Essays on the Political Economy of City Status

by

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Dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in the Department of Political Science
in the Graduate School of Duke University
2022

ABSTRACT

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Abstract

This dissertation studies the political economy of city status and its historical role in promoting development. The status of a city was a set of political institutions that altered the governance of towns it was bestowed upon, making towns into cities and townsmen into citizens. The three essays of this dissertation explore why and how alternative city-level political institutions may result in different development outcomes, and how individuals may dynamically interact with and respond to political institutions. I highlight the role of the distribution of political power between the landed and the urban elites as key to understanding the consequences of city status. In this dissertation, I utilize a variety of methods such as archival research, game-theoretic modeling, historical and qualitative analysis, case studies, geographic information system mapping as well as econometric analysis.

In Chapter 2, I develop a formal model of city formation with political control by landed or urban elites. I show how technological limitations faced by the landed elites, a result of their dependence on the scarcely available land as a production input, constrain optimal allocation decisions for employing complementary production inputs, labor, and productive public goods. The model predicts that political control by landed elites will result in cities with a smaller equilibrium population size and with fewer public goods being provided.

In Chapter 3, I argue that institutions privileging urban at the expense of

landed elites may generate better outcomes even in the absence of democracy and may actually outperform democracy if it leads to political control by landed elites. Using original town-level data, I draw on evidence from an 1869 city reform in Congress Poland which deprived three-quarters of the 452 cities of their city status, giving political rights to landed but not urban elites. I show that degraded cities experienced a 64 percentage points slower population growth over the next 40 years. City status was associated with greater public goods provision and more effective judiciary in remaining cities and contributed to a relative agrarianization of degraded cities. I discuss implications for our understanding of the role of inclusive institutions in promoting development.

Chapter 4 explores how individuals may contest unfavorable formal institutions, resulting in the development of norms that directly counter these institutions. The theoretical framework developed in this chapter serves to provide an explanation for how formal institutions may persist even long after their demise, and why the direction of this persistence does not need to replicate equilibria that formal institutions were meant to sustain. To investigate this empirically, I study the long-term effects of the 1869 city reform to show how formal city-level institutions that have been unfavorable to entrepreneurship have led to the development of strong pro-entrepreneurship norms that have persisted until the present and make the populations of towns with previously unfavorable institutions more entrepreneurial now.

To Xiaojuan—for your love and patience. And to my parents, Andrzej and Natalia—for your trust and support in the pursuit of my dreams.

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List of Abbreviations

AGAD	Central Archives of Historical Records (*Archiwum Główne Akt Dawnych*)
APL	State Archive in Lublin (*Archiwum Państwowe w Lublinie*)
APŁ	State Archive in Łódź (*Archiwum Państwowe w Łodzi*)
ATT	Average Treatment Effect on the Treated
BBWR	Nonpartisan Block for Cooperation with the Government (*Bezpartyjny Blok Współpracy z Rządem*)
CE	Common Era
GUS	Central Statistical Office (*Główny Urząd Statystyczny*)
IPTW	Inverse Probability of Treatment Weighting
KRSW	Government Commission for Internal Affairs (*Komisja Rządowa Spraw Wewnętrznych*)
ND	National Democracy (*Narodowa Demokracja*)
NE	Nash Equilibrium
OLS	Ordinary Least Squares
OZN	Camp of National Unity (*Obóz Zjednoczenia Narodowego*)
PKW	National Electoral Commission (*Państwowa Komisja Wyborcza*)
PPR	Polish Workers' Party (*Polska Partia Robotnicza*)
PPS	Polish Socialist Party (*Polska Partia Socjalistyczna*)
PSL	Polish People's Party (*Polskie Stronnictwo Ludowe*)
RGIA	Russian State Historical Archive (*Rossiyskiy Gosudarstvennyy Istoricheskiy Arkhiv*)

SE	Standard Error
SN	National Party (*Stronnictwo Narodowe*)
WWI/II	World War I/II
ZLN	Popular National Union (*Związek Ludowo-Narodowy*)

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1

Introduction

Cities are man's "greatest invention," writes Glaeser (2011). They make us "richer, smarter, greener, healthier and happier." How does this great invention come about, what are its consequences, and what is the role of political institutions in making it happen? These are the central questions that broadly motivate this dissertation.

The evolution of cities has taken a long path since the first towns emerged more than 12,000 years ago in the Fertile Crescent. As Sjoberg (1965) notes, however, the evolution of cities cannot be understood without understanding the parallel evolution of political organization. The case of European city growth in the second millennium CE serves as the perfect illustration. In 1000 CE cities in Europe were small and few in number, and they dwarfed in comparison with their Middle Eastern or Chinese counterparts (e.g., see Bosker, Buringh, and Zanden 2013; Voigtländer and Voth 2013). There were only four cities with a population of 50,000 or more, and only one of them—Constantinople—was not a part of the Islamic world (Glaeser 2011). By the early modern period, however, Europe has become the most urbanized region of the world. How did this happen?

Scholars have provided various explanations of this rapid urban growth relative to the rest of the world, as well as why certain cities have grown faster than others. The rise of European cities was said to be a result of trade and commerce (Pirenne, 1925 [2014]), geography and natural endowments (Bosker and Buringh 2017), wars, diseases and other catastrophic events (Dincecco and Onorato 2016; Jedwab, Johnson, and Koyama 2019; Voigtländer and Voth 2012), or inventions, innovations and technological progress (Andersen, Jensen, and Skovsgaard 2016; Dittmar 2011), among others.

Although important for understanding what drove urbanization, none of those factors were necessarily unique to Europe and at the same time varied sufficiently within Europe, and thus cannot explain both the divergence between Europe and the rest of the world, as well as the variation in urban fortunes within Europe. Beginning with the influential paper by De Long and Shleifer (1993), another literature has emerged that looks at the institutional determinants of urbanization and city growth. Scholars have linked both country-level (Acemoglu, Johnson, and Robinson 2005; De Long and Shleifer 1993) and more recently also city-level institutions (Bosker, Buringh, and Zanden 2013; Stasavage 2014) with the rise of European cities. This is placed within the broader literature which argues that it was the European institutions which have supported Europe's growth and rise to the riches, and that their relatively unfavorable institutions have held back the rest of the world (e.g., Blaydes and Chaney 2013; Greif 2006; Kuran 2003, 2011; North 1981; North and Thomas 1973; Rubin 2011).

The focus of this dissertation is on the *city status* and its role in promoting development. The status of a *city* was a set of political institutions that altered the governance of towns it was bestowed upon, initially through charters, later also granted administratively. As Rousseau (1762 [1913]) already noted: "[M]ost people mistake a town for a city, and a townsman for a citizen. They do not know

that houses make a town, but citizens a city." Indeed, city status is what made towns into cities and townsman into citizens.

From the historical perspective, the establishment of cities and their future growth were conditioned by geography and natural endowments. For cities to arise, a sufficient level of agricultural suitability that allows for non-food producing specialists to emerge is necessary (Diamond 1997; Sjoberg 1965). Agriculture continued to be a significant factor that gave rise and sustenance to cities until well into the late modern period and continues to be important at present. Agriculture thus became a source of powerful political interests intertwined with the fate of cities. The agricultural, or landed elites, were a major political force that strove for domination over them. The interests of the landed elites were rivaled by those of the enterprising non-food producing specialists who populated cities—merchants, craftsmen, and later, industrialists—the urban elites.

An important point advanced in this dissertation is that cities cannot be well-understood without first understanding the heterogeneity of their citizens, with their divergent socioeconomic identities and the resulting differences in their economic interests and political power. I draw distinction between the two types of elites—landed and urban—to understand why nominally similar political institutions may yield different economic outcomes depending on who gets the say.

To that purpose, Chapter 2 of this dissertation develops a formal model of city formation with political control by landed or urban elites. Both types of elites are modeled as economic producers with similar production functions except for one difference—landed elites are dependent on land as a production input. The resulting technological limitations faced by the landed elites, a consequence of a fixed availability of land, constrain optimal allocation decisions with respect to employing complementary inputs, labor and productive public goods. I show that compared to productive urban elites, political control by landed elites will

result in a smaller equilibrium population size and fewer public goods being provided. This result serves to motivate the subsequent two chapters that explore the long-term consequences of the heterogeneity in political control over towns in the empirical settings of Poland and the Russian Empire.

In Chapter 3, I introduce the City Reform of 1869 that altered the 'city status' of three-quarters of the existing 452 cities in Congress Poland, then part of the Russian Empire. I have conduced in-depth archival research that helped me recreate in detail the decision-making process behind this reform, allowing me to model the selection process by which cities were chosen for degradation. The loss of city status was consequential for the type of political institutions in place. Towns with city-status were governed by Russian-appointed bureaucrats, who strove to represent and balance the economic interests of both the urban and landed elites. Towns without city-status were governed by locally elected officials who were chosen from among the local landed elites by the landed elites, a consequence of a landed property qualification that has transferred relative political power toward the landed elites. This unique empirical setting is used to investigate what are the consequences of city-status across a period of nearly half-a-century and how the heterogeneous socio-economic interests may interact with political institutions in bringing about economic outcomes.

Chapter 4 is concerned with understanding the long-term legacies of past political institutions and how these may continue to structure human behavior even long after their demise. It builds on the premise that the propagation of formal institutions is conditioned by how these institutions are perceived by individuals subjected to them. I develop a formal model of contested institutions that illustrates how continuous interaction with formal institutions may give rise to attitudes toward them, which may be positive or neutral, but may also be negative and demonstrate themselves in the form of contestation. With time, these

attitudes become internalized by individuals, giving rise to norms that may promote behavior opposite to that induced by formal institutions. This theoretical argument is tested by looking at the long-term legacies of the 1869 City Reform and its effects on entrepreneurship. The immediate effect of the reform on degraded towns was such that the entrepreneurial urban elites were put in a position of disadvantage, which may have been harmful to entrepreneurship at the time. However, I propose that these detrimental formal institutions have inoculated individuals with strong pro-entrepreneurship norms that have remained with the local populations long-after the political institutions were largely equalized across the towns and cities of Poland in 1918. The local culture within which these norms were embedded persisted into the present and continues to guide entrepreneurship more than a hundred years after the political institutions that gave rise to it have vanished.

Finally, Chapter 5 of this dissertation concludes and presents avenues for future research.

1.1 Contributions

Prominent literature in political science, economics, and beyond argues that inclusive political institutions—i.e., those that provide broad representation in political decision-making, such as democracy—are conducive to positive development outcomes (e.g. Acemoglu, Johnson, and Robinson 2001; Acemoglu and Robinson 2000b, 2012; Baum and Lake 2003; De Long and Shleifer 1993; Gerring et al. 2005; North 1990; Przeworski et al. 2000). In the European context, early democracy had its beginnings in cities. The Greek city-states are a prominent example, but a development more relevant for modern times began in Medieval European towns. The political autonomy that (some) European towns accumulated was, accord-

ing to the economic and urban historian Paul Bairoch (1988, p. 170), a "school of democracy" where "relatively democratic forms of government were established." This was in contrast to the rural society where non-democratic institutions of serfdom and feudalism dominated. Bairoch (1988, p. 170) asserts that, despite some negative influences that came, most prominently, from guilds, "the independence of medieval cities unquestionably exerted an influence more positive than negative on economic life." This is a sentiment that is widely represented across the fields of history, political science, and economics.

This dissertation challenges the predominant contention that it was the early democratic institutions that contributed to the historical growth of European cities. Instead, I argue that what truly drove city development historically was the transfer of political power away from the traditional landed elites toward the productive and proto-capitalist urban elites, one that simply happened to be associated with the democratization of city life. As such, I make the point that the current literature oftentimes confounds the effect of democratization with that of a (relative) redistribution of political power. I argue that the economic effects of including further socio-economic segments of society in political decision-making may not be universal and will depend on their economic basis and the particularities of their socio-economic interests.

To that purpose, this dissertation offers a number of contributions that advance our understanding of the political economy of development in the historical context. First, I offer a theoretical model of city formation that illustrates how technological differences between socioeconomic groups may affect their policy preferences, and how these differences in preferences, when implemented, may have spillover effects onto other groups. As such, the model illustrates that to understand equilibrium outcomes, we must first and foremost understand the economic basis of those who wield political power. Scholars have previously explored the

differential roles of craft guilds, Jews, merchants, or Protestants in promoting development at the city level (e.g., Cantoni 2015; Epstein and Prak 2008; Gelderblom 2013; Johnson and Koyama 2017). I add to this literature by considering the differential role that the people of broadly defined urban professions may have relative to those deriving their wealth from land, and I do so by emphasizing the role of economic production functions of socioeconomic groups in driving policy preferences that have consequences for overall urban prosperity. The developed model offers a rationale for why a (relative) transfer of political power away from one socioeconomic group to another may yield differences in economic outcomes and serves to motivate the broad argument advanced in this dissertation.

The second major theoretical contribution of this dissertation adds to the literature on the historical persistence of institutions and historical legacies (Alesina and Fuchs-Schündeln 2007; Banerjee and Iyer 2005; Becker et al. 2016; Bukowski 2019; Dell 2010; Grosfeld and Zhuravskaya 2015; Grosjean 2011; Guiso, Sapienza, and Zingales 2016; Iyer 2010; Neundorf 2009; Pop-Eleches 2007; Pop-Eleches and Tucker 2017; Putnam 1993; Vogler 2019). The formal model that I develop highlights how individual-level contestation of institutions makes past institutions persist over time but with the outcomes that they promote changing over time, bringing about a reversal of fortunes. As such, I propose that formal institutions that promote unfavorable outcomes may be untenable and instead, under some circumstances, lead to the creation of norms opposing and counteracting these institutions. The model provides a behavioral explanation for why and how exposure to unfavorable institutions need not doom populations for generations but instead breaks away from linear historical determinism by showing how negative historical events can strengthen populations over time and allow for more favorable outcomes in the future than what would have been otherwise possible. As such, I also contribute to the literatures on the unintended and dynamic

consequences of institutions (e.g., Mahoney and Thelen 2010; March and Olsen 1998; Pierson 1996, 2004; Steinmo, Thelen, and Longstreth 1992). I emphasize how formal institutions may shape attitudes that become collectively internalized and lead to the creation of informal institutions that may alter outcomes originally supported by formal institutions. This shows how formal institutions implemented with desired outcomes in mind may not only become undermined over time, but may, in fact, make opposite outcomes more likely.

This dissertation also contributes to the literatures on the institutional determinants of entrepreneurial behavior (e.g., Baumol 1990; Hwang and Powell 2005; Martinelli 2004; North 1990; Shane 2003; Soto 1989) and the role of individual-level negative life experiences and setbacks for entrepreneurship (e.g., Cope 2011; Miller and Le Breton-Miller 2017). I bridge these two literatures by proposing how negative institutional environments can prompt individual-level capacity to deal with adversities in entrepreneurship.

Another major contribution of this dissertation is empirical. Historically, introductions of city status and the democratization of city life that followed have (almost) always involved a relative transfer of political power away from the traditional landed elites, which—as I argue—confounds what actually drove subsequent development. In my dissertation, I introduce the original case of the 1869 city reform in Congress Poland which presents a unique empirical setting—one where the democratization of city life was associated with a transfer of political power *toward* landed elites. Using this case, I demonstrate that democratization of town life that involves transferring political power away from urban elites actually results in worse economic outcomes compared to political institutions that are less democratic but give more political power to urban elites. The democratization that took place without including the enterprising urban elites in political decision-making not only failed to promote city development but in fact

resulted in worse economic performance. This result challenges some of the long-standing preconceptions about the role of democratization in promoting development, showing that introducing more democratic institutions may not be sufficient in bettering economic outcomes and that there are instances where more democracy results in worse outcomes.[1]

The richness of my empirical case allows me to speak to the literature on the origins and consequences of direct and indirect colonial rule (Gerring et al. 2011; Iyer 2010; Lange 2004; Naseemullah and Staniland 2016). The governance of cities subjected to the 1869 city reform greatly resembled indirect colonial rule, with local elites being in charge on behalf of the colonial empire. The situation of remaining cities that were not subjected to the reform was closer to direct rule, where ethnic Russians would dominate key positions in city government and the judiciary. While the current literature offers divergent findings on the consequences of the type of colonial rule, my dissertation provides insights that help bridge these by pointing to the importance of the economic interests stemming from pre-existing power structures as the key factor that conditions the relative performance of indirect colonial rule and helps explain the superiority of direct colonial rule in some settings but not others.

1. The reader should be advised that there may be important non-economic arguments for democratic institutions and that democratic institutions may be desirable also on normative grounds. The findings of this dissertation do not preclude that.

2

Theory of City Status

2.1 Introduction

This chapter develops a formal model of city formation conditioned on the political control by one of two groups of elites—the agricultural (landed) elites and the urban elites—in order to demonstrate how the economic basis of the two groups shapes their policy preferences and economic outcomes when they assume political control. As such, the model contributes to the small literature on the political economy of city formation (Ades and Glaeser 1995; Henderson and Becker 2000) that can be placed within the broader literature on the economic foundations of city formation (Fujita, Krugman, and Venables 1999; Henderson 1974; Krugman 1991). It highlights how the heterogeneity of socioeconomic interests may drive different outcomes across cities conditional on which of these interests gain control over city governance.

2.2 Model of City Formation

The universe consists of a single city and the surrounding hinterland. The city is composed of two sectors controlled by their respective elites: the agricultural sector and the urban sector, which produce homogeneous agricultural and urban goods, respectively. The two sectors employ labor: labor in agriculture is L_A and in the urban sector L_U. The elites, for simplicity, do not count toward city population. At the beginning of this one-period game, there are no people in the city.

The city has a government responsible for the provision of public goods (more on this below). I will consider two alternative scenarios: one in which the agricultural elites are in control of the city government, and another one where it is the urban elites being in control.

While the idea of an agricultural sector is rather self-explanatory, the concept of the urban sector is relatively broader and more abstract. In principle, it contains all those sectors that are not agriculture. However, I particularly have in mind two types economic activity that were historically most significant in driving the development of European cities: crafts and trade.

2.2.1 The People

People, who can be of one of two types—agricultural or urban, inhabit the hinterland.[1] They are distributed uniformly at a distance away from the city at one unit intervals. If $L_{H,i}$ indexes person i in the hinterland (H) (countryside), then the distance of that person to both the city and to person $L_{H,2i}$ is i units. This allows us to use L_A and L_U to denote both the number of people as well as the maximum distance from the city that people migrated from.

At the beginning of the game, people in the hinterland may choose to migrate

1. This separation is unattractive and even undesired but greatly simplifies analysis and allows for model tractability.

into the city into one of the two respective sectors that matches their type. Total city population at the end of the game is given by $L = L_A + L_U$. If people migrate, they are being paid a wage w. Specifically, those in agriculture are paid w_A and those in the urban sector w_U. Note that because I assume dualism, w_A and w_U need not be equal in equilibrium.

Migration to the city is costly. Let $\tau \geqslant 1$ be an exogenous parameter that denotes how costly migration is independent of distance. The interpretation of τ is broad—it may result from both transportation costs as well as other factors that make mobility more costly, e.g., land bondage under serfdom. Then, it costs $f(L_{H,i}, \tau)$ for person i to migrate to the city, where $f'(\cdot) > 0$, $f''(\cdot) \geqslant 0$. Crucially, this implies that as more people inhabit the city, the marginal cost of migration for the last person is higher and hence wages must be higher to compensate for this. This suits the pre-modern and early modern reality, where long-distance migration was extremely costly. Moreover, it works as a centrifugal force that limits infinite city growth. An interesting consequence of this is that wages in larger cities will be higher than in smaller cities. I also assume that the opportunity cost of migrating is equal to 0, i.e. this is the utility derived from staying in the hinterland.

We can summarize person i's utility function as:

$$U_i = \theta_i(v_i w_A + (1 - v_i) w_U - f(L_{H,i,\tau})) \tag{2.1}$$

where $\theta_i \in \{0, 1\}$ is equal to 1 if person i migrates to the city and 0 otherwise, and v_i is equal to 1 if person i is of the agricultural type, and 0 if she is of the urban type.

I assume that the elites cannot renege on wages (i.e. no hold-up problem) and cannot discriminate in wages, i.e., everyone gets the same wage without regard to outside option and individual-specific cost of migration. One can think of this

as the elites not being able to observe how far a particular individual migrates from into the city and discriminate in wages based on that. If $j \in \{A, U\}$ indexes the sector of the economy, this means that $w_j \geqslant f(L_j, \tau)$. I also assume for simplicity that the market for labor is competitive, i.e., in equilibrium $w_j = f(L_j, \tau)$. These assumptions imply that people who migrated from a distance closer to the city may generate a surplus over migration cost. Implicitly, an expansion of the city will necessarily entail a welfare transfer from the elites to the people because hiring an additional laborer increases wages for all laborers.

Finally, for solving the model we will impose a particular functional form on the cost of migration: $f(L_j, \tau) = L_j^{\tau}$.

2.2.2 *City Government*

The city is administered by a government that decides on the amount of the productive public good $G \geqslant 0$ being provided. The government can be controlled by either the agricultural elites or the urban elites. I assume that the government optimizes for the preferences of those elites that control it. However, the cost of the public good is shared equally between the elites of the two sectors.

I think of G very broadly here. It can be physical public goods such as roads, bridges, irrigation, but it can also be the delivery of justice, fire protection or other public services, or even pursued policies that affect production. G can also be a bundle of multiple goods and services. The public good G is accessible to everyone.

The two sectors differ in their production technologies (see next subsection) and, consequently, they will also differ in the desired amount of the public good. In that sense, if agricultural elites control government, the government chooses G such that it maximizes the agricultural profits, and disregards welfare implications for the urban sector, and vice versa in the other case.

Moreover, I allow for the possibility that the public good is not homogeneous, i.e., that the agricultural elites may prefer a different type (or bundle) of a public good than the urban elites, or that some form of restrictions in the access to the public good may be taking place. Instead of explicitly modeling heterogeneous public goods, I simply allow for only a fraction of the public good to be accessible to the sector not in control of the city. It allows to capture the fact that, e.g., if agricultural elites provide roads and irrigation, the urban sector may equally benefit from the roads but less so from irrigation. If $j \in \{A, U\}$ indexes the sector of the elites controlling city government, G^{j*} is the equilibrium G under j government and $\gamma_{-j} \in (0, 1)$ is an exogenously given parameter, then:

$$G \equiv \begin{cases} G^{j*} & \text{if } j, \\ (1 - \gamma_{-j})G^{j*} & \text{if } -j. \end{cases} \tag{2.2}$$

The public good is provided at a marginal cost of $\phi > 1$. This cost reflects a number of factors that affect the efficiency with which public goods may be provided. Some examples of what affects the magnitude of ϕ would be the (lack of) existence of an efficient bureaucracy and government capacity, corruption, or the extent of wasteful and unnecessary spending.

2.2.3 *Agricultural Elites and Production*

The agricultural sector is controlled by the agricultural elites. It operates with a production technology given by Y_A:

$$Y_A = B_A G^{\alpha} L_A^{(1-\alpha)\beta} \tag{2.3}$$

where $0 < \alpha < 1$ and $0 < \beta < 1$. There are two production inputs: labor employed in agriculture, L_A, and a productive public good G which is commonly funded. B_A denotes the exogenously given total factor productivity in the agri-

cultural sector and captures how efficiently production inputs are transformed into agricultural output. Note that since $\beta < 1$, this sector exhibits decreasing returns.

This key assumption reflects the fact that land in the area controlled by the city is a fixed resource and cannot be expanded. We cannot reasonably increase land density to the same extent that we can increase the density of other production inputs. Consequently, adding more labor to agriculture necessarily reduces average output per person, which is what decreasing returns to labor technology reflects.[2]

Agricultural elites maximize their profit function defined as:

$$\pi_A = Y_A(G, L_A) - \frac{1}{2}\phi G - w_A L_A \tag{2.4}$$

This profit function is equal to total revenues from agricultural production net of the cost of total wages provided to agricultural workers, w_A being the wage of a single worker, and the cost of financing the public good, for simplicity split equally between the two sectors. The price of agricultural goods is taken as the numeraire—equal to 1.

2.2.4 Urban Elites and Production

The urban sector is controlled by the urban elites. It has has a production technology given by Y_U:

$$Y_U = B_U G^{\alpha} L_U^{1-\alpha} \tag{2.5}$$

where $0 < \alpha < 1$. Similar to agriculture, there are two production inputs: labor employed in the urban sector, L_U, and a productive public good G which is commonly funded. B_U denotes the exogenously given total factor productivity for

2. The assumption that the agricultural sector demonstrates a different degree of returns to scale has been commonly made by previous studies, e.g. see Murphy, Shleifer, and Vishny (1989) or Krugman (1991).

the urban sector. Most importantly, the urban sector differs from the agricultural sector in that it employs a constant returns technology.

Urban elites maximize their profit function defined as:

$$\pi_U = Y_U(G, L_U) \cdot p - \frac{1}{2}\phi G - w_U L_U \tag{2.6}$$

The exogenously determined (relative) price of urban output is p, and the wage paid to urban laborers is w_U.

2.2.5 *Additional Assumptions*

Our primary interest is in how differences in production technology between the two sectors will affect the choices of G made by their respective elites when in control of the city government, and consequently, equilibrium total population of the city. I make two additional assumptions that restrict the set of possible equilibria, allowing to highlight the dynamics of interest. First, unless otherwise stated, I assume that $B_A = B_U \cdot p$. It implies that the two sectors demonstrate the same level of economic efficiency in output production. This assumption, although not necessary, will greatly simplify comparisons between city governments controlled by urban elites and agricultural elites.

The second additional assumption I make has to do with ensuring certain properties that better represent the reality for which this model is suited. One desired property is that a decrease in the degree of returns to scale is tantamount to a decrease in output and vice versa, i.e., $\frac{\partial \pi_A}{\partial \beta} > 0$. Since we measure labor as a continuous variable, this can be violated when the quantity of labor is below 1.[3] I would also like to ensure that the individual cost of migration (weakly) increases with distance from the city, i.e., $\frac{\partial f(L_j, \tau)}{\partial L_j} \geqslant 0$. Again, for this to be true, we need

3. To see that, note that $\frac{\partial \pi_A}{\partial \beta} = B_A G^{\alpha} L_A^{(1-\alpha)\beta}(1-\alpha) ln(L_A)$ will be negative when $ln(L_A) < 0$, which is true if and only if $L_A < 1$.

$L_A \geqslant 1$ and $L_U \geqslant 1$.[4] In order to ensure that at least one unit of labor will be demanded, we will require productivity to be sufficiently high given all other model parameters. Formally, we assume $B_j \in \{B_j^* : L_j(B_j^*|\cdot) \geqslant 1\}$ for $j \in \{A, U\}$.

2.3 City Under Agricultural Elites Control

2.3.1 *Agricultural Elites*

When the agricultural elites control the city, they will be the ones to decide not only the amount of labor to be employed in the agricultural sector but also the amount of the public good G to be provided. The problem of agricultural elites may be summarized as follows:

$$\begin{aligned} \underset{L_A, G}{\text{maximize}} \quad & \pi_A = B_A G^{\alpha} L_A^{(1-\alpha)\beta} - \frac{1}{2}\phi G - L_A^{\tau} \cdot L_A \\ \text{subject to} \quad & L_A \geqslant 0, \\ & G \geqslant 0. \end{aligned}$$

This maximization problem gives us the following set of first-order conditions:

$$\frac{\partial \pi_A}{\partial L_A} = B_A(1-\alpha)\beta G^{\alpha} L_A^{(1-\alpha)\beta - 1} - (1+\tau)L_A = 0 \tag{2.7}$$

$$\frac{\partial \pi_A}{\partial G} = B_A \alpha G^{\alpha - 1} L_A^{(1-\alpha)\beta} - \frac{\phi}{2} = 0 \tag{2.8}$$

2.3.2 *Urban Elites*

Under agricultural control of the city, urban elites take the public goods (and policies) as given. The problem of urban elites in this scenario may be summarized as:

4. Note that $\frac{\partial f(L_j,\tau)}{\partial L_j} = L_j^{\tau} ln(L_j)$ which will be negative if and only if $L_j < 1$.

$$\underset{L_U}{\text{maximize}} \quad \pi_U = B_U[(1-\gamma_U)G]^{\alpha} L_U^{1-\alpha} \cdot p - \frac{1}{2}\phi G - L_U^{\tau} \cdot L_U$$

$$\text{subject to} \quad L_U \geqslant 0.$$

Maximization of the urban elites' profit function results in the following first-order condition:

$$\frac{\partial \pi_U}{\partial L_U} = B_U(1-\alpha)p(1-\gamma_U)^{\alpha} G^{\alpha} L_U^{-\alpha} - (1+\tau)L_U = 0 \tag{2.9}$$

2.4 City Under Urban Elites Control

2.4.1 Agricultural Elites

In the scenario where the urban elites are in control of city government, the roles are reversed and it is the agricultural elites that take G as given. The problem of agricultural elites becomes:

$$\underset{L_A}{\text{maximize}} \quad \pi_A = B_A[(1-\gamma_A)G]^{\alpha} L_A^{(1-\alpha)\beta} - \frac{1}{2}\phi G - L_A^{\tau} \cdot L_A$$

$$\text{subject to} \quad L_A \geqslant 0.$$

Solving this maximization problem gives us the following first-order condition:

$$\frac{\partial \pi_A}{\partial L_A} = B_A(1-\alpha)\beta(1-\gamma_A)^{\alpha} G^{\alpha} L_A^{(1-\alpha)\beta-1} - (1+\tau)L_A = 0 \tag{2.10}$$

2.4.2 Urban Elites

Conversely, urban elites become the ones to decide on the amount of the public good to be provided. The problem of urban elites then becomes:

$$\begin{aligned} \underset{L_U, G}{\text{maximize}} \quad & \pi_U = B_U G^{\alpha} L_U^{1-\alpha} \cdot p - \frac{1}{2}\phi G - L_U^{\tau} \cdot L_U \\ \text{subject to} \quad & L_U \geqslant 0, \\ & G \geqslant 0. \end{aligned}$$

This results in the following set of first-order conditions:

$$\frac{\partial \pi_U}{\partial L_U} = B_U(1-\alpha)pG^{\alpha}L_U^{-\alpha} - (1+\tau)L_U = 0 \tag{2.11}$$

$$\frac{\partial \pi_U}{\partial G} = B_U \alpha p G^{\alpha-1} L_U^{1-\alpha} - \frac{\phi}{2} = 0 \tag{2.12}$$

2.5 Equilibrium

The agricultural and urban population, and the amount of public goods, that constitute the model's sub-game perfect Nash equilibrium under agricultural rule are given by equations 2.13, 2.14 and 2.15.

$$G^{A*} = \left(\frac{(1-\alpha)\beta}{1+\tau}\right)^{\frac{\beta}{1+\tau-\beta}} \left(\frac{2\alpha}{\phi}\right)^{\frac{1+\tau+\alpha\beta-\beta}{(1+\tau-\beta)(1-\alpha)}} B_A^{\frac{1+\tau}{(1+\tau-\beta)(1-\alpha)}} \tag{2.13}$$

$$L_A^{A*} = \left(\frac{(1-\alpha)\beta}{1+\tau}\right)^{\frac{1}{1+\tau-\beta}} \left(\frac{2\alpha}{\phi}\right)^{\frac{\alpha}{(1+\tau-\beta)(1-\alpha)}} B_A^{\frac{1}{(1+\tau-\beta)(1-\alpha)}} \tag{2.14}$$

$$\begin{aligned} L_U^{A*} = \left(\frac{1-\alpha}{1+\tau}\right)^{\frac{1+\tau+\alpha\beta-\beta}{(1+\tau-\beta)(\alpha+\tau)}} \left(\frac{2\alpha}{\phi}\right)^{\frac{\alpha(1+\tau+\alpha\beta-\beta)}{(1+\tau-\beta)(1-\alpha)(\alpha+\tau)}} (1-\gamma_U)^{\frac{\alpha}{\alpha+\tau}} (B_U p)^{\frac{1}{\alpha+\tau}} \cdot \\ \cdot B_A^{\frac{\alpha(1+\tau)}{(1+\tau-\beta)(1-\alpha)(\alpha+\tau)}} \beta^{\frac{\alpha\beta}{(1+\tau-\beta)(\alpha+\tau)}} \end{aligned} \tag{2.15}$$

The equilibrium amount of public goods, and the agricultural and urban population under urban rule are given by equations 2.16, 2.17 and 2.18.

$$G^{U*} = \left(\frac{1-\alpha}{1+\tau}\right)^{\frac{1}{\tau}} \left(\frac{2\alpha}{\phi}\right)^{\frac{\alpha+\tau}{\tau(1-\alpha)}} (B_U p)^{\frac{1+\tau}{\tau(1-\alpha)}} \tag{2.16}$$

$$L_A^{U*} = \left(\frac{1-\alpha}{1+\tau}\right)^{\frac{\alpha+\tau}{\tau(1+\tau+\alpha\beta-\beta)}} \left(\frac{2\alpha}{\phi}\right)^{\frac{\alpha(\alpha+\tau)}{\tau(1+\tau+\alpha\beta-\beta)(1-\alpha)}} (1-\gamma_A)^{\frac{\alpha}{1+\tau+\alpha\beta-\beta}} \cdot \tag{2.17}$$

$$\cdot (B_U p)^{\frac{\alpha(1+\tau)}{\tau(1+\tau+\alpha\beta-\beta)(1-\alpha)}} (B_A \beta)^{\frac{1}{1+\tau+\alpha\beta-\beta}}$$

$$L_U^{U*} = \left(\frac{1-\alpha}{1+\tau}\right)^{\frac{1}{\tau}} \left(\frac{2\alpha}{\phi}\right)^{\frac{\alpha}{\tau(1-\alpha)}} (B_U p)^{\frac{1}{\tau(1-\alpha)}} \tag{2.18}$$

Among other things, the question of interest is whether who controls the city government has consequences for population size of the city. We are thus interested in the relation between $L^{A*} = L_A^{A*} + L_U^{A*}$ and $L^{U*} = L_A^{U*} + L_U^{U*}$. Unfortunately, the equilibrium solutions are overly complicated to derive readily comprehensible results analytically. However, it is straight forward to derive these results numerically. In what follows, unless otherwise stated, I use the following set of parameters in my numerical analysis:

$$\alpha = 0.4, \;\; \beta = 0.7, \;\; \tau = 1.4, \;\; \gamma_A = 0, \;\; \gamma_U = 0, \;\; \phi = 1.2, \;\; p = 1, \;\; B_A = 30, \;\; B_U = 30$$

Figure 2.1 illustrates the equilibrium population size of the city under agricultural (left panel) and urban elites control (right panel) as a function of the parameter β which captures the extent to which the agricultural and urban sectors differ (i.e., the extent of decreasing returns in the agricultural sector). I present these results for alternative values of the parameter α which determines partial output elasticities with respect to public goods and labor (for a 1% change in G,

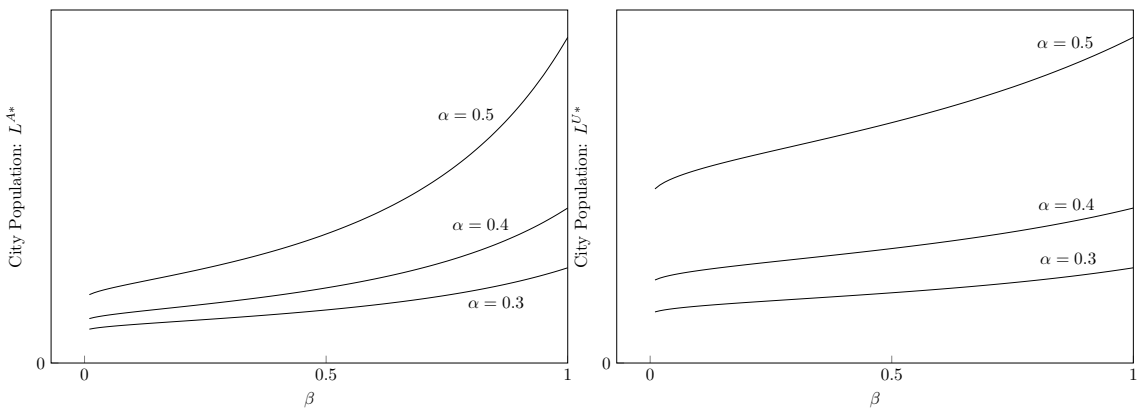


FIGURE 2.1: City population under agricultural and urban rule for alternative values of β

output will change by α%; for a 1% change in L_j, output will change by $(1-\alpha)$%). At least three things are worth noting: (1) as the parameter α increases, the equilibrium size of the city increases as well; (2) it increases disproportionately faster at higher values of β; and (3) for values of β converging to 1, the two systems of government generate increasingly identical results.

To highlight the extent to which for higher values of α and lower values of β urban government results in larger city size than agricultural government does, Figure 2.2 plots the percentage population difference in city size between urban and agricultural government (with positive values indicating larger city size under urban rule) as a function of β. For example, when β is at 0.5, for $\alpha = 0.3$ urban rule results in cities being approximately 40% larger. When α increases to 0.5, urban-ruled cities will be approximately twice as large as under the rule of agricultural elites.

Next, I study the effects of changes in the migration cost τ. Figure 2.3 plots total city population under agricultural and urban rule as a function of τ. The slope is downward in τ—as the migration cost decreases, the city grows in size exponentially. Note however that with reduction in migration costs, city population grows disproportionately more when the city is controlled by urban elites.

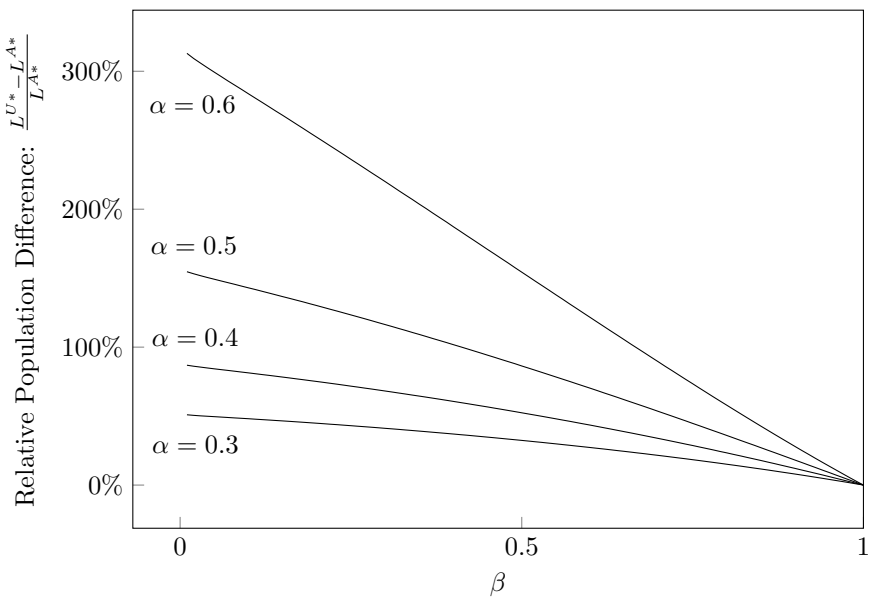


FIGURE 2.2: Percentage difference in city population for alternative values of β

On the other hand, when migration cost rises, the equilibrium city size under the two governments converges.

The extent to which urban rule results in larger city size relative to agricultural rule is conditional on the parameter α. Figure 2.4 illustrates this for alternative values of τ. A reduction in τ consistently leads to greater city size under urban rule, but the extent to which this is true increases with α—and this increase is disproportionately larger at higher values of α.

