The Economic Effects of Leaders' Economic Interests:
Evidence from Election By Lot in the Florentine Republic

Do political leaders pursue their own parochial interests? Does the economic background of those in power affect the economy? Estimating the impact of leaders' interests without bias is difficult given the non-random nature of transition between leaders in most regimes. This paper exploits a selection mechanism in the Florentine Republic that combines features of election and lottery to evaluate the causal impact of leaders' economic interests. Coupling high frequency data on the trading value of the Florentine currency with data on the guild association of each leader, I show that the export orientation of the Florentine executive, the Standard Bearer of Justice, had a large effect on the value of the city's currency, the *florin*.

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1 Introduction

Do leaders pursue their own parochial interests or do electoral incentives limit the willingness of politicians to move policy in the direction of their preferred outcome? While a substantial body of scholarship views institutions like elections as essential constraints on politicians' behavior, considerably less attention has been devoted to understanding how the interests and backgrounds of leaders themselves affect outcomes. In this paper I exploit a selection mechanism for the executive of the Florentine Republic that combines features of both election and lottery to evaluate the causal impact of politicians' economic interests. Coupling high frequency data on the trading value of the Florentine currency with data on the guild association of each leader, I show that the export orientation of the Florentine executive, the Standard Bearer of Justice, had a large effect on the value of the city's currency.

Theoretical predictions vary. On the one-hand, canonical models predict policy convergence (Downs 1957, Lindbeck and Weibull 1987, Baron 1994). On the other-hand, a substantial theoretical literature finds that politicians can nevertheless pursue policies that diverge from the decisive voter's preffered outcome (Besley and Coate 1997, Roemer 1999, Glaeser et al. 2005).[1] Empirical estimates of leader or party influence are similarly mixed (Alesina and Sachs 1988, Ferreira and Gyourko 2009, Snowberg et al. 2007). This, of course, reflects the difficulty in estimating the causal effect of politicians' factional or partisan interests without bias. Since in most contexts transition in power are strategically determined, any observed difference in outcomes across parties or factions is difficult to interpret causally. To get around this, I estimate the impact of leaders' economic interests by exploiting a unique feature of Florentine institutions wherein the electoral concerns of politicians were divorced from realized transitions of power, in turn, determined by lottery.

The Florentine Republic during the oligarchic period considered is a "hard case" for

[1]Of particular relevance to this paper is the work of Frieden (2002, 2014).

finding evidence of the effects of leaders' interests. The Florentine elite maintained a restrictive franchise that ensured a rough homogeneity of preferences in government, excluding from public office actors whose economic position differed substantially from the dominant set of major guildsmen. To ameliorate whatever conflict arose within this group, the Florentine elite designed a set of institutions where members faced election to hold office and then, from the pool of successful candidates, the city's executive was randomly drawn. Furthermore, this process was conducted frequently, ensuring that leaders were weak and incapable of accumulating too much power. Exploiting the random assignment of leadership I, nevertheless, show that the economic background of leaders had substantial macro-economic effects. Focusing upon the exchange rate of the *florin*, I show when in power, groups benefiting from a strong currency caused the value of the *florin* to rise.

This result highlights the centrality of elite interests in the study of political economy. While a great deal of scholarship views variation in the quality of political institutions as central in explaining variation in economic performance (North 1990, Acemoglu et al. 2005, Rodrik et al. 2004), comparatively little weight has been placed on the origins and consequences of elite interests. An exception that this paper builds upon is the work of Stasavage (2002, 2003) who challenges an increasingly dominant institutionalist perspective, showing that partisan control of government following the Glorious Revolution, not the constraints imposed by the construction of a strong parliament alone, led to a reduction in the yield associated with British debt. Drawing explicit comparison to France, he argues that the existence of a powerful commercial political faction, the Whig party, absent in the French case, was the decisive factor leading to financial development in Britain.

My approach most closely matches that of Jones and Olken (2005) who in a sample of post-war states exploit the random timing of leader deaths to show that leaders affect economic growth. They provide evidence that leaders' impact on growth is concentrated in autocracies and operates through the control of monetary policy. My results suggest

that the leader effects they estimate may arise from intra-elite political competition. More broadly, my results highlight the limits to institutionalism and underscore the importance of factional, economic interests, even in the political economy of non-democracy. Despite a resurgence of interest in the function and consequences autocratic institutions (Svolik 2012, Wright 2008, Magaloni 2008, Gandhi 2008), comparatively little work exists examining the economic consequences of political-economic cleavages within these regimes. This paper provides a step forward.

2 Historical Background

Between the end of the short-lived *Ciompi* regime in 1382 and the rise of the Medici in 1434 the Florentine Republic was a highly institutionalized oligarchy with a well defined set of rules and procedures determining the selection and composition of government.[2] These institutions, combining features of election and selection by lot, in conjunction with a limited franchise wherein full citizenship was based upon membership in well defined occupational associations - the guilds - allow me to estimate the causal impact of guild association on price levels. In this section I describe the institutions of the Florentine oligarchy, highlighting how they relate to the identification strategy I exploit and the hypotheses I test in the remainder of the paper.

2.1 The Guilds

Since the founding of the commune the guilds served as the basic organizing corporate bodies of Florentine political and economic life.[3] Unlike merchants in many other Euro-

[2]Following the revolt of the *Ciompi* (wool workers) in 1378, a pseudo-popular regime was established. This collapsed in 1382 to be replaced by the oligarchic regime described below. The institutions of this regime were then corrupted and replaced by Medician rule. For an overview of the *Ciompi* regime see Brucker (1968), Najemy (1979). On the rise of the Medici see Kent (1978), Hibbert (2001).

[3]See Staley (1906), Goldthwaite (1982) ch. 6 and Goldthwaite (2009) ch. 5.

pean cities, Florentine merchants were not organized into a single guild.[4] Rather, they exercised political power through separate guilds, each organized around a particular trade and divided into seven major and fourteen minor occupations.

Each guild regulated entry into a particular industry, limiting the number of individuals who at any given moment could practice a trade. Though they were rarely powerful enough to restrict output and therby ensure cartel-like rents, they did make attempts at setting standards of production and training. Collectively through the *Mercanzia* - the over-arching commercial organization of the city - the guilds exerted control over most facets of economic life in the city, developing an advanced body commercial law and regulation. Where they exercised the greatest influence, however, was as a barrier to full political participation.

During the period under study, membership in the guilds was a prerequisite to hold office. Access to the highest office, the Standard Bearer of Justice (*Gonfaloniere di Giustizia*), and six out of the eight additional seats on the executive college, the Priorate, was limited to members of the major guilds, with the remaining two reserved for the minor guilds. The first step towards accession to political office was, therefore, through membership in the guilds, and, for the most part, through membership in the major guilds. In ways to be discussed below, access to the highest offices were even further restricted to members of an elite within this group.

2.2 The Priorate

Political authority resided in the Priorate, a governing body of nine individuals that, in consultation with two advisory councils, the *Collegi* of the *Dodici Buonomini* and the *Sedici Gonfaloniere*, were charged with crafting and implementing law.[5] In addition to

[4]See Epstein (1991).

