Public Expenditures and Competition
in Chicago Aldermanic Elections

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By

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Abstract

Theories of machine politics predict relationships between politics and public policy based on politicians' and constituents' alignment with the machine coalition. However, few attempts have been made to examine the validity of these predictions in the post-machine era of politics in Chicago, the quintessential "machine city." Using a series of regression models drawing on election results and public expenditure data, I show that electoral competition, conditioned by prevailing circumstances in post-machine politics, does not exert a significant influence on municipal spending. More intense competition in aldermanic elections, as indicated by parity of campaign spending and wider distribution of votes, does not significantly increase tax increment financing (TIF) expenditures. These results should inform our understanding of municipal politics in the post-machine era. Efforts to reform Chicago elections should seek not only higher levels of competition, but also stronger electoral accountability mechanisms to promote effective governance in a more competitive electoral environment.

Acknowledgements

Introduction

In recent years, significant efforts have been made in the political science and public policy literature to understand how local governments make policy decisions. Some of these studies apply existing empirical findings from federal- and state-level bodies to the local context (e.g. Holbrook & Weinschenk 2014). Others focus on the conditions and incentives faced by actors within local governmental institutions (Liu, Lindquist, & Vincent 2010; Clingermayer & Feiock 1995; Duncombe 1996; Joassart-Marcelli, Musso, & Wolch 2005; Eisinger 1988). A substantial body of work focuses on representation and local elections, much of it about campaign finance (Dewar 1998; Krebs 1998; Hajnal & Lewis 2003; Hajnal 2009; Percival, Johnson, & Neiman 2009). This attention to campaign finance and its role in municipal governance is especially prevalent in the case of Chicago, which is often treated as a quintessential city for the study of urban policy and politics (Krebs 2001; Hogan & Simpson 2001; Krebs 2005; Hennessy 2013; Diamond 2017).

However, no study to date has analyzed the empirical relationship between the conditions of Chicago municipal elections and the local policy outcomes that result from them. I address this relationship by asking how the level of competitiveness in these elections influences economic development spending. Specifically, I study how electoral competition affects local spending by comparing city council candidates' vote shares and campaign expenditures to investment in tax increment financing (TIF) projects.

In this study, I take competition to mean the overall difficulty of attaining elected office, which necessarily encompasses several important facets of city council elections, including the number of candidates, campaign spending, and the margin of victory. This definition captures the degree of selective pressure and accountability wielded by voters over their representatives.

Economic development policy, meanwhile, represents one significant, though non-comprehensive, proxy for a local official's effectiveness.

To evaluate the relationship between these variables, I analyze 200 aldermanic elections along with the four-year term following each election. These data represent every race in each of the city's fifty wards in four election cycles: 2003, 2007, 2011, and 2015. Races with greater competition feature larger numbers of candidates, closer vote margins, higher overall campaign spending, and relative parity of spending between candidates. In order to measure public investment, I evaluate the allocation of TIF while controlling for variables describing socioeconomic conditions in each ward over time. This expansive dataset allows for the construction of a model describing how electoral competition affects policy outcomes in Chicago under different sets of conditions.

Intuition points to potentially contradictory predictions for the model. One might speculate that more intense electoral competition (and concomitant public scrutiny) would induce aldermen to pursue public resources for their wards more aggressively than they would without such pressure. Incumbents may anticipate that they will be held more accountable for their performance by an electorate that faces a greater number of viable alternatives in more highly contested elections. Facing this pressure, they might seek voters' favor by making more forceful efforts to bring city resources to their communities.

Alternatively, it is also reasonable to expect that particular areas experiencing less competition, frequently strongholds of machine politics, are more likely to receive greater shares of the city's resources. If these areas are predominantly represented by aldermen loyal to the party organization, they may be rewarded by the mayor and other machine aldermen in the form of policy decisions favorable to their wards (as was the case under the patronage system during

the height of Chicago's political machine under Richard J. Daley). I test these hypotheses in order to generate a more informed theory of Chicago politics. I find no significant effect in either direction, implying that competition in aldermanic elections lacks the capacity to induce responsive governance in the current political climate. I argue that this result, rather than simply suggesting a technocratic, equitable distribution of economic development resources, is best explained by theories of recent transformations in machine politics. While the result does not conform to patterns of governance associated with the classical political machine, it is nonetheless compatible with a centralized structure of municipal policymaking and politics.

Chicago makes for an especially interesting case study because of the continued strength of its political machine, and because of the particularities of its municipal government structure and policy environment. As a result of these unique conditions, one must be cautious not to over-generalize findings that may not be applicable elsewhere. However, certain conclusions of this work can be adapted to other contexts and contribute to our theoretical understanding of local politics and governance. The results offer evidence as to which institutional or electoral reforms could make city government more representative, aligning aldermen's incentives and capacities with the needs and priorities of the communities they represent.

Context

While local politics as a whole has been relatively neglected in the academic literature, the same cannot be said of the major political currents shaping modern Chicago in academia, journalism, and the popular imagination. In part because of the extreme character of its political culture, Chicago's political and social history has long been a subject of intense interest, from Gosnell's (1937) study of machine politics to surveys of the history and current workings of city government in the present day (Diamond 2017). Hague, Lorr, and Sternberg (2017) provide a

useful delineation of three key periods in postwar Chicago political history: the height of the Richard J. Daley machine from the early 1950s through the 1970s, the "urban populist" era marked by the revolutionary election of Harold Washington as mayor in 1983 until his death in 1987, and the neoliberal era presided over by Richard M. Daley and Rahm Emanuel from 1989 to the present. These periods have also marked shifts in the literature they produced. Early-era studies focused on the operations of the Democratic machine from its powerful bosses down to its army of precinct captains (Royko 1971; O'Connor 1975; Rakove 1975; Judd & Swanstrom 2002); those from and about the populist 1980s on the charisma, racial dynamics, and reformist politics of Washington's tenure (Clavel & Wiewel 1991; Biles 2018; Rivlin 1992); and those concerning the late 1990s through the present on the corporatization of Chicago government and marginalization of neighborhood-based democratic governance amid the transformation of the city from an industrial base into a globalized capitalist center (Madigan 2004; Diamond 2017).

Simultaneously, scholarship on Chicago has evolved as the politics of the city itself have changed. Whereas analyses written during or about the 20th century through the first decade of the 21st generally tended to emphasize the key players and dynamics within the machine system and the opposition it engendered (Joravsky & Camacho 1987; Grimshaw 1992; Taylor et al. 1987; Despres 2005), those with a recent focus more often turn their attention to the relationship between politics and broader economic and social developments (Rast 1999; Bennett 2017). These more recent works recognize that there have been fundamental shifts in the local political climate. Although the legacy of decades of machine rule, which lasted long after the demise of most other large cities' machine systems, continues to be felt, the inner workings of power have changed significantly, from day-to-day operations in municipal government to the macro-level structure of politics (Bennett 2017). More than patronage or corruption, for example, the

essential issues now relate to inequality, economic transformation, and the interchangeability of

money and political power. From these shifts in the city's major political fault lines comes

contention over the models of governance and electoral competition the city will follow in its

next phase. The first traces of this transition could be seen in the transfer of administrations from

Daley to Emanuel. The 2011 elections that brought the new mayor to power, as well as the

election preceding it, exhibited levels of competition unheard of for most of the Daley years.

However, these events also precipitated a proliferation of campaign spending mirroring that

observed in federal and state elections (Diamond 2017; Gierzynski, Kleppner, & Lewis 1998).

Since Emanuel's sudden announcement that he would not seek election for a third term, a series

of political scandals and the surprising election of a reformist mayor have spawned renewed

speculation as to the likely direction of current trends in city politics in the coming years.

There now exists, then, an opportunity to address the most salient questions on the

threshold of a potential new era by evaluating how Chicago's new driving forces have interacted

thus far in the critical period of transition, a goal I take up in this study. Ultimately, I argue that

research studying how elections and changes in political dynamics have altered the recent course

of the city should inform ongoing efforts to reform Chicago.

Literature Review

The institutional configuration of Chicago's city council, mayoral administration, and

electoral system gives rise to a number of widely held assumptions and expectations about how

the city crafts policy. Some of the city's unique characteristics comport with existing general

theories that describe the effect of political systems on the functioning of legislative bodies, both

at the local and congressional level. Others, however, call for attention to Chicago's

idiosyncrasies to develop a better understanding of elections and policymaking processes in the

city. Here I summarize past research on the general topic before outlining what I consider to be the most important distinguishing features of Chicago.