As a results of these dynamics, although a decrease in migration costs leads to larger city size, it disproportionately results in increases in urban labor specifically. Figure 2.5 illustrates this. As τ decreases, the share of agricultural labor in the population decreases. Consequently, coupled with the observation that a decrease in τ results in larger city size, this leads to a highly intuitive result: larger cities will have a relatively smaller proportion of population employed in the agricultural sector. Additionally, note that the extent to which a decrease in τ changes the share of agricultural labor in total city population differs under agricultural and

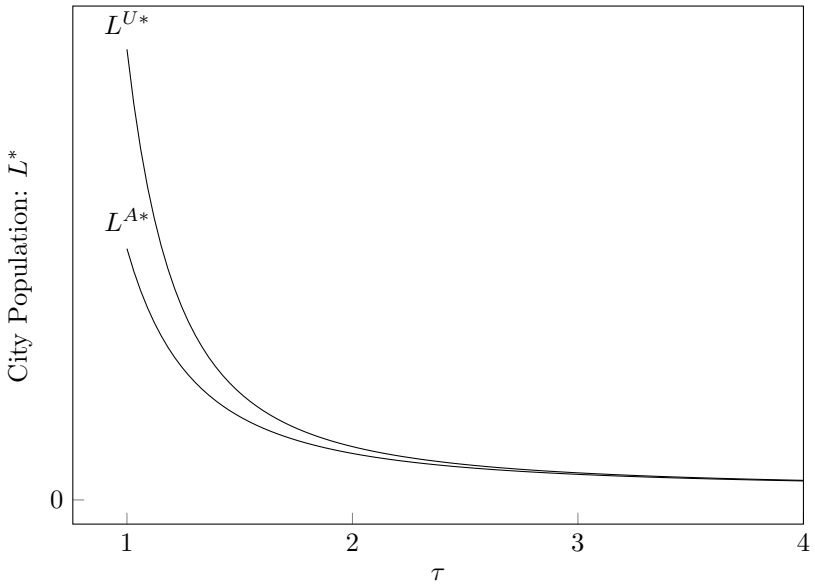


FIGURE 2.3: City population for alternative values of τ

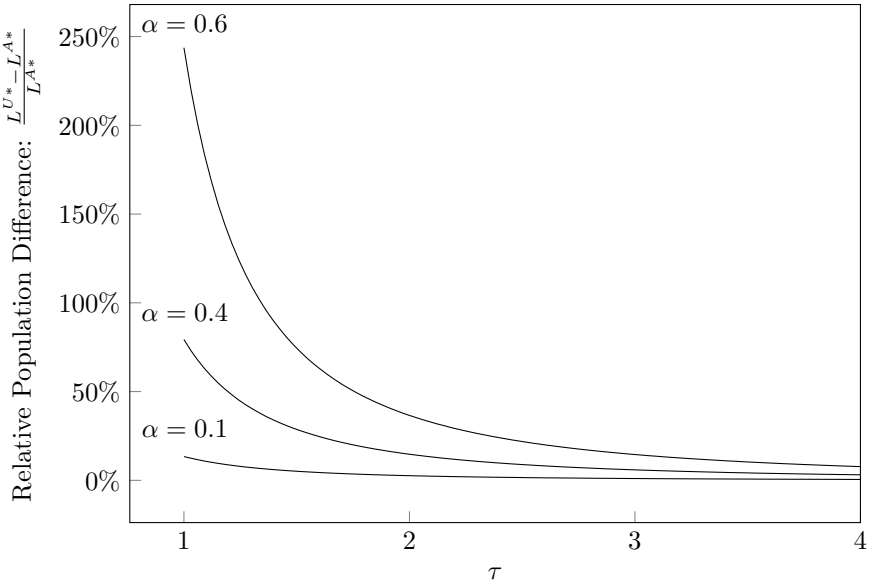


FIGURE 2.4: Percentage difference in city population for alternative values of τ

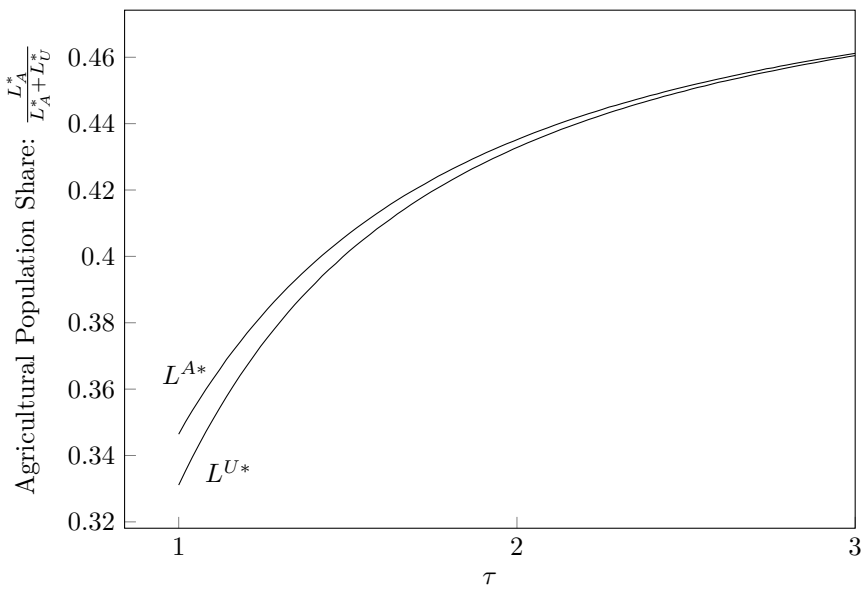


FIGURE 2.5: Share of agricultural labor in city population for alternative values of τ

urban government.

This is further investigated in Figure 2.6 which shows the that difference in agricultural share of population under the two forms of governments changes not only for different values of τ, but also for β. Here the vertical axis capture the percentage points difference in agricultural share of population, with negative values indicating smaller agricultural share of population under urban rule. Note that the relationship is non-linear, with the highest differences being observed for intermediate values of β. The non-linearity is a result of two forces simultaneously affecting population size. Lower values of β have a direct effect on the equilibrium agricultural labor quantity, putting downward pressure on agricultural share of total population. There is also another effect—the spillover effect of agricultural rule on the urban sector. It affects the equilibrium urban labor by reducing the amount of the public good G, reducing urban share of population. The magnitude of the two forces is mediated by the value of τ. This is related to a previous observation: for higher values of τ, the two forms of government

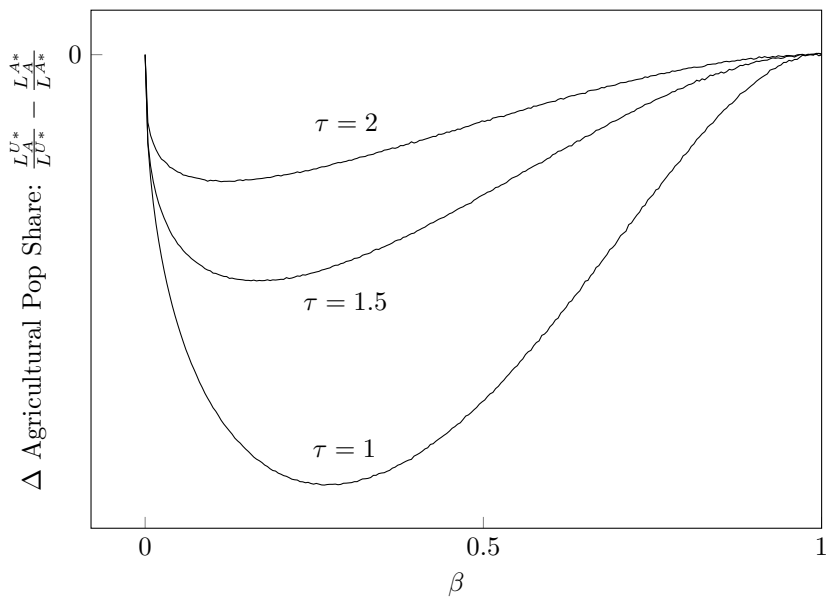


FIGURE 2.6: Difference between urban and agricultural rule in share of agricultural labor in city population for alternative values of β

converge in their equilibrium city sizes.

In Figure 2.7, I make a quick departure from the assumption that $B_A = B_U \cdot p$ and see what happens when total factor productivity in the urban sector (B_U) changes, keeping the agricultural total factor productivity constant (without loss of generality). We can immediately see that as B_U rises, equilibrium city population increases under both types of governments, but it increases at a greater rate when urban elites are in control. Note that there exists a critical value of B_U, let us call it B_U^*, below which agricultural rule will result in larger city size. This observation is important particularly for understanding the long-term dynamics of city growth—at any two points in time, the particular system of city governance may generate different outcomes because of changes in external factors such as the state of technology available at the time. This hints at the fact that city population growth over time may be driven by technological progress, a result supported by a number of studies (e.g., Andersen, Jensen, and Skovsgaard 2016; Dittmar 2011). In as much as cities were the centers of technological progress (see Epstein 1998;

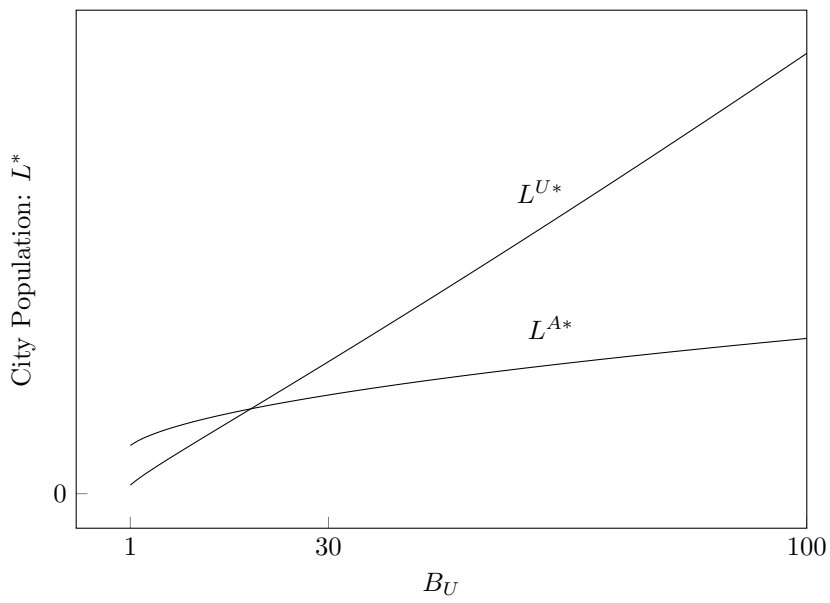


FIGURE 2.7: City population and urban technological progress

Mokyr 1995), this may have favored the emergence of an urban government in the first place.

As was mentioned when discussing Figure 2.6, who controls the city government has consequences for city population not only directly—through this control's impact on the given sector's labor size—but it also indirectly affects the amount of labor employed in the other sector. The channel through which this happens is the quantity of the public good G being provided. In Figure 2.8 I illustrate how the quantity of G differs under urban and agricultural rule as the cost of public goods provision (ϕ) changes, and I also show how this difference is affected by the value of τ. Intuitively, as ϕ decreases, in equilibrium more public goods will be provided. However, the rate of increase in public goods provision will be greater under urban rule. Moreover, I find that the amount of G provided increases as the migration cost τ decreases. This reflects the extent of complementarity between public goods and labor as factors of production. A reduction in migration costs increases labor in the city, and more public goods are needed to

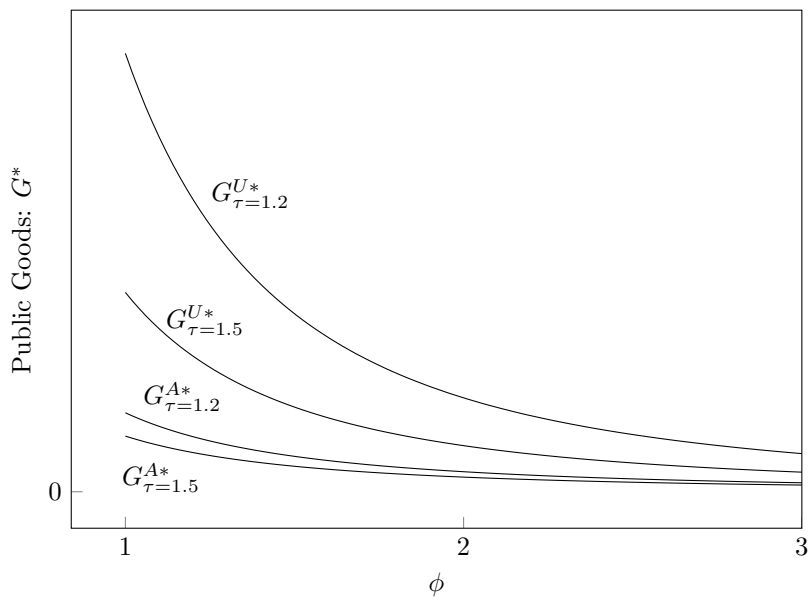


FIGURE 2.8: Public goods provision for alternative values of ϕ

complement this increased amount of labor.

Finally, in Figure 2.9 I illustrate the working of the γ parameter, taking γ_U as an example. The γ parameter may be thought of as capturing the extent to which provided public goods are either targeted at one of the groups, or the extent to which the other group can be excluded from benefiting from them. As γ_U specifically measures this for the urban group when agricultural elites are in power, unsurprisingly the equilibrium city population under urban rule is unaffected. When agricultural elites are in power, however, as γ_U increases, city population decreases and it does so at an increasing rate for higher values of γ_U. The rate of change, however, is mediated by the value of ϕ—this is because generally less public goods will be provided when ϕ is higher, but at the same time the marginal benefit of an additional unit of G is higher, which partially offsets the reduction in population size.

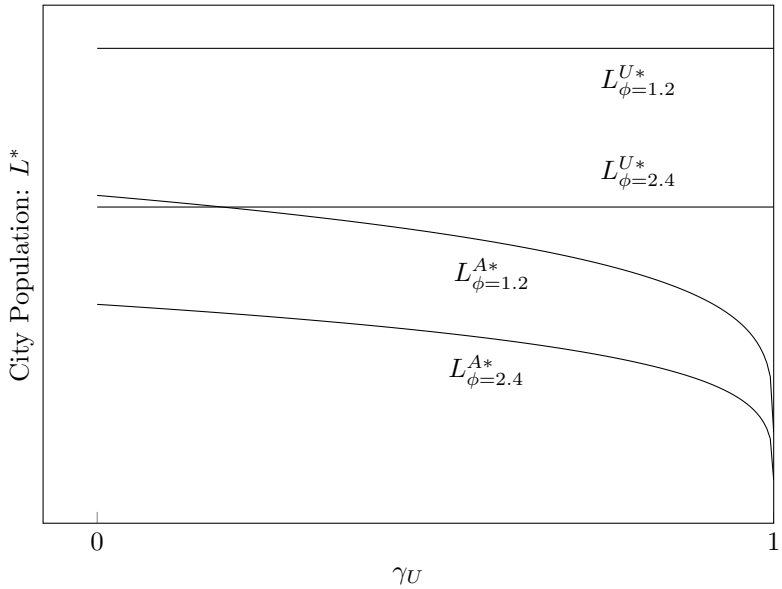


FIGURE 2.9: City population for alternative values of γ_U

2.6 Conclusion

I have developed a simple formal model of city formation to illustrate how political control over city governance by either the urban or the landed elites may result in divergent outcomes in terms of equilibrium city size and public goods provision. I have demonstrated how technological constraints on the production function of the landed elites result in their preference for relative under-provision of public goods and for employing less labor. I have shown that the extent to which the two "forms" of government may yield different outcomes is dependent upon the state of technological progress. For example, the model suggests that reductions in transportation technology increase the advantages brought by the rule of urban elites relative to agricultural elites. As such, the model presents the intuition not only for why which of the two groups of elites governs may have immediate consequences for the city's economic development, but also how the optimal form of government may be conditioned by exogenously-determined circumstances and may change over time as circumstances evolve.

3

Burghers into Peasants

3.1 Introduction

Inclusive political institutions with broad representation in political decision-making, with democracy being the embodiment of that, have been widely argued to have a positive effect on economic outcomes. They foster development by instituting secure property rights and checks and balances, restricting predatory taxation, increasing public goods provision or bringing more stability (e.g. Acemoglu, Johnson, and Robinson 2001; Acemoglu and Robinson 2000b, 2012; Baum and Lake 2003; De Long and Shleifer 1993; Gerring et al. 2005; North 1990; Przeworski et al. 2000).

Historically, however, early expansions of democracy were commonly tantamount to a transfer of power away from traditional landed elites.[1] This creates the possibility that what we attribute to inclusive institutions is, in fact, the result of a relative loss of power of traditional elites and a relative gain of power

1. An early democracy, as opposed to a modern one, can be characterized by limited suffrage, lack of secret ballot, small population that facilitates a more direct participation, lack of political parties that could mobilize voters, or little political ideology.

by other socio-economic groups. If different socio-economic groups promote development to a different extent, then *who* is included in political decision-making relative to the status quo is what really matters. In fact, a recent body of literature that focuses on city-level institutions paints a more nuanced picture of the effects of inclusiveness of institutions on long-term prosperity, where further expansions of political representation to some groups may not necessarily result in positive outcomes (Minns et al. 2020; Stasavage 2014, 2019; Wahl 2018).

One of the most notable introductions of inclusive institutions in European history began around the 11th century CE amidst the legal revolution of the Middle Ages. It took place in the form of granting towns the status of a 'city', with the citizens gaining (greater) control over the government and the judiciary. These improvements in urban self-determination and the rise of city-level democracy were a unique feature of European cities, and are often credited with making Europe the most urbanized region of the world by the early modern period—with profound consequences for economic and political development.

I propose a theory that casts new light on the historical role of expansions of inclusive institutions in towns—I argue that 'city' status contributed to long-term development of towns not because it brought city-level democracy per se, but because it was an instrument of separating urban and rural jurisdictions, allowing for cities to represent the interests of productive and geographically-sorted urban (burgher) elites as opposed to landed elites. The two groups differed in how their wealth is generated, and the political control of a city by burgher elites resulted in differences in pursued policies, with important spillover effects that positively affected the overall level of economic development.

To empirically assess my theory, I draw on evidence from a natural quasi-experiment in 19th century Kingdom of Poland, a polity controlled by the Rus-

sian Empire.[2] In 1869–1870, a reform was undertaken whereas ¾ of the existing 452 cities were deprived of their city status and the separate jurisdiction it has carried. The degraded cities were joined together with the surrounding countryside to form common jurisdictions, giving landed interests the control over urban affairs.

What makes this case particularly interesting is the fact that towns with the status of a city had no representative institutions and were governed by Russian agents, whereas the loss of city status was associated with an introduction of democratic institutions that gave political rights to local landowners, but not the broad urban class. This allows us to unbundle the effect of inclusiveness from that of relative power transfers to urban elites. At the same time, city status did not carry other important consequences, allowing us to isolate the effect of having a separate urban jurisdiction from other confounders that citizenship has historically implied.

Utilizing historical official records, archival materials, and numerous other sources, I collect original city-level data pertaining to the population, public goods provision, the judiciary, industrialization, and more, in all of the 452 cities that existed prior to the reform. I use it to show that over the subsequent forty years towns where democratic institutions were introduced with the reform experienced a 64 percentage points (pp.) lower population growth compared to those that remained as cities and lacked inclusive institutions. Placebo tests show that the results are not driven by pre-exisiting growth patterns whereby the degraded cities grew slower already prior to the reform. I introduce official government documents demonstrating that the selection of cities was not driven by their future growth prospects. Focusing on the mechanisms, I argue that the landed control

2. Kingdom of Poland is also referred to as Congress Poland (after the Congress of Vienna), Russian Poland or Vistula Land (*Privislinskiy Kray*). These names are used interchangeably.

over local government and the judiciary resulted in under-providing productive local public goods and having under-performing courts. This led to shifts in the socio-economic composition of towns, with degraded towns becoming relatively more agricultural and being 30 pp. less likely to have industrial activity emerge. Placebo tests demonstrate that the advantage of city status did not apply to industries controlled by landed elites, suggesting that it is the forestallment of other socio-economic groups by landowners which drives the results.

The case of Congress Poland, although set in the 19th century, also provides us with a greater understanding of the historical experience of European cities in the preceding centuries. Unlike in Western Europe, in the East of the continent feudal institutions were largely retained well into the 19th century, with serfdom being in place in the Kingdom until as late as 1864. The proto-industrial nature of the economy outside of the largest urban centers, the small size of cities and the clear differentiation of socio-economic groups greatly resemble the situation of pre-modern and early modern cities in the West of the continent, while focusing on a more recent case allows us to utilize detailed town-level data unobtainable for earlier periods.

This article contributes to the debate on the role of inclusive political institutions for economic development. I show that early democracy may under some circumstances lead to adverse outcomes, and that to fully grasp the effects of its introduction, we must understand whose interests gain representation relative to the status quo. The effects of early democracy are not simply driven by more inclusiveness, but also by who is being included. Non-inclusive institutions may produce better outcomes when the more inclusive alternative leads to representation of particular interests of the in-group, and partiality toward and the general forestallment of the out-group.

I contribute to the literature on historical factors driving long-term differences

in development between cities. Scholars have explained the rise of European cities in terms of trade and commerce (Pirenne, 1925 [2014]), geography and natural endowments (Bosker and Buringh 2017), wars, diseases and other catastrophic events (Dincecco and Onorato 2016; Voigtländer and Voth 2012), or inventions, innovations and technological progress (Andersen, Jensen, and Skovsgaard 2016; Dittmar 2011), among others. Most related to mine are the contributions examining the institutional determinants of urbanization and city growth. Scholars have linked both country-level (Acemoglu, Johnson, and Robinson 2005; De Long and Shleifer 1993) and, more recently, also city-level institutions (Bosker, Buringh, and Zanden 2013; Stasavage 2014; Wahl 2018) with the rise of European cities. My contribution uniquely highlights the role of city-level jurisdiction in the distribution of political power and its consequences for long-term development of cities.

This article also speaks well to the literature emphasizing the differential role of various socio-economic groups in city development. Scholars have previously explored the differential roles of craft guilds, Jews, merchants, or Protestants (e.g. Epstein and Prak 2008; Gelderblom 2013; Johnson and Koyama 2017; Cantoni 2015). I take a step back and add to this literature by considering the differential role that the people of broadly defined urban professions may have relative to those deriving their wealth from land. I show that the forestallment of productive minorities may have broad negative consequences for overall levels of development.

Finally, this study speaks to the literature on the origins and consequences of direct versus indirect colonial rule (Iyer 2010; Gerring et al. 2011; Lange 2004; Naseemullah and Staniland 2016). Russian rule carried many features pertinent to that of colonial empires, even if not overseas but contiguous. The governance of degraded cities greatly resembled indirect colonial rule, with local elites being in charge on behalf of the colonial empire. The situation of remaining cities

was closer to direct rule, where ethnic Russians would dominate key positions in city government and the judiciary. The insights from my study suggest that the effects of indirect rule will be driven by the economic interests stemming from pre-existing power structures, which could be a plausible explanation for why some scholars find the effects of direct rule to be superior, while others do not.

3.2 Theoretical Argument

"Let men of the peace not be compelled to resort to courts outside the city."

— 1128 Charter of Laon

Historically, states and territories were spanned by multitudes of jurisdictions over land and people. How these jurisdictions were defined was at the heart of political conflict, with consequences for who shall rule and who shall be ruled.

One of the most visible realizations of this conflict came with the rise of urban Europe, beginning around the 10–11th century CE. The inhabitants of Medieval towns began forming communes—communities of mutual defense based on shared custom and interests—that sought self-determination and liberty from violence and abuse. Urban aspirations have at times culminated with the formal recognition of their special place in the feudal hierarchy—the granting of a city charter, turning towns into cities and townsman into citizens. The status of a 'city'—defined here as a separation of jurisdiction between the town and the country—granted administratively or through a charter, results in the creation of a jurisdiction that concentrates burghers and separates them from landed interests, allowing for the interests and preferences of urban inhabitants to be better represented.

City jurisdiction would be defined in two important areas: as a political jurisdiction, concerned with governance, and as a judicial jurisdiction, concerned with

delivering justice. How the jurisdiction is designated defines not only the political community that forms it, but it also defines the position of socio-economic groups within that community. While the countryside stands for landed interests, cities were at the forefront of nascent capitalism. The separation of rural and urban jurisdiction meant that the urban population, otherwise a minority, would be judged and governed separately from the country and with urban interests in mind, creating a relatively favorable environment for cities (and burghers) to thrive. At the same time, towns that were grouped into common jurisdictions with the surrounding countryside would be in a relatively unfavorable position where, if rival, landed interests would trump urban ones.[3]

Land is a fixed production input, and therefore essentially unaffected by changes in demand. Consequently, creation of a relatively more favorable political and economic environment for landed interests can, only to a very limited extent, result in agricultural expansion through increases in the area under cultivation and concurrently, increases in the number of people involved in agriculture. On the other hand, capital and labor do not face the same sort of constraints as, for practical purposes, these factors are not physically bounded by territory. I anticipate that an environment that favors urban as opposed to landed interests will result in greater economic growth, as reflected by population increases.

HYPOTHESIS 1: Towns with city status have higher population growth than those without it

My theoretical argument is based on two important assumptions. I argue that two types of elites, landed and urban, have preferences over public goods (or more broadly, policies) that are inputs in their production functions, together with

3. There existed exceptions to this regularity, e.g. city-states that would assume political control of the hinterland.

labor. At the same time, urban and landed elites differ in that the agricultural sector exhibits decreasing returns to scale due to land being a fixed resource that constrains output, whereas the urban sector employs a constant returns to scale technology. Since land, labor and public goods are complements, political control by landed elites will result in lesser public goods provision and lower equilibrium labor (population) size. Towns with city status, where urban elites are in control, will experience greater levels of development over time compared to those that are not cities and are controlled by landed elites.

HYPOTHESIS 2: Towns with city status provide more public goods than those without it

What is the exact mechanism through which city status operates? In general, how the jurisdiction is defined has consequences for who will judge and govern. In turn, this determines whose interests are being advanced and represented. In societies with clear group hierarchies, in-group solidarity and favoritism are prevalent (Tajfel et al. 1971). With regard to justice, the two primary implications of this are that it would be delivered by a separate authority specific to the city, and that it would be delivered differently (e.g. by adjusting severity of punishment). This allows for justice to be delivered impartially (at least toward urban interests), which should be reflected in the overall effectiveness of courts.[4]

HYPOTHESIS 3: Towns with city status have more effective courts than those without it

The principle of impartiality of law has long been recognized as important in the delivery of justice. Beginning in the 12th century, many cities in present-day

4. See Greif (2006, 310) for a discussion of how the courts of urban communities were incentivized to deliver impartial justice in the Medieval context.

northern Italy began appointing or electing as their chief magistrate a podestà—a foreign citizen to whom all executive and judicial powers were delegated for the length of a fixed term contract. Cities were troubled by conflicts of interest between various parties and having an outsider govern them helped to ensure that decisions would not be guided by favor or disfavor, or partiality, toward any party (Born 1927). The problem of partiality may be of even greater concern where different elements of the traditional social hierarchy are involved, i.e. where inter-group differences are more pronounced.

Additionally, separation of jurisdiction that city status introduces allows for the city government to be of citizens and represent urban and not landed interests. I thus anticipate that city status, by making towns into a jurisdiction separate from the country, will allow for the judiciary and the city government to represent urban interests to a greater extent. This should eventually be reflected in the socio-economic structure of towns, whereby urban elites thrive in cities and landed elites are relatively better off in those towns that are not cities.

HYPOTHESIS 4: Socio-economic structure of towns with city status is more representative of urban elites than in those without it

When in control, landed elites may find it in their interest to block any policies favorable to non-landed groups, even when detrimental to economic development, in order to prevent any challenges to their position (e.g. Acemoglu and Robinson 2000a, 2006). More generally, different socio-economic groups may have varying preferences for public goods and services (Chattopadhyay and Duflo 2004; Alesina, Baqir, and Hoxby 2004), and inter-group conflict or lack of inter-group co-operation may generally undermine public goods provision (Alesina, Baqir, and Easterly 1999; Habyarimana et al. 2007).

3.3 Historical Background

3.3.1 Kingdom of Poland: From Congress of Vienna to World War I

In 1815, the Congress of Vienna has established an autonomous Kingdom of Poland, a polity in personal union with the Russian Tsar. The Kingdom was granted a liberal constitution that nevertheless was never fully adhered to—which was one of the reasons behind an 1830 armed uprising against Russian rule (the November Uprising, 1830–31). Following Russian victory, the autonomy of the Kingdom was curbed and it became an integral part of the Russian Empire. It has still retained some degree of distinctiveness and the majority of official positions outside of the military were held by Poles.

Social tensions brought about by the Russian autocratic rule have never ceased, however, and were at their height in the early 1860s. In 1861, martial law was imposed. Finally, in the January of 1863 an uprising (the January Uprising, 1863–1864) broke out and fighting continued through 1864, until Russian victory. It was the largest and the longest-lasting of Polish national uprisings following the late 18th century partitions of Poland. Subsequently, the remaining bits of Polish autonomy were suppressed, and a period marked by intense Russification and efforts to fully integrate the Kingdom into the Russian Empire followed.

The Constitutive Committee in the Kingdom of Poland (*Uchreditel'nyy komitet v Tsarstve Pol'skom*, henceforth: the Constitutive Committee), an institution created in 1864 and staffed by Tsarist appointees, was tasked with the goal of preparing reforms meant to remove the autonomy of Congress Poland and fully integrate it legally and politically with the Empire. With legislative prerogatives, it became the supreme administrative authority in the Kingdom.[5]

Introduced in 1864, abolition of serfdom was the first of the reforms that the

5. The highest executive official in the Kingdom was initially the Viceroy (*namestnik*), and later the Governor-General (*general-gubernator*).

Committee was tasked with implementing. It was far more liberal than the 1861 abolition in the Empire proper, with winning over support of the numerous peasant class as an important goal. Other significant reforms that followed were the municipal reform which introduced municipal self-government (1864), abolition of dominial relations in formerly private cities (1866), an administrative reform (1867), and the city reform of 1869–1870 which this article is concerned with. Before its dissolution in 1871, the Constitutive Committee has also worked on preparing a reform of the judicial system the passing of which was delayed until 1875, and which was introduced in 1876.

The Kingdom has continued in a much unchanged form until World War I—its occupation by Germany and Austria-Hungary in 1915 and the retreat of the Imperial Russian Army and the Russian bureaucracy. Following World War I, together with parts of Prussia and Austria-Hungary, it formed the basis of the independent Polish state that came into existence in 1918. Currently most of the territory of the Kingdom is part of Poland, with smaller parts belonging to Lithuania and Belarus.

3.3.2 City Reform of 1869–1870

On June 13th, 1869, Emperor and Autocrat of All the Russias, but also Tsar of Poland—Alexander II—signed the *ukaz* that deprived 336 out of 452 cities in the Kingdom of Poland, some as old as 650 years, of their city status. The deprived cities have become rural hamlets, or effectively, villages where, unlike in cities, democratic institutions were in place. Why did the reform take place? And why was it those particular cities that were degraded?

Preparation of the reform and the selection of cities for degradation were the responsibility of the Constitutive Committee. The multi-volume publication *Postanovleniya Uchreditel'nogo Komiteta v Tsarstve Pol'skom* (Resolutions of the Constitutive Committee in the Kingdom of Poland) provides us with invaluable infor-

mation into its inner workings, shedding light on these questions. It is a collection of meeting protocols and resolutions undertaken by the Constitutive Committee that was put together in chronological order and published in print for distribution within the Tsarist bureaucracy.

A Committee member, Active State Councilor Vladimir Trubnikov was appointed in July 1867 to chair an interim committee preparing recommendations. On February 26th, 1869, the Constitutive Committee has met under the chairmanship of the Viceroy of the Kingdom of Poland, General-Field Marshall von Berg, to decide on the final shape of the reform. A forty-five pages long protocol from that meeting provides detailed evidence of the Russians' considerations. The Constitutive Committee has debated Trubnikov's recommendations as to the criteria for selecting cities for degradation, considered various alternatives, and discussed comments submitted from St. Petersburg by the Minister of Internal Affairs, Adjutant General Timashev (Uchreditel'nyy Komitet v Tsarstve Pol'skom 1869a, Article 2477).

These deliberations reveal that the largest concern driving the selection of cities for degradation was their ability to self-finance the operations of a magistrate. It was anticipated that propination fees that were a major source of city revenues will be lifted soon due to reforms, and hence a sound financial situation of a city was necessary for a continued maintenance of city administration. Trubnikov has initially proposed the following criteria, where meeting two out of three would be sufficient for degradation: 1) City population below 3,000 inhabitants, 2) Peasant-burghers constitute at least 50% of all property owners, and 3) Annual city revenues do not exceed 1,500 Rubles. Population as a criterion was important because it was more feasible to defray costs of the administration over more people. Share of peasant-burghers mattered because in cities taxes were based on hearths, and not land, whereas the opposite was true in villages. Finally, city revenues

were a direct measure of the ability to finance the operations of a magistrate office.

In his letter, the Minister of Internal Affairs proposed instead a different set of criteria, one that was applied in a draft project for reforming urban governance in the Empire (concurrently under preparation).[6] These were: 1) City population below 5,000 inhabitants, 2) Annual city revenues do not exceed 7,000 Rubles, and 3) The value of real estate in the city is less than 200,000 Rubles. The minister stated that the last criterion is most important because it best reflects the ability of burghers to pay taxes. Since no data existed on the value of property in cities of the Kingdom, an alternative measurement that would proxy for property value was proposed—the value of real estate that was insured against fire.

Another debated criterion was to consider the promise of cities to achieve satisfactory economic development in the future. Three arguments were given for rejecting this criterion: 1) "assumptions about the future are always more or less conjectural and do not coincide with the reality, as has already been proved [by] the long-term fruitless existence of many cities of the Empire", 2) the conditions for industrial development "seem to be exactly the same, both for cities and for villages", and 3) if such a need arises, hamlets can be renamed into cities in the future.

The various proposed criteria would leave between 30 and 132 cities in the Kingdom, down from 452. The committee has settled on leaving 116 cities, while degrading the remaining ones. The final selection appears to be based on: 1) population, 2) city revenues and 3) the value of insured buildings. Nevertheless, application of the criteria was not definitive and overall, the reform did not fully

6. Presumably, Timashev was referring to the forthcoming Municipal Reform of 1870, in preparation since 1862. Draft of this regulation was made available to Trubnikov in September 1867 (AGAD KRSW, 1867-186?, 1/191/0/–/130), which explains the similarity of Trubnikov's and Timashev's proposed criteria.

take into consideration the actual situation in the affected cities. This is likely a result of constraints that the Committee has faced. I discuss these in more detail in Appendix A.2.1. Appendix A.2.2 discusses in detail the reactions of city inhabitants to the reform.

At the same time, the Constitutive Committee was aware that their decision may cause discontent and has undertaken two steps to reduce the potential backlash. At the proposal of a Committee member, Senator Braunschweig, it was decided that the degraded cities should be renamed into hamlets (*posad*) and not villages. Class and status considerations were important at the time. Not (formally) renaming burghers as peasants was seen as a way of soothing opposition. Appendix A.2.3 presents a detailed justification.

Secondly, the Committee for the Affairs of the Kingdom of Poland (an advisory body to the Emperor that operated in St. Petersburg) suggested that the list of cities due for degradation should not be published all at once but gradually, at the discretion of the Constitutive Committee, considering local circumstances, because the sudden renaming of a large number of cities could be misinterpreted (Uchreditel'nyy Komitet v Tsarstve Pol'skom 1869b, Article 2650). This suggestion was taken into account and which cities were to be degraded was announced in twenty separate executive decisions the announcement of which was spread over a period of one year. The order and the gradualness with which the announcements were to be made was determined based on opinions solicited from provincial governors (Article 2680).

As a consequence of the reform 336 out of 452 cities have lost their city status, which led to the introduction of democratic institutions in those cities. Figure 3.1 maps the degraded and remaining cities.

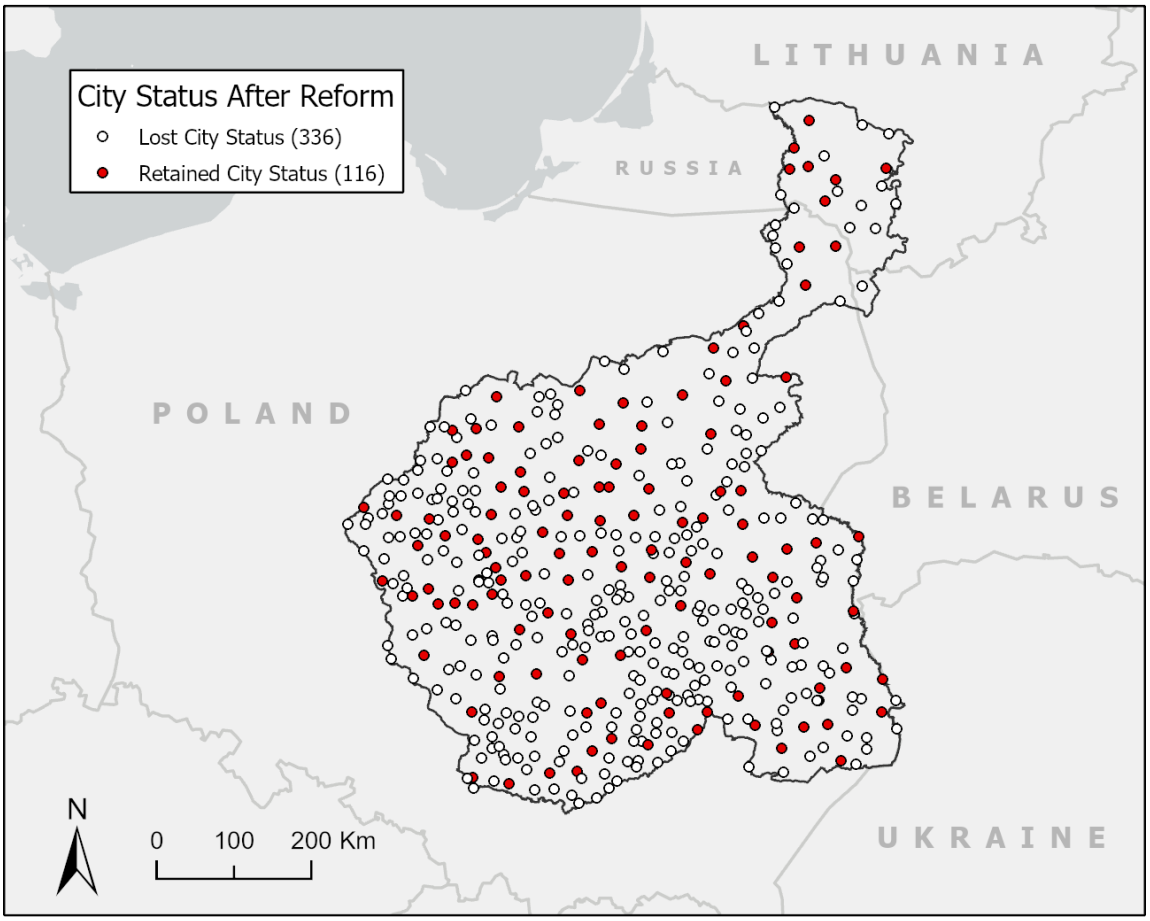


FIGURE 3.1: Cities in Congress Poland and the 1869-1870 City Reform

3.3.3 *Channels of Transmission*

City status affected the relative condition of towns through two related channels of transmission. It determined territorial jurisdiction—both in the area of the judiciary as well as local government—that mattered for the position of landed relative to burgher interests.

Being declared a city restricted the territorial extent of jurisdiction to city limits, important because of the geographic segregation of socio-economic groups. Individuals representing landed interests are more likely to reside outside of towns, where urban interests are concentrated. Moreover, city status created differences in how mayors and judges are selected. Towns with city status lacked political in-

clusiveness, with officials being appointed by the Russian administration. Towns without city status had democratic institutions in place, and officials were elected from among the local population.

The latter has favored representation of landed interests because of the larger territorial span of such jurisdictions incorporating geographically-sorted landed socio-economic groups (peasants, landed gentry) and because of a landed property qualification for voting and eligibility for office. In what follows, I discuss the two transmission channels in detail. Appendix A.2.4 addresses the possibility of alternative factors and explanations, the role of taxation and the discrimination of Jews, showing that they are unlikely to have played a role.