[5] In many ways the Priorate was viewed by contemporary Florentines as synonymous with the state or regime. Writing in the early fifteenth century, Merchant Giovanni Morelli described those selected to the Priorate as having entered "nello istato e reggimento." Quoted in Kent (1975) 578. Florentine statesman Gregorio Dati viewed

major legislative powers the Priorate was empowered with the creation and appointment of ad-hoc commissions, *balia*, which were granted temporary administrative and executive functions, particularly during periods of crisis or wartime (Molho 1968*a*, 100; Becker 1967, 220). At the head of the Priorate was the Standard Bearer of Justice, who in addition to voting alongside the other priors, was the supreme executive charged with control over the internal-security forces of the city. This was the highest executive position in government and the most prestigious public office within the Florentine Republic.

In the post-*Ciompi* oligarchy each of the city's four quarters were granted two priors with the Standard Bearer of Justice rotating between quarter of the city. In two ways these neighborhoods were centers of political-economic life (Kent and Kent 1982, Kent 1987). First, powerful extended families, capable of exerting substantial informal influence on politics maintained their residencies within a given quarter. The contemporary geography of the city continues to evidence this. Along the *Borgo degli Albizzi* were the palaces of the powerful Albizzi family. *Via de'Bardi* in the *Oltrarno* was the traditional residence of the Bardi family of bankers. The *Piazza dei Peruzzi* in the *Santa Croce* neighborhood was the courtyard of the Peruzzi family of merchants. Second, a few of the city's major industries were geographically concentrated within particular quarters. For example, armorers were centered in the Santa Giovanni quarter, soap makers near the church at Santa Croce, and tanning factories and slaughterhouses legally limited to the outskirts of the city (Brucker 1969, 24). As such, the distribution of seats on the priorate was designed to balance the geographic concentration of familial and, to some extent, industrial interests in government.

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the power of the *Signore* (the Priorate and consultative councils) as "great beyond measure." However, he noted that this authority was only fully employed "extremely infrequently in certain necessary cases..." and noted that, for the most part, the *Signore* acted within the rule of law. Or, in his words, government rarely acted outside of "the written ordinances of the commune." Quoted in Becker (1967) 229.

2.3 Scrutiny

The subset of Florentines eligible to hold office was determined by a process of periodic electoral scrutiny.[6] For the offices of the priorate, a special committee, the *accoppiatori*, was convened and in secret would conduct a vote to determine those individuals who would then be eligible for public office. Following the emergence of the oligarchic regime in 1382 scrutinies were to be held every five years. In reality, they were held more frequently. During times of political crisis, for example, following the crises of 1393 and 1406, *balia* were called to obtain a new set of individuals eligible to hold political office.

Candidates were deemed worthy based on moral judgments tinged with a sense of political knowledge, diplomatic ability, and especially, social status. However, as historian Dale Kent points out, "a man's chances of obtaining a majority in the scrutiny depended partly on his own previous political record, and partly on that of his closest male kinsmen (Kent 1975, 585)," indicating a degree of retrospection based upon past performance in office. Of the major guildsmen nominated only about 37% were passed through and for those who had previously held the highest offices of the city, the success rate was double this.[7] Successful candidates were placed into bags, *borse*, from which officeholders were then randomly drawn.

The size of the pool of potential members of priorate varied over time with each new scrutiny. Estimates put the number of names considered under scrutiny in 1382 at around 5,350 (Brucker 2015, 62, 87). This increased to 6,310 in 1391 (Kent 1975, 633)[8] and then oscillated between 5,000 and 5,500 through 1411 (Brucker 2015, 252). By 1434 the pool of eligibles was estimated to be 6,354 (Kent 1975, 623). Relative to the size of city, this pool of candidates represents, roughly, ten percent of the total population.[9] To the degree that this group of potential candidates nominated for scrutiny reflect the "selectorate" of

[6]For a detailed description of the process of scrutiny and sortition after 1382 see Najemy (1982) ch. 8, Brucker (2015) ch. 2.
[7]Table 1 of Kent (1975).
[8] Molho (1968*b*) 405 estimates a slightly smaller total.
[9]Bairoch et al. 1988 estimate the Florentine population in 1400 at 55,000.

the regime, this yields a coalition roughly equal to that of Britain following the reforms of 1832 and slightly larger than that of contemporary China.[10] What is clear, however, is that the number of candidates eligible for the highest office, the Standard Bearer of Justice, was considerably smaller.

For the office of Standard Bearer of Justice, and after 1406 for half of the seats on the priorate reserved for the major guilds, a separate scrutiny was held. These candidates were drawn exclusively from the most elite members of the Florentine oligarchy and were placed into a separate bag, the *borsellino*. In contrast with direct, *a mano*, appointment of the executive, the *borsellino* was the elite's method of assuring control of the highest offices of state. Rather than surreptitiously corrupting the lottery by appointing a leader of their preference, the elite could rely upon random selection from an exclusive subset of the population (Najemy 1982, 276-292).

2.4 Sortition

At the end of every second month the *borse* were taken from the church at *Sante Croce* where they were sequestered and, with a small element of public ritual, names were drawn from the purses. Upon being selected, individuals who were in tax arrears, who were dead but not yet removed from the purses, or who had recently served in office (or were directly related to recent office holders) were eliminated and replacements were drawn. On the first of the next month the new priorate was moved into the *Palazzo della Signoria* to begin their term.

It is worth noting that at various points in Florentine history, particularly during the Mediecian period, sortition was co-opted. Elites would select members of the priorate *a mano* while nevertheless maintaining the public spectacle of sortition. However, by all accounts, between the crisis of 1393 and the rise of the Medicean regime in 1433, elite

[10]The Reform Act of 1832 expanded the franchise to one out of every five men, or one tenth of the total population. There are about 85 million Communist Party members out of a population of 1.3 billion or about 6.5 % of the population.

control of the process of sortition operated through the *borsellino* and not the corruption of the lottery itself (Najemy 1982, 276-292; Molho 1968*b*, 412; Rubinstein 1997, 6-7).

Indeed, the announcement of each new priorate was met with surprise. Since scrutiny was conducted in secret, even those selected into office were often uncertain that they were even passed through the scruitny prior to their names being drawn. Take, for example, Gregorio Dati. His father Stagio first became eligble for the scrutiny in 1366 but was never selected. Gregorio himself was only drawn into office forty eight years later in 1414, having spent most of his life wondering if his name was even entered into the *borse*, writing that until he was named to *Signoria* he "had not been sure whether my name was in the purses...although I was eager that it should be in both for my own honor and that of my heirs."[11]

In short, the process of sortition created an experiment in government, selecting members of the priorate via a weighted lottery. Two types of election determined the composition of pool eligible for office. The first type of selection sorted individuals into their guild association. The second drew via scrutiny members from the guilds of each quarter into the pool of eligibles for office. The composition of this pool, strategically chosen via these two elections, determined the weights by which in every period government was selected at random.