Political Economy and Public Expenditure Policy

Mogues (2015) provides a useful delineation of political economy factors that affect policymaking in the theoretical and empirical literature, identifying three main factors that will structure the discussion here. The first is agents' incentives and constraints. The particular incentives and constraints that guide policymakers' behavior depend on a conceptualization of their role, which has been modeled in numerous ways. Drawing on the microeconomic theory of choices as solutions to a constrained maximization problem for a consumer's utility function, one set of economic models assumes and provides empirical support for the notion that decisions about public expenditures are made to maximize aggregate utility (Deacon 1978). As Mogues points out, this research conceives of budget-setting policymakers as "benevolent and autocratic social planner[s]," where "autocratic" refers to a lack of constraints from other actors and "benevolent" means that they seek to choose a budget allocation that maximizes social welfare in some sense (p. 455). As Deacon acknowledges, however, the translation of aggregated individuals' preferences into the eventually-observed policy outcomes is mediated by the political system. This is also true of alternative models of policymakers. Some authors, rather than focusing exclusively on politicians, emphasize the role of bureaucrats, who they consider to be interested in simply maximizing the budget available for provision of public resources or in prioritizing projects with desirable technical qualities (Niskanen 1971, Ting 2012).

These models, which might each predict different policy outcomes, may claim various levels of empirical support in different contexts. Nonetheless, in this context they must all contend with the general assumption that the policymaking agents of interest—Chicago

aldermen—typically desire reelection and act (at least in part) to retain their seats. That this assumption, well-supported by research on elected officials at other levels of government, applies in this case is confirmed by the data in this study indicating that an overwhelming majority of aldermen seek (and most win) reelection (Table 1, below). Even if the underlying preferences of each individual in society and the costs, benefits, and technical qualities of potential policies are constant, the behavior of policymakers will shift if electoral incentives change.

Furthermore, the incentives faced by policymakers themselves are not the only relevant ones in the policy process. As Mogues notes, the beneficiaries of a policy or allocation of public goods, services, or investment often face strong incentives to lobby for the implementation or preservation of that policy or allocation, as well as constraints on their ability to do so. Their ability to accomplish this preservation depends on their relative efficiency in exerting political influence relative to groups opposing them, which itself depends on a variety of factors (Becker 1983). Groups' size can affect their efficiency through the ability to control free-riding and economies of scale, with the former effect more significant at larger group sizes and the latter at smaller sizes. In general, groups that receive public benefits are large enough to exhibit economies of scale in generating political influence but small relative to the groups that pay taxes to support them because they face less difficulty of coordination. Another reason for the significance of group size is that each member of a small group benefits more from a given quantity of resources than each member of a large group, giving them large enough incentives to exert political pressure to overcome costs that give rise to collective action problems (Olson 1965). On the other hand, if efficiency is the same for larger and smaller groups, larger groups

might attain greater influence because they collectively possess more financial resources and votes (Acemoğlu & Robinson 2001).

The availability of lobbying resources and the size of interested groups likely play the primary role in the present context. Becker, for instance, assumes that voters' preferences are primarily determined through the influence of interest groups. If this is true, the strength of groups that benefit from different policies is the strongest determinant of incentives for particular outcomes. If this assumption is relaxed, then the relationship between interest groups' incentives and the influence they are capable of bringing to bear on elections becomes more complex. Applied to this study, what matters most is the type of groups who benefit from public expenditures such as TIF, as well as the strength of their incentives to exert political pressure. If the beneficiaries are a broad base of voters or a small but organized, well-financed group of developers who derive large benefits from an expenditure, one would expect the interest groups to have a strong degree of political influence. This influence would likely compel politicians to be more responsive to the program's beneficiaries than if the program had a smaller number of beneficiaries, offered less significant benefits, or had a powerful group of opponents.

The second political economy factor determining policy outcomes relates to the characteristics of potential public expenditures. Most relevant are the attributability of these expenditures to the policymakers responsible for them, and the lag time between the decision to allocate resources to a project and the time that the benefit is realized. Both of these characteristics have significant consequences for politicians' electoral incentives to pursue public spending projects. Keefer and Khemani (2005) recognize a lack of information as one of a number of "political market imperfections"[1] that can reduce the quality of policies to help the

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[1] Another imperfection is the existence of social polarization, which induces opposition to broadly beneficial reforms because they benefit other groups. While this is a pronounced feature of politics in large national

poor – even in democracies where the median voter is poorer than the average voter (p. 5). If voters do not have complete information about the quality of public projects or who is responsible for them (for example, because the investments themselves or the role of politicians is not immediately visible), then they cannot reliably attribute successful policies to particular officials (Mani & Mukand 2007). When this is the case, politicians' electoral incentives to pursue those policies are weakened, because voters evaluate governments on a vector of outcomes over all areas for which they are responsible. Those outcomes which are more visible will take on relatively more importance. A related problem is the difficulty for politicians of making credible promises to large groups of voters that they will implement broadly beneficial reforms, rather than offering particular groups more narrowly targeted services. This commitment problem results in outcomes comparable to those discussed above that occur when small interest groups have stronger incentives to lobby and fewer barriers to coordination than larger groups.

Aside from problems related to attributing policies to responsible politicians, another characteristic of expenditures that can dampen incentives is the lag time between the initial investment and its full effect being felt by voters, which both discourages policymakers from implementing an optimal level of long-term investments and creates a "limited commitment problem" (Mogues 2015, p. 463; Acemoğlu & Robinson 2001). In its simplest form, the lag time problem arises because politicians have an incentive to deliver policies that will benefit electorally influential groups within their term of office, which leads to a suboptimal amount of expenditures on programs with longer-term benefits. Moreover, because they cannot commit to implementing particular policies after their current term, politicians attempt to implement

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democracies and in US states, it is unlikely to have an appreciable effect in this study because of the relative homogeneity of most of the wards in Chicago.

policies that expand the influence of beneficiaries in order to guarantee those groups' support. Notably, TIF implementation solves this problem by operating in both the short and long term. Some expenditures may be made up front—the benefits of which can reasonably materialize within a four-year term—while the establishment of TIF districts ameliorates the limited commitment issue by guaranteeing a revenue stream for 23 years.

The final political economy factor that contributes to policy outcomes is the governance environment, which includes the form of government and the prevalence of corruption. Corruption, on the one hand, has a relatively simple application for the purposes of this study. Some types of public spending lend themselves to corruption more easily than others, in particular capital and infrastructure investments (Mogues 2015). Where rent-seekers have a large degree of influence in the political system, public spending will shift toward areas with efficient "corruption technologies" (de la Croix & Delavallade 2009, p. 188). This has implications for the prevalence of TIF spending, which commonly funds capital projects that have relatively efficient corruption technologies. Variation in the form of local government, however, is a more complex issue, although one with a less developed literature base than that of national governments. Much work focuses on the ways in which differences in institutional structures between advanced democracies shape public expenditures (e.g., Persson & Tabellini 2000). The theoretical discussion of how political structure shapes our predictions of the dynamics of policymaking merits contextual specificity, which is provided in the section on machine politics below.

The preceding dimensions of policymaking vary significantly between countries and types of investments, but they can reasonably be expected to remain constant within Chicago for the type of investment program under consideration. As a result, one might expect to see approximately uniform implementation (or lack thereof) of investment over time and across the

city, or at least between wards that share similar characteristics. Yet this is empirically not the case. As summarized above, each of the political economy dimensions bears on the means by which politics determines the outcome of public expenditure decisions, but they cannot explain the empirical discrepancy. I consider differences in political circumstances to be the most likely explanation for this result given the roughly fixed attributes of the investments, wards, and governance structures in the city. Specifically, I investigate the role of variation in the level of competition in aldermanic elections, as this factor has the favorable traits of being readily observable, continually changing at different times and places in the city, and a composite or filter through which many aspects of the political environment manifest themselves. The likely effects of competition on the program of interest, however, are not obvious. In the sections that follow, I analyze two theoretical approaches to this question before turning to the data.

Competition and Policy

I center my analysis on the role of election competitiveness in determining the course of public spending. In part, this is because most of the other relevant factors—including politicians' incentives, interest groups' incentives, and the effect of expenditures' characteristics on political actors' behavior—can only cause a change in policy outcomes under conditions of electoral competition, or the threat of it. Competition is fundamental because, under the assumption of reelection-seeking politicians, the incentive structure lacks a sufficient force to induce substantial shifts in policy if elections are uncompetitive for exogenous reasons. The enumerated political economy factors explain how public spending decisions might be expected to change under competitive conditions.