City Government

City status determined the form of local government. Degraded cities were governed by the same rural regulation that applied to villages, and it involved a degree of democratic self-government where municipality/village chiefs would be elected from among the local population.[7] There were no inclusive political institutions in cities and mayors were appointed by the Russian government.

In villages, political participation rights were determined by a land census. This was problematic for (former) burghers because land holdings in urban areas tend to be much smaller than in villages and in most cases, former cities were grouped into municipalities with other (truly rural) villages—although an exception applied to 62 of the former 332 cities which constituted a municipality of their own.[8] In recognition of this, the Constitutive Committee has allowed for the requirement to be selectively halved for certain hamlets, to 1.5 morgs of land (1 morg

7. To be eligible for office, candidates must have resided in the municipality for at least 3 years (Konic and Olszewski 1883, 17) .

8. This was more common in more populated localities where a joint municipality would be deemed too populous. Preferences of inhabitants and provincial governors, as well as geography all played some role as well. See Appendix A.2.2.

≈ 0.56ha) for selecting village chiefs (*sołtys*) and to 3 morgs in the case of municipality chiefs (*wójt*) (Poland 1864, 72–3; 1870a, 88–9).[9] Nevertheless, in some towns not even a single inhabitant met the threshold. This has clearly put non-peasant burghers in a relative disadvantage. Figure 3.2 shows a simplified scheme of the administrative division of Congress Poland following the city reform.

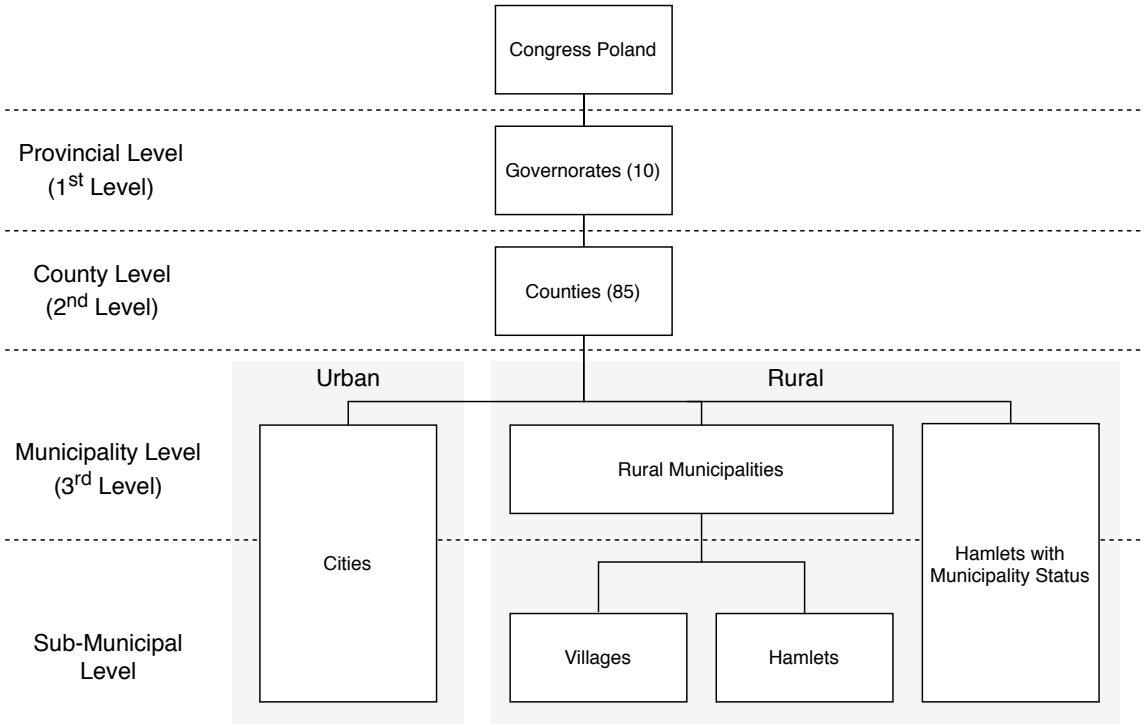


FIGURE 3.2: (Simplified) Administrative Division of Congress Poland After City Reform

The administrative tasks of cities and (rural) municipalities were similar. They were responsible for, among others, keeping population registries, documenting civil status for non-Christians, tax collection, administration of infrastructure such as roads and bridges, reporting to county chief, and oversight of health and educational facilities, should any exist. They would also manage their own property. One additional task of cities was in the area of policing, but in practice this ap-

9. Village chiefs were subordinates of municipality chiefs. The position of a municipality chief was one that carried much more power and control, and I restrict myself to it when discussing self-governance.

plied only to the largest cities. Cities and municipalities would also provide or subsidize local public goods. Examples of typical local public goods are primary schools, doctors and hospitals, slaughterhouses, veterinary inspection, supervision of craft guilds, street lighting or fire brigades.

Presence of a land census has favored local landowners at the expense of non-peasant burghers in degraded cities in two ways. First of all, it gave relatively more political power to peasant-burghers within the hamlet. Second of all, most of the hamlets were joined with other villages to form common municipalities, where relatively more political power would be held by the more agricultural inhabitants of villages, further diluting the political position of not only non-peasants but the whole hamlet in general. The latter channel would not apply to hamlets that had a status of a municipality.

I anticipate that the presence of democratic institutions in degraded towns would result in policies and decisions undertaken by municipalities, municipality chiefs and municipal assemblies that would reflect the priorities of landowners and disregard those of other socio-economic groups not given agency. In cities, I expect the appointed officials to not display the same extent of partiality toward landed interests because these officials would not be vested in local affairs and would not depend on local landowners for obtaining and keeping their position. Table 3.1 summarizes the most important institutional differences between degraded and remaining cities.

Judiciary

City status in the Kingdom of Poland determined judicial jurisdiction. Since courts in cities operated on a different basis than those outside of them, city status had implications for the justice system in place. As the judicial system was one of the objects of Alexander II's reforms that coincided in time with the city

Table 3.1: Summary of Differences in the Local Government Between Cities and Non-Cities

	Retained City Status	Lost City Status
Political Jurisdiction		
Government Type	City Government	Municipal Government
Territory	City	Hamlet (62 towns) Hamlet with Villages (274 towns)
Mayor Selection	Appointment	Election
(S)electorate	County/Provincial Government	Local Landowners
Mayors/Chiefs		
Residence	No Restriction	Local
Property Qualification	No	Yes

reform, one must distinguish between two periods: pre-1876 and from 1876 onward. My focus is on the post-1876 period because it had the greatest implication for long-term development following the city reform. Although the details of how the justice system operated before 1876 differed, the main conclusions about the post-1876 system are still largely applicable to the preceding period.

The reform finalized in 1875 and effectuated in 1876 was meant to introduce the Russian judicial system being put in place throughout the Empire beginning in 1864.[10] It has restructured the administration of justice by, among others, separating the administrative and judiciary branches and creating a classless jurisdiction, removing the remaining feudal elements. Jurisdiction was divided into two groups of courts separate from each other: the Peace Judiciary and the General Judiciary. The two groups of courts administered both civil and penal law but were distinguished by the weight of tried cases.

The Peace Judiciary consisted of Peace Courts and Municipal Courts, which were grouped together into joint peace court districts to form second-instance

10. Decision to extend the judicial reform to Poland was undertaken already in 1864. The delay in implementation stemmed from disagreements about how to adapt it to the Kingdom and because of political infighting at the highest administrative levels of the Empire (Bereza 2003).

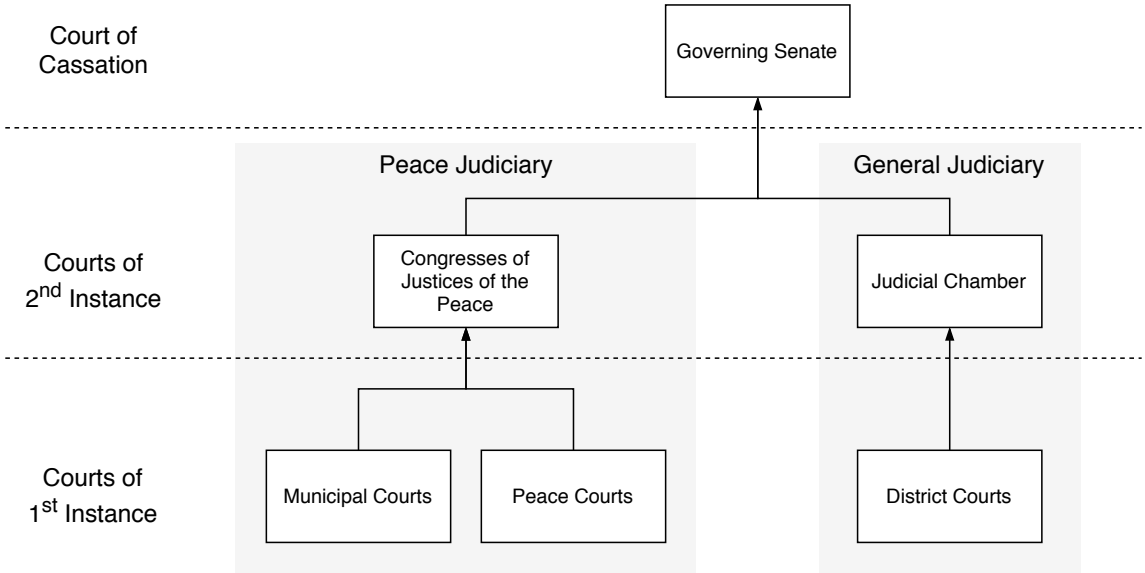


FIGURE 3.3: (Simplified) Structure of the Judiciary After 1876 Judicial Reform

courts known as Congresses of Justices of the Peace. Peace Courts held jurisdiction over administratively-defined cities and typically their jurisdiction would cover one, but in some instances two cities or a part of a city (e.g. in Warsaw). Municipal Courts held jurisdiction over the countryside (including the degraded cities) and the jurisdiction of a single court was legally capped at 4 municipalities, and in practice covered either 3 or 4 municipalities (Russia 1876b, 80). Peace and Municipal Courts both operated as courts of first-instance and will be my primary focus. Figure 3.3 presents their position within the post-1876 judicial system.

In principle, the Peace Judiciary dealt with criminal proceedings over offenses carrying a maximum of 1 year imprisonment or a fine of up to 300 rubles (Godlewski 1881, 99).[11] Adjudicating civil lawsuits, it would deal with cases where the amount of liabilities or damages does not exceed 250 rubles (115). This was increased to 300 rubles in 1882 (Godlewski 1885, 206–11), with more cases being channeled to the Peace Judiciary. General Judiciary proceeded over cases where these thresholds were exceeded.

11. For comparison, at the turn of the 19th and 20th century an industrial laborer would earn an average of 240 rubles per year (Jezierski and Leszczyńska 2010, 161).

These thresholds, although at first impression rather modest, meant that the vast majority of court cases would go through the Peace Judiciary. For example, of all the legal cases brought to courts of first-instance in the Kingdom in 1893, 95% of them would be filed at Municipal and Peace Courts (see Appendix Table A.6). Thus, the Peace Judiciary played a leading role in the country's justice system.

Apart from their territorial jurisdiction, the primary difference between the two types of courts was how judges were selected. As opposed to Russia proper, justices of the peace in Polish cities were not elected but appointed by the Russian government. This was a political decision that allowed for ethnic Russians to be judges in cities which were centers of the independence movement (Bereza 2010, 605). The primary motivation was to ensure that the judicial system will not provide protection to any "revolutionary elements" (Spasowicz 1892, 348–9) as urban citizens were the most active participants in the 1863 uprising (Głębocki 1894). In the countryside, a judicial system with inclusive institutions that incorporate the peasantry as a social class most disposed favorably toward the Tsardom was seen as more optimal than appointing scarce Russian bureaucrats (Spasowicz 1892, 356–7). Rural municipalities had democratic institutions in place, and Municipal Court judges were elected by local populations eligible to vote, i.e. the landowners but not other property owners.[12]

Qualifications required from candidates for municipal and peace judges were identical, other than the education minimum being secondary in peace and primary in municipal courts, and most importantly—municipal judges needed to own a sufficient amount of land as to be eligible for being elected chief of munici-

12. Several provisions allowed for the Russian state to intervene and either oppose candidates or appoint their own. Although practiced, the majority of judges—e.g. 94% in 1876 and 70% in 1894—were still being elected by local voters; even among those appointed, less than half were ethnic Russians (Głębocki 1894; Korobowicz 1995, 107–8). It was striven for appointed judges to be local as well (Bereza 2002, 26). Interventions were motivated either by political disloyalty (toward the Russian state) or insufficient education of the candidate (Chwalba 1999, 192).

pality, but no such restriction applied to peace court judges (Godlewski 1881, 80–1; 1881, 89; Russia 1867, 37–41). This ensured that in municipal courts both non-landowners and outsiders not vested in local interests could not be appointed as judges. Table 3.2 summarizes the differences in jurisdiction between cities and hamlets.

Table 3.2: Summary of Key Differences in the Judiciary Between Cities and Non-Cities

	Retained City Status	Lost City Status
Jurisdiction		
Court Type	Peace Court	Municipal Court
Territory	City	Multiple Municipalities
Judge Selection	Appointment	Election
(S)electorate	Minister of Justice	Local Landowners
Judges		
Residence	Non-Local (Russians)	(Typically) Local
Property Qualification	No	Yes
Education Minimum	Secondary	Primary

I draw a parallel and argue that Peace Courts, with their Russian outsiders appointed as judges, were better suited to deliver impartial justice compared to Municipal Courts, where local judges who were landowners elected by other local landowners would preside. The preeminence of landowners over the municipal judicial system and lack of their accountability to non-landowners would put urban (craft/merchant/industrial) interests in a relatively unfavorable position and consequently, city jurisdiction, with its absence of democratic institutions, would provide for a better environment to conduct non-agricultural economic activity.

3.4 Empirical Strategy

I argued that the introduction of democratic political institutions that came with city status degradation has privileged landed relative to urban elites, whereas in

cities no such privileged position of landed interests existed. This had important consequences for economic development, especially when local interests were rival. It created a relatively more favorable environment to industry, trade and commerce in non-degraded cities, which led to their relatively faster urban growth.

I expect self-interested landed elites to pursue policies that are favorable to them. They impose their preferred policies through their control of the judiciary and city government. Landed elites may find it in their interest to block any policies favorable to non-landed groups, even when they are universally beneficial, as long as that would empower urban elites relative to landed elites.

To test this argument, I look at four types of evidence. First, we are interested in directly identifying whether lack of city status and the presence of democratic institutions were related to economic development (Hypothesis 1). I proxy for economic development with population growth. To get at the proposed mechanism, we then want to verify whether indeed towns with city status differed in their policies (Hypothesis 2) and partiality of the judiciary compared to those without (Hypothesis 3), and I do so by looking at the efficiency of courts and provision of local public goods.

Finally, I want to show that the governance of degraded towns was less favorable to non-landed interests, and that city status had an effect on the social and economic structure of towns (Hypothesis 4). I verify this by looking at the emergence of industry and whether towns with city status were the preferred location of such investments.

3.4.1 Data

I am interested in the characteristics of the 452 towns that had city status prior to the reform. To ensure that institutional differences can be attributed to city status alone, I exclude Warsaw—it was governed by separate regulation—as well as all

other provincial capitals and the city of Łódź—as they were subjected to the control of provincial, not county government. I exclude from analysis two towns that lost city rights at a later time: Góra Kalwaria (in 1883) and Zawichost (1888). I also exclude cities that received city rights in-between, that is, Sosnowiec (1902) and Puławy (1906). This leaves us with 439 towns, of which 336 were deprived of city status (the treatment group), and 103 remained as cities (the control group). Appendix Table B.1 provides summary statistics for key variables. Appendix Table A.2 summarizes pre-treatment characteristics of the two groups. Appendix A.1.3 describes data sources in detail.

3.4.2 Outcomes of Interest

Population Growth

Constructing a measure capturing different levels of and changes in economic development across time at the city level is challenging in any setting with a historical dimension. I follow Acemoglu, Johnson, and Robinson (2002), Bairoch (1988), De Long and Shleifer (1993), and Stasavage (2014) and use urban population as an (albeit imperfect) indicator of economic development in preindustrial times. I argue that city status and the resulting lack of inclusive institutions was associated with greater levels of economic development and thus, greater population growth.

The main period of interest stretches from 1869—the year the city reform was introduced until 1909—the last year before World War I for which data for both degraded and non-degraded cities is available. This 40-year period is long-enough to capture long-term trends and at the same time not being impacted by the massive shock of World War I, together with the subsequent socio-economic and socio-political developments.

To ensure we are not simply picking up the effect of pre-exisitng trends

whereby some towns were growing slower already prior to the city reform, being more likely to become part of the treatment group, I also look at the effect of treatment on pre-treatment population growth as a placebo outcome. Finding a positive association between treatment and pre-treatment population growth would suggest that the outcome of interest is not caused by the treatment but rather, that I am picking up the effect of an unobserved confounder. To capture pre-existing population growth, I look at changes between 1858 and 1869, and 1825 and 1858.

Public Goods

To capture provision of public goods, I focus on the provision of public health. While an individual's health may seemingly appear to be a personal matter, the context of 19th century Europe where epidemics of contagious diseases were commonplace and where important advances in medicine and epidemiology were made suggests a much broader societal importance of the provision of public health.

In the context of the Russian Empire and the Congress Poland specifically, I focus on the presence of doctors and hospitals as two important public goods in the area of public health that were largely provided or subsidized at a local level. Local provision of public health is a reflection of local wealth, e.g. the population's ability to pay for medical services either directly or for these to be subsidized through public expenditures or charitable contributions, as well as the need for such services.

The need is generally apparent when comparing the Kingdom relative to the rest of Europe. In 1911, the Kingdom had 1 doctor per 13,500 inhabitants compared to 1 per 2,000 in Prussia and 1 per 1,000 in Austria (J. Jaworski 1911). A similar shortage existed with regard to hospitals—there were only 5.4 beds per

10,000 inhabitants in the Kingdom, compared to more than 20 in Prussia and Austria (Męczkowski 1900). Moreover, public health provision was especially important wherever industrialization proceeded. Factories and plants in the Russian Empire were a major source of infectious diseases such as cholera, which thrived in crowded and unsanitary conditions of 19th century industrial enterprises (Poddubny et al. 2014). That is why providing health care was important in places where industry developed. But it was also important for political reasons—to appease the growing labor movement which was to threaten political stability of the Empire (Fijałek 1968).

Already in 1866 attempts were made to make industrialists responsible for the provision of health care to industrial workers. It was stated that large factories should provide 1 hospital bed per 100 workers. These norms were generally not adhered to because no enforcement mechanism was ever put in place, but interestingly, there also existed a practice of "outsourcing" hospital beds to municipal hospitals (Więckowska 2007). This points to an important observation—there existed efficiency gains in the public provision of health care whereby industrialists would either subsidize hospital beds in public hospitals or these would more generally be subsidized through local public expenditures.

We would expect that those towns that move away from agriculture will have both a greater need and a greater capacity to expand public health provision. Since my theory argues that early democratization that came with loosing city status will be associated with greater relative agrarianization, I associate city status and a lack of democratic institutions with more public health.

I collect information on doctors from *Rossiyskiy Meditsinskiy Spisok* (Ministry of Internal Affairs, Russia 1914), a comprehensive government publication listing all doctors in the entire Russian Empire by name and place of residence. I use this information to establish the number of doctors residing in each town in 1914.

I then create two variables: a dummy variable coded 1 if there was at least one doctor residing in a town, and a variable for the number of doctors per 1,000 inhabitants in 1914, using 1909 population as a proxy. I also collect information on hospitals from Męczkowski (1900), who lists all hospitals in 1897. I create a binary variable coded as 1 if a town had a hospital, and 0 otherwise.

Effective Judiciary

City status determined how judges were selected and the territorial extent of judicial jurisdiction, creating a difference in who adjudicates and who the judges report to. This should have consequences for impartiality of judges in degraded cities, where due to democratic institutions judges would be chosen by landowners from among landowners. I expect that this would demonstrate itself in cases were one of the parties to a judicial proceeding is a landowner while the other one is not, i.e. where the interests of landowners and non-landowners are rival. This would have been the case with civil law procedures.

To capture this empirically, in an ideal situation we would want to compare court decisions in similar cases but where the plaintiffs and defendants either are or are not landowners, and observe any differences. The empirical setting that I operate in does not provide such detailed evidence, and approximations must thus be used. Taking a step back, in the context of Congress Poland a judge could act partially in one of two ways: 1) by adjusting the proceeding and judgment in favor of one of the parties, or 2) adjusting the date of a hearing, possibly delaying it indefinitely. The former is more direct, but can be ineffective if a party successfully appeals the ruling. Still, we could capture this empirically by observing differences in appeal rates depending on who adjudicates. I consider such evidence in Appendix A.2.5.

The latter way is indirect (in the sense that the case is still open), but it is highly

effective especially in delaying and postponing an unfavorable decision. In fact, this was one of the most common examples of bribery in the judiciary (Chwalba 2001, 93). Corruption notwithstanding, I expect that the rivalry of interests between landed and non-landed individuals would result in landowner judges in degraded cities applying this practice more commonly, resulting in greater delays in civil proceedings in Municipal Courts than in Peace Courts that operated in cities. A backlog of cases in a court is symptomatic of strategic delays in adjudicating cases by judges, but also more broadly reflective of the quality of a judiciary, particularly important for urban elites whom we could expect to more commonly engage in market transactions.

I utilize an official reference yearbook for the judiciary in the Kingdom, *Pamyatnaya Knizhka Varshavskogo Sudebnago Okruga* (Commemorative Book of the Warsaw Judicial District) (Varshavska Sudebnaya Palata 1899). For each Municipal and Peace Court, it reports the number of cases that were brought to court and that were adjudicated in 1898, as well as the number of cases that remained unadjudicated from previous year. The numbers are reported separately for civil and criminal law cases. To capture the delay in proceedings, for each court I calculate the ratio of civil cases remaining from previous year to the number of civil cases that were adjudicated in 1898. I then match each town in my sample with its respective court.

To ensure that any differences in the backlog of cases are not driven by unobserved differences in the quality of courts and judges, or their corruptibility, I consider the backlog of criminal law cases as a placebo outcome. We would expect many similarities in how these factors affect both criminal and civil procedures, but one important difference is that, in principle, the interests of town dwellers are not rival in criminal cases. If there are no systematic differences in courts and judges, we would expect to see no difference in the placebo outcome between

degraded towns and cities.

Socio-economic Structure

City status, through its lack of inclusive institutions that favor landowners, affects local policies, creating a more favorable environment for urban vis-à-vis landed interests. If that is indeed the case, we would expect the structure of the local economy in towns with and without city status to diverge. Since the studied period coincided with early industrialization which picked up after the 1864 abolition of serfdom,[13] we would like to see whether industry was more likely to emerge in towns with city status.

For data on industry, I use the two-volume gazetteer of Bobiński and Bazewicz (1901-1902) containing a list of all cities, towns and villages in the Kingdom in 1900. Besides information on the location of each settlement, it also contains information on the presence of any industrial plants. I use this information to create a binary variable equal to 1 if a town had at least one industrial plant (see Appendix Table A.3 for details).

The emergence of industry could be driven by pre-reform proto-industrialization. To account for that, I utilize an 1866 archival document (RGIA 1866, F. 1290 Op. 4 D. 759) containing the list of all cities in the Kingdom, specifying the presence of industries, if any. Using this information I create a binary variable equal to 1 if the town had at least one (proto-)industrial enterprise in 1866.

One may be concerned that my coding for the presence of industry groups into the same category industrial plants of vastly different nature, e.g. steam-engine-powered weaving plants and sawmills, resulting in a comparison of "apples to oranges". As an alternative, I consider information on whether the town was

13. For example, Załęski (1901, 138) writes that industry has only picked up after 1871.

connected to the telegraph (or telephone) by 1900. The telegraph revolutionized long distance communications by allowing for near-instantaneous transmission of information across space. I anticipate that its development is symptomatic of industrialization and commerce, which were to benefit the most from its use. For this reason, I expect the telegraph to first emerge in the non-agricultural towns where the demand for telegraphic services would be greatest.

To provide additional evidence that the emergence of industrial plants is forestalled by local elites, I look at the presence of breweries and distilleries as a placebo outcome. Breweries and distilleries are similar to other industrial plants in many respects, but they differed in two important ways. First of all, their presence precedes early industrialization and the time of treatment, meaning that whatever breweries and distilleries were established, their owners would have been or become part of the local elite.[14] Secondly, propination laws have limited any market competition because they granted local monopolies for the production and sales of alcohol. These have been gradually lifted since 1866 starting with an excise tax reform which lifted consumption taxes on alcohol levied by towns (Poland 1866a, 6–91) and a reform which allowed for free purchase of alcohol from elsewhere (Poland 1866b, 30–1). As a consequence of those reforms, brewing and distilling have undergone a significant transformation where the number of plants has decreased but overall production has risen. The number of breweries decreased from 427 in 1870 to 194 in 1913, despite a nearly five-fold increase in total beer production (Puś 1984, 222). The number of distilleries has fallen from 1,144 in 1870 to 487 in 1912, while production increased almost four-fold (218).

Finding a positive effect of the treatment variable on the placebo outcome

14. Propination laws granted the town owner (in private towns) or the citizens (in government towns) a monopoly on the production of beer and spirits. Thus, owners of breweries or distilleries must have been of the elites or in an arrangement profitable to the elites. Puś (2016) shows that 65.9% of distilleries in 1879 were controlled by landowners.

would suggest that differences in the presence of industry between towns may be driven by local market conditions that may or may not be related to city status. If, however, we establish that the treatment affects the presence of industry controlled by urban elites but not that controlled by landed elites, this would provide strong evidence in support of the proposed mechanism whereas landed elites forestall development.

3.4.3 Model Specification and Identification Strategy

I am interested in the effect of losing city status and the resulting introduction of inclusive political institutions—the treatment ($W = 1$)—on future development outcomes in towns (Y). Formally, the quantity of interest is the average treatment effect on the treated (ATT), defined as:

$$\tau_{ATT} = \mathbb{E}[Y_i(1) - Y_i(0)|W_i = 1] \tag{3.1}$$

As shown in Appendix Table B.1, cities that lost their status in the reform were, on average, smaller and poorer. Because their pre-treatment characteristics differed so much, we cannot simply attribute differences in outcomes to treatment status. This is particularly important because I expect the criteria used to select cities into treatment to be directly related to our outcomes of interest—resulting in confounding. This can be addressed by identifying cities in the treatment and control groups that are comparable along the relevant characteristics, but one lost its city status while the other one did not, and drawing inference based on the observed differences in outcomes. If the two groups of cities are balanced in terms of the observed confounders, then any differences in outcome cannot be a result of those confounders.

To that end, I use propensity score methods. Their use allows for comparing observations that are comparable in their characteristics other than treatment sta-

tus, helping alleviate the issue of confounding. The propensity score, defined as $p(x) = p(W = 1|X = x)$, is the probability of receiving treatment conditional on covariates. Rosenbaum and Rubin (1983) show that under the following two assumptions the expected difference between the mean outcomes for control and treatment units, conditional on the propensity score, is an unbiased estimate of the (local) average treatment effect:

Assumption 1. *Unconfoundedness*

$$(Y(1), Y(0)) \perp\!\!\!\perp W|X = x$$

Assumption 2. *Overlap*

$$0 < p(W = 1|X = x) < 1 \quad \textit{for all } x \in X$$

The assumption of unconfoundedness states that once we condition on the covariates X, outcomes $Y(0)$, $Y(1)$ are independent of treatment assignment W. It implies that for all units where $X = x$, the assignment to treatment is as if random. For this assumption to hold, we need to observe all covariates that simultaneously affect assignment into treatment as well as the outcome. The overlap (common support) assumption requires that for all values of x in the support of X there is a positive probability of being both treated and non-treated.

The overlap assumption is testable and the subsequent section presents supporting evidence. Unconfoundedness cannot be tested directly. It is violated if there are unobserved factors that affect both selection into treatment and the outcome. Fortunately, the Constitutive Committee meeting protocols provide ample evidence on all the information that was available to the Committee and on what criteria were used in selecting cities for degradation. This allowed me to identify the factors that determined treatment status, minimizing the chance that the unconfoundedness assumption is violated. The following three variables are used

to estimate the propensity score: 1) ln(Population) (1869), 2) ln(City Revenues) (1858), 3) ln(Building Insurance Value) (1858). Appendix Table A.10 considers sensitivity of my results to alternative propensity score specifications.

I use a propensity score weighting technique, Inverse Probability of Treatment Weighting (IPTW), to establish causality. Propensity score weighting is a procedure that uses the estimated probability of receiving treatment to create sampling weights used for creating a pseudo-population of observations that are balanced between the treatment and control groups. The weights are defined as:

$$\hat{\omega}_{ATT} = W + (1 - W) \cdot \frac{\hat{p}(x)}{1 - \hat{p}(x)} \tag{3.2}$$

where $\hat{p}(x)$ is the estimated propensity score. IPTW is an alternative to another popular set of propensity score techniques, matching, which has a couple of important advantages. First of all, as opposed to many matching procedures, weighting does not require us to discard any data that is unmatched. We can use all observations but assign them a different weight depending on the probability of treatment. Secondly, weighting is a flexible method that can be incorporated into the regression framework, allowing for easy implementation.

3.5 Results

3.5.1 Propensity Scores Estimation and Assessment of Identifying Assumptions

I estimate the conditional probability of being treated—the propensity score. The chosen covariates explain nearly 77% of the variance in treatment. Appendix Table A.5 summarizes estimation results. Table 3.3 assesses the extent of overlap in the estimated propensity scores between treatment and control groups. Results indicate that for 120 treatment units the estimated propensity score is equal to 1. To impose overlap and meet the required identifying assumption, I remove those

units from analysis. Moreover, in the region of $[0.953, 1]$ we do not have any control units that overlap with treatment units. To address this, in my main analysis I trim the sample by removing all treatment observations for which the estimated propensity score falls outside of the support of estimated propensity scores for the control group, i.e. below the minimum and above the maximum. This leaves us with 53 treatment observations, as I discarded 278 towns from main analysis, for a total of 155 observations.

Table 3.3: Propensity Score Information

	Treatment			Control		
Observations	N	Min	Max	N	Min	Max
All	331	.176	1	102	6.75e-17	.956
Overlap	211	.176	.999	102	6.75e-17	.956
Trimmed	53	.176	.947	102	6.75e-17	.956

Table 3.4 assesses whether the weighting and trimming procedures have balanced the distribution of confounding variables between the treatment and control groups. As a reference, I also show results for the unweighted sample. The top panel considers balance in each variable separately, whereas the bottom panel considers all variables jointly.

Table 3.4: Covariate Balance Before and After Adjustment

	Unweighted				Weighted and Trimmed			
Variable	Mean		% Bias	T-test P-value	Mean		% Bias	T-test P-value
	Treated	Control			Treated	Control		
ln(Population) (1869)	7.243	8.421	-244.0	0.000	7.887	7.796	18.9	0.129
ln(City Revenues) (1858)	6.011	7.601	-212.1	0.000	6.847	6.799	6.3	0.695
ln(Bldg. Ins. Value) (1858)	10.149	11.690	-260.3	0.000	11.078	11.042	6.0	0.366
Pseudo R^2			0.770				0.022	
Mean Bias			238.8				10.4	
LR χ^2-test P-value			0.000				0.293	

Note: Two-sample t-test compares predictor means for treatment and control. LR χ^2-test tests for joint significance of predictors.

As anticipated, for the unweighted sample, there is clear evidence of an imbalance between the treatment and control groups. P-values for the t-test for equality of means are close to 0, and the likelihood ratio test indicates that all the variables are jointly significant. For the weighted and trimmed, all the p-values are above conventional thresholds and we achieve a substantial reduction in standardized bias. We also see that after conditioning on the propensity score, the Pseudo R^2 is close to 0, and the likelihood ratio test rejects joint significance of all the variables, providing strong evidence for the balancing property.

The removal of a substantial number of observations raises the question of external validity of my estimates. While it helps addressing the issue of confounding and the associated bias, can such results be generalized to all treated cities? To understand how removing observations may affect results, the reader should note that the removed observations were towns with high values of the estimated propensity score, i.e. ones that were on average poor, agrarian and sparsely inhabited. My results are therefore representative of relatively larger towns, although overall cities in the Kingdom were small by European standards.

Estimation Results

Figure 3.4 presents estimation results for the effect of treatment and the resulting introduction of democratic institutions on population growth (this and subsequent figures include 95% confidence intervals). The first model looks at the percentage population change between 1869 and 1909. I find the loss of city status to reduce population growth over the subsequent 40 year period by 64.2 percentage points.

To ensure the results are not driven by unobserved trends, I consider two placebo outcomes: population growth between 1858 and 1869, and between 1825 and 1858. The effect is statistically insignificant at conventional levels for both

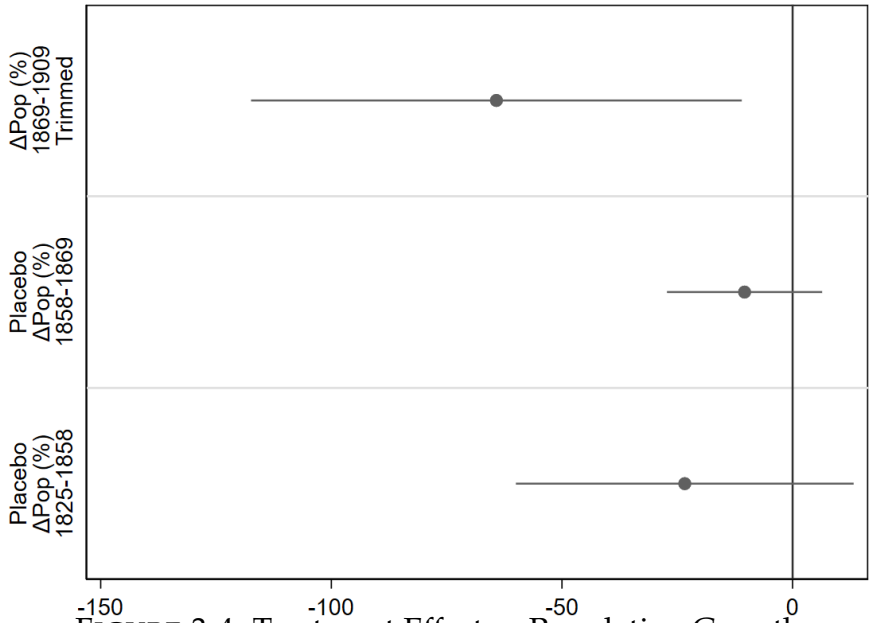


FIGURE 3.4: Treatment Effects—Population Growth

placebo outcomes, providing evidence that population growth did not diverge between the treatment and control groups until after the city status reform. See Appendix Table A.7 for details.

Table 3.5 present results for public health outcomes. The first model contains OLS estimates for the ATT on the number of doctors per 1,000 inhabitants. I find that democratization that came with treatment is associated with having approximately 0.5 fewer doctors per 1,000 inhabitants, or about the mean number of doctors in the pseudo-population created by propensity score weighting. Model 2 considers an alternative measurement—a dummy variable for whether the town had at least one doctor. In this and subsequent probit models I present both the probit coefficient (β) and the marginal effect of treatment (Mfx). I find that loss of city status was associated with an approximately 22 pp. decrease in the probability of having a doctor by 1914. Model 3 looks at whether loss of city status had an effect on the probability of having a hospital by 1897. I find the treatment to be associated with a 6.5 pp. decrease in the probability of having a hospital, but this

effect if statistically insignificant at conventional levels.

Table 3.5: Treatment Effects—Public Health

	Doctors per 1000 inh.	Doctors (Yes= 1)		Hospitals (Yes= 1)	
	(1)	(2)		(3)	
	β	β	Mfx	β	Mfx
ATT	-0.522**	-1.240**	-0.218***	-0.509	-0.065
	(0.176)	(0.425)	(0.064)	(0.480)	(0.069)
(Pseudo) R^2	0.333	0.160		0.030	
Observations	155	155		155	

Note: Model 1: OLS. Models 2 and 3: Probit. Robust SEs in parentheses. * p<0.05, ** p<0.01, *** p<0.001

This result may be driven by relative path dependence in the existence of hospitals over time, which once built, cannot be relocated as easily as individual doctors can relocate. Moreover, there existed few hospitals to begin with. We do possess qualitative evidence on the role of public expenditures for the establishment and operation of hospitals. Męczkowski (1900) presents information pertaining the establishment of individual hospitals that (at times) also informs us about their funding. Six hospitals that opened since 1867, all of them in towns with city status, are reported to have obtained some sort of financial support from local government, from local industrialists and citizens, or both. One hospital that closed is reported to have closed because of a lack of funding, and that was in the degraded town of Koniecpol (3).

Figure 3.5 plots treatment effects on the effectiveness of the judiciary. I consider three types of models. The first is a baseline model estimated by OLS. One may be concerned that the results of this model are driven by differences in the volume of cases that the courts consider, and that judges may need to prioritize criminal over civil cases. To account for that, the second model additionally controls for the log of the total number of cases that entered court in 1898. There are instances

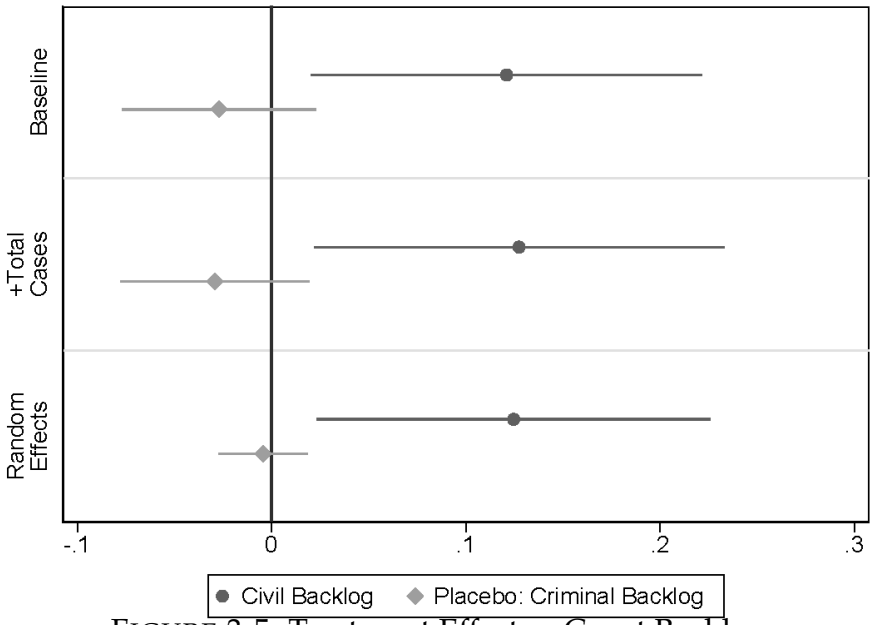


FIGURE 3.5: Treatment Effects—Court Backlog

in which more than one town belongs to the jurisdiction of the same court, which violates the assumption of independence between observations. To account for that, the third model is estimated as a random effects model. Across the models, I find that the loss of city status is associated with an increase in a backlog of civil cases equal to 12.1-12.7% off all civil cases adjudicated in 1898. At the same time, the effect on the placebo outcome is close to zero and statistically insignificant. Democratically-elected judges in Municipal Courts serving degraded cities delay adjudicating civil cases at a substantially higher rate than judges in Peace Courts serving remaining cities, while no significant difference exists with respect to criminal cases. Appendix Table A.8 presents these results in full.