2.5 Export Orientation and Preferences over Money

By the thirteenth century the Florentine state operated a bimetallic currency, minting coins in both gold and silver. The size and weight of the coins were designed to initially establish an exchange rate between the two where each *florin* equalled the value of one lira (a nominal silver pound of 20 *soldi*). The gold content of the *florin* was never altered, and since there was no peg between the money of account and the *florin*, its value was allowed to inflate in terms of silver, a process into which the government regularly intervened with debasements of the silver content of its coinage. Since the gold content of

[11]Quoted in Brucker (2015) 257

the *florin* remained unchanged, the floating exchange rate between the *florin* and silver yields a measure of inflation.[12] What is more, it is clear that contemporary actors were aware of the correlation between the price of the *florin* and the level of prices, viewing the exchange rate between the *florin* and silver as an index of the cost of living (Cipolla 1982, 27).

While this led to a monetary system substantially different from those of modern states, in the Florentine Republic monetary policy was, nevertheless, determined by the government (Sargent and Velde 2014, ch. 9). However, it was not conducted via the policy instruments available to contemporary central bankers. Rather, it was established through the minting of coins. Here, the government established the silver content of coinage, setting b, the amount of silver in a given coin. In order for a metallic currency to be in equilibrium, the following inequality must hold.

$$\frac{(1-\lambda)\phi}{b} \leq p_t \leq \frac{\phi}{b} \tag{1}$$

Where p_t is the price level, measured in coins per good, at time t. We can define ϕ as the relative price of the consumption good, in terms of silver. This allows us to set an upper bound on price levels equal to $\frac{\phi}{b}$. If price levels exceeded $\frac{\phi}{b}$ then people would have incentive to melt coins for their silver content, decreasing the amount of coins in circulation and lowering prices.

Conversely, to establish the lower-bound on price levels we must understand the role of the Florentine government played in minting coins. In this system the government did not directly control the supply of money but, rather, operated through the practice of "free" minting, which, despite its name, does not mean without charge.[13] Rather, it denotes a practice where the mint would issue (theoretically) unlimited coinage. Here,

[12] Economic historian Carlo Cipolla (1982) asserts that "fundamentally, a rise in the quotation of the *florin* in terms of petty coinage tended to have an expansionary and inflationary effect on the economy, whereas a fall tended to have a depressive and deflationary effect." 23

[13] Bernocchi (1976), p. 160 dates Florentine free minting to 1296.

the government established a percentage $\lambda \in (0, 1)$ that the covered the total production costs of minting (as well as potential seignorage taxes). The government minted unlimited quantities of coins, buying silver and offering $\frac{1-\lambda}{b}$ coins in return, while keeping a fraction, $\frac{\lambda}{b}$, to pay for minting. If p_t were to fall below $\frac{(1-\lambda)\phi}{b}$ people would have incentive to buy coins from the government, increasing the amount of money in circulation and thus increasing prices.

Since the cost of minting, λ, was fairly constant, the main monetary policy instrument the Florentine government had to affect prices was through changes in the silver content, b. It is clear from the bounds established in Equation 1 that a debasement of the coinage, a decrease in b, would increase the price level sustainable in equilibrium. So, given the policy instruments available, how might economic actors preferences map onto their willingness to use these policies?

I borrow from historian Gene Brucker and distinguish between two stylized types of agents operating in the Florentine economy: sedentary and international merchants (Brucker 1969, 68-74). Sedentary merchants were manufacturers, typically of wool or silk, mostly for export. International merchants were, on the other hand, financiers, involved in wide range of business activities, participating in commercial ventures both domestic and foreign.[14] Export oriented manufacturers would thus have been expected to maximize total exports whereas financiers - bankers and international merchants - who were involved in a mix of both domestic and foreign enterprises - would have sought to maximize some combination of imports and exports.[15]

As a consequence, these stylized agents would have distinct preferences over export competitiveness and, thus, distinct preferences over prices, with the sedentary merchants

[14] Goldthwaite (2009) 218-222 describes near identical function of bankers and international merchants.

[15] Eighty-eight percent of the Standard Bearers of Justice in my sample were drawn from the Banking, International Merchant, Wool, and Silk manufacturers guilds. As such, I focus on generating empirical predictions for them. The remaining twelve percent were drawn from the other three major guilds. For a complete breakdown of the Standard Bearers of Justice by guild membership see Table A1.

maintaining a preference for export competitive policies - low relative prices - and international merchants the opposite.[16] In what follows I provide a micro-founded derivation of these preferences for agents with different portfolios - one partaking exclusively in exports and the other with a mixed portfolio of imports and exports. I show that the exclusively export oriented actor, the sedentary merchant, has a relative preference for lower prices (higher competitiveness) compared to the actor with the mixed portfolio, the international merchant. The key feature then linking the theoretical model to the subsequent empirical analysis is that the guild association of each Standard Bearer of Justice corresponds with, in expectation, their relative involvement in domestic and foreign industries. [17]

First, define competitiveness $\theta = \frac{p_m}{p}$ as the relative prices of imports, p_m, and exports, p, and note that by selecting b the government could directly manipulate θ. Second, define both the marginal propensity to import, $m(\theta)$, and the marginal propensity to export, $\sigma(\theta)$. By assumption, an increase in θ will increase the volume of goods exported and decrease the volume of imports. This allows us to define nominal value of exports, X, as the price index of exports times the volume. The volume of exports is expressed as a fraction of world output, where the fraction of world output is defined by $\sigma(\theta)$. This equals

$$X = p \times \sigma(\theta) \times \gamma^*$$

Where γ^* is world output. To express this in real terms, simply divide the price level, p, yielding

[16] Cipolla (1982) ch. 1 outlines a similar theory of preferences over price levels in fourteenth century Florence

[17] Ideally, I would have a direct measure of each leaders' interests. Nevertheless, so long as guild membership provides a rough indicator of their orientation I can estimate the causal impact of the interest. In the period studied, some started to join guilds for the political purpose of becoming eligible for office. This would simply introduce measurement error in guild as a proxy of interests.

$$x = \sigma(\theta) \times \gamma^*$$

Define the total value of imports in the home currency as

$$M = p_m \times m(\theta) \times \gamma$$

Where γ is the total volume of home output. As before, we can express this in real terms

$$m = \theta \times m(\theta) \times \gamma$$

We can define the fraction of world and home output produced by actor i as π_i^* and π_i, respectively. In total, these allow us to write the optimization problem a dictator would face given their endowments. For manufacturers, they choose θ to maximize $\sigma(\theta) \times \pi_i^* \gamma^*$. For financiers they maximize $\sigma(\theta) \times \pi_i^* \gamma^* + \theta \times m(\theta) \times \pi_i \gamma$ also with respect to θ.

For manufacturers, this implies a corner solution, where θ is set to its largest possible value or, in other words, they would set p at its lowest possible value. Define this lower bound as $\underline{p}$. For financiers the optimal choice of θ depends on four parameters π_i, π_i^*, γ and γ^*. To see this, take the first order condition

$$\sigma'(\theta) \times \pi_i^* \gamma^* + \pi_i \gamma \times (m(\theta) + \theta \times m'(\theta))$$

The optimal value of θ here is defined, simply, as that which equates the marginal benefits from the fraction of a given portfolio comprised by exports to the losses to accruing to the fraction of this portfolio comprised by imports. To see this rearrange the above

$$\sigma'(\theta) \times \pi_i^* \gamma^* + \pi_i \gamma \times m(\theta) = -\pi_i \gamma \times \theta \times m'(\theta)$$

It is clear that for a financier sufficiently invested in imports, he would prefer a low value of θ (a high level of p). Conversely, for an investor sufficiently invested in exports, they

would prefer high values of θ (low levels of p).