One prediction of the effect of competitiveness is a straightforward application of the median voter theorem. This classical model holds that, if voters vote based one issue dimension

for which their preferences are single-peaked, the winning candidate will be the one whose position is closest to that of the median voter (Black 1958; Downs 1957). For low levels of competition, this does not mean that elected officials will hold positions that are particularly close to the median of their constituents. For example, if there is only one candidate (or, to add a level of complexity to the model, if only one of the candidates is viable because voters have incomplete information about candidates or their positions), that candidate will win regardless of how distant their position is from the median. Alternatively, because elections for many offices involve a variety of issues, a candidate may win with near-median positions on most issues, but an unpopular opinion on any particular issue. If competition is introduced, then the probability increases that a candidate will offer a position nearer to the median on this issue along with an equally satisfactory vector of proposals on the other issues.

An important consideration for the study of competition and policy outcomes is the possibility of representing each variable with more than one type of measurement, each of which may yield somewhat different results. This limitation will be discussed further in the methods, but I note here that it is helpful to test more than one definition of competition and successful policymaking to check the validity of results in different settings.

Retrospective Voting and Electoral Competition

To return to the assumption of reelection-seeking politicians mentioned above, implicit in the idea that officials are incentivized to act on a particular policy dimension by their motivation to be reelected is some concept of retrospective voting, or at least some concept of officials' behavior as assuming the occurrence of retrospective voting. This concept refers to the idea that voters analyze some visible aspect of incumbents' past performance in office in determining whether to vote for their reelection. Very few studies have examined this theory in the context of

local government, but one of the first studies to do so found empirical evidence of retrospective voting under some circumstances in South Carolina school board elections (Berry & Howell 2007).

Viewing successive elections as an iterated game, I consider what predictions can be made about the behavior of legislators who win competitive elections given some implications of the well-developed theory of retrospective voting. Effectively, my model reverses the relationship between the variables in this theory, viewing attributes of elections as a cause and policymakers' decisions as an effect. This move relies on two plausible assumptions introduced above and prevalent in the political science literature: (1) that voters reward elected officials who deliver satisfactory public services and investments to their constituents and punish those who do not (Healy & Malhotra 2013; Woon 12), and (2) that one of the primary determinants of officials' behavior in office is the desire for reelection (Johnson 1990; Mayhew 1974; Downs 1957), an assumption supported in the present context by the high rates of reelection I demonstrate below. If both are true, then elected officials who face electoral competition will also be under pressure to deliver these goods to their constituents to a greater degree than those who face little electoral opposition.

If retrospective voting applies to Chicago city council elections (or if candidates think it does) it is an open question what aspect of performance voters primarily reward: quality of city service delivery, expansion of economic opportunities and market-based growth, citywide policy, or some other aspect. One of the most compelling reasons for aldermen to pursue development investment is that they seek reelection and believe voters engage in some version of retrospective voting. Berry and Howell show this is the case under the set of circumstances in South Carolina school board elections in 2000. However, because of contextual differences, we

do not know to what extent this applies to the Chicago city council. For example, aldermen face more uncertainty than do school board members as to which performance outcomes are most important to voters due to the fact that aldermen have a more varied set of responsibilities over a wider range of policy areas. Therefore, this study cannot determine whether aldermen act as though reelection truly depends on their performance in office in general, but rather if their performance in specific areas is responsive to competition. The program I have selected aligns most closely with the policy goal of promoting economic development. Therefore, if my results do show an effect of competition, it would indicate that aldermen consider pursuing this goal to be good politics or policy, that they are sufficiently incentivized to do so, and that they are capable of doing so. The presence or absence of such an effect will imply whether or not local institutions are effectively configured to induce aldermen to act on their wards' behalf in an important area of policymaking in 21st century Chicago.

Dynamics of Machine Politics

Unlike the other political economy concepts informing my approach, models of machine politics tend to emphasize the benefits obtained by officials who exhibit loyalty to the machine coalition and its leadership. This creates a bi-layered theoretical background. On one level, I apply knowledge of electoral competition based on extensive work at higher levels of government, and some at the local level. But superimposed on this is another level, that of the existence of a political machine (or at least the remnants of machine politics) in Chicago that does not exist or carry the same amount of influence in Congress or state legislatures. Much has been made of machine politics in the discourse on modern Chicago, but few works have conducted analyses of its effects on broad, citywide programs, a gap to which this study

contributes. In order to clarify my results, I briefly discuss this level of theoretical context before moving to my methods and findings.

An extensive literature details the structure of Chicago's political machine, its most significant figures, and the way it operated during different phases of the city's development. This literature dates back to at least the 1930s, when Gosnell (1937) published his seminal description of the functioning of the newly dominant Chicago Democratic machine in theoretical terms accompanied by historical and quantitative analysis. It laid the foundation for a sociological and political scientific understanding of the basic components of this regime that expanded with, for example, works by journalists Mike Royko (1971) and Len O'Connor (1975) on the personal qualities of Richard J. Daley and his style of administering the machine apparatus. Over time, academic research and journalism alike have documented the evolution of the machine, and a small body of quantitative research has addressed empirical questions about Chicago elections, campaign finance, and city council voting patterns (e.g. Koehler & Wrightson 1987; Miranda & Tunyavong 1994; Krebs 1998; Krebs 1999; Hogan & Simpson 2001). This research outlines patterns in the sources of campaign contributions to machine and independent candidates over time. In doing so, it traces the political alignment of different interest groups and constituencies to discover who participates in machine politics and who benefits most from inclusion in the machine coalition, a question closely related to the present work.

Krebs (2005) provides a succinct summary of two competing theories of machine politics that address this question and are tested in this literature. The "rainbow theory" of machine politics, which emphasizes the multiethnic coalitions underpinning the machine, contrasts with the more recent view that political machines tend to distribute most of their resources to their cores of support to the exclusion of relatively peripheral supporters (Dahl 1961, Merton 1968;

Erie 1988; Grimshaw 1992, Inglot & Pelissero 1993, Joyce 1997). Krebs concludes with the suggestion of Keiser (1993) that reconciles the two positions by arguing that the breadth of this resource distribution depends on political conditions. Keiser predicts that when the machine is relatively unchallenged, resources will be consolidated and tightly controlled by the core of the machine, but when there is a greater degree of electoral competition, resources will be disbursed more widely to appeal to voters.

The Chicago political machine of the 20th century is thus a fairly well-understood subject. However, models of the machine have not been used to develop specific predictions of policymaking behavior and rigorously test them for their applicability to machine politics in the landscape of the post-machine dominance era. Wolfinger (1972) usefully differentiates political machines, which function as strong, well-organized entities, from machine politics, which consists of a more diffuse political system that nonetheless exhibits similar patterns of practice within a less-centralized structure. The current state of Chicago politics resembles the latter model of machine politics more closely than the former, since the centralized political machine no longer exists as it did in the powerful form of the 1930s-1970s. This shift has required a reconceptualization of the functioning of the city's politics to determine what of the old model still holds and what is no longer relevant (Simpson & Kelly 2008; Diamond 2017). For example, studies conducted during the second Daley administration found that Democratic ward organizations remained as gatekeepers in aldermanic elections, with the strength and support of the local machine exerting a significant effect on the entry of candidates and their ultimate vote shares (Krebs 1998; Krebs 1999). Thus, while the machine politics paradigm remains relevant to a thorough understanding of politics in the city, recent developments call for empirical re-examination of the predictions made by models of machine politics. This paper does so by

testing Keiser's prediction about the effects of competition on the distribution of resources in the context of a public expenditure program that has taken on a more visible role in recent years.

Past research related to this point supports the conclusion that public resources were directed to areas of machine strength, both during the administration of the first Mayor Daley and in subsequent years. This finding comports with the traditional idea that an effective citywide political leader required a strong neighborhood- or ward-based dominion and that spoils must be concentrated in this base and among friends, such as the "automatic eleven" machine wards (O'Connor 1975). One early finding was that greater shares of park resources flowed to machine constituencies (Koehler & Wrightson 1987). Additionally, wards with aldermen of greater influence in the machine and with higher support for the mayor received greater allotments of community development block grant and capital spending (Miranda & Tunyavong 1994).