Figure 3.6 shows whether introduction of inclusive political institutions impacted the economic structure of towns (see Appendix Table A.9 for complete results). Model 1 estimates the effect of treatment on the presence of industrial enterprises by 1900. Towns with democratic institutions were 30.2 pp. less likely to have at least one industrial plant. To ensure that this is not driven by pre-

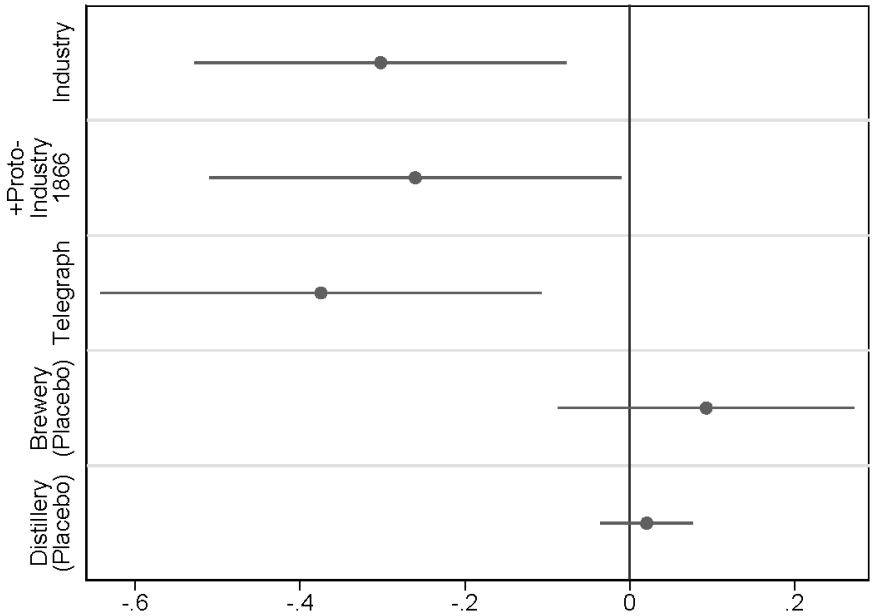


FIGURE 3.6: Treatment Effects—Socio-economic Structure

treatment proto-industrialization, Model 2 controls for proto-industry in 1866. Treatment reduces probability of industrialization by 26 pp. As an alternative variable, I consider the presence of a telegraph (or telephone) by 1900. Receiving treatment is associated with a 37.5 pp. decrease in the probability of having the telegraph. Models 4 and 5 consider two placebo outcomes, the presence of breweries and of distilleries. I find the marginal effect of treatment on the placebo outcome to be small, positive, and statistically insignificant, providing additional evidence for the proposed mechanism whereby landed elites forestall developments favorable to urban elites.

3.6 Conclusion

Scholars have argued that inclusive political institutions have a generally positive effect on economic outcomes (e.g. Acemoglu, Johnson, and Robinson 2001; Acemoglu and Robinson 2000b, 2012; Baum and Lake 2003; De Long and Shleifer 1993; Gerring et al. 2005; North 1990; Przeworski et al. 2000). Their extensions that

took place in the form of granting towns the status of a 'city', however, would be confounded by transfers of power away from traditional landed elites. Political control by landed elites, as opposed to urban (merchants, craft or industrial) elites, may have particular negative consequences for economic development, and thus any introduction of democratic institutions that transfer power *toward* landed elites may lead to adverse outcomes. This suggests that in many historical contexts the relationship between inclusive institutions and economic development of cities may be spurious, and what truly drives the effect of city status on economic outcomes is the relative gain of power by burghers.

I have exploited original city-level data and a natural quasi-experiment in 19th century Congress Poland where three fourths of the cities were deprived of their city status—which resulted in a transfer of power toward landed elites—and show that towns without city status experienced a 64 percentage points slower population growth over the subsequent 40 years. Using placebo outcomes, I show that the observed differences are not driven by trends prior to the reform. I explore the mechanisms by which city status affects long term development, and provide evidence that city status was associated with more public goods provision and a more efficient judicial system. I argue that this has led to structural divergence, whereby towns with city status attracted more industry, and degraded towns were 30% less likely to industrialize and experienced relative agrarianization. Using industrial enterprises controlled by landed elites as a placebo, I show that the likely explanation for the worse performance of towns without city status is the forestallment of development by landed elites and not any underlying differences in market conditions.

My findings have important implications for our understanding of the role of inclusive institutions in promoting development—the effect of expansions of representation may be conditioned by the economic interests of those gaining rep-

resentation, and in some circumstances inclusiveness may lead to perverse outcomes. This helps us understand not only why further expansions of political representation in already established cities resulted in mixed economic outcomes, but may also explain why scholars find diverging effects of indirect colonial rule in different contexts—because which socio-economic groups gain relative political power matters.

4

What doesn't kill you makes you stronger?

4.1 Introduction

Could formal institutions lead to norms that oppose them?[1] I propose that in situations where formal institutions results in outcomes undesirable from the perspective of individual self-interest, these formal institutions may be contested and the process of contestation may inoculate individuals with norms (informal institutions) that counteract formal institutions. These informal institutions may outlive formal institutions that led to them in the first place and may bring about a shift to a new equilibrium.

1. North (1991) distinguishes between two types of institutions: formal rules such as constitutions, laws, or property rights, and contrasts these with informal constraints such as sanctions, taboos, customs, traditions, or codes of conduct. Throughout, I refer to the former as *formal* institutions and to the latter as *informal* institutions. Going forward, whenever I refer to simply *institutions*, I am referring to *formal institutions* specifically. Another set of terms that prominently features in the literature makes a distinction between *institutions* and *culture*, which has some resemblance (Alesina and Giuliano 2015; Greif 1994; Tabellini 2008, 2010). However, as noted by North (2005, p. 50), culture involves "*the intergenerational transfer* of norms, values, and ideas". One of the reasons why it is useful to make the distinction between formal and informal institutions or (formal) institutions and culture is that, in principle, the former are legible to outside observers and can be clearly said to be in place at a particular place and time, either because they are imposed or because they are explicitly agreed upon. On the other hand, the latter are more elusive, may possibly require a longer time to develop, and arise organically without an element of engineering or design (abstracting from any deliberate attempts such as social engineering).

I develop a formal model that illustrates how continuous interaction with formal institutions may give rise to negative attitudes toward them that may be acted upon in the form of contestation. These may become internalized as norms, and consequently support an equilibrium that is alternative to the one that formal institutions are meant to sustain. These informal institutions (norms) remain with individuals even when formal institutions vanish, and may support an equilibrium shift when that happens.

The theoretical argument is tested by looking at the legacies of diverse town-level political institutions that were introduced with the 1869 City Reform in Poland. The reform took away the city status of a number of cities and introduced a new set of political institutions that were more democratic in nature but which transferred political power away from the entrepreneurial urban elites such as craftsman, merchants, or industrialists. The new formal institutions in the degraded towns have forestalled entrepreneurship of the urban elites, which resulted in a backlash and led to contestation. The political institutions of the two types of towns were largely equalized in 1918, but the new norms that developed with contestation made the people of degraded towns more resilient, giving them an edge over the populations of towns that remained as cities once the playing field for entrepreneurship is equalized. The culture in which these norms were embedded persisted into the present and is reflected in higher rates of entrepreneurship today among the populations of towns that were subjected to formal institutions harmful to entrepreneurship in the past.

With this paper, I contribute to the literature on the historical persistence of institutions and historical legacies (Alesina and Fuchs-Schündeln 2007; Banerjee and Iyer 2005; Becker et al. 2016; Bukowski 2019; Dell 2010; Grosfeld and Zhuravskaya 2015; Grosjean 2011; Guiso, Sapienza, and Zingales 2016; Iyer 2010; Neundorf 2009; Pop-Eleches 2007; Pop-Eleches and Tucker 2017; Putnam 1993;

Vogler 2019). Uniquely, I highlight how individual-level contestation of formal institutions may inoculate individuals with norms opposing and counteracting these institutions which may persist despite the demise of formal institutions and bring about a reversal of outcomes.

I also contribute to the literatures on the unintended and dynamic consequences of institutions (e.g., Mahoney and Thelen 2010; March and Olsen 1998; Pierson 1996, 2004; Steinmo, Thelen, and Longstreth 1992). I emphasize how formal institutions may shape attitudes that become collectively internalized and lead to the creation of informal institutions that may alter outcomes originally supported by formal institutions.

This paper also contributes to the literatures on the institutional determinants of entrepreneurial behavior (e.g., Baumol 1990; Hwang and Powell 2005; Martinelli 2004; North 1990; Shane 2003; Soto 1989) and the role of individual-level negative life experiences and setbacks for entrepreneurship (e.g., Cope 2011; Miller and Le Breton-Miller 2017). I bridge these two literatures by proposing how negative institutional environments can prompt individual-level capacity to deal with adversities in entrepreneurship.

In what follows, I develop my theoretical argument and formalize the proposed mechanism with a simple model. In Section 4.3, I outline the conditions needed for testing the theory and introduce the case of town-level institutions in the Kingdom of Poland. Section 4.4 introduces my data and describes the main variables. Section 4.5 presents the empirical results for a cross-section of towns. Then, in Section 4.6 I present a case study on two towns, Łęczna and Opole Lubelskie, and using microhistorical evidence I illustrate the mechanism of contestation and how the post institutional-change takes place. Finally, Section 4.7 concludes.

4.2 Theoretical argument

A growing literature posits that formal institutions may have a long-term continuing effect even long after their demise (e.g., Alesina and Fuchs-Schündeln 2007; Banerjee and Iyer 2005; Becker et al. 2016; Dell 2010; Grosfeld and Zhuravskaya 2015; Guiso, Sapienza, and Zingales 2016; Neundorf 2009; Pop-Eleches and Tucker 2017; Putnam 1993). Various mechanisms by which institutions persist are proposed. For instance, institutions may generate attitudes toward particular patterns of behavior which, through their repetitive nature, become collectively internalized by individuals through the development of social norms, becoming part of their *culture*.[2]

Commonly, persistence studies propose intergenerational transmission of values through family socialization as the mechanism by which the effects of formal institutions may outlive them and continue structuring human behavior (see Bisin and Verdier 2000, 2001). And yet, persistence needs not imply the lack of resistance. Should we expect that individuals will always wish to internalize and propagate formal institutions? If we endogenize the recipients of institutions and see them as having agency over propagating formal institutions (or not) and even attitudes toward them, this opens the possibility for several new interpretations of institutional persistence that are otherwise underrepresented in the literature.

One finding that at first may be counter-intuitive is that institutions, even if they leave persistent effects, need not result in behavioral norms that necessarily duplicate them. Take the work of Lowes et al. (2017) who study the long-term legacies of the institutions of the 17th- to 19th-century Kuba Kingdom in Central Africa on present-day cultural norms. The authors find that individuals whose ancestors came from the Kuba Kingdom and were exposed to developed state in-

2. Social norms are the unwritten rules that regulate conduct. See Elster (1989) for a discussion of what does and what does not constitute a social norm.

stitutions, demonstrate weaker norms of rule-following compared to those whose ancestors lived just outside of the reach of the Kingdom. As an explanation, Lowes et al. (2017) propose that state institutions undermine intrinsic norms because of a crowding-out effect, whereby formal mechanisms of enforcing rules that come with state institutions substitute cultural norms of rule-following. When the formal institutions vanish, cultural differences persist.

Their explanation, while plausible, raises an important question: if pre-existing norms ensured rule-following, why was there a need for formal state institutions to regulate it in the first place? This question can be better answered by a competing explanation that gives the inhabitants of the Kuba Kingdom agency over how they view and respond to state institutions. If the rules imposed by the state or the advance of the state itself were seen as, perhaps, illegitimate, or unwanted (not an inconceivable scenario, e.g., see Scott 2009), then the effect of the Kuba state institutions that we are seeing is not a result of any crowding out, but instead, a result of deliberate opposition to the centralizing efforts of the Kuba Kingdom and the rules that came with it. Institutions may lead to the creation of norms that directly counteract them. The very fact of the collapse of the Kuba Kingdom and the formal institutions it created may have to do with these institutions being contested.[3]

The propensity of institutions to shape culture may be driven by how the institutions are received. If institutions are deemed positively, we may expect individuals to work with the formal institutions and eventually internalize them. But if institutions are deemed negatively, individuals may actively engage to counteract the effects of institutions, internalizing this opposite stance as the norm. The resulting direction of outcomes may not be obvious and would depend on the

3. Opposition to Kongo state institutions may be better understood in the context of the following description: "In its heyday, the Kingdom exacted taxes, forced labor, and collected fines from its citizens in order to prosper" (2014).

relative strength of forces at play.

The role of resistance to institutions as important in explaining institutional legacies is theorized by Neundorf and Pop-Eleches (2020), who focus specifically on authoritarian legacies. They argue that the socialization efforts of the authoritarian state may be obstructed by the competing socialization efforts of different socialization agents, such as the church, the family, or peers. These agents may promote norms and values that run opposite to those promoted by the state, weakening its effectiveness. Because the salience of some areas in which political institutions attempt to structure human behavior may be higher among these competing agents, this may explain why legacies persist in some areas but not others. The theoretical framework developed by Neundorf and Pop-Eleches (2020) has much broader applicability than solely explaining the legacies of authoritarian institutions, and provides important insights into thinking about why the legacies of political institutions persist. The presence of groups that have values, norms, or interests opposed to those that formal institutions advance may lead to these institutions being contested.

The contestation of institutions may, however, begin at the level of the individual. Darden and Grzymala-Busse (2006) highlight the importance of the extent of pre-communist schooling in explaining why in some former Soviet-bloc countries, the communist political elites retained power while in others, a communist exit took place. There is considerable variation among the former communist countries in how extensively their populations were inoculated with nationalist education before the advent of communism. The more-educated populations possessed norms that made them reject communist rule and deem it illegitimate, which led to a series of events that made communist exit more likely. Education was thus a tool that helped individuals acquire norms that led to the contestation of communist institutions. This suggests that individuals may contest and undermine

formal institutions when they choose to and have the capacity to.

4.2.1 How does contestation work?

The key element to understanding institutional persistence is whether institutions were contested. Contestation of institutions is a result of self-realization by individuals that institutions induce behavior that is not in their self-perceived interest. Contestation is a consequence of institutions inducing behavior leading to outcomes that are different from what the individual prefers. By that token, institutions that are evaluated as beneficial or neutral would not be contested. In fact, we may observe the opposite—concurrence with formal institutions. Contestation occurs when formal institutions lead to outcomes other than those preferred.

If contestation is driven by individual self-interest, then as interests and preferences differ between individuals, so may their attitudes toward formal institutions. What this suggests is that individuals may not always (openly) contest institutions, even if harmful, because they value cooperation and generally wish not to be punished for violating institutionalized norms of behavior. Contestation will be manifested more openly if the negative attitudes toward institutions are more prevalent. Individuals may still choose to cooperate within the norms set by institutions but develop intrinsic valuation that undermines such behavior as preferred.

The intrinsic valuation of behavioral norms induced by formal institutions may thus develop as a result of the experience of interacting with said institutions. This intrinsic valuation may be based on the contestation of formal institutions, inoculating individuals with norms that run counter to what the institutions promote. This may lead individuals to undermine the formal institutions when they are in place.

The intrinsic valuation that individuals develop—the internalized norms—

may show great persistence over time and outlive the formal institutions that brought these in the first place. Importantly, when individuals develop norms over actions other than those induced by formal institutions, the removal of these institutions may lead to a behavioral reversal that will result in a new equilibrium that is different from that which was coordinated upon with the help of formal institutions. Contestation of formal institutions and the subsequent accumulation of norms (informal institutions) may lead to former formal institutions leaving a persistent effect that is opposite to that promoted by the institutions.

How do individuals respond to contested institutions, and how do these shape their attitudes and norms? A potentially useful analog comes from research on how early career setbacks can be beneficial to long-term career success (Wang, Jones, and Wang 2019)—the experience of a setback may allow for learning and prepare one to better deal with any future challenges. A medical analog is captured by Wolff's law which states that bones adapt to increased pressure by becoming stronger. Individuals exposed to 'undesired' institutions are in a sense inoculated and persevere to counteract them, and when the institutions disappear, this perseverance remains. By that token, we would expect that norms take time to develop and accumulate. The continued interaction with formal institutions leads to a buildup of the stock of norms that, together with formal institutions, drives individual valuation of different actions and associated outcomes.

4.2.2 Simple model of contestation of formal institutions

The intuition developed above is formalized with a simple model.[4] Suppose two players are engaged in a game of coordination that is played over multiple periods $t = 0, 1, 2, 3 \ldots T - 1$, where T is the length of time that formal institutions are in

4. Potentially interesting extensions to this model will allow for n-players and for players to be of at least two different types. To keep matters as simple as possible, I do not consider these at this point. But in principle, the results may be driven by relative sizes of populations of the two types.

place. In this game, two actions are possible: A and B. I first assume that there are formal institutions in place that make action A (without loss of generality) to be the best response for both players irrespective of the other player's action. This is reflected in the variable $i > 0$ that enters the payoff to playing A (later, I allow for the possibility that formal institutions vanish at $t = T$). Institutions are therefore seen as an exogenous means of imposing a particular pattern of behavior, but at the same time, I allow for the possibility of individuals violating these when this is individually beneficial.

Moreover, players have intrinsic valuations related to actions A and B that are reflected in two additional elements.[5] First, $e \in \mathbb{R}$ reflects the initial relative valuation of A and B in the absence of formal institutions, or the pre-institutional cultural endowment that guides preferences.[6] If the individual prefers A to B, $e < 0$, if B is preferred to A, then $e > 0$, and if the individual is indifferent, then $e = 0$.

The second element is developed dynamically over the course of the game: individuals develop attitudes over the course of interacting with formal institutions. Negative attitudes are a form of contesting the formal institutions, while positive attitudes are a form of institutional concurrence that leads to internalizing the formal institutions. This is captured by the term b_t which measures the acquired norms (or the stock of attitudes) toward the institutionalized action A at time t. The term b_t evolves over time, changing value at every period by $\epsilon \in \mathbb{R}$. Hence, at any time t, its value is $b_t \equiv b_{t-1} + \epsilon$.[7] For simplicity, I assume that

5. These valuations may, but need not, be pecuniary in nature; they may, for example, reflect cultural norms.

6. Another way to interpret this parameter is to think of it as the pre-existing informal norms of behavior that, as North (2006) points out, may stand in the way of institutional change bringing about the desired or anticipated results.

7. A similar idea was originally proposed by Greif and Laitin (2004). Their idea was applied to extend a repeated prisoner's dilemma game to show how institutions may be reinforced or

$b_0 = 0$. We may therefore rewrite b_t as $b_t = t\epsilon$. Note that ϵ may take any value. For $\epsilon > 0$, individuals have positive attitudes toward the formal institutions and over time internalize these institutions, leading to positive values of the b_t term. Importantly, if $\epsilon < 0$, individuals are opposed to the formal institutions and over time contest and actively undermine them. Finally, if $\epsilon = 0$, the formal institutions do not affect the individual's intrinsic norms.

I make two additional assumptions. First, I assume that all else constant, individuals prefer to coordinate their behavior, i.e., prefer action profiles where they both take the same action. This is reflected by the term α, where $0 < \alpha < 1$, that discounts payoffs to actions A and B when the other player choose B and A, respectively. Lower values of α signify higher valuations placed in coordinated actions. Second, I assume that $i > \max(\alpha e, \frac{e}{\alpha})$. This ensures that, at least in period $t = 0$, the formal institutions will be binding. This assumption is not strictly necessary, but it makes it easier to illustrate how actions of individuals may reverse over time.

	A	B
A	$i + b_t, i + b_t$	$\alpha(i + b_t), \alpha e$
B	$\alpha e, \alpha(i + b_t)$	e, e

FIGURE 4.1: Payoffs at time t

Figure 4.1 summarizes payoffs to this game at time t. I now proceed to state basic propositions that result from this model. I will only consider Nash equilibria in pure strategies. All proofs are presented in Appendix B.1.1.

Proposition 1. *At time $t = 0$, this game has a unique Nash equilibrium:* (A, A)

Proposition 1 simply states that we begin by considering a situation where for-

undermined over time, with consequences for whether cooperation may be sustained in the long run.

mal institutions are binding and result in an equilibrium (A, A) that they were meant to sustain. If the institutions are not contested ($\epsilon \geqslant 0$), the institutional equilibrium will be sustained over time (even if the pre-institutional cultural endowment favors action B, i.e., if $e > 0$). This is stated in Proposition 2.

Proposition 2. *At time $t \geqslant 0$ and when $\epsilon \geqslant 0$, (A, A) is the unique Nash equilibrium of this game*

From now on, unless otherwise stated, suppose that $e > 0$. This is the most interesting scenario, where pre-institutional cultural endowments favor action B while formal institutions support action A. This is the setting where we would expect formal institutions to have been needed the most in the first place. The most important conclusion from this simple exercise is stated in Proposition 3. It considers the scenario where formal institutions are being contested ($\epsilon < 0$). We are interested in seeing how contestation may undermine the institutionally-supported equilibrium.

Proposition 3. *Let $\overline{\epsilon} = \frac{e-\alpha i}{\alpha t}$ and $\underline{\epsilon} = \frac{\alpha e - i}{t}$. At time $t > 0$ and when $\epsilon < 0$ and $e > 0$, the game has the following Nash equilibria:*

1. *If $\epsilon < \underline{\epsilon}$, (B, B) is the unique NE*
2. *If ϵ is such that $\overline{\epsilon} \geqslant \epsilon \geqslant \underline{\epsilon}$, there are two NE: (A, A), (B, B)*
3. *If $\epsilon > \overline{\epsilon}$, (A, A) is the unique NE*

This proposition tells us that institutional contestation need not result in a deviation from the institutional equilibrium (A, A) when the strength of institutional undermining is small (relatively high values of ϵ). Under sufficiently high contestation, both the institutional equilibrium and the contestation equilibrium (B, B)

are possible. When contestation is sufficiently high, a reversal from the institutional equilibrium toward (B, B) is inevitable. For any given value of ϵ, the contestation equilibrium is more likely as institutional undermining progresses (larger values of t) and when the initial intrinsic norms over B are stronger (larger values of e). The strength of formal institutions (larger values of i) makes the institutional equilibrium sustained for higher values of contestation. Finally, decreases in the value of α that increase penalization for the lack of coordination expand the range of ϵ for which two Nash equilibria are possible.

What this exercise illustrates is that institutional contestation, prompted by the very existence of formal institutions, may result in a shift away from the institutional equilibrium even when these formal institutions are (still) in place. As a result of the acquired attitudes toward formal institutions (and the actions and outcomes they are meant to induce), the forces of contestation may continue to shape actions even after the demise of formal institutions. This is explored next.

What happens when formal institutions vanish?

Suppose at time $t = T$ the formal institutions vanish. The game is modified by simply removing the payoff of i associated with the enforcement of choosing action A (without loss of generality).[8] The adjusted payoffs are presented in Figure 4.2.

	A	B
A	b_T, b_T	$\alpha b_T, \alpha e$
B	$\alpha e, \alpha b_T$	e, e

FIGURE 4.2: Payoffs at time T

The complete characterization of all possible equilibria in this game after the demise of formal institutions is stated in Proposition 4. I consider three different

8. A more comprehensive model would allow, for example, for values to decay over time.

scenarios depending on the value of the pre-institutional cultural endowment: (1) when the cultural endowment favors A ($e < 0$), (2) when no pre-institutional endowment exists and thus neither A nor B is preferred ($e = 0$), and (3) when the cultural endowment favors B, which is different from A that was favored by formal institutions ($e > 0$). Further, all scenarios are also listed in terms of the threshold values of contestation ϵ.

Proposition 4. *At time $t = T$, the game has the following Nash equilibria:*

1. *For $e < 0$:*
   - *(a) If $\epsilon < \frac{e}{\alpha T}$, (B, B) is the unique NE*
   - *(b) If $\epsilon = \frac{e}{\alpha T}$, there are three NE: $(B, B), (A, B), (B, A)$*
   - *(c) If ϵ is such that $\frac{\alpha e}{T} > \epsilon > \frac{e}{\alpha T}$, there are two NE: (A, B), (B, A)*
   - *(d) If $\epsilon = \frac{\alpha e}{T}$, there are three NE: $(A, A), (A, B), (B, A)$*
   - *(e) If $\epsilon > \frac{\alpha e}{T}$, (A, A) is the unique NE*
2. *For $e = 0$:*
   - *(a) If $\epsilon < 0$, (B, B) is the unique NE*
   - *(b) If $\epsilon = 0$, there are four NE: (A, A), $(B, B), (A, B), (B, A)$*
   - *(c) If $\epsilon > 0$, (A, A) is the unique NE*
3. *For $e > 0$:*
   - *(a) If $\epsilon < \frac{\alpha e}{T}$, (B, B) is the unique NE*
   - *(b) If ϵ is such that $\frac{e}{\alpha T} \geqslant \epsilon \geqslant \frac{\alpha e}{T}$, there are two NE: (A, A), (B, B)*
   - *(c) If $\epsilon > \frac{e}{\alpha T}$, (A, A) is the unique NE*

Proposition 4 reports a number of interesting findings that the model helps to illustrate. I will discuss these selectively. First, note that the institutional equilibrium (A, A) may be sustained even after the formal institutions vanish, and this may happen not only when the initial cultural endowment favored A ($e < 0$), but also if formal institutions induced concurrence instead of contestation (for positive and sufficiently high values of ϵ).

The second interesting finding from this model is that when the initial values favor policy A but its institutionalization undermines how it is valued, there exists a range of ϵ values where lack of coordination ((A, B) and (B, A)) is the Nash equilibrium of this game. This is one of the scenarios where precisely through how institutions operated, once they vanish, we would not observe any persistence of formal institutions on present-day outcomes (i.e., no coordination of actions between players in a systematic way). What is important, however, is that this scenario is qualitatively different from one where institutions have no effects on shaping norms and attitudes (e.g., scenario 2(b) when $\epsilon = 0$ and $e = 0$).

The most important finding illustrates how contestation may undermine formal institutions and result in a shift to a new equilibrium (B, B). All else constant, the stronger the contestation (lower values of ϵ), the more likely is the new equilibrium. But in situation where cultural endowments supported B, even with sufficiently modest concurrence ($\epsilon > 0$) whereby institutions are internalized, an equilibrium shift may occur. In the scenario where we would expect formal institutions to arise the most (when $e < 0$), the demise of formal institutions ensures that an equilibrium shift to (B, B) may occur even with less intensive contestation (higher values of ϵ) as compared to the threshold stated in Proposition 3, when formal institutions were still in place. This is because $\frac{\alpha e - i}{t} < \frac{\alpha e}{T}$. Therefore, there exists a range of ϵ such that $\frac{\alpha e - i}{t} < \epsilon < \frac{\alpha e}{T}$ where, in fact, the very fact of for-

mal institutions vanishing will be what necessarily prompts the shift to the new equilibrium (B, B).

In the next section, I outline the conditions that would be most suitable to testing the proposed theory empirically. I then introduce the 1869 reform of town-level political institutions in the Kingdom of Poland as an empirical case that meets the desired conditions and allows for an empirical investigation of the legacies of contested institutions.

4.3 Empirical case: Legacy of past town-level political institutions in Poland

The ideal empirical setting for testing the proposed theory would involve the presence of two important elements: (1) formal institutions that previously favored actions that run against individual self-interest and have since vanished and (2) contestation of these formal institutions by individuals.[9] These two elements make it more probable for us to observe an equilibrium shift, whereby the effects of past formal institutions have persisted and yet reverted over time as a consequence of contestation and the resulting acquisition of norms.

Additionally, it is helpful to note that equilibrium outcomes, as observed empirically, may be thought of as either flow or stock variables. Outcomes that are flows would change dynamically and reversals would be observed quickly. Outcomes that are stocks would take much longer time to change in a way visible to the observer. For example, wealth is a stock variable while income is a flow variable. If institutional changes affect incomes but we are interested in (or only observe) wealth, passage of sufficient time will be needed for meaningful changes to be observed. An alternative would be the presence of sufficiently large shocks that level the playing field and largely deplete the stock, e.g., an economic crisis or a war. While these considerations do not stem directly from the theory, which I have purposefully kept simple, they suggest that the ideal empirical setting will observe outcomes following a passage of time or following the presence of shocks.

The City Reform of 1869 that altered town-level political institutions in Poland is an empirical setting that meets these desired properties. Depending on whether they were granted the status of a *city*, towns in the post-1863 Kingdom of Poland

9. Ideally, we may wish to see direct evidence of the existence of norms. Empirically, this may be challenging in a historical setting. Contestation, essentially being a symptom, may be an alternative way of capturing the presence of norms.

were endowed with two different sets of political institutions. Towns with city status were governed by officials appointed by the Russian imperial bureaucracy who sought to keep a balance between the various socio-economic groups and their interests. Towns without city status had elections, with mayors and judges being elected from among the local landowners by the local landowners, a consequence of a landed property qualification in place. The latter set of political institutions kept political power away from the entrepreneurial (proto-)capitalist elites, such as merchants, craftsman or industrialists (the urban elites), and gave it to the landed elites who pursued policies favorable to their interests and who forestalled urban elites.

In 1869, a reform was undertaken whereby 3 in every 4 cities that existed at that time were deprived of their *city status*, which was associated with the imposition of the latter set of formal institutions. These institutions, I argue, were unfavorable to the urban elites and undermined the very basis of their economic existence. They have favored outcomes that ran counter to the self-interest of the urban elites, who may be thought of as the entrepreneurial class of small and medium-sized business owners. The new formal institutions have resulted in lesser public goods provision or a less effective and partial judiciary, all of which undermined entrepreneurship. At the same time, the pursuit of entrepreneurship was realized in individual self-interest of improving one's material well-being. This setting thus meets the first of the required elements stipulated above.

These formal institutions have stayed in place for a period of nearly 50 years, until in 1918 the newly-independent Poland introduced democratic political institutions in all towns, without regard for city status, and which enfranchised all socio-economic groups without regard for land ownership. This moment marked the demise of the past formal institutions that impeded entrepreneurship. In Section 4.6, drawing on a case study, I will present evidence demonstrating the pres-

ence of contestation—the second important element—and how it has continued through the political process to revert the effects of past formal institutions.

The final element that makes this setting attractive empirically is the presence of large shocks that may have leveled the playing field and made Polish towns devoid of past structural legacies that could have persisted through a mechanical rather than cultural reproduction. In this context, what I mean by that is that despite institutional change, firms may persist over time because once in place, they will continue to exist until forced to shut down (the presence of firms reflects a stock rather than a flow). But their continued existence should not be confused with the same entrepreneurial initiative that is needed for establishing new firms. Shocks ensure that as we observe firms, that reflects the post institutional-change environment. They also make it more likely that the observed patterns are a result of differences in cultural institutions and not other factors that will disappear with shocks. This is because large-scale shocks such as wars and revolutionary transformations act as levelers that destroy the fortunes of the well-off, having an equalizing effect (e.g., Scheidel 2018). Poland experienced a number of shocks that may have been of sufficient magnitude. The most important of these are wars (World War I, World War II), financial crises (1929-1930, 2007-2009), communist rule (1945-1989) and the subsequent "shock-therapy" transition to market economy. All of these were large in scale and sufficiently disruptive to the status quo.

To recoup, the city reform of 1869 has transformed the political institutions in towns that lost their city status. In those degraded towns, the newly-established political institutions introduced elections that have allowed for landed elites to gain representation. Landed elites would have undertaken policies that, in relative terms to towns that remained as cities, were unfavorable to the entrepreneurial class of urban elites. This may have thwarted entrepreneurship in

the short-run, but at the same time provoked contestation on the side of the urban elites. The unfavorable institutions have, in a way, inoculated urban elites, made them more resilient to unfavorable conditions, and created norms that support entrepreneurship. As the unfavorable formal institutions vanished, the individuals who were exposed to unfavorable institutions will demonstrate a comparative advantage in entrepreneurship. These qualities were embedded in local populations as cultural norms that have persisted through a mechanism of inter-generational transmission.

Because of the contestation of institutions that were unfavorable to entrepreneurship, I expect to observe an equilibrium shift where towns that were subject to previously unfavorable political institutions, will now demonstrate higher rates of entrepreneurship. The city status degradation was, however, more complex than simply affecting entrepreneurship. For example, it introduced elections that allowed local populations to choose their own mayors and judges, albeit only landowners were enfranchised. In this case, what should we expect the direction or the degree of persistence be? On the one hand, elections may, by themselves, have been seen as something positive because they allowed for democratic participation. But it is also possible that elections may have been viewed negatively because they were the means by which landed elites gained power. In terms of the formal model, the direction of the cultural endowment that favored electoral participation as well as the degree of contestation are unclear a priori, making any of the equilibria a possibility. I treat this as an open empirical question that I will attempt to get at in what follows.

4.4 Description of data and main variables

In this section, I describe the main data and variables that will be used to empirically evaluate the relationship between loosing city status following the 1869 reform (treatment) and contemporary levels of entrepreneurship.

As my starting point, I take all the 452 towns of Congress Poland that were recognized as cities just prior to the 1869 city reform. Subsequent border shifts have placed some of these towns on the territories of present-day Lithuania and Belarus. Because of the difficulties of disentangling national-level political institutions from local ones, I exclude these towns from analysis. Additionally, some towns have since been joined into other towns, cities or villages, forming singular administrative units. These towns have been excluded as well. Finally, I also exclude the former provincial capitals (including Warsaw) and the city of Łódź, as these towns were subject to different institutions. This leaves me with 409 towns that constitute my units of analysis.

My main interest is in analyzing how having lost city status and being governed by early democratic institutions that discriminated the entrepreneurial class is related to the prevalence of entrepreneurship in subsequent periods of time. For the post-1989 period, I look at the number of private firms per 1000 inhabitants, a measure of entrepreneurial density. The earliest year for which such disaggregated data is available is 1995. I also collect present-day data (for 2020) and data for 2010, which is just after the 2007-2009 crisis. I also wish to evaluate entrepreneurship in the pre-1989 period, which is difficult because private entrepreneurship was severely restricted under communist rule. To measure it, I look at the number of crafts workshops per 1000 inhabitants in 1983. The crafts sector grouped a broad set of small business activities and was arguably the most

accessible to private entrepreneurs.[10]

The second goal of this empirical analysis is to evaluate the plausibility that the relationship between past political institutions and present-day private entrepreneurship is not spurious, but rather, that past political institutions have altered informal institutions that continue to persist. To that purpose, I present four sets of evidence. First, I want to show that local populations differ not just in their inclinations to engage in private entrepreneurship, which could be driven by unobserved differences in opportunities, but that they prefer private entrepreneurship relative to public entrepreneurship (i.e., local-government-owned enterprises).[11] To measure this, I look at the relationship between past political institutions and the share of all enterprises that are public.

Second, if past political institutions indeed drive the results, then we may expect them to also shape people's interactions with present-day political institutions. An important aspect of past institutions in the degraded towns was the presence of elections as the selection mechanism for mayors and judges. This was absent in towns that remained as cities. Given that the populations of degraded towns had half-a-century more exposure to elections, we may expect them to demonstrate higher levels of democratic engagement. For example, Zagórski and Markowski (2021) find that differences in past national-level political institutions and the resulting democratic experience continue to drive present-day differences in electoral turnout in Poland. As the outcome of interest, I will look at electoral turnout for the run-off vote in the 2020 presidential election. Although national-level elections may be less related to the proposed mechanism than local-level

10. See Åslund (1985) for an overview of the state of the (non-agricultural) private sector in Poland under communism.

11. In principle, it is plausible that public entrepreneurship substitutes private entrepreneurship *conditional on* opportunities. I do not see this as relevant here given the nature of public enterprises at the local level.

ones, the major advantage is that we consider an election with the same two candidates across all of the analyzed towns. This reduces the concern that observed differences in outcomes could be driven by unobserved differences in candidates.

Third, degraded towns have in the past enjoyed lesser provision of public goods. We may wish to evaluate whether this continues to be the case at present. In order to do so, I evaluate the relationship between past political institutions and the log of present-day town-level public expenditures per capita. Towns that were degraded in the past may continue to prefer providing public goods privately. To make sure I am not just capturing differences in the *ability* to provide public goods and attributing them to the *willingness*, I will also control for the log of local government revenues from corporate and personal income taxation. As Charnysh (2015) argues, income tax revenues are a reasonable proxy of local incomes in the Polish context because tax rates and the shares of tax revenues that local governments receive are all fixed at the central level and do not vary across local governments.

Finally, I would like to substantiate that the observed relationships could plausibly stem from inter-generational transmission of norms. To this purpose, I will exploit the arguably exogenous variation in the extent to which populations of towns were replaced during and after World War II. The tragedy of the Holocaust and post-WWII migrations have decimated the once-substantial population of Jews residing in Polish towns. The extent to which Jews constituted a sizable share of the population has varied, however.

Figure 4.3 demonstrates the distribution of pre-war Jewish population shares across the towns in my sample. Some towns had close to no Jews, while others were almost entirely Jewish. The share of pre-WWII Jewish population may serve as a proxy for population replacement.[12] As larger shares of population were re-

12. The legacy of having a substantial Jewish population in the past may by itself be a factor

placed, we would expect to see less transmission of past norms and instead we may expect the norms brought by new settlers to eventually dominate, whatever these may have been. Given that degraded and non-degraded towns have not differed substantially in their shares of population being Jewish (especially once we account for differences in overall population sizes of towns), and that we have no reason to expect that new settlers self-selected after WWII based on past political institutions, I anticipate that we should observe any differences between treatment and control group towns to disappear for larger rates of population replacement. I measure Jewish population shares using data from the 1921 census. Interwar Poland had two censuses, with the second one being held in 1931. The results of the second census were not, however, published at the town-level. We must therefore resort to using 1921 data to proxy for WW2-era Jewish population.

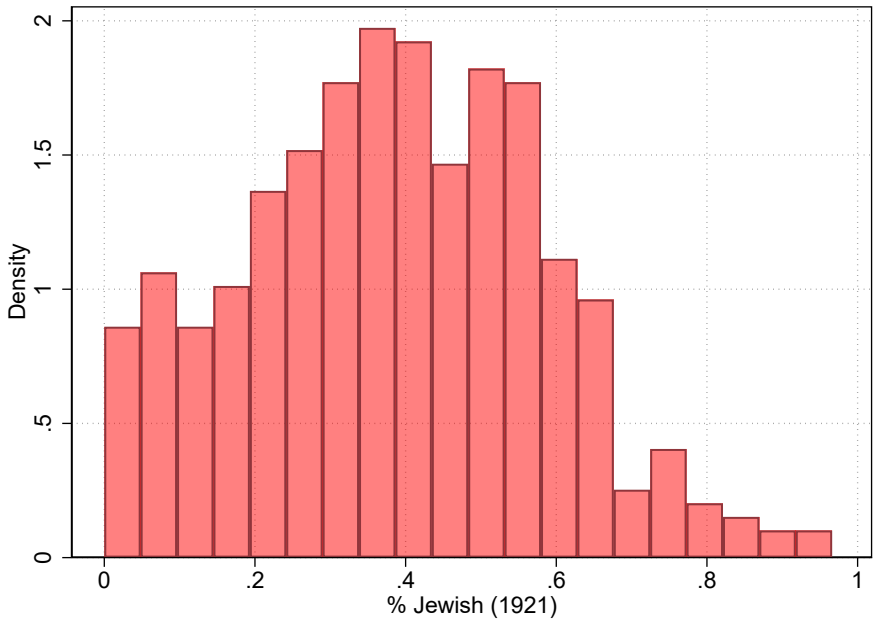


FIGURE 4.3: Histogram of share of population being Jewish in 1921

affecting my outcomes of interest, e.g. see Grosfeld, Rodnyansky, and Zhuravskaya (2013). My interest is, however, not in how the effect changes with the share of Jewish population but how the *differences* between the effects of being a degraded and a non-degraded town change across different Jewish population shares.