2.6 Executive Constraints, Preferences and Policy Outcomes

Still, the members of the elite faced institutional constraints on their behavior when in office. Namely, they faced scrutiny to remain eligible for government offices, positions that entailed both large ego rents and, to some degree, financial remuneration.[18] In the appendix I develop a simple model of policy making in the shadow of future scrutiny and show that, while the incentive to remain in the pool of potential leaders disciplined leaders' policy choices, the price level they implement is nevertheless a function of their preferred outcome, deviating from the ideal point of the decisive member of the electoral committee in proportion to the extremity of their own bliss point.[19]

This simple model allows me to make to two empirical predictions. First, consider the expected price levels implemented by international and sedentary merchants, $E(x_I^*)$ and $E(x_S^*)$, respectively. As described in the previous section it is clear the export manufacturers have a strict preference for the lowest possible price level, $p = \underline{p}$, and therefore the highest possible level of competitiveness, $\theta_S = \overline{\theta}$. Contrastingly, international merchants prefer price levels weakly greater than the lowest possible price level, $p \geq \underline{p}$ and therefore, $\theta_I \leq \overline{\theta}$. It follows directly that $E(x_I^*) < E(x_S^*)$.

Next, consider the variance in outcomes, $V(x_I^*)$ and $V(x_S^*)$. Of course, all agents might prefer low variability in prices. However, since all export manufacturers strictly prefer $\theta_S = \overline{\theta}$ it follows that x_S^* is constant across all exporters. Contrastingly, there is variation within the group of international merchants in their preferred level of competitiveness. Because the preferred outcome of international merchants is determined by the composition of their portfolios, e.g. their relative exposure to imports and exports (π_i, π_i^*), and by the fundamentals of world trade (γ and γ^*), there is non-zero variance in the pre-

[18] This is particularly true of administrative positions in the *cantado* of the city, the occupation of which were also determined by the process of scrutiny and sortition.

[19] This section builds on the models of Fearon (1999) and Ferejohn (1986).

ferred and implemented level of export competitiveness within the group of international financiers. In other words, $V(x_I) \neq 0$. It follows that $V(x_I) > V(x_S)$.

While we do not directly observe θ we do observe a good measure, the exchange rate between the silver coinage through which monetary policy was conducted and the *florin*, the gold coin minted by the Florentine Republic but for which the gold content was never altered. Since the intrinsic content of the *florin* remained unchanged and since nearly all international trade was denominated in the *florin* (or currencies equal to the *florin* in terms of gold content) the price of gold in terms of silver coinage gives us a measure of θ^{-1}. Since $\theta = \frac{p_m}{p} = \frac{GoldCoin/good}{SilverCoin/good} = \frac{GoldCoin}{SilverCoin}$, where the price of goods in the international market are set in gold *florins* or gold coins like the Venetian *ducat* equal in content to the *florin*. The price of the gold coin in terms of silver, $\frac{SilverCoin}{GoldCoin}$, gives a measure of θ^{-1}.

3 Data, Identification, and Estimation

3.1 Data

I exploit data from two sources. First, I use the Tratte as collected by Herlihy et al. (2000) which records all office holders of the Signoria and Guilds. From this source I record each of the Standard Bearers of Justice between 1393 and 1432. I then cross reference this with the Guild elections from the same source in order to identify the guild membership of each leader.[20] This produces a set of 227 leaders and their associated guild memberships. In addition to the guild memberships, for each leader I also record both the quarter of the city where the Standard Bearer resided and the scrutiny that determined the lottery from which he was drawn.

I couple these data with the daily trading value of the *florin* as denominated in silver.

[20] I can directly identify by first and last name nearly all Standard Bearers in the Guild elections. For those who I cannot I use the same process and identify the guild membership of direct relatives, first fathers then brothers and then sons. As most guild memberships were constant within family this allows me to identify the membership of all Standard Bearers of Justice.

These are taken from the manuscript of Bernocchi (1978) who, from archival banking records collected by the Florentine state, records the value of the *florin* in terms of silver on each trading day between 1391 and 1431. The time between trading days was determined by the schedule of holidays, including both Catholic and traditional local festivals.

