generate fine-and-fee revenue, so spending on them might be distinctly related to monetary sanctions. Model 11 tests these possibilities by removing fine-and-fee revenue from the total revenue variable and including it as a stand-alone predictor. The main results were substantively unchanged, as shown in the plot. The stand-alone fine-and-fee revenue variable was positively and statistically significantly related to police expenditures, although not social spending, suggesting cities direct fine-and-fee revenue to police and/or police collect more such revenue.¹¹ State governments and the federal government distribute funding to cities, influencing their police budgets (Mello, 2019). To model the role of money from these higher-level governments, Model 12 omits intergovernmental transfers from the total revenue measure, leaving only cities' own internal revenue sources (taxes, fines, and fees). This specification finds very similar results to the baseline, suggesting local dynamics—not funding from higher-order governments—are sufficient to explain the relationship between revenue shortfalls and expenditure fluctuations. Model 13 clusters the standard errors by state to test whether that scale is more consequential for unobserved effects and finds a very similar result, reinforcing the logic of clustering standard errors within cities.

These sensitivity checks provide evidence the results are robust to a range of alternative modeling and sample specifications while adding helpful nuance, especially around small cities. See the [online supporting information](#) for the 14th robustness check that uses a categorical construction of the total revenue variable and arrives at similar results.

8 | DISCUSSION AND CONCLUSION

Recent political debates on whether to defund police budgets and reinvest the savings in social services have raised questions regarding how local government expenditures fluctuate and dovetail with academic debates about whether the welfare state has shrunk. This article gathered data on 390 cities between 1990 and 2019 and leveraged the considerable geographic and temporal variation in municipal budgets to shed light on the context of municipal government restructuring. It analyzed criminal justice and social service spending together and focused on the oft-neglected city scale to address whether and how social spending has been giving way to criminal justice spending.

The findings show that U.S. cities realigned their budgets slowly and steadily away from social provision and toward law enforcement between 1990 and 2019. Police spending grew 32% relative to social spending during these years. Since 2008, the divergence has accelerated, with police spending growing to the highest levels on record and social service expenditures remaining flat. In what contexts does this welfare-to-carceral transition occur? Fixed-effects regression models demonstrate that it increased during budget shortfalls, when mayors and city councils made deep and enduring cuts to social services and made shallow and temporary cuts to policing. Police were cut three times less than social services during budgetary shortfalls. These findings are robust to four operationalizations of government spending and 14 alternative modeling specifications. Spending on parks and housing declined the most during fiscal crises.

¹¹ Full model results omitted here for space but available by request.

Although fiscal crises spur local budgetary restructuring, I expected two persistent characteristics of cities would be required for welfare-to-carceral realignment: the ideological and political sway of police. Cities in all regions of the country made deeper cuts to social services than to police during fiscal crises, and austerity cuts did not vary between Democratic and Republican mayors, underscoring the breadth of the consensus that police are the primary function of local government. Although cities with unionized and nonunionized police forces both shielded police budgets relative to social service budgets, the results for nonunionized cities were not significant, muddying the findings and meaning future research will be needed to disentangle the role of police officer's institutional and political power in securing police funding.

Prior theoretical examinations of welfare and carceral budgeting during austerity expected equal cuts to all government functions or emphasized the role of large-scale economic and legitimacy crises. This study found no support for theories of across-the-board cuts, and it looked at briefer and more localized revenue shortfalls than the macro theories speak to. In doing so, it developed the fiscal crisis model of budgetary restructuring: routine budget deficits—not just spectacular economic crises—are key moments of welfare-to-carceral realignment. This approach also foregrounds the widely held belief that policing is the primary function of municipal governments. The breadth and depth of this commonly held belief is an important context of budgetary change. The fiscal crisis model highlights revenue shortfalls and widespread attitudes to explain the gradual and enduring transition away from social services and toward policing. Theories of policing might do well to incorporate the significance of revenue shortfalls and first principles in shaping the size of police departments.

This study informs academic debates regarding the extent of welfare-state retrenchment by providing a novel look at municipal-level change and by analyzing criminal justice and social services together. I found that police spending *is* cut during budget shortfalls. It has not been cut nearly as much as social service spending, however. Analyzing these cuts together reveals trends that would have been obscured had they been analyzed alone. During urban austerity, policymakers weigh trade-offs between government functions, and research should analyze criminal justice and welfare state functions together to capture this dynamic. This study also represents an encouragement for more municipal-scale research of the welfare state. Looking at cities adds another piece to the welfare-retrenchment puzzle that analyzing only national or state governments misses. Cities spend, collectively, more than states do, they are frequently the most trusted form of government in opinion polls, and they are increasingly central to both social service provision and political demands for budgetary reform.