Last but not least, we want to ensure that any observed differences are not driven by unobserved factors that are correlated with treatment status. In all models, I will include additional control variables for contemporary city status and the log of population size. Controlling for population size is important because of the role of scale of operations that may warrant various forms of organizing economic activity (e.g., the degree of horizontal or vertical integration, the degree of specialization or differentiation). Present-day city status may be thought of as an indicator of the economic condition of the town, and in that sense, may help capture various unobservable factors that explain rates of entrepreneurship. As of 2020, 240 out of 409 towns in my sample (nearly 59%) held city status.

Appendix Table B.1 presents summary statistics for key variables. Data was obtained from the websites of the Central Statistical Office of Poland (GUS) and the National Electoral Commission (PKW), as well as from the Index of the localities of the Republic of Poland (*Skorowidz miejscowości Rzeczypospolitej Polskiej*) that contains results of the 1921 census and the 1984 Statistical Yearbooks (*Rocznik Statystyczny*), both published by GUS separately for each province (*województwo*).

4.5 Empirical results

This section establishes basic facts about the relationship between past city-level political institutions in the Kingdom of Poland (treatment) and present-day rates of entrepreneurship. I also investigate other contemporary outcomes, with the goal of assessing the plausibility of the proposed mechanism whereby half-a-century of past political institutions has led to differences in informal institutions (norms) that persisted into the present.

Main results are presented in Table 4.1. All models are estimated via Ordinary Least Squares (OLS) and include robust standard errors. For Model 1, the dependent variable is the number of private craft workshops per 1000 inhabitants, arguably the best available proxy of private entrepreneurship under communism. In Models 2–4, the dependent variable is the number of private firms per 1000 inhabitants in years 1995 (earliest available after transition to market economy), 2010 (intermediate year, following the 2007-2009 crisis which was a major shock to private enterprises), and 2020 (contemporary period), respectively. All models control for the log of population and city status (dummy variable equal to 1 if the town is a city, 0 otherwise) in the year for which the dependent variable is measured.

The results in Model 1 show little evidence for the association between treatment status and crafts per 1000 inhabitants in 1983. The coefficient is positive, indicating that losing city status in 1869-1870 is associated with 1.1 more craft workshops per 1000 inhabitants (about 0.18 standard deviations), but this relationship is not statistically significant. By 1983, there is no evidence of any advantage of towns that remained as cities until WWI. Model 2 indicates that the effect of treatment on the number of firms per 1000 inhabitants in 1995 is positive and statistically significant at the 1% level. Formerly degraded towns have nearly 8.8

Table 4.1: Association between past city status degradation (treatment) and (1) craft workshops per 1000 inhabitants in 1983 and (2–4) firms per 1000 inhabitants in 1995, 2010 and 2020

	Crafts per 1000 inh. (1983)	Firms per 1000 inh. (1995)	Firms per 1000 inh. (2010)	Firms per 1000 inh. (2020)
	(1)	(2)	(3)	(4)
Treatment	1.100	8.770**	8.219*	11.47**
	(1.130)	(3.160)	(3.221)	(3.467)
ln(Population) (1983)	-2.179***			
	(0.384)			
ln(Population) (1995)		7.068***		
		(1.265)		
ln(Population) (2010)			8.125***	
			(1.349)	
ln(Population) (2020)				7.286***
				(1.555)
City status (1983)	6.748***			
	(0.960)			
City status (1995)		34.43***		
		(2.320)		
City status (2010)			48.09***	
			(2.407)	
City status (2020)				43.83***
				(2.502)
Constant	25.94***	-46.76***	-30.20*	-10.57
	(4.069)	(13.20)	(13.27)	(15.36)
R-squared	0.33	0.56	0.63	0.50
N. of towns	334	372	386	403

OLS. Robust SEs in parentheses. * p<0.05, ** p<0.01, *** p<0.001

more firms per 1000 inhabitants, or approximately 0.38 standard deviations more. Following the crisis years of 2007-2009, there is only very modest evidence of any leveling effect. As evidenced in Model 3 formerly degraded towns still have about 8.2 more private firms per 1000 inhabitants relative to those that remained as cities throughout the long 19th century (although this accounts for only 0.27 standard deviations more). By 2020, the advantage of degraded towns has grown to having 11.5 more firms per 1000 inhabitants (Model 4), or 0.39 standard deviations.

In Table 4.2, I examine whether past-political institutions are related to: (1) the inclination of local populations to delegate entrepreneurship to public firms relative to private ones, (2) political mobilization stemming from longer exposure to democratic institutions, and (3) public provision of public goods. Establishing a continued impact of past formal institutions in these three areas would make it more probable that the observed differences in entrepreneurship indeed stem from past institutions, and that the relationship is not simply spurious.

Table 4.2: Association between past city status degradation (treatment) and the 2020 (1) share of all enterprises being public, (2) tunout in presidential elections run-off vote, (3) local public expenditures per capita, and (4) income tax revenues per capita

	Public firms share (2020)	Election turnout (2020)	ln (Public expenditures per capita) (2020)	
	(1)	(2)	(3)	(4)
Treatment	-0.0118**	0.0152*	0.214**	0.0630
	(0.00388)	(0.00629)	(0.0653)	(0.0393)
ln(Population) (2020)	-0.0166***	0.0139***	-0.289***	-0.232***
	(0.00169)	(0.00293)	(0.0291)	(0.0178)
City status (2020)	0.00408	0.00325	0.775***	0.198***
	(0.00227)	(0.00569)	(0.0376)	(0.0412)
ln(Income tax per capita) (2020)				0.547***
				(0.0280)
Constant	0.194***	0.533***	10.91***	6.699***
	(0.0179)	(0.0304)	(0.296)	(0.279)
R-squared	0.38	0.05	0.65	0.85
N. of towns	403	403	403	403

OLS. Robust SEs in parentheses. * p<0.05, ** p<0.01, *** p<0.001

The results in Model 1 show that loosing city status in 1869-1870 is negatively associated with the share of all firms being public (i.e., relatively more firms are public firms). In formerly degraded towns, public firms constitute a nearly 1.2 pp. smaller share of all firms (0.53 standard deviations). Towns that remained as cities after 1869 and had larger local government involvement through the long 19th century, have relatively more public firms at present. Model 2 looks at whether

there is a continuing effect of the exposure to democratic institutions on present-day democratic engagement. I find that the populations of degraded towns that were exposed to elections for half-a-century longer had a turnout in the runoff vote of the 2020 presidential election that was larger by 1.5 pp. (or 0.32 standard deviations).

In Model 3, I examine the effect of past city status degradation on (the natural log of) local public expenditures per capita. Surprisingly, I find that degradation is associated with expenditures per capita being 21% higher (0.38 standard deviations). One reason to be cautious about this result is that we are not necessarily capturing preferences but rather, ability to spend more. This may especially be true given that having more firms can be related to higher fiscal revenues. In Model 4, I thus additionally control for the log of income tax revenues per capita (from both personal and corporate income taxes). These tax revenues account for a substantial share of total revenues and, at the same time, the tax rates and tax base are not subject to local government control (ensuring that we control for ability but not preferences). The effect of treatment on public expenditures diminishes to 6.3% (0.11 standard deviations) and becomes statistically insignificant at conventional levels, suggesting no continued difference in public spending per capita after we account for capability.

Finally, I wish to verify the plausibility that the observed differences between towns with different past political institutions stem from the inter-generational transmission of norms (i.e., have something to do with the qualities of towns' populations) rather than through other unobserved channels, e.g., the structure of the local economy, the town's topology, or other types of endowments that may have persisted. To that purpose, I exploit the variation in the pre-WWII Jewish population share across the towns as a plausibly exogenous factor that determined population replacement around the mid-point of the 20th century. Table 4.3 presents

the results from estimating three models where treatment is interacted with the share of Jewish population in town's pre-WWII population as a proxy for population replacement. Model 1 examines the conditional effects of treatment on the number of private firms per 1000 inhabitants. Model 2 looks at the conditional effects of treatment on the share of public firms among all the firms. In Model 3, I estimate the conditional effects of treatment on the 2020 presidential election turnout.

Across the models, the results in Table 4.3 suggest large effects of treatment for low values of the share of pre-WWII population being Jewish, i.e., in those towns that on average experienced the least population replacement. The effects seem to disappear for larger values of population replacement, as indicated by the opposite signs on the interaction coefficients, presenting strong evidence that past political institutions are associated with present-day outcomes only in those towns where a degree of population continuity was ensured.

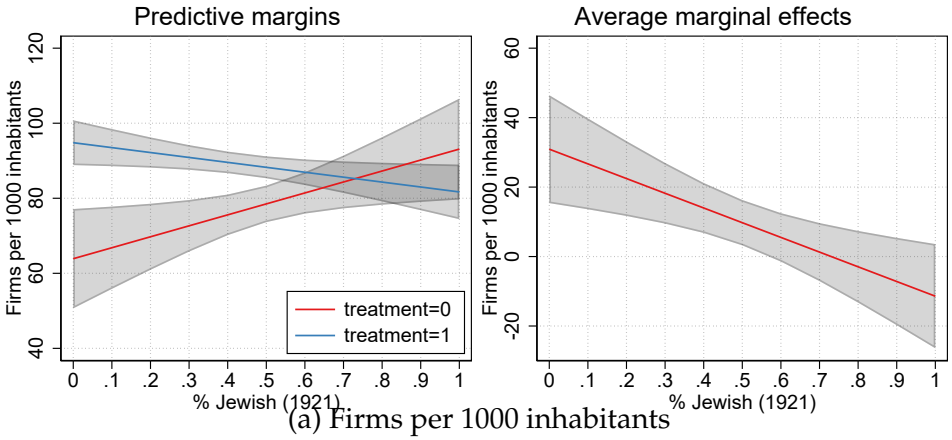
These results are illustrated in Figure 4.4 which plots the predictive margins and the average marginal effects for the three models together with 95% confidence intervals. Panel 4.4a looks at the conditional effects of treatment on the number of private firms per 1000 inhabitants in 2020. The left plot visualizes the predictive margins. As we can see, for low values of population replacement, the formerly degraded towns have approximately 30 more firms per 1000 inhabitants compared to those towns that remained as cities after 1869. These effects appear to converge for larger values of population replacement. The right plot visualizes average marginal effects. The effect of treatment stays positive and statistically significant for values of pre-WWII Jewish population below approximately 55%. For larger values, the coefficient is statistically indistinguishable from zero, suggesting no continued effect of past political institutions where population replacement was most extensive.

Table 4.3: Association between past city status degradation (treatment), share of pre-WWII population being Jewish, and (1) firms per 1000 inhabitants, (2) share of all enterprises being public, (3) tunout in presidential elections run-off vote

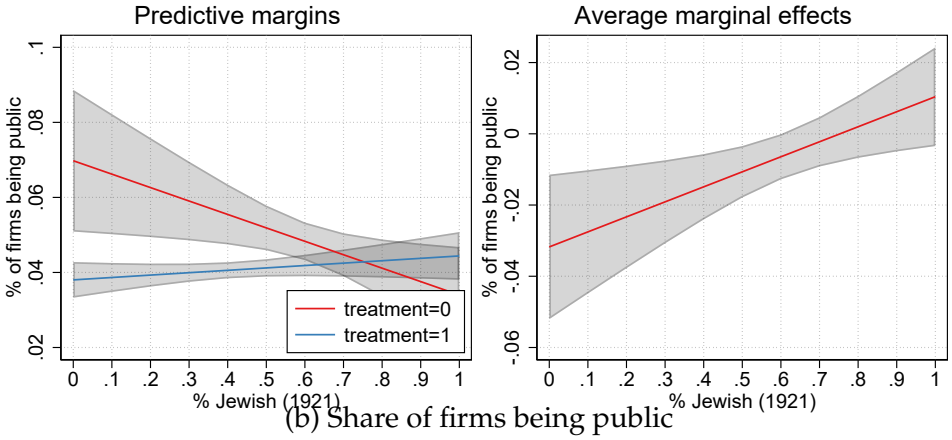
	Firms per 1000 inh. (2020)	Public firms share (2020)	Election turnout (2020)
	(1)	(2)	(3)
Treatment=1	32.10***	-0.0326**	0.0352*
	(7.892)	(0.0102)	(0.0137)
% Jewish (1921)	31.36*	-0.0382*	0.0309
	(12.57)	(0.0150)	(0.0230)
Treatment=1 × % Jewish (1921)	-44.48**	0.0446**	-0.0433
	(13.99)	(0.0158)	(0.0259)
ln(Population) (2020)	7.621***	-0.0163***	0.0138***
	(1.437)	(0.00172)	(0.00268)
City Status (2020)	45.04***	0.00370	0.00422
	(2.621)	(0.00230)	(0.00579)
Constant	-29.87	0.211***	0.518***
	(17.58)	(0.0237)	(0.0331)
R-squared	0.52	0.40	0.06
N. of towns	412	412	412

OLS. Robust SEs in parentheses. * p<0.05, ** p<0.01, *** p<0.001

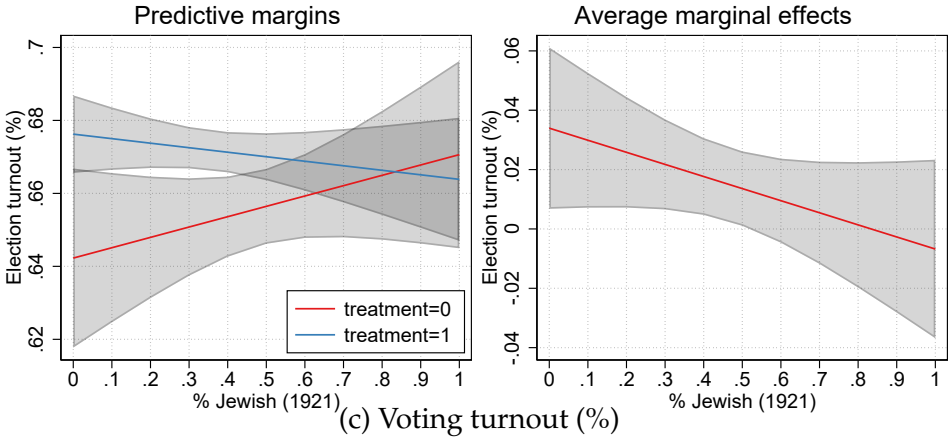
Panel 4.4b looks at the conditional effects of treatment on the share of all firms being public firms in 2020. Similarly, I find that for low values of pre-WWII population being Jewish, the degraded towns have relatively fewer public firms—the difference is approximately 3 pp. for towns with no population replacement. This difference diminishes for higher rates of replacement, disappearing at about 60% of pre-WWII population being replaced. Finally, Panel 4.4c examines the conditional effects of treatment on election turnout. Just like in the previous two panels, across towns without population replacement, city status degradation in 1869-1870 is associated with election turnout higher by about 3.4 pp. This difference diminishes with higher rates of population replacement and becomes statistically indistinguishable from zero at approximately 50% of pre-WWII population being Jewish.



(a) Firms per 1000 inhabitants



(b) Share of firms being public



(c) Voting turnout (%)

FIGURE 4.4: Predictive margins and average marginal effects conditional on share of pre-WWII population being Jewish together with 95% confidence intervals

The results presented in Figure 4.4 are precisely what we would expect to see if the effects of past political institutions continue to shape present-day outcomes by means of an inter-generational transmission of norms, under the condition that population replacement in both groups of towns originated, on average, from similar populations. These results give us additional confidence that the observed variation in outcomes is largely driven by differences in towns' populations and not any structural or environmental factors that drive outcomes irrespective of who the inhabitants are. In the following section, I will introduce a case study of two towns, where one remained as city following 1869 while the other one was degraded, in order to illustrate the mechanisms by which local populations interacted with past political institutions and how they diverged from each other well into the period where any meaningful differences in formal institutions vanished.

4.6 Case study: Łęczna and Opole Lubelskie

In the late 1860s, the towns of Łęczna and Opole Lubelskie (*Opole* in short) appeared very much alike. They were both located in the Lublin *guberniya* (province) and at a distance of about 70 kilometers from each other. The two towns gained their city charters in the 15th century and existed as cities for over 400 years at that time (Najgrakowski 2009). They were characterized by nearly identical population sizes (3,132 and 3,128 inhabitants, respectively) and in the past both were private cities. Łęczna and Opole were similar in terms of their demographic makeup. The two towns were predominantly inhabited by Roman Catholics (Poles) and Jews. From the 1860s until the end of the long 19th century, between 60% and 70% of the inhabitants were Jewish (Śmiech and Jastrzębski 2017, p. 203; Bogusz 2017, p. 357).[13] Both cities were also local trade hubs, although historically the fairs (*jarmark*) in Łęczna were larger and more famous.[14] For example, in 1864 the value of goods sold in Łęczna was 528 300 Rs while in Opole it was 199 000 Rs (Mencel 1989).

As part of the City Reform of 1869 that was implemented over the next two years, however, Opole Lubelskie ceased to be a city in 1870 while Łęczna remained one.[15] The loss of city status by Opole was consequential for the political institutions that were in place. This dichotomy between the two towns remained until 1918 when an independent Polish state came into existence and when the political institutions between towns and cities were largely unified. It was not until 1957

13. A modest increase in the share of the population being Jewish was common across the Kingdom of Poland and has largely stemmed from increased migration of Jews escaping pogroms in the Russian Empire.

14. In the past, the people of Opole have traveled to Łęczna to visit the fair (Śmiech and Jastrzębski 2017, p. 86).

15. In fact, Wiśniewski (1989) speculates that it is the presence of renowned fairs that may have led to the "favorable" decision of Łęczna keeping its city status, even though it was no different than other towns that were degraded.

that Opole Lubelskie has once again become a city.

My focus here will be to map the situation of both towns in the second half of the long 19th century, especially in the context of their political institutions and any contestation that may have taken place, explain how the differences in status have affected the functioning of towns and their populations, and then to show a growing line of divergence between them that has particularly taken off following WWI when an expansion of democratic rights has enfranchised the masses and largely unified the political institutions of the two towns.

There are several ways in which the loss of city status has impacted Opole Lubelskie. These consequences predominantly stem from a relative transfer of political power to the landowners and the resulting decrease in the involvement of the local government in public goods provision, broadly construed. For example, one of the immediate effects was that the loss of city status facilitated the demise of craft guilds (K. Kołodziejczyk 2008). This happened through the reduction of expenses by local governments on craft guild supervision (Wiech 1992). As a result, this has facilitated craft production to be driven by market forces of demand and supply (K. Kołodziejczyk 2008). Towns such as Opole Lubelskie were dominated by one-person craft workshops that were particularly susceptible to ups and downs of the business cycle (K. Kołodziejczyk 2008). These broader shifts that have affected degraded towns have put their populations in a position where being more exposed to the market, they were forced to undertake private initiative and to compete. Indeed, the end of the 19th century has brought more competition between craftsman in Opole, and it is something that was particularly visible along the Jewish-Christian divide that has very much continued to shape the state of the crafts in the interwar period (K. Kołodziejczyk 2008).

Before I proceed further, it is important to address the fact that at the outset of Poland's independence, Opole had a larger population than Łęczna. Although

population or even economic growth is not the story that I attempt to explain here, the reader may be concerned that factors that have made Łęczna lag behind Opole in the interwar period have already been present even before institutional transition, and thus may not have been activated by this transition.

There are two elements that account for the divergent population size: pre-WWI development and the experience of WWI. Opole appears to have grown faster in population only beginning from the late 1880s onward—this is a time that coincides with the establishment of sugar refineries in both Opole and also in the nearby Wrzelów village, which has caused an influx of people to the town (Mikulec 2000).[16] At the same time, the reason why Łęczna did not grow as fast as some other cities in the Lublin region was due to "random events" such as fires and epidemics (Bogusz 2017, p. 358). The second factor was large population losses during World War I. While both towns have suffered, Łęczna suffered more. The Opole municipality lost about 30% of population between 1911 and 1916 (Śmiech and Jastrzębski 2017, p. 282). Łęczna lost 41.4% of inhabitants during WWI, particularly because of conscription and evacuation of civilians deep into the Russian Empire (Lewandowski 1989).[17] I consider the divergent impacts of war, fires, disease, and even the construction of the sugar mill to have largely been exogenous factors and hence unrelated to any relevant town characteristics.

4.6.1 Local politics and the forces of contestation

When formal institutions were still in place (1870–1918)

The political institutions of the two towns differed substantially from 1870 until World War I. This difference was important in a twofold way. First, the institutions have directly determined how local political decisions were being made

16. The Opole sugar mill was the largest firm in the town of Opole from 1883 until its closure in 2005 (Śmiech and Jastrzębski 2017, p. 51).

17. The Bolshevik Revolution made returns of evacuees extremely difficult.

and whose interests were being represented. Secondly, this period was the formative period for the modern Polish independence movement in the Kingdom and the time when some of the most important political parties and movements have formed.[18] In what follows, I will sketch what little we know about the politics of the two towns before World War I. I will then outline the local politics of the two towns in the post-independence period. My emphasis will be on illustrating how the political process was either a tool of contestation or concurrence with the status quo.

When it comes to the pre-WWI local political life in Opole, this principally meant the periodical meetings of the municipality where the eligible voters (i.e., Polish landowners) would meet and vote on important matters and elect their chiefs and judges. The municipal (*gmina*) meetings in Opole were the place were political speeches were given, especially beginning with the 1905-1907 revolution (Mikulec 2000). But Łęczna, as a town that was a city, did not have those meetings and the people of Łęczna did not vote for their mayors and judges. It was generally illegal for people to gather in public, unless it was sanctioned by the authorities. What this meant was the Łęczna had it more difficult for any local political organization to take place. An important point of change was the aforementioned 1905-1907 revolution, when open contestation became a matter of fact, albeit short lived. This period of contestation gives us a unique glimpse into the political inclinations of local populations.

One of the most important gains of the revolution was the freedom of association, granted in 1905 (Śmiech and Jastrzębski 2017, p. 162). This was further accelerated by the 1906 election to the State *Duma* which has contributed to creating new associations and organizations in the Opole region (p. 158). Around the 1905-

18. For instance, the Polish Socialist Party was established in 1892; the National Democracy movement dates to 1893; the first Peasant movement party in the Kingdom was formed in 1904.

1907 revolution, the political life in Łęczna has also come to life (Lewandowski 1989). But the politics of the two towns appears to have drifted in different directions.

At that time, Opole was one of the towns with the strongest anti-tsarist sentiment in the whole of Lublin province (Śmiech and Jastrzębski 2017, p. 145).[19] Ideally, we wish to see how this compares to the pre-reform attitudes. While we do not possess accurate accounts for the 1860s, one way to assess anti-tsarist sentiments would be to look into the involvement of local populations in the 1863-4 January Uprising against Russian rule, the largest of Polish national uprisings, which could be measured by looking at the Uprising activity in or near a town. While the presence of a battle in or near a town is not direct evidence that the town inhabitants were involved, the insurgents were not able to operate in an area without at least a tacit cooperation from the locals.

The work of Zieliński (1913) is a compilation of all the battles and skirmishes that took place during the Uprising, together with details of their nature, date, and location. This comprehensive list contains details of as many as 4 battles and skirmishes in Łęczna and 0 in Opole, suggesting that it was Łęczna were the anti-tsarist resistance was more prevalent. This should not be taken as definitive evidence of stronger pre-1869 anti-tsarist attitudes in Łęczna, since many other factors may have driven such patterns, but anecdotally, this suggests that these attitudes could not have been at their strongest in that period in Opole. The growth of anti-tsarist sentiments that overlaps with the period when the new political institutions were in place may be seen as evidence of contesation and rejection of the new status quo by the inhabitants of Opole, precisely what we would expect to see when formal institutions work against their individual interests.

19. Together with Urzędów, Kazimierz and Puławy, all of them towns without city status as of 1905 (Śmiech and Jastrzębski 2017, p. 145).

The 1905 political activization in Opole has particularly prompted initiatives that were inspired by the National Democracy movement, such as the Polish Educational Society (*Polska Macierz Szkolna*) and its schools and libraries (Mikulec 2000, p. 125).[20] It was a country-wide initiative that had as its primary goal disseminating and supporting nationalist education and it was the most important of the various initiatives that have popped up at the time (Plis 1990/1991; W. Jaworski 2008). In Łęczna, a school of the Polish Education Society has also been established in 1907, but it was already toward the end of the revolution and the Society was dissolved the same year (Lewandowski 1989).

What marks a difference between the two towns, however, is that various National Democracy initiatives in Opole have not only been stronger but also continued. Following the suspension of the Polish Education Society, a leading role was undertaken by the Polish Catholic Union (*Polski Związek Katolicki*) which has, among others, opened a reading room in Opole (Mikulec 2000). In 1909, a branch of the People's House (*Dom Ludowy*) association was established in Opole (Mikulec 2000). It was an institution for extracurricular education and propagation of culture that was largely inspired by the National Democracy movement (W. Jaworski 2008). The association organized theatrical performances and launched a teahouse, which was visited in large numbers by the inhabitants of Opole (Mikulec 2000). Mikulec (2000) brings up a 1910 report from the county police to the Lublin governor which states that "the Opole teahouse was taking on [...] the character of a versatile club with a tight clerical-nationalist direction".

20. National Democracy (*Narodowa Demokracja*, or *endecja*) was a right-wing nationalist movement that was represented by a number of political parties over time. From 1919 to 1928, the main political party of the movement was the Popular National Union (*ZLN*, or *Związek Ludowo-Narodowy*). In terms of its economic policy, the party emphasized the development of cities, industry, and trade as the key basis of national development, and articulated the need to support domestic crafts, trade, and industry (Orlof and Pasternak 1993, pp. 25-6). In 1928, the party transformed into the National Party (*SN*, or Stronnictwo Narodowe). *SN* was the main party of the National Democrats who were in opposition to the government during the *Sanacja* rule (1926-1939).

Meanwhile, no such an association existed in Łęczna (W. Jaworski 2008).

In fact, around the 1905-1907 revolution, the political life in Łęczna has taken a different direction. Especially among the craftsman and the laborers the political forces that have picked up the most in Łęczna were the Polish Socialist Party and the Bund (a Jewish socialist party) (Lewandowski 1989). One of the interesting differences between the two towns is that in the early-1900s, unlike in Opole, in Łęczna the anti-Jewish rhetoric was not very strong. Wieczorek (1997) hypothesizes that this may have to do with the independence movement in Łęczna being more closely aligned to the socialists who, as opposed to National Democrats, were programmatically distant from anti-semitism. The presence of anti-Jewish sentiments is yet another form of rejecting and contesting the status quo. These political differences are something that was to be visible in local politics also after World War I.

When formal institutions vanished (since 1918)

The independence that came in 1918 was accompanied by universal suffrage and an introduction of elections that would take place in towns regardless of whether they were a city or not. The political systems of towns with and without city status were largely unified, but the people of Opole have not forgotten how they were deprived of their precious city status some half a century earlier. They have elected their new local government in 1920 and one of the first resolutions that were voted on was an application for the restoration of city status (Śmiech and Jastrzębski 2017, p. 335). This attempt was unsuccessful, and further, also failed, attempts were made again in 1924 and 1929.

The proponents of regaining city status have petitioned for the new city to be formed by combining the town of Opole with a number of neighboring villages (AP Lublin 1920-1929, 35/594/0/1/1/1). The goal of this was to increase the num-

ber of Christians in the newly formed city, thereby increasing their share relative to the share of Jews (Śmiech and Jastrzębski 2017, p. 379-82). These machinations were supposed to help create a permanent Christian majority that would maintain absolute political control. The neighboring villages, as represented by the landed interests, were predominantly not very keen on being part of the city. They did not want to loose their autonomy and be dominated by the town's population which was much larger in size and with a large share of Jews (Śmiech and Jastrzębski 2017, p. 379-82; AP Lublin 1920-1929, 35/594/0/1/1/1). It was not until 1957 that Opole has once again become a city.

In what follows, I will discuss what (little) we know about the political composition of the two towns in the immediate post-formal institutions period (i.e., the Interwar Period). With this discussion, my focus will be to highlight two aspects that may be most related to understanding the forces of contestion and institutional concurrence: the support for radical parties (contestation) and the support for parties or policies that promote larger local government involvement (institutional replication, or concurrence). By radical parties, I mean those parties that propose radical or revolutionary transformation of the status quo, precisely the type of parties that we could expect to be supported in the context where we observe popular rejection of the status quo. In the Polish context, these are nationalist parties (national democracy) on the right and communist parties on the left.[21] The support for larger (local) government is meant to capture preferences for replicating and prolonging past formal institutions which, in our empirical context, have promoted larger local government involvement in towns that re-

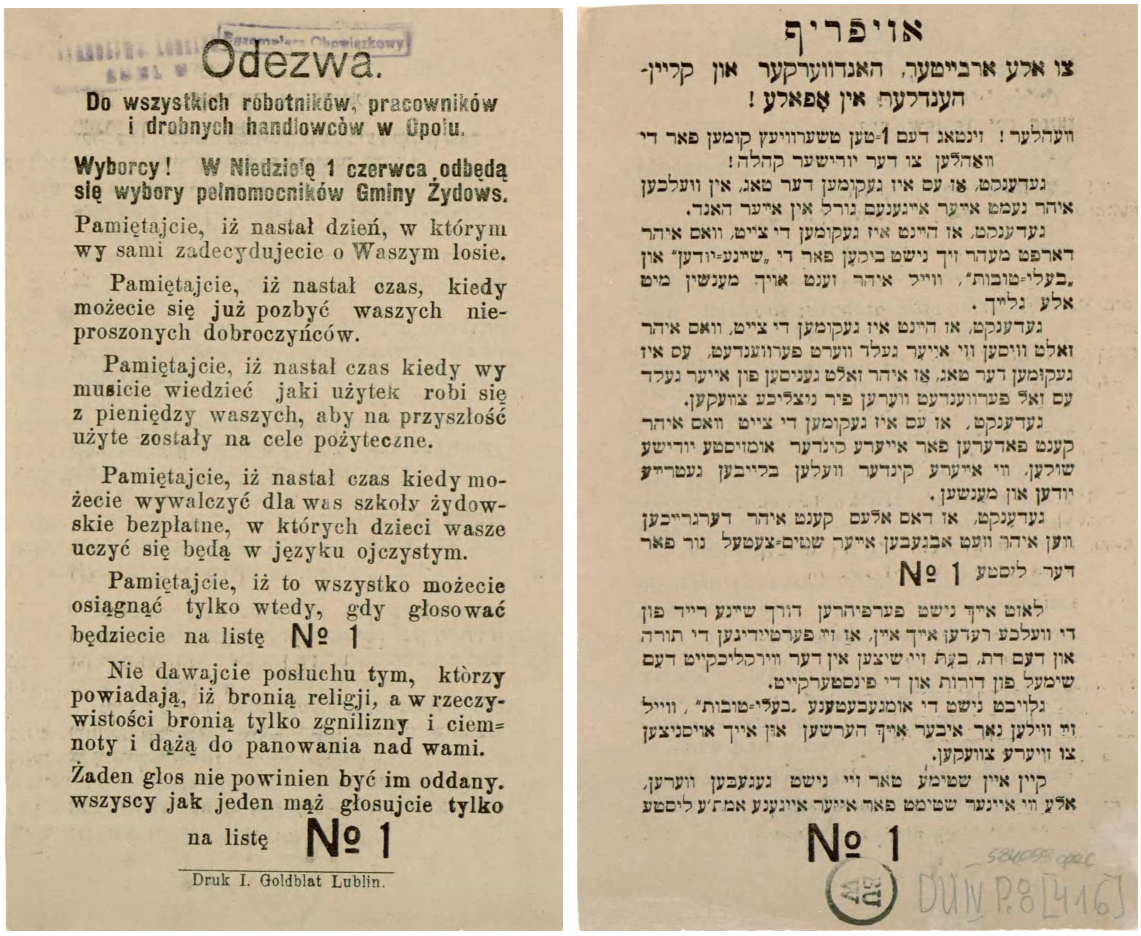
21. This categorization is based on the discussions in Holzer (1977), Bełcikowska (1925), and Kopstein and Wittenberg (2005). The most relevant for national democracy are ZLN and its successor SN. Following the death of Piłsudski, in 1937 the right faction of the *Sanacja* formed the Camp of National Unity (OZN) which took on much of the national democratic ideology. It was still, however, a government party and hardly challenging the status quo. On the communist left, the most relevant here is the Union of the Peasants' Left "Self-help".

mained as cities and forced private solutions to public goods provision in those towns that lost their city status. My focus here will especially be on socialist parties. More detailed accounts of local election results are presented in Appendix B.1.3.

In 1924, previously planned local elections did not take place due to legislative issues; however, elections to the Jewish self-government (*qahal*) did take place (Śmiech and Jastrzębski 2017, p. 581-2). An electoral leaflet from Opole that may give us some limited insights into the election, is presented in Figure 4.5. The leaflet begins with a call that "the time has come" when the voters can "get rid of" their "uninvited benefactors". It reminds them that they should be informed about what use is made of "their money" so that it can be used for a "useful purpose" in the future. The language of this leaflet is something that is in line with my theoretical expectations over a community that has in the past experienced limited political control and political discrimination (unfavorable institutions), and one that was accustomed to private solutions to public goods provision. In fact, the leaflet calls: "Remember that the time has come when you can secure free Jewish schools for you, where your children will learn in their mother tongue." And only four years later, in 1928, a private Jewish school with Hebrew as the language of instruction was established (Śmiech and Jastrzębski 2017, p. 589; Ministerstwo Wyznań Religijnych i Oświecenia Publicznego 1931, p. 168).

While, similarly as for Opole, we do not have the exact information on the political makeup of the town council in the early years of independence in Łęczna, we do know that it was generally dominated by Jewish parties, the socialists (PPS)[22] and the national democrats (Popular National Union, ZLN) (Horoch 2017, p. 471). The noteworthy feature in the early years was the particularly strong position of the socialists, especially among the craftsman, although that is some-

22. Polish Socialist Party, *Polska Partia Socjalistyczna*.



Odezwa.

Do wszystkich robotników, pracowników i drobnych handlowców w Opolu.

Wyborcy! W Niedzielę 1 czerwca odbędą się wybory pełnomocników Gminy Żydows.

Pamiętajcie, iż nastał dzień, w którym wy sami zadecydujecie o Waszym losie.

Pamiętajcie, iż nastał czas, kiedy możecie się już pozbyć waszych nieproszonych dobroczyńców.

Pamiętajcie, iż nastał czas kiedy wy musicie wiedzieć jaki użytek robi się z pieniędzy waszych, aby na przyszłość użyte zostały na cele pożyteczne.

Pamiętajcie, iż nastał czas kiedy możecie wywalczyć dla was szkoły żydowskie bezpłatne, w których dzieci wasze uczyć się będą w języku ojczystym.

Pamiętajcie, iż to wszystko możecie osiągnąć tylko wtedy, gdy głosować będziecie na listę № 1

Nie dawajcie posłuchu tym, którzy powiadają, iż bronią religji, a w rzeczywistości bronią tylko zgnilizny i ciemnoty i dążą do panowania nad wami.

Żaden głos nie powinien być im oddany. wszyscy jak jeden mąż głosujcie tylko na listę № 1

Druk I. Goldblat Lublin.

אויפריף

צו אלע ארבייטער, האנדווערקער און קליין-הענדלער אין אָפּאָלע!

ווהלער! זינטאג דעם 1-טן טשערוויעץ קומען פאר די וואהלען צו דער יודישער קהלה!

געדענקט, אז עס איז געקומען דער טאג, אין וועלכען איהר נעמט אייער איגענעם גורל אין אייער האנד.

געדענקט, אז היינט איז געקומען די צייט, וואס איהר דארפט מעהר זיך נישט בימען פאר די „שיינע-יודען" אין „בעלי-טובות", ווייל איהר זענט אויך מענשען מיט אלע גלייך.

געדענקט, אז היינט איז געקומען די צייט, וואס איהר זאלט וויסען ווי אייער געלד ווערט פערווענדעט, עס איז געקומען דער טאג, אז איהר זאלט געניסען פון אייער געלד עס זאל פערווענדעט ווערען פיר ניצליכע צוועקען.

געדענקט, אז עס איז געקומען די צייט וואס איהר קענט פאדערען פאר אייערע קינדער אומזיסטע יודישע שולען, ווי אייערע קינדער וועלען בלייבען געטרייע יודען און מענשען.

געדענקט, אז דאס אלעס קענט איהר דערגרייכען ווען איהר וועט אבגעבען אייער שטים-צעטעל נור פאר דער ליסטע № 1

לאזט אייך נישט פערפיהרען דורך שיינע רייד פון די וועלכע רעדען אייך איין, אז זיי פערטיידיגען די תורה און דעם דת, בעת זיי שיצען אין דער ווירקליכקייט דעם שימעל פון דורות און די פינסטערקייט.

גלויבט נישט די אומגעבעטענע „בעלי-טובות", ווייל זיי ווילען נאר איבער אייך הערשען און אייך אויסניצען צו ווערע צוועקען.

קיין איין שטימע טאר זיי נישט געגעבען ווערען, אלע ווי איינער שטימט פאר אייער איגענע אמת'ע ליסטע

№ 1

DUN P.8 [416]

FIGURE 4.5: A 1924 electoral appeal to the Jewish community of Opole Lubelskie

Source: [s. n.] (1924)

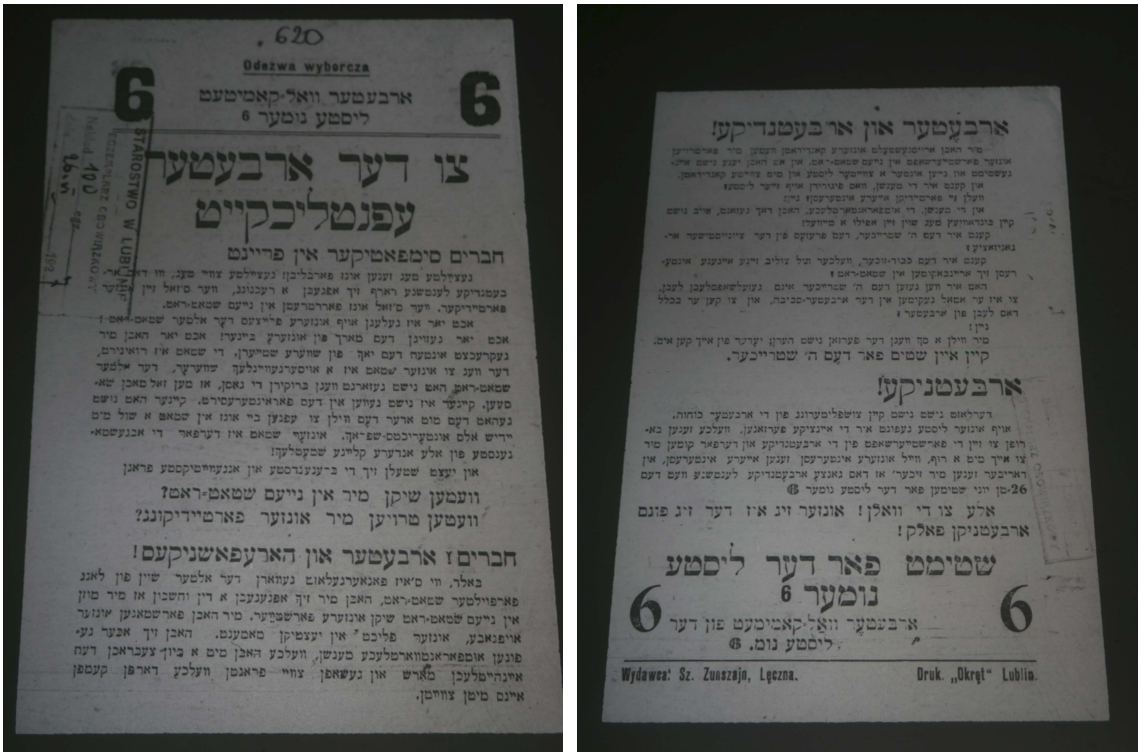
thing that has eventually weakened over the late 1920s and early 1930s in favor of pro-government parties (Piekaruś 2017). A stronger support for socialists is something consistent with the expectation over a community that has in the past enjoyed greater local government engagement in public goods provision.