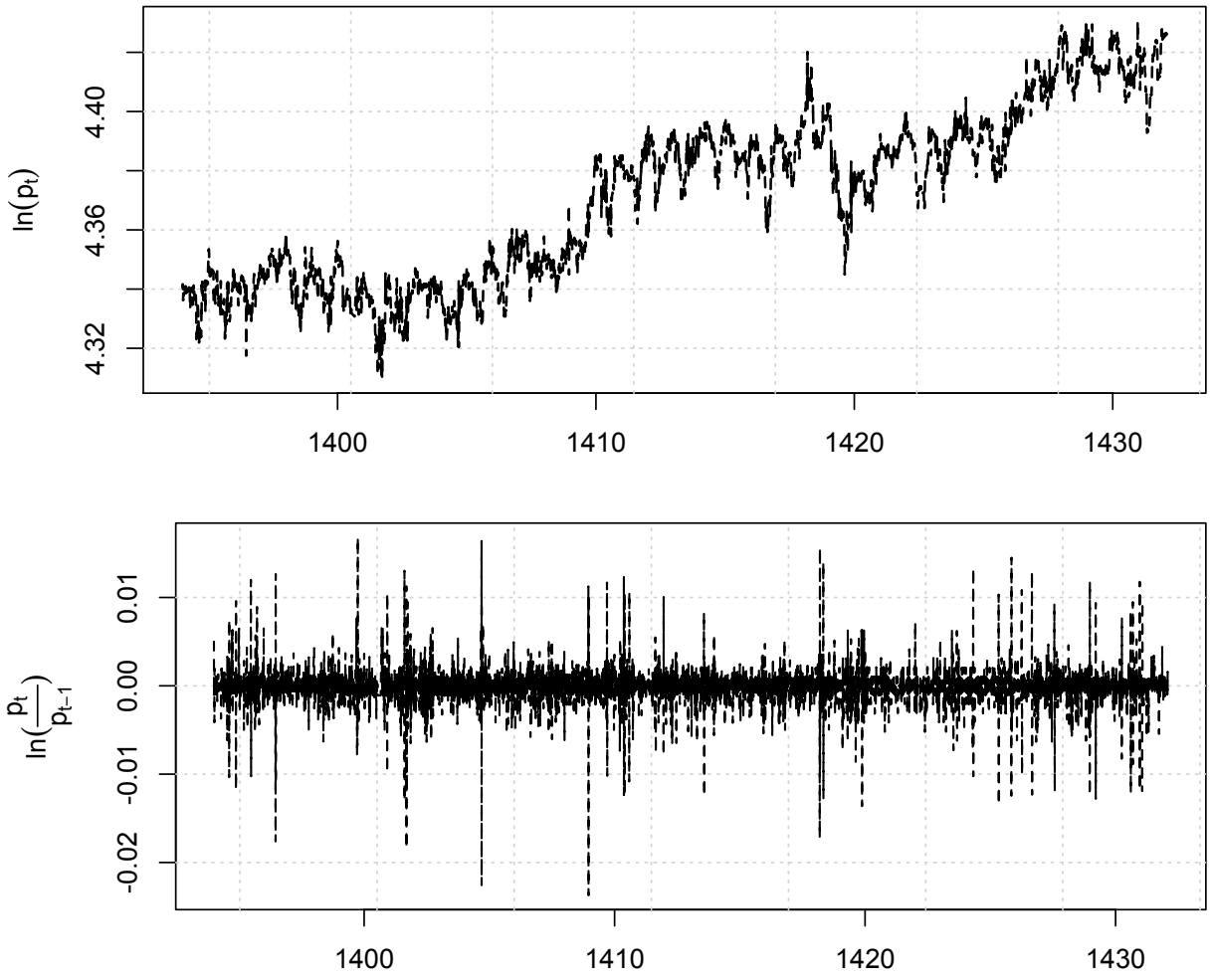
3.2 Identifying Assumptions

The top panel of Figure 1 plots the logarithm of the daily price of the gold *florin* in silver between January 1394 and December 1431. As is apparent, there is a substantial inflationary trend in these data, potentially inducing problems of statistical inference. To be assured of stationarity I first difference this series. Throughout the remainder of the paper I use the logarithm of the ratio of the price in period t to period t-1 as the outcome of interest. This differenced series is plotted in the lower panel of Figure 1 and indicates stationarity. Furthermore, an advanced Dickey-Fuller test on the differenced series yields a test statistic of -107.89 and an associated p-value of approximately zero, indicating that, once differenced, the series is stationary.

Besides stationarity, I also require the assumption of exogeniety, requiring the intervention of interest - the guild association of each leader - to be "as if" randomly assigned and, therefore, uncorrelated with unobserved confounders. A potential violation of this would be if each scrutiny produced a different likelihood of a given guild being drawn. That is, we want to compare Standard Bearers of Justice, each randomly drawn from purses determined by the same election. As such, throughout I condition on the scrutiny determining each sortition. In addition, since the office of Standard Bearer of Justice rotated between quarters of the city, and since some industries were geographically concentrated in particular neighborhoods, I condition on the quarter of the city from which the executive was to be drawn.

Conditional upon the particular scrutiny, the random selection of leaders during sorti-

Figure 1: *The daily trading price of the florin in terms of the soldi*



The top panel of this figure gives the logarithm of the daily trading price of the gold *florin* in silver. The bottom takes the logarithm of the ratio of the price in period t to period t-1.

tion is sufficient to identify the effect of guild association on price levels. Nevertheless, if there were corruption of the lottery, then my identifying assumption of exogeneity would be violated. As discussed, the historical evidence suggests that between 1393 and 1433 the selection of leaders *a mano* did not occur. While this is not directly falsifiable outside of the archival research already conducted by historians, randomization following scrutiny implies two testable empirical predictions.

If as the historical account tell us, sortition between 1393 and 1433 was random, it implies that the lottery's outcomes should be independent across time. That is, the previous draw from the lottery should have no influence on the current draw. In the appendix I conduct a series of tests evaluating the independence of leader draws across time.[21] These tests uncover no evidence that leaders' guild associations are correlated across time.

Similarly, if the sortition was not corrupted, across guild associations we should expect balance in covariates unrelated to the scrutiny process. Unfortunately, the limits of early-renaissance data preservation entail that I have few covariates of this sort to evaluate this. One related way to test this, however, is to see if certain guilds were more likely to be drawn at certain times of year. In the appendix I provide two types of evidence that this is not the case.[22] First, I show that guild association is unrelated to the number of non-trading days within a given term, showing that holidays occurred evenly across all guilds. Second, I show that guild association of leaders is unrelated to the month in which they were sorted into office. In other words, members from each guild were equally likely to be drawn at all points of the year. These results, indicate that my assumption of exogeniety likely holds.

[21]Tables A2 and A3.
[22]Tables A4 and A5.

3.3 Estimation

If the stationarity and exogeniety assumptions are satisfied then the effect of the Standard Bearer of Justice's guild membership on price levels can be estimated via OLS. I estimate baseline regressions of the following form

$$r_t = \alpha + \sum_{g=1}^{G} \beta_g + \sum_{q=1}^{Q} \gamma_q + \sum_{s=1}^{S} \delta_s + \epsilon_t \tag{2}$$

Where $r_t = \log\left(\frac{p_t}{p_{t\text{-}1}}\right)$ and where p_t equals the exchange rate between the gold *florin* and the silver *soldo* on day t. In the baseline models I condition on the set of scrutiny dummies, δ_s as well as the set of city-quarter dummies γ_q. The parameters of interest, β_g, are the full set of guild dummies.[23] The random disturbance, ϵ_t, is assumed to be normally distributed with a mean of zero.

For all models I can alter the error structure, allowing the disturbances to be correlated across period (introducing MA components to the statistical model) and none of the coefficients on guild association change. Furthermore, I introduce lagged values of prices (an AR component) and show that, again, this does not alter my estimates of guild association in any substantive way.[24] Instead of treating change in the daily trading value as the unit of observation, I can average accross each term in office – treating each term in office as the unit of observation – and none of the results are substantively altered.[25] Finally, I can control for the guild composition of the other members of the *priorate* and the effect of the Standard Bearer's guild background remains unchanged. Moreover, I show that this main effect does not vary with the composition of this larger body.[26]

[23] No member of the *Vaiai e Pelliccia* (Furriers) was drawn as Standard Bearer of Justice over the period of inquiry. As such, I do not include a parameter for this guild.

[24] Table A6.

[25] Table A7

[26] Table A8. To establish the guild membership of each member of the priorate I use the same method for linking guild elections and family members. However, there is considerably more missingness in this measure.

Since sortition itself revealed information to political and economic actors, resolving uncertainty about the about the composition of government for the following two month term, I control for the number of days until the next sortition. Moreover, since the amount of time between trading days may reveal information about the value of the *florin*, I control for the number of days since the last open trading day. The inclusion of these covariates does not change the substantive or statistical interpretation of the main results.

4 Results

In this section I present my main results, showing a strong and positive causal impact of the Standard Bearer of Justice's membership on price levels. Recall that, because of their mixed orientation towards world trade, I expect that the groups classified as international merchants to have caused higher price levels than the export-oriented sedentary merchants ($E(r_t|Calimala \text{ or } Cambio) > E(r_t|Lana \text{ or } Seta)$). These expectations are given by guild the parameters, β_g, from Equation 2. In line with my theoretical prediction, I show that groups with a mixed trade orientation caused higher price levels relative to the export oriented manufacturers of wool and silk.

Results derived from the estimation of Equation 2. are given in Table I. Column 1 gives estimates where I condition just upon the scrutiny from which each Standard Bearer was drawn. The base category in these estimates is the *Lana* (wool manufacturers) guild, so each of the guild coefficients represent differences from this group. In this baseline regression the only two groups statistically different from the *Lana* are the *Calimala* and *Cambio* guilds. In line with the theoretical model's prediction, the effect on the daily change in the exchange rate between the *florin* and *soldo* for these two groups are 0.012 and 0.011%, respectively. An F-test fails to reject the null hypothesis that leaders drawn from these guilds are equal in their effect on changes in the exchange rate.