In an extension of this work, I study competition, machine influence, and public spending in the most recent period, one in which the city has experienced the continued decline of machine dominance relative to the periods of study of most existing empirical work. In the span of these years, relative to the late-machine and transitional years covered by past research, campaign finance has become an ever-more important facet of machine politics in Chicago (Hogan & Simpson 2001; Krebs 1998; Diamond 2017). This transition to campaign money as the main currency of machine politics, supplanting the direct provision of jobs and other city resources to political supporters, has become known as "pinstripe patronage" because it entails appealing to elite moneyed interests for support. The result of this trend toward pinstripe patronage, coupled with the declining role of traditional patronage, is a reorientation from what Gosnell (1937) refers to as "primary relationships" to "secondary contacts" with voters, a process

that weakens machine influence in communities (191). These changes have, to a limited extent, enabled a greater intensity of competition (on occasions when opponents of machine politics are able to amass sufficient resources) relative to the machine-dominant era that essentially precluded competition in large sections of the city. At the same time, the ability of machine politics to adapt itself to changing circumstances has allowed it to retain much power in a time when its traditional strategies are no longer feasible. Still, the greater variation in competition enabled by the evolution of machine politics makes the period of study suitable for a more precise evaluation of its effects than in the past.

Data and Methods

The data for this study fall into three sets. The first is election data, which constitutes the explanatory variables in this study. The second is administrative data regarding the provision of public resources—in this case, spending through the city's tax increment financing (TIF) program—which represents the dependent variable. The last is demographic data from the US Census Bureau included as control variables in the regression models.

Election Data

There are two categories of data representing the explanatory variable of electoral competition, which are each derived mainly from one source. The first category is election results. Most of the data in this category are from the Chicago Board of Election Commissioners, which reports and maintains information about all elections it administers at all levels of government. This study uses these results from all fifty wards of the city across the four most recent sets of regular general and runoff aldermanic elections, held in 2003, 2007, 2011, and 2015. The full elections dataset includes 248 total elections, 200 of which were general elections,

and 48 of which were runoff elections, which are held between the top two candidates after general elections in which no candidate receives an outright majority. I use these data to evaluate the competitiveness of elections in terms of the number of candidates running, the dispersion of the vote, and the characteristics of winning and losing candidates. To simplify the analysis, I concentrate on the more numerous general elections, but include basic information on the occurrence of runoffs in the table of summary statistics.

Obtaining these election results is relatively straightforward, as the Chicago Board of Election Commissioners makes publicly available the names of candidates and number of votes they receive by ward and precinct for all municipal elections held during the period of study.

The second category of data describing electoral competition is campaign finance. Most of this category is drawn from the Illinois State Board of Elections, which governs campaign finance in all state and municipal elections in Illinois. This study uses campaign contribution and expenditure disclosures filed through the board by each candidate in each race as an alternative metric of the competitiveness of aldermanic elections to check the robustness of findings made on the basis of vote shares and numbers of candidates. For simplicity and clarity, I limit the data to funds received or spent directly by a candidate's committee. Although other associated committees spend money on campaigns, it is difficult to determine exactly how much is spent and which funds are used for what purposes. Generally, spending by a candidates' own committee is a sufficient benchmark for the financial capability of campaigns, so excluding outside committees represents a reasonable solution.

Administrative Data

For the second set of data, which pertains to the dependent variable, I use reports on the expenditure of TIF funds published online by the City of Chicago. There are several compelling

reasons to consider the delivery of this program as a proxy for the success of an alderman in the realm of economic development and provision of public goods in the Chicago context. The first is theoretical: in order for any measure of my dependent variable to be useful, it must be a measure over which aldermen have a meaningful amount of influence. It is important to note that in Chicago, many policies with distributive consequences are administered in a way that has been politicized to a significant degree. Depending on the circumstances, through some combination of official authority, lobbying clout, and personal connections, aldermen can exercise substantial (but not exclusive) power over decisions made with regard to these programs (Roth 2017). The existence of these political mechanisms makes the models less susceptible to random confounding effects on economic and social outcomes than they would be if they were estimated using more general measures of neighborhood health. This, of course, comes with a corresponding limitation in terms of loss of generality. This study does not attempt to speak to the relationship between elections and aldermen's power over local economic conditions beyond the specific case of this policy. At most, it addresses their role in delivering a representative example of public resources to their wards.

The second consideration is a pragmatic one. TIF is measurable in a concrete, objective, reasonably precise way, and complete information exists as to its disbursement in the city. This makes any conclusions drawn from the analysis more complete than if there were a large amount of unknown information that might be systematically biased with respect to the outcomes in question.

Finally, another useful quality of this measure for comparing the effectiveness of aldermen in different cases is that it is zero-sum in some sense. The revenues channeled into a TIF account must be diverted from other taxing bodies, so the city administration must be

convinced that the local potential projects that could be financed through this mechanism would be more worthwhile than alternative, typically citywide, uses of the revenue. Moreover, the fixed amount of TIF funds can be ported between districts in different wards; "effective" aldermen may be able to persuade key decision-makers to move finances into their ward for certain projects.

Demographic Data

The third set of variables I use are derived from demographic data from the Census and American Community Survey (ACS). These data are used in in the regression models to control for socioeconomic and racial differences between the wards. Because these characteristics have major implications for the politics and economic policy needs of different areas of the city, the analysis would be incomplete without them. Since competition is likely correlated with these characteristics that separately affect policy, causal inferences would be unwarranted due to omitted variable bias in the absence of adequate controls. Without these controls, the model might overestimate the effect of the variables of interest, attributing to them some of the effects of separate, structural factors. To create the controls I aggregate data available at the block group level by taking a weighted average of population estimates for different racial groups in each of the block groups that make up each ward. In the case of income, which is available in the form of median household income in each block group, it is not possible to determine the median by ward without individual-level data. I instead take an average of the median in each block group within a ward weighted by the total population in the block group. These data are all drawn from the ACS 5-year estimates, except in the case of the 2003 election cycle, because the ACS estimates began in 2005. For this cycle, I average data from the 2000 census and the 2005-2009

ACS estimates to derive values closer to the true 2003 cycle values than would be obtained by using only one source or the other.

Methods

I use ordinary least squares (OLS) linear regression to test the relationship between the variables of interest, controlling for critical confounding factors. I estimate fixed effects models to mitigate bias resulting from repeated observations of the same candidates and wards in successive election cycles. I specify several different models to evaluate separately the effect of competition as measured by different indicators, specifically campaign expenditures and vote shares, on TIF spending during the duration of aldermanic terms. I use multiple measures of competition as a robustness check; the measures are related but incorporate slightly different information. Campaign expenditure-based variables capture the perception of candidates' political strength, which might inform incumbents' behavior, while vote shares might reveal under- and over-estimates of candidates' viability based on fundraising alone.

I construct variables from campaign finance data and election results that combine multiple pieces of information into a single measure for each election. I refer to the key campaign finance variable as the "winner's share of expenditures," which refers to the portion of overall campaign spending in a race that was spent by the candidate who eventually placed first in the general election. This measure has the advantage of measuring competition by incorporating spending both by the winning candidate as well as by all opposing candidates. Moreover, by taking a proportion it eliminates bias that might be introduced by heterogeneity in the absolute levels of campaign spending in different parts of the city and in different years. I label the key variable constructed from election results the "effective number of candidates," which is an adaptation of the popular "effective number of parties" metric for the distribution of

power in parliamentary systems. The construction of this variable entails taking the inverse of the sum of the squares of all candidates' shares of the total vote. This formula both captures the intuition that a greater number of candidates suggests greater competition and weights the index more heavily for candidates receiving larger shares of the vote, reducing the susceptibility of the measure to peripheral candidates who expand the size of the field but do not make an election meaningfully more competitive.

Findings and Analysis

In this section I present summary statistics for many relevant variables as well as results of the regression models using the main specifications. The models offer mixed evidence on key predictions of the post-machine theory. Most significantly, intense electoral competition is not associated with a greater share of public expenditures in the form of TIF spending. I also discuss demographic controls and cycle-by-cycle subsets of the data to illustrate how estimated effects vary between sections of the city and over time as the political culture of Chicago has evolved.