Łęczna has not escaped the kind of tendencies that sought to increase the share of Poles in the population in order to improve their political position, and in 1927 a few neighboring villages (with predominantly Polish population) were joined into Łęczna (Horoch 2017, p. 472). An election to the city council has taken place the same year, and yet, despite the machinations, 5 out of the 16 seats were taken

up by Jews.

The leaflet in Figure 4.6 is a Yiddish-language electoral appeal to the Jewish inhabitants of Łęczna that incites them to support List no. 6.[23] The leaflet states:

> "The old city council laid on our shoulders for eight years. They sucked our marrow from our bones for eight years! For eight years we groaned under the yoke of heavy taxes. The city is ruined, the road to our city is extraordinarily more difficult, the old city council wasn't concerned about paving the streets, about making sidewalks. No one was interested in this. [...] Our city is therefore the most backward of all other small towns!"



Odezwa wyborcza

6 ארבעטער וואל-קאמיטעט 6

ליסטע נומער 6

צו דער ארבעטער עפנטליכקייט

חברים סימפאטיקער אין פריינט

חברים ז ארבעטער און הארעפאשניקעס!

ארבעטער און ארבעטניקע!

אלע צו די וואלן! אונזער זיג איז דער זיג פונם ארבעטניקן פאלק!

שטימט פאר דער ליסטע נומער 6

6 א־בעטער וואל־קאמיטעט פון דער ליסטע נומ. 6

Wydawca: Sz. Zunszajn, Łęczna. Druk. „Okręg" Lublin.

FIGURE 4.6: A 1927 electoral appeal to the Jewish community of Łęczna

Source: Zunszajn (1927)

The complaint of the authors of this leaflet is that, according to them, Łęczna

23. We do not know exactly what party this was, but given that the leaflet badmouths the Zionists, is directed to "the workers", and complains about synagogues not operating in Yiddish (but, presumably, Hebrew), it is possibly representing the Jewish socialists.

experienced high taxation and yet little public goods provision. There is an expectation for the local government to be the provider of local public goods such as roads, paved streets or sidewalks, but the level of provision is unsatisfactory given the expenses. I show in Section 4.6.2 that perhaps these claims are not unjustified.

In 1928, new municipal elections were scheduled to take place in Opole. Although the Opole countryside was to some extent influenced politically by the communists, by far the strongest political forces in Opole and the region were the nationalists and Christian democrats (Śmiech and Jastrzębski 2017, p. 401). Potentially due a differential ability to mobilize voters among the electoral competitors, the result was a true mosaic and reflected a failure of the pro-government and the right-wing forces, and has given seats to Jewish parties and to communists (p. 402-3).

The result came as a shock, and various "procedural errors" were found so that the election was invalidated and then repeated three weeks later (p. 403). The "new" result has distributed seats away from Jews and from communists toward the remaining political competitors. The result partially reflects the fact that the communists were "crossed out", i.e. not allowed to stand in the election; however, Śmiech and Jastrzębski (2017, p. 403) also entertain the possibility that the election was fraudulent. Still, what is interesting is that communists actually gained enough support in the first place and fraud and other machinations must have been employed to prevent them from taking up seats in the municipal council.

The next election in Łęczna took place in 1929. The distribution of seats has changed slightly compared to 1927 and the number of seats was lowered to 12. The Jewish socialists (*Bund*) and the national democrats each gaining one seat at the expense of the two agrarian parties and the socialists (PPS), and no more nonpartisans were in the council (Horoch 2017, pp. 472).

The next city council election in Łęczna took place in the crisis-year 1930 and saw important changes (Horoch 1989, p. 204). A few are most noteworthy. First, the demise of national democrats and weakening of socialists. Second, an increase of seats taken up by Jews to 7. Third, the return of non-partisans to city council. Finally, the entrance of the Nonpartisan Bloc for Cooperation with the Government (henceforth *BBWR*) into the council.[24] BBWR has, with time, gained a leading political role in the city and has also gained the support of the Orthodox Jews (Horoch 1989). BBWR was, in essence, the definition of the political mainstream and maintaining the status quo, precisely what we would expect to be supported in the absence of contestation.

The leaflet in Figure 4.7 incites Jews to support List no. 10 in an upcoming city council election in the early 1930s.[25]

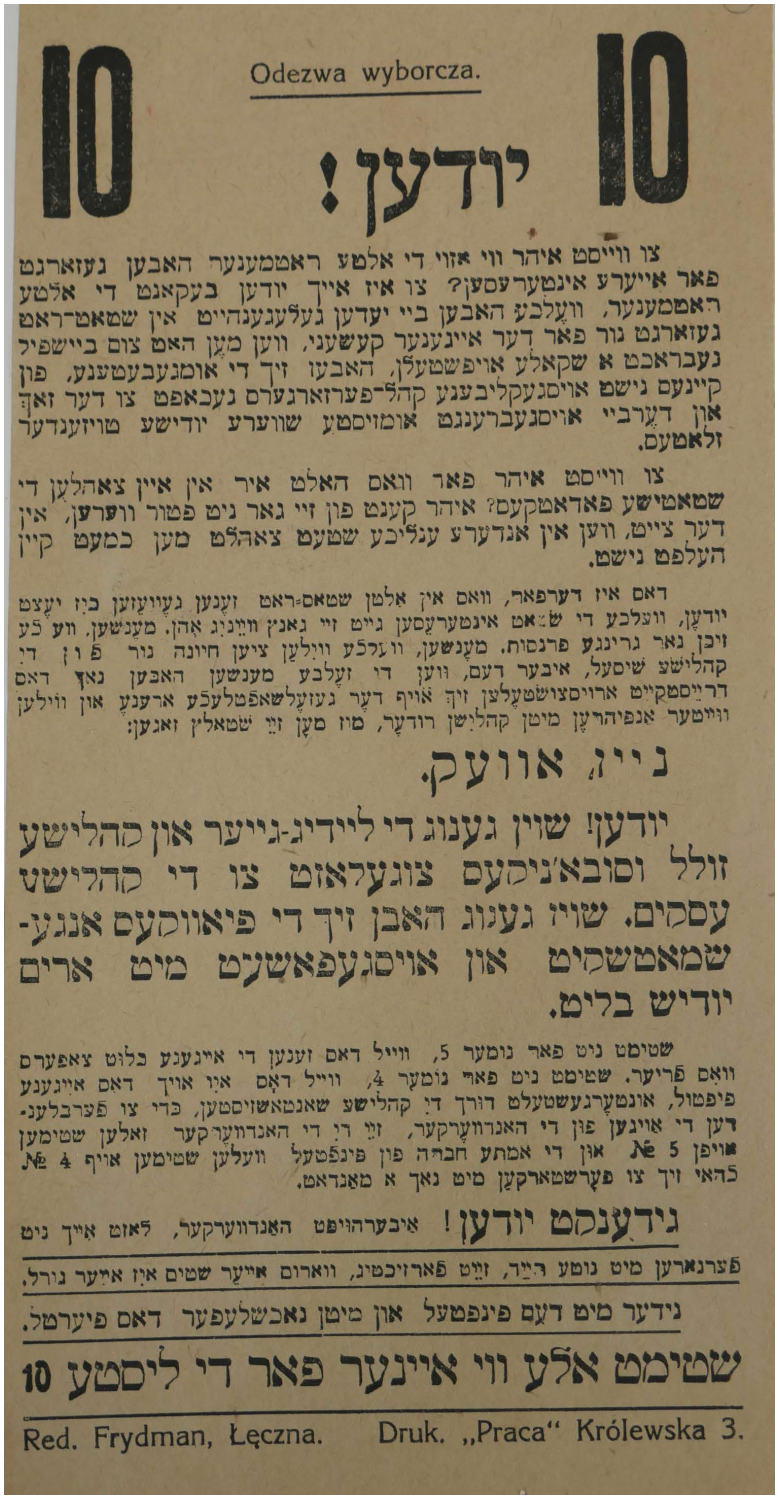
> "Do you know why you keep on paying the city taxes? You can't get rid of them, at this time, while in other similar cities they pay almost less than half."

The complaints over heavy taxation in Łęczna have continued, and the authors of this electoral appeal claim that the taxation of the people of Łęczna was substantially higher than that of the populations of other comparable cities. Again, this is something that we would expect to see in a town with a legacy of higher local government involvement.

The year 1930 brought in Opole a third municipal election since Poland's independence and poses an interesting contrast to the result in Łęczna. The result was a sweeping victory of the national democrats who secured 7 out of 12 seats (Śmiech and Jastrzębski 2017, p. 424). And yet, the national democrats were seen

24. *Bezpartyjny Blok Współpracy z Rządem*; BBWR was a catch-all organization that supported the Sanation movement. It grouped politicians of vastly different political backgrounds, and hence does not yield itself easily into a left-right categorization.

25. No exact year of this leaflet is known but based on the content, we can deduce it was most likely the 1930 election.



10 Odezwa wyborcza. 10

יודען!

צו ווייסט איהר ווי אזוי די אלטע ראטמענער האבען געזארגט פאר אייערע אינטערעסען? צו איז אייך יודען בעקאנט די אלטע ראטמענער, וועלכע האבען ביי יעדען געלעגענהייט אין שטאט־ראט געזארגט נור פאר דער איינענער קעשעני, ווען מען האט צום ביישפיל געבראכט א שקאלע אויפשטעלן, האבען זיך די אומגעבעטענע, פון קיינעם נישט אויסגעקליבענע קהל־פערזארגערס געכאפט צו דער זאך און דערביי אויסגעברענגט אומזיסטע שווערע יודישע טויזענדער זלאטעס.

צו ווייסט איהר פאר וואס האלט איר אין איין צאהלען די שטאטישע פאדאטקעס? איהר קענט פון זיי גאר ניט פטור ווערען, אין דער צייט, ווען אין אנדערע ענליכע שטעט צאהלט מען כמעט קיין העלפט נישט.

דאס איז דערפאר, וואס אין אלטן שטאט־ראט זענען געווען כיז יעצט יודען, וועלכע די שטאט אינטערעסען גייט זיי גאנץ ווייניג אהן. מענשען, וועלכע זיכן גאר גרינגע פרנסות. מענשען, וועלכע ווילען ציען חיונה נור פון די קהלישע שיסעל, איבער דעם, ווען די זעלבע מענשען האבען נאך דאס דרייסטקייט ארויסצושטעלען זיך אויף דער געזעלשאפטלעכע ארענע און ווילען ווייטער אנפיהרען מיטן קהלישן רודער, מיז מען זיי שטאלץ זאגען:

נייז, אוועק.

יודען! שוין גענוג די ליידיג-גייער און קהלישע זולל וסובא'ניקעס צוגעלאזט צו די קהלישע עסקים. שויז גענוג האבן זיך די פיאווקעס אנגע-שמאטשקיט און אויסגעפאשעט מיט ארים יודיש בליט.

שטימט ניט פאר נומער 5, ווייל דאס זענען די איינענע בלוט צאפערס וואס פריער. שטימט ניט פאר נומער 4, ווייל דאס איז אויך דאס איינענע פיפטול, אונטערגעשטעלט דורך די קהלישע שאנטאשויסטען, כדי צו פערבלענ-דען די אויגען פון די האנדווערקער, זיי די האנדווערקער זאלען שטימען אויפן № 5 און די אמתע חברה פון פינפטעל וועלען שטימען אויף № 4 לכאי זיך צו פערשטארקען מיט נאך א מאנדאט.

גידענקט יודען! איבערהויפט האנדווערקער, לאזט אייך ניט פערנארען מיט נוטע רייד, זייט פארזיכטיג, ווארום אייער שטים איז אייער גורל.

נידער מיט דעם פינפטעל און מיטן נאכשלעפער דאס פיערטל.

שטימט אלע ווי איינער פאר די ליסטע 10

Red. Frydman, Łęczna. Druk. „Praca" Królewska 3.

FIGURE 4.7: An electoral appeal to the Jewish community of Łęczna from the early 1930s

Source: Frydman (193x)

by (some of) their opponents at that time as "heirs and industrialists impervious to human poverty" (Śmiech and Jastrzębski 2017, p. 424). The other seats were taken up by pro-government as well as non-partisan candidates (p. 424).

For the 1934 election, we only have a combined result for the cities of Łęczna and Lubartów. Among the 28 seats taken up in the two cities, 26 have gone to BBWR (including 9 to Jews on the BBWR list), 1 to the National Party and 1 to PPS (in Łęczna) (Horoch 1989, p. 476). The list of socialists (PPS) was supported by the Jewish socialists (Bund) (p. 476). Łęczna sees a much stronger status quo pro-government stance, and the Jewish parties actually co-operate with the mainstream (Polish) parties, something rather unthinkable in Opole.

The fourth municipal election in Opole has taken placed in 1935. It has taken place according to the new national regulation of 1933 (Śmiech and Jastrzębski 2017, p. 549). We do not know the political affiliation of the elected members in this election, either at the municipal or sub-municipal level, but we know that out of the 30 individuals who were elected to the *gromada*[26] council, 11 of them were Jews (while 2/3 of Opole inhabitants were Jewish) (p. 546). The 1933 regulation was such that the voters would elect their *gromada* representatives who would then select the new municipal council. The last data available on the city council composition in Łęczna are from 1935 and show the dominant position of BBWR that secured 6 out of 12 seats (Horoch 1989, p. 478).

The fifth and final municipal election in Opole before WWII has taken place in 1938. What is worth noting is the weak result of pro-government parties and a strong result of the national democrats, even though in the rest of the Opole countryside the national democrats were rather weak and the strongest political

26. *Gromada* literally means a "gathering" or "cluster" and refers to a sub-municipal territorial unit that roughly covers the town of Opole by itself.

force was the agrarian People's Party[27] that did not get even a single seat in the town of Opole (Śmiech and Jastrzębski 2017, p. 547).

In contrast, an interesting feature of Łęczna's politics is the increasing weakness of radical parties. They have taken up 12.5% of seats in 1927, 25% in 1929, and since the crisis, 0% in 1930 and 0% in 1935. In Opole, radical parties were stronger. The first election of 1928 allocated 38.5% of seats to radical parties, and even after communists were crossed out, the second election of 1928 gave 16.7% of seats to radical parties. Following the crisis, this has gone up to 58.3% in 1930 and remained high, at 23.3% in 1938.

The weakness of radical parties in Łęczna was visible not only in their electoral results but also in other aspects of their activity. For example, only a rather small local organization of the National Party was present in Łęczna, particularly among the Łęczna farmers (Horoch 2017, pp. 474). A 1932 county report to the provincial authorities states that the local branch "does not show any activity" and that the members do not pay their dues (pp. 474-5). The communists were also present in Łęczna, with a few dozen members in the mid-1930s; they were, however, cooperating with other organizations with a more agrarian and social-democratic character (pp. 477). They ceased to be active due to arrests of some of the members in 1937 (pp. 477). Meanwhile, the National Party ceased to operate beginning 1935 and the PPS dissolved in 1936, due to lack of activity (pp. 477-8).

Even after WWII, the observed trends have continued in Łęczna. There was very little sign of political activity by political parties in Łęczna in the first few months after liberation; the first party units only begin to appear in mid-1945 (Wrona 1989, p. 231). In 1947, before the communists formalized their monopoly on power, among the 15 members of the City National Council, 3 where from

27. *Stronnictwo Ludowe*, a centrist party.

PPS, 4 from PSL, and 8 where non-partisan (Szumiło 2017).[28] Not a single council member represented the communist party (PPR). The first communist party branch was only established in 1948 (Zaporowski 2017, p. 489). But even then and into the 1950s, the communist party in Łęczna was rather disorganized, not active and not functioning well; the party members were not even paying their membership dues (Wrona 2017, p. 600).

Overall, what we see is that the populations of Łęczna were more inclined to support pro-government politicians and the socialists, which may be indicative of their overall preferences for maintaining the status quo and ensuring larger government involvement. On the other hand, the people of Opole were more inclined to support radical parties, especially the national democrats who sought a transformation of the status quo and who largely represented the interests of the Polish entrepreneurial elites. The political system in Opole was the means by which the institutional reversal and the shift to a new equilibrium was taking place.

4.6.2 Public goods provision

The issue of public goods provision is strongly symptomatic of the past institutions that operated in towns across Poland. It would thus be an area where we could expect to see signs of a reversal following the demise of past city-level political institutions. Both Opole and Łęczna were heavily under-invested in the long 19th century but they have taken slightly different paths in addressing the resulting issues. In what follows, I will bring up examples of two areas of public goods provision—transportation infrastructure and education—to sketch the differences brought about by past institutions.

28. According to Szumiło (2017), one of the possible reasons why the communists were weak was the activity of the anti-communist underground in the area. E.g., in 1946 they entered the town and executed communists and communist sympathizers.

Transportation infrastructure

The two towns have long suffered from poor road and transportation infrastructure, both inside the towns as well as outside, for traveling elsewhere (Śmiech and Jastrzębski 2017, p. 78; Bogusz 2017). This made transportation of goods difficult and expensive, thwarting potential trade. Despite the overall poor state of transportation infrastructure, in Opole we observe private initiative that was meant to change that. The undertaking of private initiative in areas that in other towns are dealt with by public institutions is symptomatic of contestation of the institutional equilibrium that is unfavorable to the local populations.

One example comes from the times when the formal institutions were still in place. The Kleniewski family were local elites and entrepreneurs who, among others, founded the sugar mill in Opole (Śmiech and Jastrzębski 2017, pp. 50-1). The Kleniewskis began experimenting with privately-built narrow-gauge railways that would connect their sugar mill with the neighboring areas, finally reaching the town of Opole in 1915 (p. 79-80). The railway was destroyed by the retreating Russian forces. After the war, the family wanted rebuild the railway but before that happened, it was nationalized by the state and operations resumed in 1919 (p. 500). Meanwhile, we find no evidence of similar private initiative taking place in Łęczna.

This ability to "get things done" has stayed with the people of Opole and made them better adapted when independence came. In 1931, the daily "Ziemia Lubelska" published a brief characteristic of the Opole town and municipality. The journalist paints a rosy picture of Opole. He writes that the works on new roads connecting Opole with other towns and villages are progressing well, and that "all roads within the municipality are constantly renovated" ("Gmina i osada Opole" 1931). Plans for building a new school are underway, and once complete, it will be one of the largest schools that a municipality has built in the whole of Poland.

There are five fire brigades across the towns and villages of the municipality, and the town slaughterhouse in Opole has been modernized. The journalist continues:

> "The settlement of Opole looks like a clean town, it is lit by electric light, the streets and pavements have been put in order, now the trees are planted. In order to increase the efficiency of work of social institutions in the municipality, a Civic Committee was established, which included representatives of social organizations, offices located within the municipality, and to which a number of more active civic individuals applied for accession." ("Gmina i osada Opole" 1931)

These descriptions reveal a town that is undergoing or has recently undergone a number of investments in education, transportation or public health. They also show a degree of civic engagement where the local inhabitants take an active part in local affairs. What makes these descriptions even more noteworthy is that the newspaper that published the rather flattering portraiture of Opole, "Ziemia Lubelska", was leaning heavily in the pro-government stance and was opposed to the National Democracy, which dominated the local government of Opole (Notkowski 1983). In large contrast, the interwar period in Łęczna was characterized by stagnation, not merely in the economic sense, but also in terms of undertaking initiative that are to better the livelihoods of Łęczna's inhabitants.

Education

One area were public vs. private provision of public goods may have mattered was education. According to the 1897 census, Łęczna had a literacy rate of 34%. Unfortunately, we do not have separate data for Opole alone, but in the county where Opole was located and where all settlements operated with the same political institutions as in Opole, the literacy rate was at 30% (Russia 1904). This would place Łęczna's literacy rate above the national average and that of Opole—below.

The schools of the 19th century commonly operated on a mixed public-private basis, where private schools received subsidies or public schools depended on collections, donations, or tuition fees. I argue that the particularities of these arrangements were, to a large extent, driven not only by preferences of the inhabitants but also by the local political institutions in place. In Łęczna, it appears that over time the city budget would take a more leading role in supporting education. In Opole, with the rise of private involvement, the opposite was true. Both towns had public primary schools. In Łęczna, initially the public school was supported by private donations; by mid-1890s, however, school budgets do not appear to have these private subsidies listed (Bogusz 2017, p. 378). In Opole, the opposite appears to be true. The private contribution (*składka*) of the inhabitants of Opole toward the school was constantly rising (as the costs were increasing) and has become by far the major source of financing the school (Mikulec 2000). The school was renovated in 1897 entirely using private donations collected from the inhabitants (p. 117).

The differences are also visible in other aspects. For instance, since 1835 Łęczna had a Sunday crafts school for those learning crafts. As the city was not able to fully finance its operations, the crafts school used the primary school facilities and the city only subsidized the teacher's salary (Bogusz 2017, p. 381-2). In Opole, it was only in 1930, after the institutional transition, that the local government opened a new school for young people employed in crafts and industry (Śmiech and Jastrzębski 2017, p. 475). This suggests that the ability to mobilize public resources to support schools was still important. And yet, in 1938 when the construction of a new primary school building took place, the inhabitants of Opole took an important part in the project, by both giving voluntary donations and by actively helping in the construction process (p. 480). At the same time, the school in Łęczna was under-invested in the Interwar Period and lacked books and other

resources (Horoch 2017, p. 457). The people of Łęczna appear to have lacked the same private initiative that was demonstrated by the inhabitants of Opole.

It was already in 1887 that a private school opened in Opole, where children of the wealthy, of craftsman, and of workers of the sugar refinery attended (Śmiech and Jastrzębski 2017, p. 111). In 1921, there was private imitative to introduce a "complete" school (one that would have a 6th grade) in Opole (p. 464-5). In Łęczna, there was also a private gymnasium that opened in 1917 but it closed already in 1923 (Horoch 2017, p. 458). When the construction of a new "complete" school was initiated in Łęczna in 1920 and the construction was completed in 1925, it was all due to a substantial subsidy from county authorities (p. 453) and financing by the city government (Śliwina and Tracz 1928, p. 12).

Table 4.4: Primary education in the two towns

	Łęczna		Opole	
	1925/1926	1930/1931	1925/1926	1930/1931[a]
Number of classrooms	7	9	8	15
Number of teachers	10	15	16	21
Number of students	494	615	700	1033
Students per 1000 inhabitants	138.2	153.4	115.4	156.8
Student/teacher ratio	49.4	41	43.8	49.2
Students per classroom	70.6	68.3	87.5	68.9

Source: Ministerstwo Wyznań Religijnych i Oświecenia Publicznego (1927, pp. 162; 172; 1931) and own calculations.

a. Aggregated data across the two primary schools that existed in Opole in the school year 1930/1931.

Table 4.4 gives us a glimpse into primary education in the two towns in the early years of institutional transition. It contains data on the number of classrooms, teachers and students across primary schools in the two towns, based on official data. I have computed three additional measures that may help us evaluate primary education: the number of students per 1000 inhabitants (a proxy for enrollment rates), the student/teacher ratio (it may be a measure of quality as un-

derstood by teacher attention; an imperfect measure given that teachers may have been part-time), and the number of students per classroom (a measure of physical infrastructure quality for education). The population ratios were computed using linearly prorated population data that is available for 1921, 1931, and 1932. See Appendix Table B.2 for population data.

What we see is that enrollment rates have been growing in both towns, something expected given the increased nation-wide efforts to introduce mandatory and universal primary education. Still, Łęczna has started off with a higher enrollment rate but Opole was able to increase its school enrollment much faster and has surpassed Łęczna in the school year 1930/1931. When it comes to the student/teacher ratio, both towns increased the number of teachers (by 5), but because of higher increases in enrollment, the student/teacher ratio actually increased in Opole while decreasing in Łęczna. This may suggest a relative change in quality of education, but we should be careful in making such interpretations because we do not know how hours worked per teacher have changed over that time.[29] Finally, Opole started off with less educational infrastructure, as reflected by a higher number of students per classroom. While both towns improved until 1930/1931, Opole's higher investments in the post-WWI period are reflected in a much faster increase in the number of classrooms that has led to a significant decline in the student/classroom ratio that has essentially equalized with that of Łęczna.

What this discussion shows is that in light of unfavorable political institutions, the inhabitants of Opole have undertaken more private initiative to compensate for lower public provision of education. When the unfavorable institutions vanished, with a mix of public and private investment they were able to quickly catch

29. Increasing number of teaching hours per teacher may be an acceptable alternative to increasing the number of teachers.

up (and in some areas surpass) the provision of education in Łęczna that has previously enjoyed years of higher local government involvement and expenditures on primary education. The private intitiative that the people of Opole have learnt to apply during the period of unfavorable institutions, has stayed with them and helped in achieving catch up once formal institutions have been equalized between both towns.

City budgets

An interesting comparison of the politics of Opole and Łęczna can be made by studying their public expenditures. Such a comparison helps in attributing differences in outcomes discussed above to differences in policies. While limited data availability makes it difficult to make such comparisons for the whole Interwar Period, I present in Table 4.5 the budgets at the midpoint of that period. Note that I make the comparison between the city budget for Łęczna and the municipality budget for Opole. The municipality is a territorial unit that is larger than the town of Opole, but is a better point of comparison because of the similarity of tasks that the municipal government would assume; regardless of this, only such data is available.[30] As Opole was by far the largest single entity making up the municipality, this diminishes the concerns that the policies pursued by the municipality are far from being representative of the preferences of the Opole town inhabitants (but rather, representative of the populations of all other villages that made up the municipality).

A cursory comparison of budgets reveals a few interesting observations. Łęczna spends more on administration than it does on education and culture, roads, and health and social assistance combined. It spends more on administra-

30. Cities were also municipalities but ones that only covered the city territory and did not include any surrounding villages.

Table 4.5: Local government budgets in the 1928/1929 fiscal year

Budget item	Łęczna	Opole
Revenues	97,298	76,839
Expenditures	97,298	74,734
Administration	33,836	25,027
Education and culture	8,591	2,395
Road infrastructure	15,536	41,000
Health and Social assistance	9,050	6,312
Extraordinary expenditures		120,000
Construction of new schools		106,000

Note: All monetary units are Polish Złoty. Source: Śmiech and Jastrzębski (2017, p. 405) and Zwolakiewicz (1929).

tion than Opole not only in absolute numbers but also as a percentage of total expenditures.

It may be useful to put the budgets and local government revenues into a per capita perspective. The closest year for which population data is readily available is 1931. In this year, the population of the Opole municipality (which includes the town of Opole and the neighboring countryside) was 14,977 individuals while that of Łęczna was 4,030 individuals (GUS 1933, p. 30).[31] Normalizing the numbers from Table 4.5 on a per capita basis reveals the stark contrast between Łęczna and Opole. While the budget revenues in Łęczna were about 24 Polish Złoty per capita, they were only a little over 5 Polish Złoty per capita in Opole. This number may possibly still overestimate the value for the town of Opole. For example, in the 1930/1931 municipal budget, the expenditures on the town of Opole made up 25% of the municipal budget, much below the town's share of population in the municipality ("Gmina i osada Opole" 1931). Even if we take into account expenditures which were classified as "extraordinary", primarily spent on the construction of new schools, the gap in public expenditures of Łęczna and Opole is apparent as is Łęczna's relative over-bureaucratization.

31. The population of the town of Opole was 6,798 in 1932, or about 45% of the total Opole municipality population (Śmiech and Jastrzębski 2017, p. 426; GUS 1933, p. 30).

What this suggests is that the observed differences in outcomes between the two towns may indeed be a results of differences in preferences that were translated into local government policies. Łeczna, as a town with a history of larger local government involvement, continues to demonstrate larger local government but this does not necessarily translate into better outcomes.

4.6.3 Local entrepreneurship

Last but not least, I would like to trace the evolution of entrepreneurship to directly get at the transition period right after the unfavorable institutions in Opole have vanished. I expect that the experience of being exposed to unfavorable institutions that impeded entrepreneurship in the past should have left the people of Opole with an edge in entrepreneurship that prevails after the institutions' demise. This should particularly be visible following large shocks such as crises that level the playing field.

In the interwar period, Łęczna experienced an economic decline (Siuchniński 1965, p. 719).[32] Despite that, Wieczorek (1997) characterizes the local population at that time as "guarding its urbanity", and one that "retained something in its genes" from the past times of glory. This mechanism was directed especially against those who wanted to somehow "break out of their own fate" and "stand out from the conformism of their environment" (Wieczorek 1997). Such a quality of character of the people of Łęczna may be seen as standing in contradiction to what is the entrepreneurial spirit.

Despite economic problems, Łęczna was a place were Poles and Jews cohabited relatively well (Horoch 2017, p. 481). Opole on the other hand was characterized by fierce Polish-Jewish competition. With the advent of independence, in order to better face their Jewish competitors who had an edge in coordinating

32. Siuchniński (1965, p. 702) attributes that to a lack of railways and large industrial enterprises.

their collective action in business due to the *qahal* system, Polish craftsman and merchants of Opole began to self-organize into an association that imitated labor unions (as opposed to guilds, as used to be the case) (Śmiech and Jastrzębski 2017, p. 430). Based on the newspapers the association subscribed, Śmiech and Jastrzębski (2017, p. 431) infer its members had nationalist (ND) sympathies. Despite that, whenever profitable opportunities arose, there were examples of Jewish-Christian cooperation in business in Opole.[33] This may suggest that any religious animosities were "pragmatic" and not "ideological" in nature, a reflection of contesting the status quo and seeking to improve one's relative position.

To directly get at the level of entrepreneurship, I look into the numbers of businesses in the two towns and how they relate to population size. Table 4.6 presents the number of local businesses based on the listings in *Księga Adresowa Polski*, an extremely comprehensive business directory that lists (possibly all) individual businesses by location and industry and which came out in the period 1926-1930. I have counted every single business as well as professionals (e.g., doctors, lawyers) that were listed as residing in the city of Łęczna and the town of Opole in the years 1926, 1928, 1929, and 1930. These years cover the prosperity period of 1926-1928 as well as the crisis years 1929-1930. What we may infer from the numbers is that Łęczna started with a larger number of businesses than Opole; it was overtaken by Opole in the times of the economic boom; and when the crisis hit, not only has Opole retained its businesses, but actually the number has slightly increased compared to the pre-crisis year of 1928 as opposed to Łęczna which experienced a large decline.

Given the different population sizes of the two towns, we may want to standardize this measure. I do so by dividing the number of firms by the population

33. E.g., Śmiech and Jastrzębski (2017, pp. 514; 593-4) bring up the examples of a 1920 tannery business and a 1938 transport company.

Table 4.6: Private enterprises in the two towns — 1926-1930

	Łęczna		Opole	
Year	Firms	Firms per 1000 inhabitants	Firms	Firms per 1000 inhabitants
1926	272	74.3	195	31.6
1928	307	80.0	331	51.9
1929	280	71.4	361	55.7
1930	260	64.9	340	51.6

Sources: Mosse (1926, 1928, 1929, 1930); own calculations.

and multiplying by 1000 to obtain the number of firms per 1000 inhabitants, a measure of entrepreneurship that is commonly used also in contemporary studies. Since we do not know the exact population size of the towns across the years, I have used inverse distance weighting of the available population data for years 1921, 1931 and 1932 to linearly interpolate population sizes in 1926, 1928, 1929 and 1930. This method makes the resulting measures of firms per 1000 inhabitants less useful for year-to-year comparisons, but still makes them useful for analyzing broader trends. What we see is a dramatic rise in entrepreneurship in Opole over the prosperity period that has largely withstood the crisis. In Łęczna, although entrepreneurship rates are drastically higher in the beginning, something that we would expect to see given the legacy of its privileged institutional setting, the (would be) entrepreneurs of Łęczna were less able to seize on the opportunities of prosperity and were also less likely to withstand the economic turbulences that followed.

While we do not have detailed-enough information that would allow us to trace this further through time, it may be informative to see how entrepreneurship evolved following the further shocks of World War II, communist rule and the transition back to a market economy. Table 4.7 shows the evolution of entrepreneurship in the two towns in the post-communist period, starting with 1995—the first year for which town-level data is available. Additionally, I include

Table 4.7: Private enterprises in the two towns — 1983-2020

	Łęczna		Opole	
Year	Firms	Firms per 1000 inhabitants	Firms	Firms per 1000 inhabitants
1983[a]	40	4.2	82	13.2
1995	836	38.4	367	39.5
2000	1,281	57.8	811	89.9
2005	1,257	57.7	855	96.7
2010	1,306	62.9	958	106.0
2015	1,238	63.7	902	103.3
2020	1,230	65.9	941	113.1

Source: Own calculations based on GUS and Wojewódzki Urząd Statystyczny w Lublinie (1984).

a. For 1983, this includes crafts only.

data on craft workshops in 1983, during communist rule. We see that during communist rule, Opole already had an edge over Łęczna, with more than 3 times as many craft workshops per 1000 inhabitants. In the early post-communist period, the shock of the transition provided a level ground which was reflected by low and comparable levels of entrepreneurship in the two towns. But since then, the population of Opole has again shown more dynamism and by 2020 would have more than 1.7 times as many enterprises per 1000 inhabitants as in Łęczna. Once again, we observe that the people of Opole have a better ability to withstand shocks and undertake entrepreneurship when feasible.

4.7 Conclusion

I have proposed a theoretical argument for how contestation of formal institutions may bring about an institutional backlash that results in an equilibrium reversion once these formal institutions are gone. I used the case of the City Reform of 1869 in Poland to study how town-level formal institutions that were imposed from above and led to unfavorable outcomes in terms of entrepreneurship, were contested, and how this contestation inoculated local populations with attitudes of resilience that made them more entrepreneurial. Even though the formal institutions vanished, the resilience of local populations remained and through inter-generational transmission persisted across generations into the present, as reflected by higher rates of entrepreneurship today in towns previously exposed to unfavorable institutions.

The legacy of the City Reform of 1869 is still very much alive in the popular consciousness across Polish towns. Even though the value of city status is merely symbolic at present and does not carry any real benefits, nearly every year since 1989 a formerly degraded city in Poland regains its city status. From among the towns that were subject to the 1869 reform, 37 towns became cities again between 1995 and 2020, with 19 of them regaining city status between 2015 and 2020 alone. The public discussion on reinstating the city status is frequently framed as pertaining to "historical justice" whereby past wrongs and transgressions against these towns must now be compensated. For example, in 2017 an interpellation was made in the *Sejm* (lower house of the Polish parliament), calling for the annulment of the 1869 tsarist decree that degraded numerous cities.[34] The city degradation

34. "Interpelacja nr 12423 do prezesa Rady Ministrów w sprawie przywrócenia praw miejskich miejscowościom, które zostały ich pozbawione w wyniku represji carskich po upadku Powstania Styczniowego" (10 May 2017) (https://www.sejm.gov.pl/sejm8.nsf/InterpelacjaTresc.xsp?key=11FEA8BE)

is popularly seen as one of the tsarist repressions after the failed January Uprising against Russian rule and reinstating city status—a form of remedying this "wrongdoing".[35] This illustrates how powerful the legacies of past institutions can be, and how these institutions can continue to shape people's perceptions and attitudes long after these institutions are gone.

What I have omitted so far from discussing is how should the prevalence of entrepreneurship be understood. Implicitly, I assumed that entrepreneurship is "good" and "desirable", and that "more" of it reflects both choice and ability. Once could object to that, suggesting that entrepreneurship could simply reflect the lack of alternatives—it could be that poverty or lack of jobs forces individuals to undertake entrepreneurship. The available evidence contradicts such an interpretation. Entrepreneurship rates have risen across Polish towns over time with the rise of incomes, they have diminished in times of crises, and are higher in towns with higher incomes at any point in time. It appears that indeed, the past experience of being exposed to unfavorable institutions, while harmful in the short run, may under some conditions bring about unexpected positive long-term consequences because of the ability of humans to adapt and adjust in light of hardships and setbacks.

35. There is no evidence confirming such a thesis; in fact, limited evidence rejecting such a thesis exists.

5

Conclusion

Robert Dahl (1961) famously asked: "In a political system where nearly every adult may vote but where [...] resources are unequally distributed, who actually governs?" This dissertation underlines the importance of understanding this by highlighting how nominally similar political institutions may results in vastly different economic outcomes depending on "who governs."

Cities are, in essence, political communities that group individuals of diverse qualities and with divergent interests. Historically, the distribution of political power between groups of these individuals followed a diverse spectrum of configurations. I have argued that to understand why some cities grew and others did not, we need to pay closer attention to what interests held political power and governed towns. The second important point advanced in this dissertation is that political institutions do not operate in a vacuum. Individuals learn and adapt to make the best out of a bad position they find themselves in.

Empirically, I have explored the 1869 city reform in Congress Poland as an exogenous shock to city-level political institutions that affected the relative distribution of political power between the landed and the urban elites. I have found

that political institutions that gave relatively more political power to the landed elites and transferred it away from the entrepreneurial urban elites were associated with less favorable economic outcomes over the next half-a-century, despite being "more democratic." These political institutions have, however, resulted in contestation among large segments of the population that eventually created strong pro-entrepreneurship norms. Despite the leveling of political institutions across towns beginning in 1918, these norms have persisted and continue to give an edge in entrepreneurship across the populations of towns that were previously in a disadvantaged position more than a century ago.

In Chapter 2 of this dissertation, I have developed a formal model of city formation with political control by landed or urban elites to illustrate how the heterogeneity of socioeconomic groups affects their policy preferences, underlining the significance of paying attention to "who governs" for understanding economic outcomes stemming from different political institutions. I showed how the technological limitations faced by the landed elites, a consequence of a fixed availability of land on which they depend as a production input, constraints optimal allocation decisions with respect to employing complementary inputs, labor, and productive public goods. The model provided theoretical foundations illustrating how political control by landed elites may result in a smaller equilibrium population size and fewer public goods being provided.

Chapter 3 introduced the City Reform of 1869 that altered the 'city status' of three-quarters of the existing 452 cities in Congress Poland in a quasi-random fashion. The variation in 'city status' was then used to evaluate the economic consequences of political institutions that are more 'democratic' in nature, but that transferred political power to landed elites and contrast it with that of political institutions that were more 'autocratic' but that have given relatively less political power to landed elites. I have found that the towns with more autocratic institu-

tions experienced a higher rate of population growth over the subsequent forty years, a proxy for economic growth. To illustrate the channels through which "who governs" affects economic outcomes, I have shown that the towns controlled by landed elites provided fewer public goods and had a worse-performing judiciary, all of which may deter economic expansion. Finally, I have also provided evidence showing that the towns under the control of landed elites were less likely to industrialize but that this only applied to the economic sectors under the control of urban elites. This finding illustrates how landed elites have used their democratically-assumed political power to forestall the urban elites, plausibly to prevent any future challenges to their own position.

In Chapter 4, I set out to understand how formal (political) institutions that promote adverse outcomes are strategically responded to and undermined. My goal was to understand the long-term legacies of past political institutions and how these may continue to structure human behavior even long after their demise. I developed a formal model of contested institutions that illustrates how continuous interaction with adverse formal institutions may give rise to negative attitudes. These attitudes demonstrate themselves in the form of contestation and, over time, become internalized by individuals, giving rise to norms that may promote behavior opposite to that induced by formal institutions. I tested the proposed theoretical argument by looking at the long-term legacies of the 1869 City Reform and its effects on entrepreneurship. In the towns that were subjected to the reform, new political institutions were introduced, putting the entrepreneurial urban elites in a position of disadvantage. I have used a case study of two towns supported by microhistorical evidence to show how adverse institutions have resulted in the contestation of the status quo when introduced but not otherwise. I argued that these detrimental formal institutions have inoculated individuals with strong pro-entrepreneurship norms that have remained with the local popu-

lations long after the political institutions were largely equalized across the towns and cities of Poland in 1918. I have shown evidence suggesting that the local culture within which these norms were embedded persisted into the present and that towns that were subjected to institutions unfavorable to the entrepreneurial class in the past have higher rates of entrepreneurship at present. I have shown that this persistence is recorded in those towns that experienced relatively little population replacement but not in those with more population replacement, providing evidence that the observed differences in entrepreneurship stem from differences in people and as such are not driven by other structural factors.