In Column 2 I introduce fixed effects for the respective quarter of the city from which

The Effect of Guild Association on the Price of the *Florin* 1393-1431

	1.	2.	3.	4.	5.
Calimala	0.12***	0.12***	0.12***	0.12***	0.12***
(International Merchants)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Cambio	0.12***	0.11***	0.11***	0.11***	0.11***
(Bankers)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Seta	0.02	0.03	0.03	0.03	0.03
(Silk Manufacturers)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Notai	-0.08	-0.07	-0.07	-0.08	-0.08
(Lawyers)	(0.09)	(0.08)	(0.08)	(0.09)	(0.09)
Medici e Spezial	0.03	0.03	0.03	0.03	0.03
(Doctors and Apothecaries)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Time Between Trading Days			0.15***		0.15***
			(0.04)		(0.04)
Time Until Next Sortition				0.00***	0.00***
				(0.00)	(0.00)
Constant	-0.05	-0.03	-0.25***	-0.13**	-0.34***
	(0.04)	(0.05)	(0.07)	(0.05)	(0.07)
Scrutiny Effects	Yes	Yes	Yes	Yes	Yes
Quarter Effects	No	Yes	Yes	Yes	Yes
F Test	0.01	0.03	0.03	0.03	0.02
$Calimala = Cambio$	(0.94)	(0.85)	(0.87)	(0.87)	(0.88)
T	9103	9103	9103	9103	9103
R^2	0.001	0.001	0.010	0.002	0.012

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table I: This table gives the effects of guild membership on daily price levels. The *Lana* are the baseline category. Robust standard errors clustered by term in office. The F test of the null hypothesis that the coefficient associated with the *Calimala* is equal to that for the *Cambio* guild. The p-value for this test is in parentheses below. Coefficients are scaled by a factor of 10^3.

each Standard Bearer was drawn; my effect estimates remains nearly identical at 0.012 and 0.011 for the *Calimala* and *Cambio* guilds, respectively. As before, these effects are statistically indistinguishable from each other. Again, the other guilds are statistically indistinguishable from the baseline.

Since the amount of time separating trading may allow for economic actors to accumulate information, in the third column I account for the number of days separating each day of trading. The relationship between the number of days between trading is positive and statistically significant, yielding an estimated relationship equal to 0.015. However, the inclusion of this covariate does not alter my estimate of the relationship between guild membership and the price of the *florin*. As before I estimate a statistically identical pair of effects for Standard Bearers of Justice drawn from the *Calimala* and *Cambio* guilds equal to 0.012 and 0.011, respectively. Again, the remaining guilds are indistinguishable from the baseline category.

In the fourth column I account how information about the composition of government may be revealed through the process of sortition by controlling for the the amount of time until the next sortition. This is estimated to be very close to zero and, again, does not alter the estimated guild effects in any substantive or statistical way. In the last column I include the full set of controls, once more producing identical results to the baseline model.

These results demonstrate that leaders drawn from guilds with preferences for a strong *florin* caused just such an outcome. Moreover, these groups, the *Calimala* and *Cambio* guilds, produce effects statistically indistinguishable from each other, indicating that it was their common position in the marketplace driving the inflationary result. In Table II I reproduce Table I, now treating the main independent variable as a dummy equal to one if a Standard Bearer of Justice was a member of either the *Calimala* or *Cambio* guilds and zero otherwise.

The results presented in Table II give near identical point estimates to my earlier analysis, indicating an increase in the trading price of the *florin* in *soldo* of about a

The Effect of *Calimala* and *Cambio* Leader Membership on Price of the *Florin* 1393-1431

	1.	2.	3.	4.	5.
Calimala (International Merchants) or *Cambio* (Bankers)	0.11*** (0.03)	0.11*** (0.03)	0.12*** (0.03)	0.11*** (0.03)	0.11*** (0.03)
Time Between Trading Days			0.15*** (0.04)		0.15*** (0.04)
Time Until Next Sortition				0.00*** (0.00)	0.00*** (0.00)
Constant	-0.04 (0.04)	-0.05 (0.04)	-0.27*** (0.07)	-0.15*** (0.04)	-0.37*** (0.07)
Scrutiny Effects	Yes	Yes	Yes	Yes	Yes
Quarter Effects	No	Yes	Yes	Yes	Yes
T	9103	9103	9103	9103	9103
R^2	0.001	0.001	0.010	0.002	0.011

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table II: This table gives the effects of membership of the Standard Bearer of Justice in the *Calimala* or *Cambio* guilds on daily price levels of the *florin*. Robust standard errors clustered by term in office in parentheses. Coefficients are scaled by a factor of 10^3

.011% daily increase in the price of gold. This is a substantively large effect, equivalent to a .46% increase in the price of the *florin* over the course of average term in office.[27] To better evaluate the magnitude of this effect, we can compare it to the average year-to-year change in exchange rate between the *florin* and soldo, which between 1393 and 1432 equalled .61%. Thus, a single two month term in office by a leader drawn from either the great merchant or banking guilds would produce an increase in prices equal to roughly three-quarters of the average annual change.

[27]The average term in office had 42 trading days. $42 \times .00011$ yields the result.

4.1 Guild Specific Heteroskedasticity

Given the occupational preferences outlined earlier, I expect that the economic background of leaders influences not just the the mean but the variance of the *florin's* exchange rate, with those leaders with backgrounds as international merchants and financiers to cause a greater variance. The theoretical prediction is that $E(\sigma_t^2|Calimala \text{ or } Cambio) > E(\sigma_t^2|Lana \text{ or } Seta)$. I evaluate this hypothesis by examining the impact of leaders' guild association on the variance of trading in the *florin*. I follow convention and model the variance of price changes as a GARCH process.

I continue to model the mean as a function of the same set of covariates.

$$r_t = \alpha_1 + \sum_{g=1}^{G} \beta_{1g} + \sum_{q=1}^{Q} \gamma_{1q} + \sum_{s=1}^{S} \delta_{1s} + \sigma_t \epsilon_t \tag{3}$$

Assuming $\epsilon_t \sim N(0,1)$ yields a model of σ_t^2

$$\sigma_t^2 = \alpha_2 + \sum_{g=1}^{G} \beta_{2g} + \sum_{q=1}^{Q} \gamma_{2q} + \sum_{s=1}^{S} \delta_{2s} + \eta \sigma_{t-1}^2 + \zeta \epsilon_{t-1}^2 \tag{4}$$

Which is a GARCH(1,1) model where ζ is the ARCH component and η the GARCH component.[28] In both equations I condition upon the full set of scrutiny and quarter effects. I am interested in two sets of parameters: β_1, which gives the main set of guild effects on the price levels and β_2, which gives the effect of guild membership on the variance of prices.