Key Findings: Electoral Competition

Table 1 provides summary statistics for the variables describing competition in elections, both voting results and campaign expenditures. The table confirms that Chicago city council elections exhibit a clear pattern of low levels of competition. From 2003 to 2015, more than nine in ten incumbents ran for reelection, and seven of every eight who ran won reelection. Moreover, few challengers ran for office and most did not pose a serious electoral threat to the incumbents. The typical margin by which an alderman won election was roughly forty points, although with very high standard deviation due to the presence of uncontested races. Despite the non-partisan election system with runoffs between the top two candidates—procedures structurally conducive

	2003	2007	Daley Era Total	2011	2015	Emanuel Era Total	Total
Election Results							
Effective number of candidates							
Mean	1.81	2.16	1.98	2.64	2.44	2.54	2.26
Median	1.78	2.03	1.86	2.27	2.40	2.38	2.08
Standard deviation	0.65	0.97	0.84	1.68	1.18	1.45	1.21
Margin of victory							
Mean	52.95	46.04	49.50	42.68	36.79	39.74	44.62
Median	53.16	42.63	51.24	35.13	30.24	33.65	37.06
Standard deviation	31.18	31.55	31.40	28.94	30.18	29.57	30.81
Runoff elections							
Number of runoffs	5	12	17	14	18	32	49
Mean runoff winning vote share	54.79	57.32	56.68	55.89	55.13	55.46	55.87
Incumbency							
Number who ran for reelection	49	49	98	41	44	85	183
Number who ran unopposed	10	9	19	6	7	13	32
Number who won reelection	45	41	86	37	37	74	160
Percentage who won reelection	91.84	83.67	87.76	90.24	84.09	87.06	87.43
Campaign Finance							
Total campaign spending							
Mean	281,398	455,802	368,600	328,347	443,533	385,940	377,270
Median	242,894	274,667	251,580	232,753	351,673	309,396	273,616
Standard deviation	214,318	558,535	429,907	300,074	325,162	316,621	376,688
Winning candidate's share of total spending							
Mean	0.82	0.73	0.77	0.67	0.68	0.67	0.72
Median	0.91	0.79	0.84	0.78	0.71	0.72	0.80
Standard deviation	0.24	0.26	0.25	0.31	0.27	0.29	0.27
Reporting threshold							
Number of candidates surpassing $5,000	94	130	224	159	144	303	527
Number of candidates on the ballot	146	174	320	239	183	422	742
Percentage of candidates surpassing $5,000	64.38	74.71	70.00	66.53	78.69	71.80	71.02

Table 1: Summary statistics for electoral competition. Campaign spending figures are inflation-adjusted to 2019 dollars.

to greater numbers of candidates running and winning more than marginal shares of the vote—only one in four races went to a runoff election. The effective number of candidates measure similarly indicates the imbalance in distribution of the vote; this value is consistently much lower than the average number of candidates per race, suggesting that many candidates win only insignificant vote shares. One in six aldermen in these four terms ran unopposed.

The figures also show, as expected from the discussion of machine politics, amounts of campaign spending that are strikingly large for elections that are largely not very competitive. Throughout the period of study, candidates' committees combined to spend an average of $377,000 in wards with a population of roughly 55,000. While the spending figures are highly right-skewed with very large standard deviations, the median value was also more than a quarter million dollars. One might suppose that high total levels of campaign spending would suggest closely contested races, but, again as anticipated by the machine model, this is not the case. Winning candidates spent the vast majority of the total amount, typically between 70 and 80 percent. This is especially remarkable considering that individual candidates often spent such an overwhelming proportion in a field of several candidates, rather than against a single opponent as is common in elections at higher levels of government. It may seem puzzling that candidates would spend so much in such uncompetitive elections, but some of this paradox can be attributed to endogeneity, as this proliferation of campaign spending undoubtedly contributes to the uncompetitive appearance of the election returns.

The evidence does suggest that these dynamics are changing, and relatively greater competition has become the norm, although the absolute level is still low. While total campaign spending has continued to grow in the Emanuel era, the typical proportion spent by the winning candidate has fallen by roughly ten percentage points. Likewise, most of the other variables have

trended toward more competition in the latter election cycles. Significantly more candidates ran in the last two cycles than in the first two. The proportion of candidates who reached the $5,000 minimum threshold for campaign finance disclosure requirements remained approximately the same, suggesting that the increase was not driven by an influx of peripheral candidates. The average effective number of candidates was modestly higher under Emanuel, while margins of victory fell, although the variance is too great for the magnitude of this reduction to be useful. The rate of runoff elections nearly doubled during the cycles under Emanuel compared to the last two under Daley, likely due to a greater number of open seats as well as challengers' greater ability to siphon enough votes to keep incumbents below the 50% threshold. The sum total of these effects has not translated into definitive changes in patterns of election outcomes, but it does constitute a marked rise in competition.

Key Findings: TIF

Table 2 displays the proportion of wards receiving TIF funds; the total amount spent in the city; and the mean, median, and standard deviation of the amount spent per ward among the wards with non-zero values. As in Table 1, I present these quantities for each cycle individually, as well as for each of the mayoral administrations and for the study period as a whole.

As the table values show, the allocation of TIF varies substantially across the four terms covered in this study. Citywide, the total amount spent through the program was nearly identical in 2003 and 2007 before rising sharply in each of the Emanuel terms. The proportion of wards receiving funding, however, rose dramatically in 2007 before returning to its original level over the next two terms. As the average amount of expenditures within a ward rose, the number of wards receiving funding fell, even as the overall budget grew in the latter terms. The mark of the Emanuel years was a greater concentration of larger amounts of spending in fewer areas,

	2003	2007	Daley Era Total	2011	2015	Emanuel Era Total	Total
Probability of TIF expenditure							
Proportion of wards							
receiving expenditures	0.54	0.74	0.64	0.66	0.54	0.6	0.62
(Downtown wards)			0.875			0.67	0.76
(Non-downtown wards)			0.62			0.59	0.61
Citywide TIF expenditures							
(millions)	660	660	1,320	847	1,007	1,853	3,173
Amount of TIF expenditures							
(millions)							
Mean	24.44	17.83	20.62	25.66	37.28	30.89	25.59
Median	14.60	5.96	6.34	8.82	7.91	8.35	7.40
Standard deviation	32.89	30.40	31.39	62.68	132.73	99.64	72.76
Log of TIF Expenditures							
Mean	16.21	15.73	15.93	15.83	15.49	15.68	15.81
Median	16.50	15.60	15.66	15.99	15.88	15.94	15.81
Standard deviation	1.43	1.43	1.43	1.66	1.84	1.74	1.59

Table 2: Summary statistics for tax increment financing. TIF expenditure figures are inflation-adjusted to 2019 dollars.

although the gap in probability of receiving funding between downtown and the rest of the city shrank. This combination suggests that the Emanuel administration was biased toward larger development projects covering a narrower range of areas, but was less biased toward spending downtown, although the 2015 redistricting might explain part of the latter finding.

Because of the extreme right skew of the TIF expenditure data, with large sums invested in wards with exceptionally many or exceptionally large projects, the mean spending per ward is far greater than the median across time periods. The standard deviation is also consistently very large relative to the mean. To make the data more manageable, I perform a log transformation and present the results immediately below the raw figures.

Regression Analysis

During the period of study, TIF expenditures were made in 124 of 200 cases (62%). Because most, but not all, wards received funding for at least one project in a given electoral term, I estimate the regression models in two stages. The first stage is a linear probability model that evaluates the effect of competition on the probability of a ward receiving funding in a given term, while the second evaluates the effect of competition on the total amount of TIF spending in a ward conditional on the ward having received a positive amount of spending within a given term. Most specifications in both stages also include a set of control variables, which are median household income, a dummy for wards located in or adjacent to the downtown central business district, and a set of dummies for wards that have a majority black, Latino, or white population. Additionally, I estimate several specifications of the regression models both aggregated over the entire period of study and divided into specific periods covering the Daley and Emanuel mayoral administrations. Generally, the models show consistent results between the two stages and across time periods that indicate no statistically significant relationship between the electoral

competition variables and TIF spending. However, the two stages address slightly different questions, necessitating differences in model specification and interpretation of the coefficients. In the following sections, I describe these details before proceeding to the summary statistics and regression results by stage and time period.