Throughout this dissertation, I have characterized the political system of towns subjected to the 1869 city reform as an "early democracy," where "early" serves to contrast it with what we would call a "democracy" at present and suggests certain "imperfections" or even "incompleteness." But was it really "democracy," the reader may ask. The presence of elections, even if competitive, and the political participation of non-trivial shares of society may not be enough for this system to be deemed truly "democratic." What was it, then? An oligarchy? A polyarchy? The perspective that I have taken is that "democracy" may be evaluated on a continuous scale that captures the extent or the degree of "democracy," and as such, suggests that political institutions may be compared and evaluated in relative terms as being "less democratic" or "more democratic." This perspective, although analytically useful, has limitations that I would like to acknowledge. The major limitation stems from the implicit assumption that the relationship between political institutions and economic outcomes is linear. This is a strong assumption, and we currently have little evidence to asses how true it is. It would be violated if democratization yields different outcomes depending on what the starting point is. Nonetheless, the reader should be advised that the violation of this assumption does not invalidate the findings presented in this dissertation. Rather, it would

necessitate a more careful elaboration of the scope conditions under which the relationships described on these pages may be expected to hold.

Another aspect of the empirical case that has not been explored in desirable detail pertains to the ethnic dimension of Russian rule in colonized Poland. In this dissertation, I have reduced what could be interpreted as a two-dimensional difference in political institutions across the towns of Congress Poland into a single dimension. And yet, given the context, the ethnicity of those who govern and those who judge could not have been without significance. The reader might ask: Would the observed effects remain the same if the appointed mayors and judges were all ethnically Polish? My approach to this question is based on my understanding of the contentious and fragile ethnic relations of the time and suggests that, if anything, the added ethnic dimension and the presence of ethnic conflict should undermine the performance of mayors and judges, which would imply that the potential bias stemming from ignoring it works against me. But an alternative interpretation is tenable—it would imply that ethnic Russians were additionally motivated to perform well precisely because of the presence of an ethnic conflict and the desire to appease revolting Poles. What may, perhaps, ease the concern that the ethnic dimension is key to what is going on is the fact that while the vast majority of appointed judges were Russian, the vast majority of mayors were Polish. And yet, the observed outcomes pertaining to governance and the judiciary are well-aligned. Still, future research would benefit from exploring the role of ethnicity in more detail. This could be done by careful archival research that would lead to collecting the names and, perhaps also biographies of individual mayors and judges. The collected data would then allow for directly testing whether their performance was conditioned by ethnicity and other qualities.

Finally, the reader may be puzzled about how to think of, what may be viewed as, a tension between the empirical results of Chapters 3 and 4. How can the find-

ings conclude that one set of political institutions is simultaneously "better" and "worse" in economic terms? Are these findings not contradictory? I would like to take a moment to make my case for why I think there is no contradiction and the findings across the two Chapters are consistent. The crucial distinction that is to be made has to do with the presence of town-level political institutions that have given political power to the landed elites in some towns, while other towns were subjected to more authoritarian institutions with appointed officials. Chapter 3 is concerned with a period of time when this distinction was valid. On the other hand, Chapter 4 is primarily concerned with the post-WWI period when political institutions across both towns were reformed and (largely) unified. The point raised in Chapter 4 is that individuals may respond to and undermine the effects of formal political institutions. It was primarily concerned with how this undermining affects relative performance *after* the very institutions that prompted it are gone. Moreover, the act of undermining and the overall efforts of any individuals or groups thereof are distinct from the effects of institutions, even if one is a strategic response to the other. To give a somewhat tangible metaphor, if a factory is sabotaged and fails to produce, blame the saboteur, not the factory.

Several avenues for future work on the political economy of city-level institutions exist. One of the interesting puzzles that remains unanswered has to do with the variation in the experiences of towns. I found that, on average, the rule of landed elites was detrimental to city development. The extent to which that was true has varied across towns, however. Some towns, despite rule by landed-elites, performed well and we do not currently have a good explanation for why that would be the case.

Perhaps a related questions that remains is: Why is it that the politically-empowered landed elites would not themselves become engaged in economic activity typical of burgher or urban elites, such as commerce and industry? Existing

evidence suggests that, in fact, in some settings, the expansion of landed elites into other industries did occur. We do not currently have systematic evidence pointing out when landed elites, instead of forestalling development, are at its forefront.

Finally, in exploring the long-term legacies of contested political institutions, I have attempted to capture what is inherently individual-level attitudes by utilizing aggregate measures, an approach that has its limitations. The theoretical argument that I have presented would ideally be tested in a setting where, in addition to a desired variation in the exposure to formal institutions, geolocated individual-level data is available. Future research on contested institutions would benefit from exploring existing survey data in such settings or explicitly devising surveys to that purpose.

Appendix A

Appendix

A.1 Appendix

A.1.1 Summary Statistics

Table A.1: Summary Statistics

	Mean	Std. Dev.	Min.	25%	50%	75%	Max.	N
Population (1825)	1391.6	957.9	154	718	1112.5	1807	6693	438
Population (1858)	2002.4	1521.9	198	961	1568	2570	11578	439
Population (1869)	2378.9	1825.1	272	1114	1834	3004	13081	439
Population (1909)	4631.1	5533.7	405	1870	3225	5370	69525	439
Δ Population (%): 1825-1858	49.4	81.4	-32.0	15.6	33.6	64.3	1233.6	438
Δ Population (%): 1858-1869	18.4	17.6	-59.7	6.43	17.5	29.2	74.6	439
Δ Population (%): 1869-1909	91.7	84.0	-55.0	41.9	79.4	115.8	742.8	439
Jewish Population (%) (1858)	0.43	0.24	0	0.24	0.45	0.60	0.98	433
Jewish Population (%) (1909)	0.44	0.22	0	0.28	0.47	0.59	0.97	439
Hospital (1867)	0.089	0.28	0	0	0	0	1	439
Hospital (1897)	0.11	0.31	0	0	0	0	1	439
Doctor (1914)	0.54	0.50	0	0	1	1	1	439
Doctors per 1000 Inh. (1914)	0.24	0.32	0	0	0.16	0.34	1.86	439
Proto-industry (1866)	0.31	0.46	0	0	0	1	1	439
Industry (1900)	0.44	0.50	0	0	0	1	1	439
Brewery (1900)	0.21	0.41	0	0	0	0	1	439

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	Mean	Std. Dev.	Min.	25%	50%	75%	Max.	N
Distillery (1900)	0.10	0.31	0	0	0	0	1	439
Telegraph (1900)	0.35	0.48	0	0	0	1	1	439
River	0.56	0.50	0	0	1	1	1	439
Postal Station (1858)	0.47	0.50	0	0	0	1	1	439
Government City (1858)	0.45	0.50	0	0	0	1	1	439
County Capital (1858)	0.066	0.25	0	0	0	0	1	439
County Capital (1911)	0.16	0.37	0	0	0	0	1	439
City Revenues (1848)	1012.8	1360.3	85	249	470	1200	11321	433
City Revenues (1858)	1042.8	1359.3	98.2	259.6	481.1	1243.0	9290.9	433
Δ City Rev's (%): 1848-1858	12.2	56.1	-82.4	-9.28	3.42	21.7	665.3	433
Insured Building Value (1858)	56696.2	66141.8	3320	19290	32930	66080	486120	433
Houses (count) (1858)	181.0	123.1	0	96	149	238	822	439
Brick Houses (%) (1858)	0.11	0.15	0	0.016	0.050	0.15	0.96	433
Total Court Cases (1898)	1464.9	641.1	404	1007	1338	1748	5123	439
Criminal Backlog (1898)	0.037	0.070	0	0.0076	0.019	0.045	0.96	439
Civil Backlog (1898)	0.079	0.26	0	0.0052	0.014	0.040	2.21	439
Province (1858)								
Augustów	0.096	0.29	0	0	0	0	1	439
Lublin	0.23	0.42	0	0	0	0	1	439
Płock	0.096	0.29	0	0	0	0	1	439
Radom	0.25	0.44	0	0	0	1	1	439
Warszawa	0.33	0.47	0	0	0	1	1	439
Province (1911)								
Kalisz	0.12	0.32	0	0	0	0	1	439
Kielce	0.091	0.29	0	0	0	0	1	439
Lublin	0.14	0.34	0	0	0	0	1	439
Łomża	0.057	0.23	0	0	0	0	1	439
Piotrków	0.11	0.32	0	0	0	0	1	439
Płock	0.052	0.22	0	0	0	0	1	439
Radom	0.14	0.34	0	0	0	0	1	439
Siedlce	0.093	0.29	0	0	0	0	1	439
Suwałki	0.062	0.24	0	0	0	0	1	439
Warszawa	0.14	0.35	0	0	0	0	1	439

A.1.2 Summary of Pre-treatment Characteristics

Table A.2: Mean Pre-treatment Characteristics by Treatment Status Before and After Weighting and Trimming

	Unweighted			Weighted and Trimmed		
	Control	Treatment	Difference	Control	Treatment	Difference
River	0.72	0.51	-0.21***	0.38	0.57	0.19
Population (1869)	4903.84	1604.90	-3298.95***	2600.64	2747.89	147.24
City Revenues (1848)	2542.57	541.46	-2001.11***	1168.27	1058.21	-110.07
City Revenues (1858)	2579.18	569.40	-2009.78***	1129.85	1185.21	55.36
ΔCity Rev's (%): 1848-1858	20.80	9.59	-11.21	32.20	13.70	-18.50
Ins'd Building Value (1858)	1.4e+05	30965.30	-1.1e+05***	63948.31	66184.34	2236.03
Province (1858)						
Augustów	0.12	0.09	-0.03	0.07	0.09	0.02
Lublin	0.22	0.23	0.01	0.15	0.23	0.07
Płock	0.15	0.08	-0.07	0.05	0.06	0.01
Radom	0.16	0.28	0.13***	0.10	0.19	0.09
Warszawa	0.36	0.32	-0.04	0.63	0.43	-0.19
Government City (1858)	0.63	0.40	-0.23***	0.41	0.51	0.10
County Capital (1858)	0.27	0.00	-0.27***	0.34	0.02	-0.32
Proto-industry (1866)	0.41	0.28	-0.13*	0.20	0.53	0.33*
Postal Station (1858)	0.95	0.32	-0.63***	0.99	0.75	-0.23***
Jewish Pop. (%) (1858)	0.52	0.40	-0.12***	0.46	0.43	-0.03
Houses (count) (1858)	308.76	141.83	-166.93***	170.60	234.11	63.51*
Brick Houses (%) (1858)	0.18	0.09	-0.09***	0.10	0.12	0.02
Hospital (1867)	0.31	0.02	-0.29***	0.04	0.04	-0.00

Note: Monetary values are in Silver Rubles. * $p<0.05$, ** $p<0.01$, *** $p<0.001$

A.1.3 Data Appendix

Table A.3: Description and Sources of Variables used in this Study

Variable	Description and Source
Population (1825)	Town population in 1825. Source: Komisja Rządowa Spraw Wewnętrznych i Policji (1827)
Population (1858)	Town population in 1858. Source: Wolski (1860)
Population (1869)	Town population in 1869. Source: Poland (1870b)
Population (1909)	Town population in 1909. Source: Grabski (1914, 1915)
City Revenues (1848)	Total revenues of the city government in 1848 (in Silver Rubles). Decimals (*kopeykas*) were rounded to the nearest Silver Ruble. Source: AGAD (1848-1849, 1/191/0/–/6951)
City Revenues (1858)	Total revenues of the city government in 1858 (in Silver Rubles). Source: Wolski (1860)
Building Insurance Value (1858)	Value of buildings assessed for the purpose of insurance in 1858 (in Silver Rubles). Source: Wolski (1860)
County Capital in 1858	Dummy variable equal to 1 if the town was the seat of county administration in 1858. Source: Wolski (1860)
County Capital in 1911	Dummy variable equal to 1 if the town was the seat of county administration in 1911. Source: Główny Urząd Statystyczny Rzeczypospolitej Polskiej (1921)
Province Capital in 1858	Dummy variable equal to 1 if the town was the seat of provincial administration in 1858. Source: Wolski (1860)
Province Capital in 1911	Dummy variable equal to 1 if the town was the seat of provincial administration in 1911. Source: Główny Urząd Statystyczny Rzeczypospolitej Polskiej (1921)
Government City in 1858	Dummy variable equal to 1 if the city was owned by the government in 1858, and 0 if it was privately owned. Source: Wolski (1860)
River	Dummy variable equal to 1 if the town is crossed by a river. Source: Wolski (1860)

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Variable	Description and Source
Postal Station in 1858	Dummy variable equal to 1 if there is a postal station in the town in 1858. Source: Wolski (1860)
Type of Hamlet	Hamlets were either incorporated into an existing municipality, or constituted a new municipality of their own. Source: Kapuściński (1870, 1872)
County in 1858	Name of the county the town belonged to in 1858. Source: Wolski (1860)
County in 1911	Name of the county the town belonged to in 1911. Source: Główny Urząd Statystyczny Rzeczypospolitej Polskiej (1921)
Province in 1858	Name of the province the town belonged to in 1858. Source: Wolski (1860)
Province in 1911	Name of the province the town belonged to in 1911. Source: Główny Urząd Statystyczny Rzeczypospolitej Polskiej (1921)
Doctors in 1914	Dummy variable equal to 1 if there was at least one doctor listed as residing in the town in 1914. Source: Ministry of Internal Affairs, Russia (1914). A digital version of the list was webscraped from https://www.personalhistory.ru/papers/rms1914.htm
Doctors per 1000 inhabitants in 1914	Number of doctors residing in the town in 1914 per 1000 inabitants in 1909. Source: Population - Grabski (1914, 1915), Dictors - Ministry of Internal Affairs, Russia (1914). A digital version of the list was webscraped from https://www.personalhistory.ru/papers/rms1914.htm
Hospitals in 1867	Dummy variable equal to 1 if the town had at least one hospital in 1867. Source: Męczkowski (1900)
Hospitals in 1897	Dummy variable equal to 1 if the town had at least one hospital in 1897. Source: Męczkowski (1900)
Brewery in 1900	Dummy variable equal to 1 if the town had at least one brewery in 1900. Source: Bobiński and Bazewicz (1901, 1902)

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Variable	Description and Source
Distillery in 1900	Dummy variable equal to 1 if the town had at least one distillery in 1900. Source: Bobiński and Bazewicz (1901, 1902)
Telegraph in 1900	Dummy variable equal to 1 if the town had access to the telegraph (or telephone) in 1900. Source: Bobiński and Bazewicz (1901, 1902)
Industry in 1900	Dummy variable equal to 1 if the town had at least one of the following in 1900: factory, plant, metal foundry, tannery, sawmill, brickyard, steam machine, dyehouse, oil mill, printer, weaving mill, spinning mill, paper mill, soap mill (in Polish: *fabryka, zakład, odlewnia metali, garbarnia, tartak, cegielnia, maszyna parowa, farbiarnia, olejarnia, drukarnia, tkalnia, przędzalnia, papiernia, mydlarnia*). Source: Bobiński and Bazewicz (1901, 1902)
Proto-industry in 1866	Dummy variable equal to 1 if any industries were listed as present in the town in 1866. Source: (RGIA 1866, F. 1290 Op. 4 D. 759)
Civil Backlog in 1898	Number of unadjudicated civil cases remaining from previous year relative to the number of civil cases adjudicated in 1898. Source: Varshavska Sudebnaya Palata (1899)
Criminal Backlog in 1898	Number of unadjudicated criminal cases remaining from previous year relative to the number of criminal cases adjudicated in 1898. Source: Varshavska Sudebnaya Palata (1899)
Total Cases in 1898	Number of civil and criminal cases brought to court in 1898. Source: Varshavska Sudebnaya Palata (1899)
Court Jurisdiction in 1900	Name of the court which has jurisdiction over the town in 1900. Source: Bobiński and Bazewicz (1901, 1902) and Varshavska Sudebnaya Palata (1899)

A.2 Further Qualitative Evidence

A.2.1 Constraints on the Constitutive Committee

Much of the Polish historiography considers the city reform to be yet another example of the punitive measures undertaken by the Tsarism following the 1863–1864 Uprising. This view is based largely on the perceptions of the contemporaries, however, not the actual motivations of the Russians. Firstly, the reform itself was largely meant to lay ground for the unification of the Kingdom with the Empire. A parallel reform was under deliberation for the Empire. Secondly, many of the cities in the Kingdom of Poland were indeed tiny and akin to villages.

The indiscriminate selection of cities was likely a result of constraints that the Constitutive Committee has faced. A letter dated February 5th, 1868, sent from St. Petersburg to the Constitutive Committee states that because of insufficient funds being available, any "expenses expected by interim committees should be limited to the point of extreme necessity" (AGAD KRSW, 1867-186?, 1/191/0/–/130). Another constraint was temporal—the Constitutive Committee was itself an interim institution and faced time constraints, and indeed was disbanded shortly after the reform, in 1871, before being able to conclude other reforms under preparation. That made further efforts to acquire additional information unfeasible. Finally, the reform was prepared by foreigners unfamiliar with the Kingdom and who, at least on some occasions, displayed lack of knowledge of the local reality.

In the context of the reform, the most blatant example is Timashev's idea that applying criteria that would leave around 50 cities would be most consistent with "the actual needs of the region" as it would be equivalent to the number of cities in the neighboring four western provinces of the Empire that have a total area similar to the Kingdom and, according to the minister, are in "similar political

conditions".[1] The four provinces were actually different in that they were much more heavily agricultural (and less populous), and other members of the Committee indeed noted, when arguing with this point made by the minister, that the "economic conditions" were incomparable. Overall, the actual state of the cities in question was not legible to the Russian authorities who simply did not possess all the information needed to make a more nuanced decision.

A.2.2 Reactions of towns to degradation

If the inhabitants of towns selected for degradation expected that their situation would change as a result, we would expect to see some form of reaction to the reform. While detailed records from those times have not been preserved, documents of the Constitutive Committee present some evidence for the popular reception of the reform. I discuss this anecdotal evidence in what follows.

When selecting cities for degradation, the Constitutive Committee sought to consult provincial Governors and Commissions on Peasant Affairs on a number of additional matters. Two of these are important for our discussion. First, a list of 29 cities that were to be subjected to degradation "if there are no special obstacles" to doing so was set aside, and the Committee wanted a second opinion on these. Second, the Committee sought advise on whether the cities that were unconditionally subject to degradation should form independent municipalities, or if they should be joined into neighboring rural municipalities.

A circular letter with instructions was sent to Governors and Commissions on Peasant Affairs on July 26th, 1869. In this letter, the provincial authorities were asked to (jointly) provide their considerations as to whether any of the 29 cities should not be degraded and to collect "information about the desire of the in-

1. Grodno, Kovno, Vilna and Volhynian Governorates, just like the entirety of the Kingdom of Poland, were all part of the Polish-Lithuanian Commonwealth pre-1795.

habitants of these cities [subject to unconditional degradation] to form separate municipalities or to unite with neighboring villages", together with their considerations on this matter (Russia 1870, Item 102-103). A follow-up circular letter sent by the Committee on September 15th, 1869 asks the provincial authorities to additionally collect information on the number of persons in the cities subject to degradation who posses enough land to be able to vote at a municipal gathering or be elected to a municipal office, and to take this information into consideration (Item 133-134).

Provincial authorities individually reported back to the Constitutive Committee, and protocols of the Committee's meetings provide us with information as to the content of these reports, as well as the position of inhabitants of individual cities with regard to the reform. Out of the 29 cities subject to conditional degradation, for 12 of these I find evidence that a letter or petition was sent by the citizens, or more generally some report of a "position" of the inhabitants on this issue.[2] The protocols also contain a joint recommendation by the respective Governor and Commission on Peasant Affairs, and the final decision of the Constitutive Committee. Moreover, two additional petitions from other cities are reported as well. One from a city that was subject to unconditional degradation, where the inhabitants petitioned to remain as a city; another one from a town that was to remain as a city, where the inhabitants petition for degradation. I summarize these in Table A.4.

In the majority of listed towns, the inhabitants state their desire for their town to remain as a city. Many of these requests have been honored, although we must be cautious in attributing this to the expressed will of the inhabitants — several of the remaining 17 out of the overall 29 towns have also remained as cities de-

2. It is important to note that lack of evidence of any petitions being sent by inhabitants of the remaining 17 cities does not mean that such letters were not sent; it is only indicative that no record of such letters was made in the protocols.

Table A.4: Position of town inhabitants and government authorities toward city status degradation

Town Name	Inhabitants' Position	Provincial Authorities' Opinion	Constitutive Committee's Decision	Province
Towns subject to conditional degradation				
Opoczno	Remain	Remain	Remain	Radomska
Zawichost[a]	(1) Jews: Remain Christians: Degrade (2) Majority: Remain	Governor: Remain Commission: Degrade	Remain	Radomska
Nowy Korczyn	Degrade	Degrade	Degrade	Kielecka
Garwolin[b]	Remain (1869) Remain (1870)	Degrade	Remain	Siedlecka
Wyszogród	Remain	Degrade	Remain	Płocka
Dobrzyń n. Wisłą	Remain	Degrade	Remain	Płocka
Rypin	Remain	Remain	Remain	Płocka
Błaszki	Remain	Degrade	Remain	Kaliska
Dąbie	Remain	Degrade	Remain	Kaliska
Działoszyn	Remain	Degrade	Degrade	Kaliska
Żarki	Remain	Degrade	Degrade	Piotrkowska
Preny	Remain	Remain	Remain	Suwalska
Towns subject to unconditional degradation				
Błonie	Remain	Remain	Remain	Warszawska
Towns not initially subject to degradation				
Tarnogród	Degrade	Degrade	Degrade	Lubelska

Sources: Uchreditel'nyy Komitet v Tsarstve Pol'skom (1869c, Articles 2822, 2836, 2881, 2886 and 2896), Uchreditel'nyy Komitet v Tsarstve Pol'skom (1870a, Articles 2918, 2947, 2972 and 2994), Uchreditel'nyy Komitet v Tsarstve Pol'skom (1870b, Articles 3015 and 3045), Uchreditel'nyy Komitet v Tsarstve Pol'skom (1870c, Articles 3136 and 3142). [a] Opinion of inhabitants is reported in two separate documents. The first one distinguishes between the (conflicting) opinions of Christians and Jews. The second one states that "the majority of inhabitants" want their town to remain as a city. About 59% of inhabitants of Zawichost at that time were Jewish. [b] Inhabitants of Garwolin have sent at least two separate letters petitioning for their town to remain as a city.

spite no mention of a petition of their inhabitants in this regard. The inhabitants of two cities, Nowy Korczyn and Tarnogród, expressed their support for degradation. Why would that be the case? One fact that is quite telling is that in both of these cities, the majority of citizens were actually landowners (according to 1865 administrative data). While we have no details of the exact content of the petition from Nowy Korczyn, the Committee protocols state the following for Tarnogród:

> "Residents of the city of Tarnogród [...] in a petition submitted in December to the Constitutive Committee stated: that they were engaged almost exclusively in arable farming and day labor, and only very little trade; that in general their life is no different from the life of the villagers, and that they are in such a poor condition that every year they have a significant number of tax arrears and they are unable to support the city administration" (Uchreditel'nyy Komitet v Tsarstve Pol'skom 1870a, Article 2994)

The argument of a reduction of tax burdens was also present in the considerations of the provincial authorities. For example, in the Kielce governorate, when suggesting degrading the city of Jędrzejów, the report to the Committee states that "one cannot but come to the conclusion that Jędrzejów can be freely converted to a hamlet, all the more so as this will serve the benefit of the inhabitants, since with the renaming into a hamlet, the duties paid now by the residents will decrease by 1/5" (Uchreditel'nyy Komitet v Tsarstve Pol'skom 1869c, Article 2836). It suggests that the local authorities pointed to the residents that the conversion of cities into hamlets will be associated with a reduction in tax burdens. The circular letter submitted by the Committee to the Governors and Commissions on Peasant Affairs on November 15th, 1869 makes it explicit that there are no obstacles "to inform the residents of the towns being converted to hamlets that assumptions are being made regarding the imposition of rural taxes on them" (Russia 1870, Item

161-162). It is thus likely that two reasons, the relative poverty and the resulting wish to reduce tax burdens (even if already modest) as well as the agricultural predominance (presumably, associated with preferences that favor degradation), motivated wishes of those inhabitants who supported degradation. We should note that in each city, there were likely those who were in favor and those who were against, and it is only the relative size of the two groups that varied and possibly determined the position of "the majority".

What about circumstances when the inhabitants were against degradation? A petition submitted to the Governing Committee by the citizens of Żarki can be informative in this respect (see Figure A.1). I have located a copy of this petition in the archival records of the Piotrków governorate, permitting us to assess in detail the argumentation the inhabitants presented. The body of the petition is as follows:

> Residents of the city of Żarki on affirming the city of Żarki as a city on the following grounds:
>
> Upon receipt of information and readings of the Highest Decree of the Sovereign Emperor published in the Warsaw journal that most of the cities will be reinstated as villages; fearing that the city of Żarki will be reinstated as a village; we take the liberty to refer to the following circumstances:
>
> 1. Żarki city has long been and still is a city in which the District Court is located.
> 2. [It] has 400 hearths of which 356 are insured for 77,450 Rub. Silver: [It] also has many more newly built that are not insured. Those that are insured are insured only at half of the cost to pay less rent. And since in the past year an order was issued so that the [household tax] now be levied on the property of the residents, the city of Żarki will increase its real estate insurance this year.

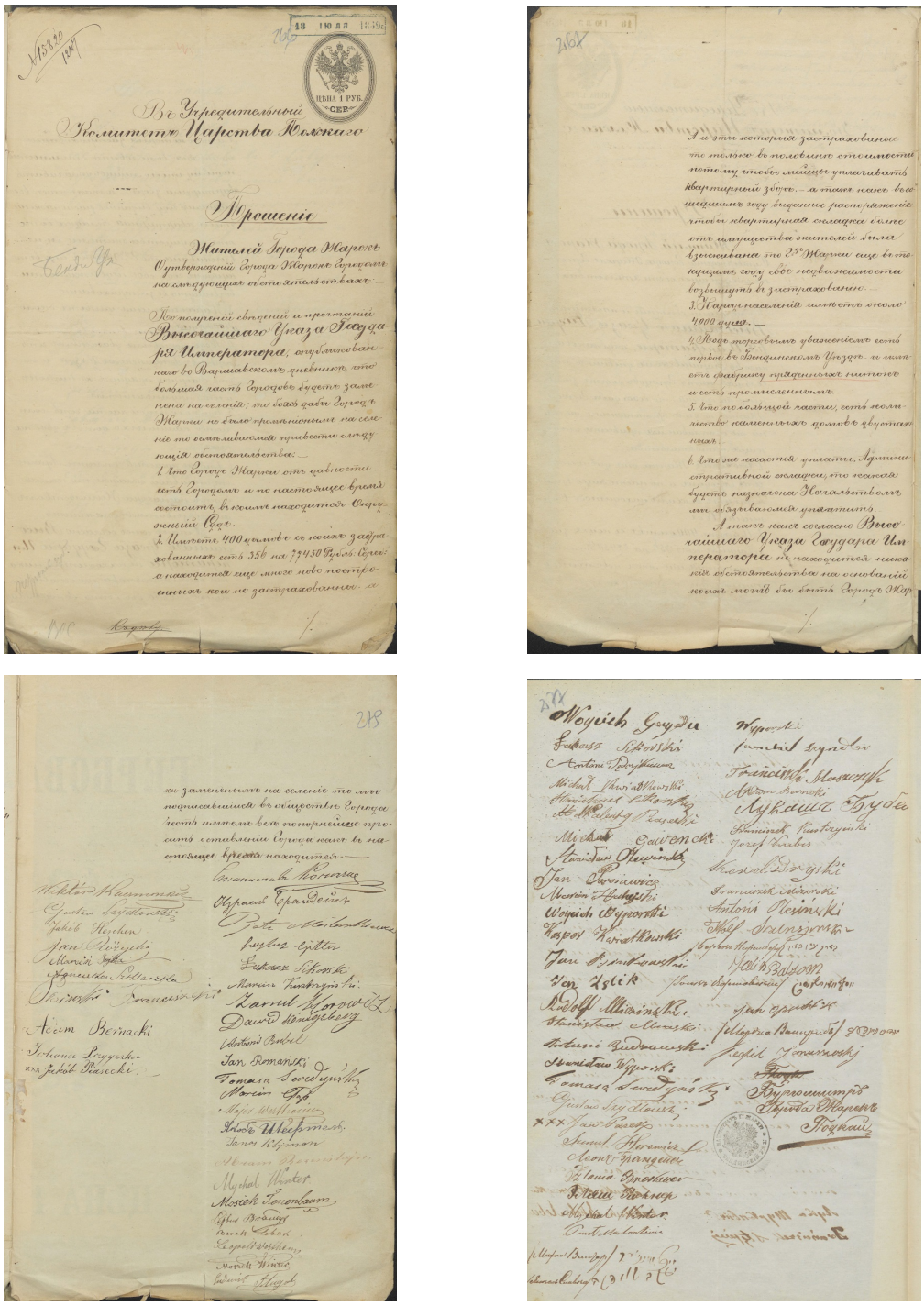

FIGURE A.1: Petition of the citizens of Żarki submitted to the Constitutive Committee

Source: Archiwum Państwowe w Łodzi (1867-1870, 39/8/0/–/571)

3. The population is about 4,000 souls.
4. Has commercial respect, is the first in Bendzin county, has a spinning thread factory and is [an] industrial [city].
5. For the most part, there are a number of two-story stone houses.
6. As for the payment of the Administrative [tax], we undertake to pay whatever the amount set by the Administration.

And since, according to the Highest Decree of the Sovereign Emperor, there are no circumstances based on which Zharki city could be reinstated as a village, then we, the undersigned from the community of the city, have the honor to humbly ask to leave the city as it is now.

What we can infer from this letter is that the residents point to a number of factors that were commonly associated with 'cityness' as arguments against degradation, and these were factors that commonly distinguished urban settlements from those with a more rural character. The most interesting, however, is the fact that the residents indicate their willingness to pay higher taxes as to cover the costs of having city administration. This suggests that they perceived value in the fact of their city remaining as a 'city' and that this value was not just symbolic, but very likely—also economic.

The second type of evidence comes from deliberations on whether the cities that were unconditionally subject to degradation should form independent municipalities. Opinions of both the city residents and the residents of the neighboring rural municipalities were to be solicited. The following statement of the Piotrków governor submitted to the Constitutive Committee provides for a good summary:

"[W]ith the extension of municipal structure to the hamlets, the costs of maintaining municipal administrations and other public needs will fall on them

> with a greater weight. Therefore, although it is clear from the information collected by the commission that, with very few exceptions, the population of future hamlets expressed a desire to form separate municipalities, but in view of the above considerations and not finding in all the above-mentioned petitions of city residents, **but for the desire to get rid of the rest of the rural population**, no indications that deserve respect for such features of urban life, which would require the formation of separate municipalities from hamlets, the commission recognized it more expedient and even agreeable with the material interests of the future hamlet settlements themselves to annex the abolished cities to the already existing rural municipalities." (Uchreditel'nyy Komitet v Tsarstve Pol'skom 1870a, Article 2918)

Overall, I find that there was substantial variation in the opinions of inhabitants of degraded cities. On the contrary, the vast majority of rural inhabitants were in favor of annexation of newly formed hamlets (but with many exceptions). In the end, only a small fraction of cities would form their own municipality. Beyond the opinions of inhabitants, the typical reasons that drove those decisions were: 1) insufficient funds for the maintenance of a separate municipal administration (as judged by the Constitutive Committee and provincial authorities), and 2) an insufficient number of large-enough landowners who could vote and take municipal office (in some instances, not a single inhabitant of a degraded city would meet the threshold). The latter reason is perhaps the most interesting, because the reluctance of being governed entirely by the rural population from outside of the hamlet may have been the very reason why some of the cities preferred having their own municipality after degradation. This is particularly paradoxical because, while in most of the instances the small number of inhabitants eligible for office was the reason why separate municipality would not be granted, the Constitutive Committee seemed to be aware of the potentially adverse consequences

this may have. In fact, upon receipt of a report from the Radom governorate, when discussing whether to degrade the city of Zawichost, the Constitutive Committee concluded that:

> "[I]t seemed an obstacle to the conversion of this city into a hamlet, that, on the one hand, Zawichost could not form a separate municipality since there, out of the total number of 3,070 inhabitants, only 48 landowners have the right to vote at municipal gatherings, and of them only 32 can be elected to municipal offices, on the other hand, **the annexation of this city** with such a significant population and a small number of votes to a rural municipality **could adversely affect the interests of its inhabitants**." (Uchreditel'nyy Komitet v Tsarstve Pol'skom 1869c, Article 2822)

To conclude, the qualitative evidence available to us suggests that different segments of the population varied in their preferences and evaluation of the consequences of the reform for their well-being. This is what we would expect to see in a situation that creates relative winners and relative losers. To be clear, different considerations where at play, and the reform had multidimensional consequences for individual citizens that were not always all positive or all negative. Nevertheless, the considered evidence suggests that overall, inhabitants of cities, especially those inhabitants who were not engaged in agriculture and especially of those cities that had less of an agricultural character, were at best ambiguous toward the reform, and in many cases, actively trying to prevent their city from being degraded or being annexed into neighboring rural municipalities.

A.2.3 Justification for not renaming degraded cities as villages

At the meeting of the Constitutive Committee discussing the reform, Senator Braunschweig proposed that the degraded cities should be renamed into hamlets (*posad*) and not villages (Uchreditel'nyy Komitet v Tsarstve Pol'skom 1869a,

Article 2477 - Annex). Braunschweig's argumentation gives us great insights into the context, reasoning and considerations at the time. Braunschweig argues that because of the existing class relations, renaming burghers as peasants will generate a hostile response:

> "Here the townspeople [...] greatly value their alleged class superiority over the peasants. This prejudice is so strong and widespread among them that renaming them as peasants or rural inhabitants will create general displeasure among them, so that instead of gratitude for the new merciful and beneficent social order, the government will acquire only hostility and grumbling from a population of one hundred thousand."

He then continues:

> "Offended in their pride, these people may become irreconcilable enemies of the government and will use all their influence on the peasants, with whom they will now be placed in closer and more frequent relationships, to cause anxiety and dislike towards the government and Russia. Given the political situation of this region, it would be necessary to avoid, whenever possible, any useless legislative and administrative measures that could arouse displeasure and hostility against the government among the masses."

Braunschweig also expresses his concern that simply renaming a group of people as peasants does not make them peasants, and that for reasons of legibility to the state a distinction must be made:

> "The real rural population in the local area [...] has always remained unwaveringly loyal to the legitimate government and now constitutes the most reliable conservative element on which, if necessary, it can safely rely on. On the contrary, the urban population has never been distinguished by its reliability. After the renaming of a significant number of cities and towns into

villages and their inhabitants into peasants, any official distinction between the one and the other will disappear, and then the government will be deprived of the opportunity in any general measures to unconditionally trust the entire rural population."

A.2.4 Alternative Explanations

I consider two alternative explanations for how the city reform may have driven my observed outcomes which may seem as plausible given the empirical context, but which I argue are unlikely.

Discrimination of Jews

Jews constituted a sizable 46.5% of city inhabitants in 1865—47.1% in remaining cities and 45.7% in the cities that were to be degraded (R. Kołodziejczyk 1979, 77). If the reform resulted in any changes that specifically targeted Jews, this may have been an important driver of (de)urbanization. Has city status created a different environment in cities vs. non-cities specifically for Jews?

I studied the appropriate legislation pertaining to cities and hamlets and found that city status did not carry important consequences for the political position of Jews. They were allowed to vote in municipal elections on the same basis as Christians (Kirszrot 1917, 84), and in that sense, had political subjectivity in the degraded cities. Although Jews could not take the position of a village or municipality chief in the newly created hamlets (with some exceptions) (Konic and Olszewski 1883, 17), it was also true that they could not be appointed as city mayors (Kirszrot 1917, 85).

Protocols from Constitutive Committee meetings show that the Committee has actually taken actions to ensure the reform does not impair the rights of Jews. For example, it was specifically decided that the management of public lands and

buildings that belong only to the Jewish community, such as Jewish prayer houses, will not be transferred to municipalities and municipal gatherings. Instead, Jews in degraded towns were granted the right to hold private gatherings relating to the disposal of exclusively Jewish property (Uchreditel'nyy Komitet v Tsarstve Pol'skom 1870a, Article 3005).

Any impairment to the position of Jews relative to that of Christians may instead be driven by a composition effect. Jews were much more represented in crafts and trade, and among the urban proletariat, and only very few worked in agriculture and owned land in sufficient quantity as to gain political rights. The reform may have potentially impacted Jews more than Christians in degraded cities, but all available evidence points that this effect is driven by the landowner/non-landowner cleavage. I have also collected data on Jewish share of population at the individual settlement level in 1909. Jews accounted for 40.8% of inhabitants in non-degraded cities and 44.5% in degraded cities in that year. It appears that, at least at an aggregate level, Jewish to Christian relative population growth was actually lower in cities, suggesting that in hamlets the position of Jews relative to Christians was not worse than in cities.

Taxation

City status in Congress Poland had implications for the type and extent of taxation in towns. Could this be what drives my results? I argue not. In principle, taxation in cities was based on property and industry whereas taxation in the rural areas (including the degraded cities) was based on land. Exceptions were allowed in former cities where taxes on land would not be sufficient to pay for the local administration, but such decisions were uncommon and taken on a case by case basis.

The reform has generally reduced the level of taxation in the degraded cities.[3] For example, Wiech (1992) calculates that total tax revenues in the 34 degraded cities of Kielce governorate decreased by 8.5%. Moreover, the overall burden of (direct) taxation was not excessively high. For 1908, Markowski (1923) estimates the average per capita tax in cities at 2.50 rubles, compared to 0.56 rubles in villages. In the 97 cities with a population below 20,000, the average per capita tax was at 1.47 rubles (Markowski 1923). Generally, tax revenues were lower in smaller localities.

To sum up, I do not find differences in taxation to be an important factor. Taxation rates were low, and if anything, more favorable toward urban elites in the degraded cities where the tax burden would shift onto landowners. Changes to the tax system in rural municipalities, e.g. to tax factories or to tax income, were deliberated but never implemented (Konic 1906, 145). If differences in taxation were important, we would expect to find an opposite effect whereby industry was more likely to locate in degraded cities.

A.2.5 Additional Evidence on Mechanisms

This section considers in more detail the mechanisms by which city status affects long term development and provides additional qualitative evidence.

City Government

My theoretical argument states that city status should have implications for who controls local government, and consequently, for the types of policies pursued and public goods and services provided. I will provide broad statistical as well as anecdotal evidence in support of the proposed mechanism.

3. Municipal assemblies had some power to raise additional taxes. Lower taxation was thus also a matter of choice.

First, note that as a result of the land census in rural municipalities, in 1876 only 8.8% of countryside inhabitants could participate in a municipal assembly where voting would take place (Miklaszewski 1879). While we do not have data on what proportion of voters the inhabitants of degraded cities constituted at municipal assemblies, we can however use an approximation based on land holding data. Whereas in the 1890s, the inhabitants of former cities constituted 10.8% of rural population, they made for only 6.3% of landowners who could meet the 3 morg land census (own calculations based on Glogier et al. (1904, 256) and Varshavskiy Statisticheskiy Komitet (1900, 66, 100)).[4] This tells us only a part of the story, particularly relevant to those hamlets that formed a municipality with other villages. What is common to all hamlets is that landowners could vote, and the landless could not.

This was reflected in who was elected as municipality chief. In 1871, 78% of municipality chiefs were peasants, 13% were larger landowners and only 9% belonged to other estates (Spasowicz 1892, 351). I argue that who was elected and who was in charge mattered for what policies would be pursued. The inhabitants of former cities have viewed the priorities for and tasks of the municipality differently from peasants and for that reason, municipal gatherings witnessed acute disputes about how municipal budgets should look like and how the tax contributions should be distributed among the population (Kozłowski 1998; Russia 1876a, 127). Moreover, a large part of inhabitants was excluded from these gatherings altogether, with no say over what was to be decided.