These results are given in Table III. For space, I present results using a dummy indicator taking on a value of one if the Standard Bearer of Justice was drawn from the *Calimala* or *Cambio* guilds. Estimates with the full set of guild dummies are presented in the appendix.[29] The top panel of Table III gives estimates of the effect of membership in the international merchants and bankers guilds on changes in the levels of prices, r_t as

[28] I can add or remove ARCH and GARCH components and the substantive results do not change. Table A9.

[29] Table A10.

The Effect of *Calimala* and *Cambio* Leader Membership on Price and Volitility of the *Florin* 1393-1431

	1.	2.	3.	4.	5.
Outcome: r_t					
Calimala (International Merchants)	0.09*	0.11*	0.12**	0.13**	0.13***
Cambio (Bankers)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Time Between Trading Days			0.10***		0.11***
			(0.02)		(0.02)
Time Until Next Sortition				0.00***	0.00***
				(0.00)	(0.00)
Constant	0.02	0.06	-0.11	-0.03	-0.18*
	(0.08)	(0.08)	(0.09)	(0.09)	(0.09)
Outcome: σ_t^2					
Calimala (International Merchants)	0.60***	0.53***	0.49***	0.57***	0.54***
or *Cambio* (Bankers)	(0.18)	(0.20)	(0.19)	(0.21)	(0.20)
Time Between Trading Days			0.25***		0.22***
			(0.05)		(0.06)
Time Until Next Sortition				-0.01	-0.01
				(0.01)	(0.01)
Constant	-14.60***	-14.66***	-14.90***	-14.80***	-15.00***
	(0.38)	(0.37)	(0.34)	(0.43)	(0.43)
ARCH(1,1)	0.45***	0.46***	0.45***	0.39***	0.39***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
GARCH(1,1)	0.43***	0.43***	0.40***	0.55***	0.50***
	(0.06)	(0.06)	(0.056)	(0.06)	(0.07)
Scrutiny Effects	Yes	Yes	Yes	Yes	Yes
Quarter Effects	No	Yes	Yes	Yes	Yes
T	9103	9103	9103	9103	9103

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table III: This table gives the effects of membership of the Standard Bearer of Justice in the *Calimala* or *Cambio* guilds on daily price levels and volatility. The top panel gives estimates of the effect on price levels and the bottom to the variance of the trading price. Robust standard errors clustered by term in office in parentheses. Coefficients in the top panel are scaled by a factor of 10^3.

derived from the GARCH(1,1) model detailed above. The results are nearly identical to those from the baseline estimates, though they increase slightly in magnitude when I include the full set of covariates.

In the lower panel of Table III I give estimates derived from the same set of GARCH models, presenting the effects on the variance of prices. The relationship between the guild association of the Standard Bearer of Justice and the variance of price changes is consistent with theoretical expectations. Across specification, membership in either the *Calimala* or *Cambio* guild caused greater variance in the price of the *florin*. These effects range from 0.60, when I include only the set of scrutiny dummies (column 1), to 0.49, when I include the set of scrutiny and quarter dummies and control for time between trading days (column 3).

As when I focused only on changes in prices, time between trading days is positively associated with price volatility (columns 3 and 5), indicating that while the average price might increase with time between trading days, it also increases the variance of trading prices. What is more, I find no evidence that sortition itself reveals information, reducing uncertainty and thus volatility in the trading price of the *florin*. In both models where I include time until sortition as covariates (columns 4 and 5) the number of days since the last sortition is not associated with an increase in the variance of the exchange rate of the *florin*.

4.2 Export vs. Asset Based Preferences

While I interpret the effect of guild association as the consequence of actors' market orientation, a plausible alternative is that the bankers and merchants simply held different types of assets, fostering distinct preferences over the value of the *florin*. Since many financial assets - personal and government debt - were denominated in the Florentine money of account (the so-called *florin* of account) which, in turn, was related to the price of the *florin*, if bankers and merchants held different assets than domestic manufacturers,

The Assets of Standard Bearers of Justice by Guild Association (1427)

	1. *Tax Deductions*	2. *Public Debt*	3. *Private Investment*	4. *Real Estate*	5. *Total Assets*
Calimala	2190.95	1134.02	449.18	5146.14*	6728.93
	(1972.24)	(2313.82)	(2476.42)	(2851.73)	(6770.08)
Cambio	1888.53	401.51	282.67	2734.07	3415.97
	(2410.09)	(2790.10)	(3196.82)	(3187.82)	(8662.51)
Notai	-5791.80***	-7102.63***	-8606.16***	-9238.02***	-24947.21***
	(1148.54)	(1113.41)	(1711.51)	(1506.52)	(3753.54)
Seta	-2686.90**	-2075.93	-5737.53***	-4296.76***	-12110.99***
	(1107.64)	(1625.70)	(1693.72)	(1458.11)	(4167.06)
Medici e Spezial	-2718.78***	-3560.60**	-3468.80	-3552.20**	-10582.77**
	(969.69)	(1744.07)	(2120.55)	(1775.55)	(4930.85)
Scrutiny Effects	Yes	Yes	Yes	Yes	Yes
Quarter Effects	Yes	Yes	Yes	Yes	Yes
T	227	227	227	227	227
R^2	0.051	0.035	0.079	0.083	0.064

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table IV: This table gives the relationship between the Standard Bearer of Justice's guilds and different asset types held by members of their families as denoted in the Cataso of 1427. The baseline category is the *Lana* guild. Robust standard errors in parentheses.

it is conceivable that asset ownership explains the effect I observe.

To evaluate this, I rely upon data from the *Catasto* (tax census) of 1427 (Herlihy et al. 2002) which records for each household the value of their private investments, investment in the public debt, the *Monte*, the value of their real estate holdings, and, finally, their tax deductions. Ideally, I would have each of these data for all members who passed the scrutiny prior to their selection. However, for two reasons this information is unavailable. First, we only observe the successful draws from the sortition process. Secondly, since we only observe the data in 1427, it induces problems of post-treatment bias for those Standard Bearers of Justice drawn prior to the tax census. As a second best option, I

can still determine if those who were ultimately drawn into office differed by guild, in the year 1427, in terms of the assets they held.

If the asset-preference mechanism operated as conjectured, then I expect the types of assets held by the *Calimala* and *Cambio* guilds to be statistically different from the rest of the manufacturing oriented guilds. To assess this I estimate the following regression.

$$Family\ \ Asset_i = \alpha + \sum_{g=1}^{G} \beta_g + \sum_{q=1}^{Q} \gamma_q + \sum_{s=1}^{S} \delta_s + \epsilon_i \tag{5}$$

Where the outcome is a given class of asset described in the *Cataso*, taking the sum for the family of each Standard Bearer. I treat the family as the unit of analysis here for two reasons. First, it allows us to make a more proper comparison in the 1427 cross section, as leaders drawn into office earlier in the period of study would, as individuals, have more time to accumulate wealth. Taking the family as the unit of observation lets me compare multiple generations and avoid this problem. Second, the family was, in most ways during this period, the natural economic unit, with firms being largely owned and operated within families (Lansing 2014). As before, β_g represent the full set of guild dummies, γ_q, the full set of quarter dummies, δ_s, the full set of sortition effects, and ϵ_i a mean zero random disturbance.