Model Specification

The set of models in the first stage each involve an indicator variable, set equal to 1 if a ward received TIF expenditures during a particular term or 0 if it did not, regressed on one of the measures of competition as well as a set of control variables. Because this stage consists of linear probability modeling, it introduces heteroskedasticity by construction. Although this requires using heteroskedasticity-robust standard errors, which results in a slight loss of precision, it offers the advantage of straightforwardness of interpretation relative to a probit model without a sizable substantive difference. Throughout the models I use clustered robust standard errors, clustered by ward to account for possible correlation between errors for observations of the same ward. The coefficients in Table 3 represent the change in probability (in decimal form) of a ward receiving any TIF spending for a one-unit increase in the relevant explanatory variable, with standard errors for these estimates provided in parenthesis. I indicate statistical significance with * (10% level), ** (5% level), and *** (1% level).

The models in the second stage regress the amount of TIF spending (in wards that received a positive amount) on the competition variables and controls. I use a log transformation of spending to achieve normality, which changes the interpretation of the coefficients in Table 4 to the predicted percent change (in decimal form) in the amount of TIF spending for a one-unit increase in the regressor. Otherwise, this stage follows a structure similar to the first for ease of comparison.

In both stages, I test both the effective number of parties and campaign expenditures as explanatory variables for variation in TIF spending over the entire dataset as well as separately for the first two city council terms, those under Mayor Daley, and the latter two terms, under Mayor Emanuel. I include ward and term fixed effects in some specifications, importantly models (3) and (7), which cover all four terms and also include all control variables. Ward fixed effects remove systematic differences in attributes of the ward not accounted for by race, median household income, or the downtown dummy. The time fixed effects control for the general expansion of TIF use during the period of interest as well as the idiosyncrasies of the different administrations' implementation of the program. I estimate the model specifications for each administration without the fixed effects because these models cover only two periods, each without variation in administration. In the case of the Emanuel era, redistricting between the two terms substantially changed some wards' territory, making them less comparable between those terms.

First Stage: Probability of Spending

The first stage models presented in Table 3 do not reveal a consistent, significant effect of competition on spending. Although a version of model (4) including fixed effects (not shown in the table) finds a positive effect significant at the 10% level, this is likely spurious, as the other models consistently show no significant relationship. Because competition is greater when the effective number of candidates is higher and the winning candidate's share of campaign spending is lower, the coefficients on these variables should have opposite signs. This is the case for the probability model, in which the coefficient on effective number of candidates is usually negative, while that on winner's share of expenditures is usually positive, suggesting a weak association between competition and spending in the opposite of the expected direction.

Regressor	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Effective number of candidates	-0.006 (0.032)	-0.041 (0.032)	-0.007 (0.024)	0.012 (0.053)	-0.051 (0.045)				
Winner's share of expenditures						0.145 (0.136)	0.020 (0.139)	-0.221 (0.215)	0.359* (0.188)
Downtown ward		0.311*** (0.134)	0.294*** (0.074)	0.30** (0.14)	0.353* (0.208)	0.289** (0.134)	0.32*** (0.091)	0.33** (0.128)	0.289 (0.209)
Household income (thousands)		-0.024*** (0.008)	-0.02* (0.011)	-0.022** (0.009)	-0.027** (0.011)	-0.022** (0.009)	-0.018* (0.011)	-0.024*** (0.009)	-0.022** (0.011)
Majority black		-0.247** (0.121)	0.176 (0.281)	-0.324** (0.117)	0.173 (0.199)	-0.228* (0.127)	0.198 (0.283)	-0.343** (0.13)	-0.129 (0.212)
Majority latino		-0.403*** (0.114)	-0.253 (0.189)	-0.634*** (0.137)	-0.169 (0.184)	-0.393*** (0.124)	-0.188 (0.192)	-0.678*** (0.139)	-0.12 (0.21)
Majority white		0.142 (0.13)	-0.23 (0.176)	-0.018 (0.138)	0.36* (0.183)	0.139 (0.135)	-0.29* (0.172)	-0.007 (0.148)	-0.358* (0.191)
Mayor	Both	Both	Both	Daley	Emanuel	Both	Both	Daley	Emanuel
Ward effects?	No	No	Yes	No	No	No	Yes	No	No
Time effects?	No	No	Yes	No	No	No	Yes	No	No
R-squared	0.0002	0.114	0.068	0.21	0.088	0.11	0.072	0.235	0.104
Adjusted R-squared	-0.005	0.086	0.039	0.159	0.029	0.081	0.042	0.183	0.044

Table 3: First-stage regression results. Dependent variable: probability of TIF spending

Models (2) and (3) illustrate the effects of the control variables on spending with and without fixed effects. The coefficients on the downtown dummy, median household income, and dummies indicating a majority black or Latino population are all significant, and of relatively large magnitude. The probability that a ward located in the downtown area received TIF money is 30 percentage points greater than a ward located elsewhere, controlling for demographic differences. Meanwhile, the other three significant controls are all negatively associated with the outcome. For every thousand-dollar increase in median income, a ward is about 1.2 percentage points less likely to receive funding. It may seem contradictory that there is simultaneously a positive relationship between downtown location and probability of spending, and a negative relationship between affluence and probability of spending, given the correlation between downtown location and affluence. However, this result comports with the basic tension between the purpose and implementation of the city's TIF program (Roth 2017; Weber 2010; Smith 2009). The latter finding reflects some degree of fidelity to the statutory aim of TIF, promoting economic development in blighted areas, which is less likely to be of use in communities with higher incomes. At the same time, in practice, mayors have often steered TIF and other incentives toward favored development projects in and around the central business district.

Another important result is that, controlling for differences in income and downtown location, wards with black majorities are almost 25 percentage points less likely to receive TIF than the comparison group, which is mixed-race wards (the effect might be even greater when compared to majority-white wards, which have a positive but insignificant coefficient). The effect is even larger for Latino-majority wards, which are at a 40 percentage point disadvantage relative to the mixed-race comparison group. The sizes of these racial effects are not estimated very precisely, but they are highly significant. This could suggest that constituencies' importance

to the machine coalition influences the distribution of TIF spending. Alternatively, this effect could be a consequence of discrimination by developers who are less willing to invest in projects in areas with large minority populations, leaving fewer opportunities for public incentives to be used in these areas. Discrimination in turn may be a consequence of unobserved economic characteristics and not solely of racial bias, but these characteristics would have to be somewhat independent of income. The introduction of fixed effects for ward and term in model (3) eliminates a substantial amount of variation in most of the control variables, making estimates too imprecise to be statistically significant. Despite the greater standard errors, however, the coefficient estimates on downtown location and median income remain roughly the same in magnitude, while income remains significant at the 10% level. The effect of majority-minority ethnic makeup loses roughly a third of its magnitude and becomes insignificant. These results are almost identical to those in specifications (6) and (7), which estimate the same models using winner's expenditures as the explanatory variable instead of effective number of candidates. The uniformity of results for these specifications affirms the hypothesis of robustness across measures of electoral competition.

In general, the adjusted-R^2 values are low, suggesting that most of the model specifications explain only a relatively small portion of the overall variation between wards in the probability of TIF spending. This goodness of fit result suggests that such spending is distributed relatively evenly throughout the city (setting aside the extreme cases, particularly downtown), independent of local political factors. This finding implies that most allocation decisions are made on technocratic grounds by the mayor's administration, demonstrating the profound change in Chicago in the last several decades from a blatantly patronage-based system

to a professionalized bureaucracy that has reduced the role of politics in program implementation and resource distribution.

Second Stage: Amount of Spending

The second stage regressions exhibit the same pattern as the first with regard to the electoral competition variables. In this case, none of the specifications indicate a statistically significant effect, while the sign of the coefficients is the opposite of that predicted by my hypothesis in all but one case. This agreement with the first stage reinforces the conclusion that competition does not affect public spending allocation; not only does competition not determine *where* money is spent, but it also does not significantly influence the *amount* of TIF investment in wards determined to be suitable targets for the program. This confirmation makes the simpler finding from the binary first stage models more robust to lurking variables such as eligibility of an area for the program and land use patterns, because it is conditional on some amount of TIF having been allocated to the ward.