An example of the ways in which the reform hampered city development is by having a detrimental effect on craft guilds which has consequently hurt craftsman in the degraded cities. Wiech (1992) brings up an 1885 report by a county chief

4. Note that, as mentioned previously, there existed certain legal exceptions whereas the land census could be halved in the former cities. We do not observe whether and where this has taken place.

who argues that the reform has suspended any local government supervision over craft guilds, and that this has led to a decline in local craftsman' authority. In the degraded city of Szczekociny, increasingly less attention was paid to existing legislation on craftsmanship which there was nobody to enforce after the loss of city status and the subsequent dismantling of the town hall bureaucracy (Frączek 2016, 169).[5] Poor craftsman, not having means of sustenance, would increasingly undertake agriculture (Wiech 1992).

Judiciary

Given my theory, we would expect that the composition and the operating of the judiciary will be more favorable toward landed interests in the degraded cities (and in the countryside in general). I therefore look for evidence that city status, and consequently that appropriate court type, had an effect on both the structure of who the judges were, as well as that it resulted in differences in how justice was served.

In his memoirs of the judiciary during Russian rule, Aleksander Kraushar—a contemporary lawyer critical of the fact that Russians were brought in to adjudicate in a language foreign to the local population—affirms that generally the Russian judges were not seen as partial and biased (Kraushar 1916, 8). It also appears that the Russian judges in peace courts were better educated than their counterparts in municipal courts. Whereas 86% of peace judges held university degrees in 1894, only 36% of municipal judges did too (own calculations based on Głębocki (1894)). Nearly 20% of municipal judges had only primary education, compared to 2% among peace judges (ibid.). This could possibly indicate that municipal courts performed worse than peace courts because of having judges

5. Law that regulated craft guilds has explicitly given a supervisory role to city magistrates (Poland 1818); there were however no legal obstacles for hamlets to undertake it as well.

who are less prepared to do their job.

But it could as well be misleading. We could speculate that generally civil cases may require more education and legal training among the contemporaries, and that the complexity of civil cases will tend to be greater in larger and more industrial settlements. If we accept this premise, then the aggregate differences in the level of education may simply be driven by necessity (or by its lack). For example, Bereza (2002, 28) argues that in hamlets proximate to the border, where a large share of the population was engaged in trade, the judges with a legal training would typically be appointed. Ideally, we would like to verify this in a more systematic way, e.g. by observing the education level of judges not in the aggregate, between the two types of courts, but at the individual court level between comparable cases where the level of industrialization and development is not too far apart. Unfortunately, such data is not readily available Moreover, we should not overestimate the effect of having legal education given that the Kingdom and the rest of the Empire had two very different civil codes. While trained Russian judges could demonstrate expertise in criminal law, they were not familiar with the French-Polish civil law (Kraushar 1916, 60).

One way to evaluate the effectiveness of judges would be to see how many of their adjudications are overturned in higher instances. Overall, we observe that the number of cassation appeal cases presented to the Governing Senate in St. Petersburg coming from the peace courts was much higher than from the district courts, despite the former generally dealing with cases of lesser magnitude (Bereza 2010).[6] Although this is likely to be partially driven by the much larger number of cases that peace courts have dealt with, even though a 100 rubles minimum threshold on the value of the subject of dispute limited the extent of that, what is instructive is that a much larger share of civil than penal cases were af-

6. The Governing Senate, among other roles, also acted as the court of cassation.

firmed (Bereza 2010). Evaluating such discrepancies at the individual court level could be particularly informative.[7] We do have some numbers for appeals to courts of second instance. In 1899, 39.9% of appeals from municipal courts were recognized, compared to 24% from peace courts (Białokur 1901).

We do, however, have the total number of cases and the number of cases that were appealed to the second-instance aggregated at the level of the second-instance district, but with the distinction between whether the cases originated in a municipal or a peace court. This allows us to calculate what percentage of cases from all municipal and all peace courts that fall under the same second-instance court were appealed, with the distinction between criminal and civil cases. I present this data in full for the year 1909 in Table A.11. These numbers are imperfect because they do not allow us to distinguish how appeal rates can be driven by types of cases, which may differ systematically between towns. Nevertheless, they are telling: I find that the appeal rate for criminal cases did not differ drastically between peace and municipal courts, being 6.01% in the former and 6.37% in the latter (6% higher). For civil cases, however, it was 2.67% and 3.54%, respectively (33% higher in municipal courts). This may underestimate the difference once we accept the premise that on average civil cases brought to peace courts were more complicated, and thus an appeal was more likely warranted.

An 1886 inspection of municipal courts in the Warsaw governorate is telling as to what the reasons could be. It revealed that the multiple violations of law that these courts committed, revealed during the appeal or cassation process, were not due to insufficient knowledge of the law, but a result of an intentional bias in issuing judgement (Korobowicz 1995, 106–7). A 1914 inspection report in the

7. Note that the annual report titled *Otchet po kassatsionnym departamentam Pravitel'stvuyushchego senata* which originally reports data on cassation cases presents only territorial aggregates at the level of a peace court district, which makes us unable to distinguish between municipal and peace courts.

Płock governorate mentions that municipal judges have a tendency to impose low fines (Korobowicz 1995, 107).

Corruption was also present. Chwalba (2001, 93–4) argues that "judicial protection" was essentially a commodity that corrupt judges offered for sale and that it was common in the Kingdom, especially in lower instance courts. Parties to court proceedings could bribe judges for either withdrawing a proceeding, conducting it in a favorable way or speeding up or delaying a court date. The important point is not whether particular types of court were more susceptible to corruption. Rather, the presence of corruption in the judicial system illustrates that if judges chose to, they could be partial in their sentencing.

A.3 Further Empirical Evidence

Table A.5: Propensity Score Estimation

	Treatment (0/1)	
	Coefficient	SE
ln(Population) (1869)	-1.572***	0.469
ln(City Revenues) (1858)	-0.676***	0.186
ln(Building Insurance Value) (1858)	-2.418***	0.417
Constant	44.42***	4.383
Observations	433	
Pseudo R^2	0.77	

Note: Probit. Robust SEs. * p<0.05, ** p<0.01, *** p<0.001

Table A.6: Number of Cases Submitted to First-Instance Courts in 1893 by Court and Case Type

Governorate	Peace Judiciary						General Judiciary		Total	
	Peace Courts		Municipal Courts		Total		District Courts			
	Criminal	Civil	Criminal	Civil	Criminal	Civil	Criminal	Civil	Criminal	Civil
Warszawska	34156	66818	24743	24949	58899	91767	4410	3927	63309	95694
Piotrkowska	13284	21838	26984	32454	40268	54292	3123	1897	43391	56189
Kaliska	4181	5149	16595	18132	20776	23281	1791	794	22567	24075
Radomska	4325	5090	27249	25668	31574	30758	1976	912	33550	31670
Kielecka	4253	5041	21549	27869	25802	32910	2203	930	28005	33840
Lubelska	8699	9109	24964	31812	33663	40921	1935	1323	35598	42244
Siedlecka	5213	6356	15495	25713	20708	32069	2035	719	22743	32788
Płocka	4921	5838	11358	12342	16279	18180	1257	662	17536	18842
Łomżyńska	4949	5026	18222	22573	23171	27599	1838	796	25009	28395
Suwalska	4802	3673	13535	19050	18337	22723	1436	773	19773	23496
Total	88783	133938	200694	240562	289477	374500	22004	12733	311481	387233
% of Total	28.5%	34.6%	64.4%	62.1%	92.9%	96.7%	7.1%	3.3%	100%	100%

Note: Own calculations based on Varshavska Sudebnaya Palata (1895).

Table A.7: Average Treatment Effect on the Treated—Population Growth

	Δ Population (%): 1869-1909	Δ Population (%): 1858-1869	Δ Population (%): 1825-1858
	(1)	(2)	(3)
ATT	-64.22*	-10.42	-23.38
	(26.92)	(8.513)	(18.53)
R^2	0.129	0.065	0.027
F	5.689	1.498	1.591
Observations	155	155	155

OLS. Robust SEs in parentheses. * p<0.05, ** p<0.01, *** p<0.001

Table A.8: Average Treatment Effect on the Treated — Court Backlog

	Civil Backlog			Placebo: Criminal Backlog		
	(1)	(2)	(3)	(4)	(5)	(6)
ATT	0.121*	0.127*	0.125*	-0.0270	-0.0292	-0.00427
	(0.0509)	(0.0534)	(0.0517)	(0.0252)	(0.0247)	(0.0117)
ln(Total Cases)		-0.0988*			0.0339*	
		(0.0493)			(0.0158)	
Constant	0.0230***	0.731*	0.0220***	0.0627*	-0.180	0.0403***
	(0.00568)	(0.355)	(0.00530)	(0.0241)	(0.106)	(0.00911)
R^2	0.059	0.080		0.049	0.090	
Observations	155	155	155	155	155	155

Models 1, 2, 4 and 5: OLS. Models 3 and 6: Random Effects. Robust SEs in parentheses. * p<0.05, ** p<0.01, *** p<0.001

Table A.9: Treatment Effects—Socio-economic Structure

	Industry (Yes= 1)				Telegraph (Yes= 1)		Brewery (Yes= 1)		Distillery (Yes= 1)	
	(1)		(2)		(3)		(4)		(5)	
	β / SE	Mfx	β / SE	Mfx	β / SE	Mfx	β / SE	Mfx	β / SE	Mfx
ATT	-0.860*	-0.302**	-0.753	-0.260*	-1.063*	-0.375**	0.360	0.093	0.341	0.021
	(0.383)	(0.115)	(0.397)	(0.127)	(0.494)	(0.137)	(0.383)	(0.092)	(0.411)	(0.028)
Proto-industry (1866)	No		Yes		No		No		No	
Pseudo R^2	0.083		0.097		0.123		0.016		0.017	
Observations	155		155		155		155		155	

Note: Probit. Robust SEs in parentheses. * p<0.05, ** p<0.01, *** p<0.001

Table A.10: Treatment Effects—Alternative Propensity Score Specifications

	Δ Population (%): 1869-1909	Δ Population (%): 1858-1869	Δ Population (%): 1825-1858	Doctors per 1000 inh.	Doctors (Yes=1)	Hospitals (Yes=1)	Civil Backlog	Criminal Backlog	Industry (Yes=1)	Telegraph (Yes=1)	Brewery (Yes=1)	Distillery (Yes=1)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
					Panel A: Drop ln(Building Insurance Value)							
ATT	-131.7**	4.431	-1.428	-0.416***	-0.296***	-0.0859	0.0749**	0.00773	-0.468***	-0.0823	0.0685	0.00959
	(48.07)	(7.599)	(15.27)	(0.110)	(0.0805)	(0.0762)	(0.0227)	(0.0221)	(0.0682)	(0.254)	(0.0917)	(0.0616)
					Panel B: Drop ln(City Revenues)							
ATT	-80.89*	-3.313	-8.148	-0.497***	-0.240***	-0.219	0.113*	-0.00312	-0.342***	-0.201	-0.0725	0.0225
	(35.43)	(5.818)	(15.20)	(0.124)	(0.0555)	(0.140)	(0.0444)	(0.0157)	(0.0917)	(0.183)	(0.145)	(0.0409)
					Panel C: Drop ln(Population)							
ATT	-29.09	-8.824	-23.20	-0.483*	-0.255***	-0.257	0.107*	-0.0160	-0.228	-0.515***	-0.140	0.0210
	(24.21)	(5.379)	(14.89)	(0.188)	(0.0596)	(0.185)	(0.0460)	(0.0150)	(0.131)	(0.0689)	(0.185)	(0.0248)
					Panel D: Add ln(Building Insurance Value)^2							
ATT	-64.95*	-10.54	-25.85	-0.516**	-0.205***	-0.0525	0.112*	-0.0301	-0.301**	-0.370**	0.0922	0.0196
	(27.17)	(8.660)	(18.04)	(0.180)	(0.0594)	(0.0594)	(0.0476)	(0.0255)	(0.116)	(0.137)	(0.0830)	(0.0263)
					Panel E: Add ln(City Revenues)^2							
ATT	-64.50*	-10.35	-23.12	-0.522**	-0.219***	-0.0631	0.121*	-0.0268	-0.302**	-0.372**	0.0936	0.0208
	(27.11)	(8.515)	(18.58)	(0.176)	(0.0635)	(0.0685)	(0.0510)	(0.0252)	(0.115)	(0.138)	(0.0913)	(0.0284)
					Panel F: Add ln(Population)^2							
ATT	-46.12	-12.74	-29.90	-0.524**	-0.216***	-0.0635	0.113*	-0.0322	-0.303*	-0.483***	0.0782	0.0196
	(24.90)	(8.313)	(16.93)	(0.188)	(0.0654)	(0.0679)	(0.0484)	(0.0244)	(0.126)	(0.0857)	(0.0917)	(0.0272)

Number of observations: Panel A-230 observations, B-163 , C-161, D-159, E-155, F-158. Robust SEs in parentheses. * p<0.05, ** p<0.01, *** p<0.001

Table A.11: Number of Cases Submitted to First-Instance Courts and Appealed to Second-Instance in 1909 by Court and Case Type Aggregated at the Level of Second-Instance Courts

Second-Instance Court	Number of Cases				Number of Appeals				Appeal Rate			
	Peace Courts		Municipal Courts		Peace Courts		Municipal Courts		Peace Courts		Municipal Courts	
	Criminal	Civil	Criminal	Civil	Criminal	Civil	Criminal	Civil	Criminal	Civil	Criminal	Civil
Warsaw: 1st District	5103	4597	13958	28676	221	93	1388	1351	4.33%	2.02%	9.94%	4.71%
Warsaw: 2nd District	4319	5555	5335	11729	231	133	276	440	5.35%	2.39%	5.17%	3.75%
Kalisz: 1st District	3775	5432	7160	12262	151	97	339	372	4.00%	1.79%	4.73%	3.03%
Kalisz: 2nd District	2383	3457	5209	8306	123	76	315	330	5.16%	2.20%	6.05%	3.97%
Kielce: 1st District	3865	3953	7828	16242	196	118	380	638	5.07%	2.99%	4.85%	3.93%
Kielce: 2nd District	2514	2307	9319	17550	210	83	523	681	8.35%	3.60%	5.61%	3.88%
Łomża: 1st District	3298	2928	6577	18117	110	67	492	500	3.34%	2.29%	7.48%	2.76%
Łomża: 2nd District	3850	3572	7631	14431	309	121	431	510	8.03%	3.39%	5.65%	3.53%
Lublin: 1st District	8658	8128	16440	26468	436	258	1298	1454	5.04%	3.17%	7.90%	5.49%
Lublin: 2nd District	4279	4166	8606	22217	223	82	655	1037	5.21%	1.97%	7.61%	4.67%
Piotrków: 1st District	4033	8064	8601	13718	154	90	639	442	3.82%	1.12%	7.43%	3.22%
Piotrków: 2nd District	5911	12009	7633	19348	472	420	436	735	7.99%	3.50%	5.71%	3.80%
Piotrków: 3rd District	8191	42288	3876	13662	656	1144	251	332	8.01%	2.71%	6.48%	2.43%
Płock: 1st District	3518	3626	3624	7661	167	61	266	170	4.75%	1.68%	7.34%	2.22%
Płock: 2nd District	3401	3356	4711	7103	190	101	232	222	5.59%	3.01%	4.92%	3.13%
Radom: 1st District	4103	6681	12024	20371	194	181	612	775	4.73%	2.71%	5.09%	3.80%
Radom: 2nd District	2724	4369	10035	20277	252	93	299	374	9.25%	2.13%	2.98%	1.84%
Suwałki: 1st District	3114	2448	4583	9769	277	91	351	497	8.90%	3.72%	7.66%	5.09%
Suwałki: 2nd District	2504	1204	3069	8755	139	42	198	270	5.55%	3.49%	6.45%	3.08%
Siedlce: 1st District	3788	4526	9378	22504	254	103	495	461	6.71%	2.28%	5.28%	2.05%
Siedlce: 2nd District	3564	3391	5477	17530	255	183	380	334	7.15%	5.40%	6.94%	1.91%
Total	86895	136057	161074	336696	5220	3637	10256	11925	6.01%	2.67%	6.37%	3.54%

Note: Own calculations based on Russia (1911). Warsaw City District court was omitted because it does not receive any appeals from municipal courts.

Appendix B

Appendix

B.1 Appendix

B.1.1 Proofs of propositions

I consider pure-strategy Nash equilibria only.

Proposition 1. *At time $t = 0$, this game has a unique Nash equilibrium: (A, A)*

Proof.

This follows from the assumptions that $i > \max(\alpha e, \frac{e}{\alpha})$, $b_0 = 0$ and $0 < \alpha < 1$, which make choosing action A a strictly dominant strategy. ■

Proposition 2. *At time $t \geqslant 0$ and when $\epsilon \geqslant 0$, (A, A) is the unique Nash equilibrium of this game*

Proof.

Suppose players play strategy (A, A) and a player deviates to B. This deviation is profitable if $\alpha e > i + t\epsilon$. But, by assumption, $i > \alpha e$ and $t\epsilon \geqslant 0$, which means that $i + t\epsilon > \alpha e$, a contradiction. Such deviation is not profitable. By this reasoning, (A, B) cannot be NE because deviating to A would be profitable. By symmetry,

this means (B, A) also cannot be NE. Suppose players play (B, B). A player could deviate profitably to A if $\alpha(i + t\epsilon) > e$. By assumption, $\alpha i > e$ and since $t\epsilon \geqslant 0$, this implies that $\alpha(i + t\epsilon) > e$ must be true as well. Hence, since a profitable deviation exists, (B, B) cannot be NE. This makes (A, A) the unique NE. ■

Lemma 1. $\frac{e-\alpha i}{\alpha t} > \frac{\alpha e - i}{t}$

Proof. Note that $\frac{e-\alpha i}{\alpha t} > \frac{e-\alpha i}{t} > \frac{\alpha e - \alpha i}{t} > \frac{\alpha e - i}{t}$, where the first inequality is true because $0 < \alpha < 1$ and $t > 0$, the second inequality is true because $0 < \alpha < 1$ and $e > 0$, and the third inequality is true because $0 < \alpha < 1$ and $i > 0$. ■

Proposition 3. *Let $\overline{\epsilon} = \frac{e-\alpha i}{\alpha t}$ and $\underline{\epsilon} = \frac{\alpha e - i}{t}$. At time $t > 0$ and when $\epsilon < 0$ and $e > 0$, the game has the following Nash equilibria:*

1. *If $\epsilon < \underline{\epsilon}$, (B, B) is the unique NE*
2. *If ϵ is such that $\overline{\epsilon} \geqslant \epsilon \geqslant \underline{\epsilon}$, there are two NE: (A, A), (B, B)*
3. *If $\epsilon > \overline{\epsilon}$, (A, A) is the unique NE*

Proof.
Case 1: $\epsilon < \frac{\alpha e - i}{t}$

- (A, A): Suppose a player deviates to B. This deviation is profitable if $\alpha e > i + t\epsilon \iff \epsilon < \frac{\alpha e - i}{t}$, which is true by assumption. Since a profitable deviation exists, (A, A) cannot be NE.
- (A, B): Suppose player 1 deviates to B. This is profitable if $e > \alpha(i + t\epsilon) \iff \epsilon < \frac{e-\alpha i}{\alpha t}$. Since by assumption and by Lemma 1 we have $\epsilon < \frac{\alpha e - i}{t} < \frac{e-\alpha i}{\alpha t}$, the deviation will be profitable and hence (A, B) cannot be NE.
- (B, A): By symmetry with above, (B, A) cannot be NE.

- (B, B): Suppose a player deviates to A. This is profitable if $e < \alpha(i + t\epsilon) \iff \epsilon > \frac{e-\alpha i}{\alpha t}$. By assumption and by Lemma 1 we have $\epsilon < \frac{\alpha e - i}{t} < \frac{e-\alpha i}{\alpha t}$, which is a contradiction and hence no profitable deviation exists. Hence, (B, B) is NE.

Case 2: $\frac{e-\alpha i}{\alpha t} \geqslant \epsilon \geqslant \frac{\alpha e - i}{t}$

- (A, A): This deviation is profitable if $\alpha e > i + t\epsilon \iff \epsilon < \frac{\alpha e - i}{t}$, a contradiction. Hence, no profitable deviation exists and (A, A) is NE.

- (A, B): Suppose player 2 deviates to A. This is profitable if $i + t\epsilon > \alpha e \iff \epsilon > \frac{\alpha e - i}{t}$. Now, suppose player 1 deviates to B. This is profitable if $e > \alpha(i + t\epsilon) \iff \epsilon < \frac{e-\alpha i}{\alpha t}$. Given the assumption, each deviation is (strictly) profitable unless ϵ is equal to one of the borderline values. However, given Lemma 1, ϵ cannot be equal to both of these at the same time. This means that for any ϵ in the assumed range, it will be profitable for at least one of the players to deviate. Hence, (A, B) cannot be NE.

- (B, A): By symmetry with above, (B, A) cannot be NE.

- (B, B): Suppose a player deviates to A. This is profitable if $e < \alpha(i + t\epsilon) \iff \epsilon > \frac{e-\alpha i}{\alpha t}$, which is a contradiction and hence no profitable deviation exists. Hence, (B, B) is NE.

Case 3: $\epsilon > \frac{e-\alpha i}{\alpha t}$

- (A, A): Suppose a player deviates to B. This deviation is profitable if $\alpha e > i + t\epsilon \iff \epsilon < \frac{\alpha e - i}{t}$. By Lemma 1, this would imply $\epsilon < \frac{e-\alpha i}{\alpha t}$, a contradiction. Hence, no profitable deviation exists and (A, A) is NE.

- (A, B): Suppose player 2 deviates to A. This is profitable if $i + t\epsilon > \alpha e \iff \epsilon > \frac{\alpha e - i}{t}$. Since by assumption and by Lemma 1 we have $\epsilon > \frac{e - \alpha i}{\alpha t} > \frac{\alpha e - i}{t}$, the deviation is profitable. Hence, (A, B) cannot be NE.

- (B, A): By symmetry with above, (B, A) cannot be NE.

- (B, B): Suppose a player deviates to A. This is profitable if $e < \alpha(i + t\epsilon) \iff \epsilon > \frac{e - \alpha i}{\alpha t}$, which is true. Since there is a profitable deviation, (B, B) cannot be NE.

■

Proposition 4. *At time $t = T$, the game has the following Nash equilibria:*

1. *For $e < 0$:*

   (a) *If $\epsilon < \frac{e}{\alpha T}$, (B, B) is the unique NE*

   (b) *If $\epsilon = \frac{e}{\alpha T}$, there are three NE: $(B, B), (A, B), (B, A)$*

   (c) *If ϵ is such that $\frac{\alpha e}{T} > \epsilon > \frac{e}{\alpha T}$, there are two NE: (A, B), (B, A)*

   (d) *If $\epsilon = \frac{\alpha e}{T}$, there are three NE: $(A, A), (A, B), (B, A)$*

   (e) *If $\epsilon > \frac{\alpha e}{T}$, (A, A) is the unique NE*

2. *For $e = 0$:*

   (a) *If $\epsilon < 0$, (B, B) is the unique NE*

   (b) *If $\epsilon = 0$, there are four NE: (A, A), $(B, B), (A, B), (B, A)$*

   (c) *If $\epsilon > 0$, (A, A) is the unique NE*

3. *For $e > 0$:*

   (a) *If $\epsilon < \frac{\alpha e}{T}$, (B, B) is the unique NE*

(b) *If ϵ is such that $\frac{e}{\alpha T} \geqslant \epsilon \geqslant \frac{\alpha e}{T}$, there are two NE: (A, A), (B, B)*

(c) *If $\epsilon > \frac{e}{\alpha T}$, (A, A) is the unique NE*

Proof.

Case 1a: $e < 0$ and $\epsilon < \frac{e}{\alpha T}$

- (A, A): The utility from playing A conditional on the other player playing A is $b_T \equiv T\epsilon$. Deviating to B yields a payoff of αe. The player will deviate only if $\alpha e > T\epsilon \iff \epsilon < \frac{\alpha e}{T}$, which is true given $\epsilon < \frac{e}{\alpha T} < \frac{\alpha e}{T}$, where the second inequality is true given that $e < 0$. Since profitable deviation exists, (A, A) cannot be NE.
- (A, B): Suppose a player deviates to B. The deviation would yield a payoff of e compared to $\alpha T\epsilon$. This deviation is profitable if $e > \alpha T\epsilon \iff \epsilon < \frac{e}{\alpha T}$ which is true. Hence, (A, B) cannot be NE.
- (B, A): By symmetry with above, (B, A) cannot be NE.
- (B, B): Suppose a player deviates to A. The payoff from deviating is $\alpha T\epsilon$. This deviation is profitable if $\alpha T\epsilon > e \iff \epsilon > \frac{e}{\alpha T}$, which cannot be true since $\epsilon < \frac{e}{\alpha T}$. Since no profitable deviation exists, (B, B) is NE.

Case 1b: $e < 0$ and $\epsilon = \frac{e}{\alpha T}$

- (A, A): Both players receive $T\epsilon$. Suppose a player deviates to B. This yields αe. This deviation is not profitable if $T\epsilon \geqslant \alpha e \iff \epsilon \geqslant \frac{\alpha e}{T}$. However, since $e < 0$, $\frac{\alpha e}{T} > \frac{e}{\alpha T}$, which implies $\epsilon > \frac{e}{\alpha T}$, a contradiction. Hence, (A, A) cannot be NE.
- (A, B): At (A, B), player 1 receives a payoff of $\alpha T\epsilon$ and player 2 receives αe. Suppose player 1 deviates to B. This would be profitable if $\alpha T\epsilon < e \iff \epsilon < \frac{e}{\alpha T}$, a contradiction. Suppose player 2 deviates to A. This

would be profitable if $T\epsilon > \alpha e \iff \epsilon > \frac{\alpha e}{T}$. Since $e < 0$, $\frac{\alpha e}{T} > \frac{e}{\alpha T}$, which would imply $\epsilon > \frac{e}{\alpha T}$, a contradiction. Since no profitable deviation exists, (A, B) is NE.

- (B, A): By symmetry with above, (B, A) is NE.
- (B, B): Suppose a player deviates to A. This deviation is profitable if $\alpha T\epsilon > e \iff \epsilon > \frac{e}{\alpha T}$, a contradiction. Hence, (B, B) is NE.

Case 1c: $e < 0$ and $\frac{\alpha e}{T} > \epsilon > \frac{e}{\alpha T}$

- (A, A): Suppose a player deviates to B. This is profitable if $\alpha e > T\epsilon \iff \epsilon < \frac{\alpha e}{T}$, which is true. Since a profitable deviation exists, (A, A) cannot be NE.
- (A, B): At (A, B), player 1 receives a payoff of $\alpha T\epsilon$ and player 2 receives αe. Suppose player 1 deviates to B. This is profitable if $\alpha T\epsilon < e \iff \epsilon < \frac{e}{\alpha T}$, a contradiction. Suppose player 2 deviates to A. This would be profitable if $T\epsilon > \alpha e \iff \epsilon > \frac{\alpha e}{T}$, a contradiction. Hence, (A, B) is NE.
- (B, A): By symmetry with above, (B, A) is NE.
- (B, B): Suppose a player deviates to A. This is profitable if $\alpha T\epsilon > e \iff \epsilon > \frac{e}{\alpha T}$, which is true. Since a profitable deviation exists, (B, B) cannot be NE.

Case 1d: $e < 0$ and $\epsilon = \frac{\alpha e}{T}$

- (A, A): Suppose a player deviates to B. This deviation is profitable if $\alpha e > T\epsilon \iff \epsilon < \frac{\alpha e}{T}$, a contradiction. (A, A) is NE.
- (A, B): At (A, B), player 1 receives a payoff of $\alpha T\epsilon$ and player 2 receives αe. Suppose player 1 deviates to B. This is profitable if $\alpha T\epsilon <$

$e \iff \epsilon < \frac{e}{\alpha T}$. Since $e < 0$, $\frac{e}{\alpha T} < \frac{\alpha e}{T}$, which implies $\epsilon < \frac{\alpha e}{T}$, a contradiction. Suppose player 2 deviates to A. This would be profitable if $T\epsilon > \alpha e \iff \epsilon > \frac{\alpha e}{T}$, a contradiction. Hence, (A, B) is NE.

- (B, A): By symmetry with above, (B, A) is NE.
- (B, B): Suppose a player deviates to A. This is profitable if $\alpha T\epsilon > e \iff \epsilon > \frac{e}{\alpha T}$, which is true since $\epsilon = \frac{\alpha e}{T} > \frac{e}{\alpha T}$. Since a profitable deviation exists, (B, B) cannot be NE.

Case 1e: $e < 0$ and $\epsilon > \frac{\alpha e}{T}$

- (A, A): Suppose a player deviates to B. This deviation is profitable if $\alpha e > T\epsilon \iff \epsilon < \frac{\alpha e}{T}$, a contradiction. (A, A) is NE.
- (A, B): Suppose player 2 deviates to A. The deviation is profitable if $T\epsilon > \alpha e \iff \epsilon > \frac{\alpha e}{T}$, which is true. Hence, (A, B) cannot be NE.
- (B, A): By symmetry with above, (B, A) cannot be NE.
- (B, B): Suppose a player deviates to A. This is profitable if $\alpha T\epsilon > e \iff \epsilon > \frac{e}{\alpha T}$, which is true since $\epsilon > \frac{\alpha e}{T} > \frac{e}{\alpha T}$. Since a profitable deviation exists, (B, B) cannot be NE.

Case 2a: $e = 0$ and $\epsilon < 0$

- (A, A): Suppose a player deviates to B. This deviation is profitable if $0 > T\epsilon \iff \epsilon < 0$, which is true (since $T > 0$). Since a profitable deviation exists, (A, A) cannot be NE.
- (A, B): Suppose player 1 deviates to B. This deviation is profitable if $0 > \alpha T\epsilon \iff \epsilon < 0$, which is true. Hence, (A, B) cannot be NE.
- (B, A): By symmetry with above, (B, A) cannot be NE.

- (B, B): Suppose a player deviates to A. This deviation is profitable if $\alpha T\epsilon > 0 \iff \epsilon > 0$, a contradiction. Hence, (B, B) is NE.

Case 2b: $e = 0$ and $\epsilon = 0$

- Trivially, if $e = 0$ and $\epsilon = 0$, the payoff to all four possible action profiles is the same and equal to 0, and therefore neither one of those offers a profitable deviation. All four possible (pure strategy) action profiles are NE: $(A, A), (A, B), (B, A), (B, B)$.

Case 2c: $e = 0$ and $\epsilon > 0$

- (A, A): Suppose a player deviates to B. This deviation is profitable if $0 > T\epsilon \iff \epsilon < 0$, which is a contradiction. (A, A) is NE.
- (A, B): Suppose player 2 deviates to A. This deviation is profitable if $T\epsilon > 0 \iff \epsilon > 0$, which is true. Since a profitable deviation exists, (A, B) cannot be NE.
- (B, A): By symmetry with above, (B, A) cannot be NE.
- (B, B): Suppose a player deviates to A. This deviation is profitable if $\alpha T\epsilon > 0 \iff \epsilon > 0$, which is true. Since a profitable deviation exists, (B, B) cannot be NE.

Case 3a: $e > 0$ and $\epsilon < \frac{\alpha e}{T}$

- (A, A): Suppose a player deviates to B. This deviation is profitable if $\alpha e > T\epsilon \iff \epsilon < \frac{\alpha e}{T}$, which is true. Since a profitable deviation exists, (A, A) cannot be NE.
- (A, B): Suppose player 1 deviates to B. This deviation is profitable if $e > \alpha T\epsilon \iff \epsilon < \frac{e}{\alpha T}$. Since $\epsilon < \frac{\alpha e}{T}$ and $\frac{\alpha e}{T} < \frac{e}{\alpha T}$, this implies $\epsilon < \frac{e}{\alpha T}$, meaning there is a profitable deviation. Hence, (A, B) cannot be NE.

- (B, A): By symmetry with above, (B, A) cannot be NE.
- (B, B): Suppose a player deviates to A. This deviation is profitable if $\alpha T\epsilon > e \iff \epsilon > \frac{e}{\alpha T}$, which cannot be true since $\epsilon < \frac{\alpha e}{T} < \frac{e}{\alpha T}$, where the second inequality is true because $e > 0$. Since no profitable deviation exists, (B, B) is NE.

Case 3b: $e > 0$ and $\frac{e}{\alpha T} \geqslant \epsilon \geqslant \frac{\alpha e}{T}$

- (A, A): Suppose a player deviates to B. This deviation is profitable if $\alpha e > T\epsilon \iff \epsilon < \frac{\alpha e}{T}$, a contradiction. (A, A) is NE.
- (A, B): Suppose player 1 deviates to B. This deviation is profitable if $e > \alpha T\epsilon \iff \epsilon < \frac{e}{\alpha T}$, which is true. Since a profitable deviation exists, (A, B) cannot be NE.
- (B, A): By symmetry with above, (B, A) cannot be NE.
- (B, B): Suppose a player deviates to A. This deviation is profitable if $\alpha T\epsilon > e \iff \epsilon > \frac{e}{\alpha T}$, a contradiction. Hence, (B, B) is NE.

Case 3c: $e > 0$ and $\epsilon > \frac{e}{\alpha T}$

- (A, A): Suppose a player deviates to B. This deviation is profitable if $\alpha e > T\epsilon \iff \epsilon < \frac{\alpha e}{T}$. Since $e > 0$, however, $\frac{e}{\alpha T} > \frac{\alpha e}{T}$, which implies $\epsilon < \frac{e}{\alpha T}$, a contradiction. (A, A) is NE.
- (A, B): Suppose player 2 deviates to A. This would be profitable if $T\epsilon > \alpha e \iff \epsilon > \frac{\alpha e}{T}$, which is true since $\epsilon > \frac{e}{\alpha T} > \frac{\alpha e}{T}$. Hence, (A, B) cannot be NE.
- (B, A): By symmetry with above, (B, A) cannot be NE.
- (B, B): Suppose a player deviates to A. This deviation is profitable if $\alpha T\epsilon > e \iff \epsilon > \frac{e}{\alpha T}$, which is true. Since a profitable deviation exists,

(B, B) cannot be NE.

$\blacksquare$

B.1.2 Summary statistics

Table B.1: Summary Statistics

	Mean	Std. Dev.	Min.	25%	50%	75%	Max.	N
Treatment	0.77	0.42	0	1	1	1	1	409
City status (1983)	0.51	0.50	0	0	1	1	1	354
City status (1995)	0.50	0.50	0	0	0	1	1	409
City status (2010)	0.53	0.50	0	0	1	1	1	407
City status (2020)	0.59	0.49	0	0	1	1	1	409
ln(Population) (1983)	8.90	0.82	6.70	8.42	8.83	9.27	12.4	353
ln(Population) (1995)	8.89	0.86	6.78	8.35	8.76	9.22	12.5	372
ln(Population) (2010)	8.83	0.87	6.81	8.28	8.69	9.24	12.4	388
ln(Population) (2020)	8.71	0.93	5.82	8.11	8.59	9.17	12.3	403
Crafts per 1000 inh. (1983)	10.8	6.19	1.85	6.71	9.13	13.2	53.0	334
Firms per 1000 inh. (1995)	41.1	22.8	6.91	21.9	37.6	55.9	147.5	372
Firms per 1000 inh. (2010)	74.2	30.6	24.3	48.2	71.5	94.2	185.3	388
Firms per 1000 inh. (2020)	87.1	29.3	33.6	64.3	85.4	105.4	224.4	403
ln(Public exp. per capita) (2020)	9.01	0.56	8.28	8.56	8.76	9.41	10.9	403
ln(Income tax per capita) (2020)	7.63	0.67	6.41	7.06	7.60	8.11	9.87	403
Public firms share (2020)	0.043	0.022	0.0046	0.029	0.039	0.053	0.16	403
Election turnout (2020)	0.67	0.047	0.53	0.64	0.67	0.70	0.95	409

B.1.3 Electoral results in Łęczna and Opole

The distribution of the 16 seats up for grabs in the 1927 election in Łęczna was the following (Horoch 2017, p. 472):

- ZLN — 2
- PPS — 4
- PSL "Wyzwolenie" — 1
- PSL "Piast"[1] — 1
- Non-partisans (Poles) — 3
- Orthodox Jews — 4
- Zionists — 1

There were 12 people elected to the municipal council of Opole in the "first" election in 1928. According to Śmiech and Jastrzębski (2017, p. 402), the distribution of seats among the competing political forces was as follows, although there may be a mistake as this indicates 13 seats:

- National Democrats — 1
- Nonpartisan Bloc for Cooperation with the Government (BBWR) — 2
- Polish People's Party "Wyzwolenie" (henceforth PSL "Wyzwolenie")[2] — 1
- Polish Socialist Party (PPS) — 1
- Orthodox Jews — 3
- Zionists — 1
- Jewish Communists — 1

1. *Polskie Stronnictwo Ludowe „Piast"*, an agrarian christian-democratic party.
2. *Polskie Stronnictwo Ludowe "Wyzwolenie"*; Socialist-agrarian party.

- Union of the Peasants' Left "Self-help"[3] — 3

The distribution of seats in the "second" election in Opole in 1928 was the following (Śmiech and Jastrzębski 2017, p. 403):

- National Democrats — 2
- BBWR — 3
- PSL "Wyzwolenie" — 4
- PPS — 3

The distribution of seats after the 1929 election in Łęczna was the following (Horoch 2017, pp. 472):

- ZLN — 3
- PPS — 3
- Orthodox Jews — 4
- Zionists — 1
- Bund — 1

The seats were distributed as follows following the 1930 election in Łęczna (Horoch 1989, p. 204):

- BBWR — 3
- PPS — 1
- Non-partisans (Poles) — 1
- Orthodox Jews — 2

3. *Zjednoczenie Lewicy Chłopskiej „Samopomoc"*; Agrarian-left party, sympathizer of the communists.

- Zionists — 3
- Bund — 1
- Non-partisans (Jews) — 1

The results of the 1935 election in Łęczna were as follows (Horoch 1989, p. 478):

- BBWR — 6
- PPS — 1
- Non-partisan Poles — 1
- Agudat Izrael[4] — 3
- Non-partisan Jews (pro-government) — 1

In the Opole *gromada* council, the distribution of the 30 seats among the political parties following the 1938 election was the following (Śmiech and Jastrzębski 2017, p. 547):

- Camp of National Unity (henceforth OZN)[5] — 4
- Other (pro-government) — 2
- National Party — 7
- Labor Faction[6] — 1
- Non-partisans — 4
- Non-partisans (pro-government) — 5
- Others (Jews) — 6

4. Party of Orthodox Jews.

5. *Obóz Zjednoczenia Narodowego*, a pro-government right to far-right party.

6. *Stronnictwo Pracy*, Christian democrats

- PPS — 1

B.1.4 Population sizes of Łęczna and Opole Lubelskie over time

Table B.2: Population

Year	Łęczna	Opole
1865	3,055	2,840
1869/70	3,132	3,128
1880/82	3,625	3,385
1887/89	4,110	4,148
1905	4,909	6,504
1912/13	5,357	6,846
1921	3,227	5,646
1931/32	4,096	6,798
1939	4,340	-
1945/46	2,176	3,050
1983	9,510	6,192
1995	21,796	9,283
2000	22,163	9,026
2005	21,767	8,842
2010	20,755	9,036
2015	19,437	8,734
2020	18,675	8,320

Sources: GUS, Śmiech and Jastrzębski (2017, pp. 12-3, 203, 426, 439), Bogusz (2017, p. 357), Horoch (2017, pp. 447-8), Zaporowski (2017, p. 495), Szumiło (2017), Siuchniński (1965, p. 723), Wojewódzki Urząd Statystyczny w Lublinie (1984).

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