Results from these regressions are given in Table IV. Broadly, they do not provide support for the asset-preference interpretation of my main findings. Here I consider five types of assets: tax deductions, ownership of public debt, private investment, real estate, and the total value of assets held by a given family. Except for when I treat real estate as the outcome, a recurrent pattern emerges: the international merchants and bankers guilds are statistically indistinguishable from the baseline wool manufacturers guild. In contrast, across all asset types, the silk manufactures, notaries, and doctors guilds are on average poorer than the baseline category.[30]

This result shows that despite having substantially different effects on the price of

[30]The exception to this pattern is in the value of real estate holdings where the bankers drawn into office are slightly wealthier

the *florin*, the *Lana*, *Calimala* and *Cambio* had similar asset profiles. What is more, it matches a common understanding that the absolute wealthiest of the Florentine elite were active in either wool manufacturing, international trade, or banking and, furthermore, that these groups had an outsized influence in politics. Indeed, over 77% of those selected as Standard Bearer of Justice were drawn from these guilds. In the appendix, I provide evidence that even the differences between these three occupational groups and the other major guilds were driven by extremely wealthy outliers.[31]

4.3 An Institutional Benchmark

How large is my estimated impact of leaders' interests in comparison to the effect of potential institutional changes? To provide such a benchmark, in this section I estimate the association between parliamentary institutions and exchange rates in seven similar Italian cities, some that maintained parliamentary constraints and some that did not. To accomplish this I exploit data preserved in the archive of merchant Francesco di Marco Datini recording the exchange rate (in par-value) between the Venetian ducat and the monies of account of Bologna, Florence, Genoa, Lucca, Milan, Pisa, and Rome (The Papal State) between 1383 and 1411. For Bologna, Florence, Lucca, Pisa, the money of account was the *florin* which was equal in intrinsic value to the *ducat*. Similarly, Rome's *ducat* was directly equatable to its Venetian counterpart whereas Milan and Genoa operated silver based monies that Datini converted to par-value. A bill of exchange with a rate 2 percent would therefore indicate that for 100 *ducats* paid out in Venice the holder would be entitled to 98 *florins* in, for example, Lucca and thus yields a measure of $\frac{p_i}{p_v} = .98$ for a city i, Lucca in this instance, and Venice, v. These data are recorded at an approximately weekly interval, yielding an unbalanced panel of 5,205 city-day observations.

I compare cities that maintained institutional checks on the executive to those that did not, exploiting data from Abramson and Boix (2018) who produce an annual measure of the presence of parliaments. To be coded as present, there must exist "a non-executive

[31] Table A11.

	1.	2.	3.	4.	5.	6.
	Annual Average		*Daily Exchange Rate*			
Parliament	-0.018^{***}	-0.015^{***}	-0.012^{***}	-0.012^{***}	-0.008^{***}	-0.006^{***}
	(0.006)	(0.005)	(0.002)	(0.002)	(0.001)	(0.001)
Urban Pop		-0.017^{***}			-0.021^{***}	-0.019^{***}
		(0.007)			(0.001)	(0.001)
Silver		-0.037^{***}			-0.037^{***}	-0.039^{***}
		(0.012)			(0.003)	(0.003)
Distance to Venice		0.012			0.006^{***}	0.006^{**}
		(0.009)			(0.002)	(0.002)
Constant	-0.003	0.010	-0.010	-0.016	0.042	0.022
	(0.024)	(0.098)	(0.025)	(0.058)	(0.030)	(0.056)
Year Effects	Yes	Yes	Yes		Yes	
Month Effects			Yes		Yes	
Day of the Week Effects			Yes		Yes	
Day Effects				Yes		Yes
R^2	0.237	0.485	0.177	0.236	0.373	0.429
N	157	157	5205	5205	5205	5205

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table V: This table gives estimates of the relationship between the presence of parliaments and the exchange rate between the currencies of seven Italian cities between 1383 and 1411. The first two columns treat the yearly average exchange rate as the dependent variable. The last four columns treat the daily-exchange rate as the dependent variable. Robust standard errors in parentheses.

body (i.e. a body that fulfills legislative and sometimes judicial functions as opposed to or in addition to strictly executive tasks) formed by a plurality of members. This non-executive body must be chosen through procedures (elections or lottery) not directly controlled by the executive." In my sample there are no within-unit changes parliaments' presence. As such, I examine the correlation between parliaments and exchange rates measured at both their yearly average and daily rate.

The first two columns of Table V give results where I treat the outcome as the annual

average exchange rate between Venice and each of the seven cities. In column 1 I condition on the full set of year dummies, thereby accounting for common temporal shocks to each of the cities under consideration. Next, in column 2 I add in an additional set of controls. First, to proxy for levels of development and the size of each city-market, I include the log of each city's population. Second, I include a dummy to account for potential differences between cities that used a silver based money of account. Third, since each observation is the exchange rate between Venetian *ducat* and the local money of account, I proxy for basic fundamentals of trade between Venice and each city by including the log distance between each and Venice. Across specification there is a negative and statistically significant relationship between the presence of a parliament and the exchange rate with the *ducat* equal to a 1.8% (column 1) and 1.5% reduction (column 2), respectively.

In columns 3-6 I treat the outcome as the daily-exchange rate and replicate the same basic analysis as before. In column 3, to account for contemporaneous temporal shocks, I condition on a full set of year, month, and day of the week (Monday, Tuesday, Wednesday etc..) dummies. In column 4 I make an even more refined set of temporal comparisons by include the full set of day-dummies (e.g., a dummy for December 2, 1394). In both specifications I obtain near identical point estimates equal to a decline in the exchange rate of 1.2%. In columns 5 and 6 I include the set of control variables, yielding smaller point estimates of 0.8 and 0.6%.

The association between the presence of parliaments and the exchange rate between the currencies of these seven Italian cities and the Venetian *ducat* provides an institutional benchmark for the effect of leaders' interests. Recall that my estimate of the one term effect of having an international merchant in office on the exchange rate between the gold *florin* and the silver *soldo* was equal to 0.46%. This is between seventy six and twenty-five percent of the association between parliaments and the exchange rate of the *ducat*, indicating that permanent change in the existence of a parliament is roughly equivalent to between a two-and-a-half month and eight month shift in the preferences of leaders.

5 Concluding Remarks

By exploiting the random assignment of leaders into office in the Florentine Republic, a highly institutionalized oligarchy, I show that the selection of leaders whose economic interests aligned with a strong currency affected such an outcome and, conversely, that those whose interests aligned with a weak currency affected the same. In doing so, this paper demonstrates that, even in a highly constrained institutional setting with strong concerns for reelection, interest plays a central role in determining outcomes. This is to say, my estimates of the economic effects of economic interests occur despite the presence of strong institutional incentives against such an outcome.

My results suggests that understanding the development of political-economic interests is just as crucial as understanding the institutions through which these interests interact. What is more, this paper highlight the manner in which exogenous shocks to the economic makeup of dominant coalitions of regimes can impact outcomes. In searching for solutions to problems of development institutional responses may be insufficient. Rather, we need a better understanding of the interests of those in power and, moreover, how and why they change. Still, the estimated effects of economic interests presented herein cannot be parsed into direct effects of policy and the effects that were due to changes in market expectations. Future research should investigate these potential channels.

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