The situation of the control variables is more mixed. Median household income, by contrast to the first stage, is not significant in any of the specifications. This implies that economic status influences whether TIF resources are allocated to a ward, but it does not determine the size of outlays through the program. For the dummy variables, the table displays statistical significance levels but the meaning of the coefficient values cannot be easily inferred because the partial derivative interpretation does not hold for dummy variables in this logistic model. Instead I use a procedure described by Kennedy (1981) to estimate their effect, and find that downtown location leads to a roughly six-fold increase in the amount of TIF spending in models (2) and (6), which have identical specifications except for the competition variable. This effect is somewhat larger during the Daley era than it is for the full dataset (on the order of

Regressor	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Effective number of candidates	-0.067 (0.087)	-0.086 (0.075)	-0.143 (0.147)	-0.083 (0.203)	-0.082 (0.11)				
Winner's share of expenditures						0.262 (0.437)	0.144 (0.572)	-0.153 (0.736)	0.507 (0.766)
Downtown ward		2.097*** (0.47)	-0.981** (0.555)	2.377*** (0.547)	1.757** (0.725)	2.016*** (0.469)	-1.169** (0.559)	2.327*** (0.505)	1.715** (0.781)
Household income (thousands)		-0.011 (0.028)	0.064 (0.046)	-0.025 (0.035)	-0.002 (0.039)	0.002 (0.029)	0.074 (0.048)	-0.023 (0.038)	0.016 (0.039)
Majority black		-0.418 (0.361)	-1.475 (0.996)	-0.385 (0.386)	-0.585 (0.688)	-0.303 (0.378)	-1.228 (0.998)	-0.447 (0.442)	-0.265 (0.764)
Majority latino		-0.884** (0.379)	0.184 (0.799)	-0.415 (0.389)	-1.167* (0.642)	-0.604 (0.38)	0.588 (0.839)	-0.292 (0.449)	-0.64 (0.71)
Majority white		-0.27 (0.495)	0.567 (0.444)	-0.127 (0.572)	-0.472 (0.803)	-0.333 (0.471)	0.245 (0.386)	-0.211 (0.605)	-0.377 (0.799)
Mayor	Both	Both	Both	Daley	Emanuel	Both	Both	Daley	Emanuel
Ward effects?	No	No	Yes	No	No	No	Yes	No	No
Time effects?	No	No	Yes	No	No	No	Yes	No	No
R-squared	0.003	0.211	0.091	0.248	0.188	0.203	0.07	0.249	0.178
Adjusted R-squared	-0.005	0.17	0.045	0.169	0.097	0.16	0.019	0.164	0.08

Table 4: Second-stage regression results. Dependent variable: log of amount of TIF spending

seven- or eight-fold), and, notably, much smaller during the Emanuel era (between two- and three-fold). Despite facing frequent criticism for its perceived focus on downtown at the expense of outlying neighborhoods, the Emanuel administration allocated resources to downtown at a much less inflated rate than its predecessor did in the case of TIF. For the racial majority indicators, the significant effects found in the first stage mostly do not persist. The only significant result at the 10% level is the negative coefficient on majority-Latino wards in model (2). However, the insignificant coefficients on the majority-Latino and majority-black indicators in most of the other specifications are of the same sign and comparable magnitude, all with large standard errors. The imprecision of these estimates suggests that the sole significant result is a statistical artifact, and I cannot conclude that there is any difference in the amount of TIF spending caused by racial majority.

TIF and Machine Politics

The results of the regression models depict a TIF program that is distributed in a relatively even manner with respect to political and economic conditions. The electoral risk facing incumbents, as measured by the strength of opposition they encountered in their most recent election, does not seem to drive decisions about the allocation of TIF resources. Neither does the economic status of a ward's residents, at least among the set of wards that receive funding.

This may be considered a positive sign: in a city with a legacy of political cronyism and corruption that has engendered widespread suspicion toward its governing processes, discretionary policy decisions have recently been made on the basis of less arbitrary criteria than political expediency. At first glance, this supports the supposition that the policymaking process has become fairer and more sensitive to the interests of the general public relative to small

numbers of key political players. The conclusion that public policy in Chicago reflects a strong trend of reform is certainly true to a degree, especially when compared to the height of its political machine in the last century when nearly the entire municipal apparatus operated by overtly political means. This result may also reflect an omitted attribute of the TIF program, such as a lack of attributability of project investments to individual aldermen. This possibility seems unlikely, as aldermen are the most visible officials for voters to hold accountable for local development, as often-heated local debates over issues such as affordable housing, zoning, and new developments demonstrate.

On the other hand, the findings presented above also speak to three interrelated, residual problems affecting governance in Chicago. The first, most obvious issue is the misalignment between statutory aims of TIF as a policy instrument and its application in practice, a topic that has faced heightened scrutiny in recent years (Roth 2017; Smith 2009). TIF was more likely to be spent, and spent in greater amounts, on downtown projects during the last fifteen years, although it is also more likely to be spent in communities with lower incomes. However, the data presented here are too limited to draw further conclusions on this general point. The extent to which this financing is appropriately targeted toward intended types of otherwise-infeasible projects in areas with a high degree of need depends on factors such as land use and measures of economic impact which I do not address in this paper, but there is an empirical literature on the subject (Lester 2014; Byrne 2010).

Second, the lack of an effect of my explanatory variables does not imply that politics has no effect on critical public expenditure decisions. Although the distribution of financing does not follow the predictions of models focused either on influential aldermen pursuing ward-level electoral incentives or on a political machine dispensing favors to protect vulnerable members,

the data do not rule out political considerations altogether. Mayors may divert resources such as TIF toward favored projects (particularly downtown in the case of the two most recent administrations), rather than those with the greatest need according to legal standards, and may do so with political motivations. While downtown-centered, business-oriented implementation of programs such as TIF may be conducted for legitimate policy reasons, it also may be used to secure the financial and political support of powerful interests. This support provides the mayor with resources to win reelection and protect city council allies, creating a cycle compatible with the newer models of Chicago machine politics developed in Hogan and Simpson (2001) and Simpson et al. (2004). One direction for future research to test this model more directly would be to analyze the relationship of the competition variables and distribution of TIF expenditures with the mayor's subsequent fundraising sources and vote share by ward.

Notably, there is some evidence that these political dynamics are changing, and could continue to change; first in the finding that the downtown advantage shrank in the Emanuel years, and second in the recent election of a relatively independent, reform-minded mayor who has expressed skepticism toward current use of incentive programs and past administrations' approach to deal-making. However, despite some changes in the magnitude of the measured effects, the broad themes did not change between the last two administrations headed by ostensibly very different mayors, casting doubt on the prospects of policy reform absent significant institutional changes. Moreover, a recent episode in which the mayor-elect, Lori Lightfoot, reversed course to support two of Emanuel's favored TIF-funded developments emphasizes the ambiguity as to how drastically the incoming administration will change politics in the city. The next several years will present an opportunity to compare trends in policy

outcomes under varying political conditions and evaluate how machine politics weakens or evolves under new leadership.

Third, and most importantly for the purposes of this study, the results suggest a low level of responsiveness in municipal government. The summary statistics show that, unsurprisingly, competition in Chicago aldermanic elections is often weak. The key additional insight from my model, though, is that when competition does strengthen, it does not improve the selection of aldermen or their performance once in office (at least with respect to TIF as the measure of quality). In fact, during the period of study there was even a slight advantage in favor of lower-competition wards, highlighting the ineffectiveness of competitive conditions in inducing greater public expenditures within a ward. While in theory this pattern could be explained by non-political factors if TIF were distributed strictly on the basis of a set of eligibility criteria insulated from politics, we have already seen that this is not the case. Another reason could be that the characteristics of the TIF program make it less sensitive to electoral pressures, but the earlier theoretical discussion of the political economy factors affecting expenditures shows that this is unlikely. Expenditures made through this program are likely to be fairly visible; they are often used to improve public institutions such as schools, parks, and libraries or to facilitate economic activity. These types of investments also seem likely to generate political support among both smaller, committed constituencies such as developers or parents of school-aged children, and the community at large that benefits from enhancements to public facilities and economic development.