The findings of this study cannot offer insight into whether mayors and city councils should shift funding from policing to social services. Previous research suggested that municipal social services can reduce crime and poverty while improving health, educational outcomes, and civic cohesion (Beck, 2024; Cohen, 2020; Jackson et al., 2016; Klinenberg, 2018; Kondo et al., 2016; Small, 2006). Policing, even though it might reduce crime, brings other collateral consequences like potentially damaging arrests, burdensome monetary sanctions, and, in extreme cases, lethal use of force (Beck et al., 2023; Chalfin et al., 2022; Giuffre & Huebner, 2023). Future research will have to investigate how the budget fluctuations detailed here affect crime and other outcomes, but any short-term crime reductions gained by expanding police budgets might increase long-term crime trends if they come at the cost of the social service budgets that address the root causes of crime like poverty, joblessness, and homelessness (Beck, 2024). The consequences of increased crime, increased policing, and decreased social services are likely to affect poor, working-class, and non-White communities the most (Kramer & Remster, 2022; Morgan, 2017; National Research Council, 2001), communities that already have a more limited say in policymaking and budgeting (Miller,

2008). The study also found that when cities' Black or Latino populations grew, their governments spent more on policing but not more on social services, underscoring how law enforcement is linked to perceived racial threats.

This study had several limitations. First, expenditure is not the only way to measure government provision (Starke, 2006). What municipalities spend on police or social services may not correspond to what city residents receive. For instance, cities might decrease their social spending knowing that nonprofits, state governments, or the federal government will pick up the slack. The data in this study could not capture any such substitution effects. Similarly, if police are providing social services or if social services are policing residents, government spending on one function might end up creating outputs typically associated with the other. Qualitative research suggests police are increasingly providing social work services, hospital dollars are going to hiring security guards, and criminal justice and social service functions are becoming more "enmeshed" (Lara-Millán, 2021; Phelps & Ruhland, 2022, p. 799; Stuart, 2016). The lines between social welfare and criminal justice are blurring (Haney, 2004; Simes & Tichenor, 2022). The data I used here cannot capture this kind of mission creep, but that I observed similar trends across all social service functions, even those like parks and housing that have not undergone an increase in policing, reassures me that this limitation is not biasing the results.

A second limitation is the single geographic level analyzed here, local spending. Although this finding is an important addition to literature previously focused on higher scales, the data used here cannot indicate whether state or federal governments are undergoing a welfare-to-carceral transition. Future research will have to repeat this analysis at those scales. Furthermore, the data used here do not capture direct spending by state and federal governments. This study used municipal budget data, so it captured when higher level governments pass funding through cities, but when funding was spent directly in cities (like with the FBI or Medicaid), that did not appear in the data. Therefore, these findings reveal what local governments spend, not what residents receive from state and federal governments. A data source does not exist, to my knowledge, that tracks the city to which each direct state and federal expenditure ultimately redounds (such an accounting might not even be possible with diffuse expenditures), but this nevertheless represents a limit to this study.

A third limitation of this study is that it could not separate pension costs from other city expenditures. Cities might owe more to police retirees than to social service retirees if police retire earlier or if police are more numerous (Grunwald, 2024; Munnell, 2012). Under such conditions, police-heavy pension obligations could compel city governments to fund policing more than social services absent any ideological commitments or police political power. Although this is possible, I suspect pension obligations are not driving the findings here for two reasons. First, teachers are more numerous than police and generate considerable pension obligations, yet the findings were very similar when including education spending. Second, this study's results were similar in both unionized and nonunionized police departments (albeit not statistically significant in the latter case), even though we would expect unionized police to garner greater retirement benefits than nonunionized police. These tests of the role of pensions are oblique, however, and further research with data that can disaggregate pension costs from other spending will be required to directly test this possibility.

Amidst calls to defund police budgets and reallocate the savings to social services, some policymakers have responded that police should be funded more. Whether one thinks police budgets should increase or decrease, understanding the recent history of municipal budgeting is an important context for policymakers as they evaluate budget priorities. The present study revealed that, at

least prior to 2020, cities had been steadily and enduringly increasing their police budgets.¹² The study also suggested any attempts to reduce police budgets will encounter considerable headwinds. The gradual, steady change in local budgets means the welfare-to-carceral transition is durable and pervasive. Despite the consistency of police-budget growth, this study found that revenue shortfalls are key moments of budgetary change. If policymakers or social movements want to reallocate spending from social services to policing or vice versa, fiscal crises will be pivotal opportunities to do so.

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¹² Although this study's data end in 2019, journalistic accounts have found that only two large cities, New York and Austin, reduced their police spending after the 2020 George Floyd protests (Holder et al., 2020).

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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