The weight of the evidence suggests, rather, that the inability of Chicago's electoral institutions to select or incentivize aldermen most capable of bringing more resources to their wards is the effect of machine politics. In particular, the low level of responsiveness indicated by

my results comports well with the political weakness of the city council in the model of machine politics in the Daley, and later Emanuel, eras. Under the old "political machine" system, public resources were channeled to buy and maintain support. This usually occurred in the form of patronage jobs and preferential treatment by machine-friendly bureaucrats within the various administrative departments. Many of these resources were controlled by aldermen and ward committeemen, who then were expected to distribute them in response to election results. The new "machine politics" system, however, largely circumvents the local centers of political gravity and centralizes power over the vestigial machine apparatus in the hands of the mayor. The mayor's ability to leverage the distribution of TIF and other city resources to solicit campaign contributions obviates the need for aldermen to perform well in order for machine politics to function. This centralization enables aldermen to win reelection by taking campaign contributions from the mayor and his allies in return for supporting the mayor's policies, rather than by demonstrating their ability to voters by securing investments in their wards. This implicit tradeoff—acquiescence to the mayor in exchange for political support—constitutes the political basis of what many refer to as the "rubber stamp council" (Simpson et al. 2017; Chooljian 2017). However, my analysis goes a step further than common characterizations of this rubber stamp tradeoff. The term usually refers to aldermen's willingness to cede decisions about citywide issues to the mayor's office in return for wide latitude over affairs in their own wards. Yet my results indicate the relinquishment of significant authority over matters of intra-ward concern as well. Given this predominant arrangement, city council elections are not well-suited to selecting the highest quality legislators in most cases, favoring instead docile, controllable candidates, rendering the council largely impotent. While many of these observations are not unique, as a perusal of the literature discussed above shows, I ground them in more specific data pertaining to

policy outcomes and show that their implications are perhaps even broader than some theorists of contemporary machine politics might expect.

In this vein, my analysis also suggests that Keiser's theory overstates the effects of electoral competition on responsiveness under conditions of machine politics. It does provide some support for the theory's predictions for distributional outcomes during periods of low competition, namely that resources will be tightly controlled by the machine coalition, centrally managed, and allocated less to wards with large minority populations. Therefore, resource allotment is not largely shaped by the political circumstances of individual aldermen. However, I show that these trends are more durable to variations in electoral conditions than anticipated by Keiser, who posits that resources will shift toward areas of vulnerability when more competitive conditions obtain. Instead, I have argued that the absence of this expected shift is due to the transformation in the city's system of machine politics that allows it to absorb electoral challenge with less change in distributional policy, as well as a general cultural reduction in the politicization of policy implementation.

In sum, my findings in this paper point toward the importance of centralization and shifts in patterns of influence within the Chicago political ecosystem between the "political machine" days of old and the current context of weaker "machine politics." The best explanation of the politics behind the policy outcome observed in the case of TIF is a system wherein the mayor implements programs in a politically-conscious manner that primarily benefits the machine coalition. This conclusion explains the three strongest features of the data: a lack of distributional policy responsiveness to the outcomes of aldermanic elections, a disproportionate emphasis on investment in the downtown area, and racial disparities in a community's likelihood of receiving funding.

Policy Recommendations

Based on the results of this study, policymakers should consider heightened competition in aldermanic elections to be a necessary but insufficient facet of improving responsiveness, accountability, and representation in governance in Chicago. Inadequate intensity of such competition hampers the ability of the public to select effective public officials and reduces incentives for reelection-seeking aldermen to bring city resources into their wards. Incumbents' behavior might exhibit low responsiveness regardless of competition in any individual election because they expect that they will face little competition in the future due to the overall political climate. If this is the case, a general trend toward greater competition could elicit increased responsiveness by changing this expectation. It is also important to consider the role of information in determining public assessment of aldermen's performance in office. Policies and procedures that introduce transparency in the governing process will make competition more effective at producing better neighborhood-level outcomes because voters will be more capable of evaluating their elected officials' records. This is especially important in the city government landscape due to the ease with which local matters can escape public scrutiny and the absence of political opposition that a lack of transparency can foster.

In order to promote competitiveness in aldermanic elections, political reforms should be implemented that enable more "outsider" candidates to run and, importantly, that make their campaigns credible. The recent uptick in number of candidates and relatively low rate of occurrence of uncontested elections suggest that there are no longer systemic attempts to intimidate or prevent independent candidates from running, as may have been the case at times under the classical machine. The aim of policy, then, should be to ensure that these candidates can compete effectively to mount legitimate challenges against incumbents and to win open

seats. Steps should be taken to level the playing field so that aldermanic races are closer, which requires mitigating fundraising disadvantages in campaigns as well as promoting government transparency and public civic participation to induce competition. One relatively minor adjustment would be to reduce petition signature requirements for candidates to appear on the ballot, which would allow financially constrained aldermanic campaigns to reallocate resources away from the costly, time-consuming task of fighting petition challenges and toward voter persuasion.

More broadly, as discussed above, money has grown in importance in Chicago elections, and as the data reflect, it is the largest determinant of candidate viability in Chicago and the main barrier to many candidates' success. Because of the importance of money, changes to the campaign finance system, some of which would have to be made at the state or federal level, would be an essential component of reforms to Chicago elections. One initiative advocated by various reform-oriented groups proposes a small-donor matching program that would offer public funds to match individuals' donations of up to $175 to eligible candidates at a 6:1 rate. After a 2015 citywide referendum on small donor matching in which 79% of voters voted in favor of the program, it was introduced in the city council as an ordinance, but has languished without garnering majority support (Fair Election Ordinance 2016). This program would likely have a significant role in assisting candidates on the edge of viability, although it would not close the finance gap entirely as federal and Illinois law do not limit campaign spending to a level that would guarantee parity.

Importantly, however, my results indicate that despite the benefits of reforms to increase electoral competition, greater competition alone does not guarantee policy outcomes more beneficial to constituents. In order to make competition more effective in producing better

governance, Chicago must continue to reform its system of machine politics and improve its political culture. Recent political scandals have highlighted the need for stronger ethics rules in city government, which already appears to be a contentious issue between the incoming administration and some members of the city council. Another way to reduce machine strength and mitigate the influence of incumbents' financial and institutional advantages would be to limit the number of incumbent candidates by imposing term limits. While this policy would expand the pool of candidates and guarantee a higher level of competitiveness, it could undermine the goal of responsiveness in some ways by changing political incentive structures. At the same time that term limits eliminate politicians' need to find political cover or avoid making difficult decisions, they eliminate electoral incentives to work as constituents' delegates during lame-duck terms and transfer discretion to bureaucrats who become the more permanent agents in the city administration. This could make aldermen less accountable and reduce the amount of information easily accessible to the public that could inform future votes and create public pressure on the city council to be effective in delivering resources to the wards.

These concerns could be addressed directly by other changes to the functioning of the city council. For example, one alderman has introduced a resolution to record and broadcast all of the council's committee hearings. This would bring many of the political machinations and bargaining behind policy decisions into view, allowing constituents a convenient way to assess their aldermen's role in driving favorable or unfavorable outcomes in their neighborhoods with respect to the investment of public resources. This would likely be most effective in conjunction with a more public and participatory process for making decisions about the allocation of resources such as TIF spending, as hearings alone do not cover the range of private settings in which decisions are made by aldermen, members of the mayoral administration, and private

organizations. However, it is also possible that this policy would incentivize further relegation of political decision-making to private settings where they are shielded from public scrutiny. On balance, broadcasting committee business would at minimum provide the public with more access to information about official proceedings and ensure opportunities for aldermen to voice disagreement about official business in public, but reformers should not consider it a panacea for issues of transparency.

Another simple policy goal should be to enhance transparency by clarifying publicly available information and data regarding city government operations. The city should publish brief, accessible annual summaries of key programs and public expenditures along with clear information as to the location of spending allocations. In the case of TIF, for example, detailed data for individual projects and districts should be complemented with simpler reports on the types of projects and the spatial distribution of funding. These actions would enrich the informational environment in which voters evaluate public officials' performance and allow them to hold government institutions accountable.

Finally, aldermen should leverage the opportunity presented by their lack of political reliance on the recently-elected mayor to reassert their legislative role. While the mayor's administration currently exerts significant control over most programs in the city, including many that are localized such as TIF, aldermen can provide a counterweight, representing the interests of smaller, neighborhood-based constituencies through citywide ordinances. Although the professionalization of the city bureaucracy has made many areas of policy implementation fairer by removing them from politics, aldermen should not abdicate their responsibility to legislate and conduct oversight of the administration. The current political transition offers a

unique opportunity for the city council to redefine itself as an active, effective institution in the times to come.

Conclusion

Data from four election cycles in the post-machine dominance era of Chicago politics show that electoral competition has a statistically insignificant effect on the distribution of TIF spending. Future research should attempt to evaluate this relationship for a greater number of elections and in the context of a wider range of city policies and program outlays to deepen and add precision to our understanding. On the basis of my findings I conclude that, in addition to the conventional wisdom that political reform in Chicago should aim to induce greater levels of electoral competition, aldermanic elections and the institutional configuration of the city council should also be reformed to hold aldermen more accountable, increasing pressure on them to be effective when they do face competition.

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