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Abstract

I exploit a unique historical event to explore the causal relationship between individual wealth and posterior political power. Shortly after the foundation of Buenos Aires, plots of land in the outskirts of the city were randomly assigned to all heads of household that participated in the expedition. Using this random allocation of land as a source of exogenous variation on individuals' wealth, I find that wealth causes political power. I also explore possible mechanisms and find support for the hypothesis that wealth signals (or improves) ability.

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1. Introduction

In this paper I use data from the foundation of the city of Buenos Aires to study whether individual wealth leads to posterior political power in representative societies.

There is abundant casual evidence providing support to the conjecture that wealth causes political power. For example, Sebastián Piñera is the president of Chile and he is also among the two or three richest persons in the country; Silvio Berlusconi is the richest person in Italy and, until recently, he was the prime minister; and the super-rich Rockefellers are in the top three of America's political dynasties with a vice president, three governors, two senators, and two representatives (Hess 1997). The observed correlation between wealth and political power, however, does not help to address whether there is a causal relationship between wealth and posterior political success, even in those cases where political power comes chronologically after wealth: an individual's type may explain both why some individuals are wealthy and why they have posterior political success.

To identify the causal link between wealth and posterior political success I exploit an unusual historical event that provides a source of exogenous variation for individuals' wealth. Shortly after the foundation of Buenos Aires in 1580 by Juan De Garay, all the heads of household that participated in the expedition for the foundation received land inside the city for residential purposes and land outside the city (jointly with local aborigines to work it) for agriculture purposes. The land outside the city limits was randomly allocated. As a result of the allocation of land, and for reasons totally unrelated to individual's characteristics, some heads of household received agriculture land close to the city whereas others received it far from the city (the quality of the soil is similar in all the area under analysis). I use the randomly allocated distance of the farms to the city of

Buenos Aires as an exogenous shock to individuals' wealth in order to identify the causal relationship between wealth and the probability of having posterior political power.

I report evidence that the distance of the farms to the city is a proxy variable that provides a source of exogenous variation for wealth. First, there is suggestive evidence that the distance of the farms to the city of Buenos Aires was randomly assigned. Even though there is no historical evidence on the exact procedure for the allocation of land, there are two reasons that suggest that the distance of the farm to the city was indeed randomly assigned: (i) there was a recent law at that time stating that the land had to be assigned randomly in the colonial cities funded after 1573; (ii) the distance of the farms to the city is orthogonal to the set of individual characteristics available.

Second, I present three pieces of evidence that the distance of the farm to the city is negatively correlated with wealth: (i) a voluntary contribution 27 years after the foundation is negatively correlated with the distance of the farms to the city; (ii) the price of the land in the surroundings of Buenos Aires at colonial times was negatively correlated with the distance to the city; (iii) even today there is a negative relationship between the price of the land and the distance to the city in the geographic area under analysis.[1]

Third, there is historical evidence that the distance of the farms to the city distance does not have an effect on posterior political power either directly, or through channels other than wealth. In a nutshell, the neighbors resided in the city at walking distance of the city government or *cabildo*, they did not work the farms by themselves (most of the farms were worked by the local aborigines allocated by Garay or just leased to peasants that

[1] There is some historical evidence suggesting that original settlers needed to wait for some years before being able to sell the land. Therefore, early differences in wealth came from productivity differences (fewer transaction costs and a lower probability of being attacked by the local aborigines for land closer to the city). These productivity differences eventually had an effect on the price of land.

paid a rent for the land), and therefore the farms can be considered as an exogenous shock to neighbors' wealth.

The combination of random allocation of the distance of the farms to the city, negative relationship between distance and price of the land, and distance not having an effect on posterior political power either directly or through channels other than wealth provides with a natural experiment suitable to explore the causal impact of wealth on the probability of holding posterior political power. I find that those individuals receiving more valuable land (closer to the city of Buenos Aires) have a higher probability of achieving posterior political success, thus providing support for the hypothesis that wealth causes political power.

To the best of my knowledge, this is the first paper to identify empirically the existence of a causal relationship between wealth and representative political power. The closest approach is the work by Acemoglu et al. (2007), who use data from the 19th century from Colombia and report a set of historical correlations that suggest that political power in Colombian municipalities is important in obtaining economic rents, but there seems to be a smaller role of wealth in enabling individuals to become politicians. The relationship between political power and posterior wealth is also explored in a paper by Querubín and Snyder (2011) who, using data from the 19th century in the US, report that that the returns to a seat in the House were low during "normal" times but significantly higher during the spike of federal government spending due to the civil war.

There is also a related literature on political dynasties that documents evidence on self-perpetuation of political power in democracies (Dal Bó, Dal Bó, and Snyder 2009; Querubín 2011; Rossi 2011). This literature explains the observed persistence of political elites but it cannot explain why certain individuals got into power in the first place.

The rest of the paper is as follows. Section 2 describes the foundation of Buenos Aires and the era of colonial political power. Section 3 describes the allocation of land and presents the data. Section 4 develops the econometric model. Section 5 reports the results and discusses possible mechanisms. Section 6 concludes.

2. Foundation of Buenos Aires and the era of colonial political power

Buenos Aires (now the capital of Argentina) was founded twice. Don Pedro de Mendoza established the first settlement in 1536, at the present day location of the city. However, continuous attacks perpetrated by local aborigines forced the settlers away, and in 1541 the site was completely abandoned. In April 1578, Juan de Garay received a mandate from the Spanish crown for a second expedition with the objective of "opening the door to the land." As part of the preparation, in January 1580 Garay published in Asunción (now the capital of Paraguay) a call for heads of household willing to participate in the new expedition. Most of the answers to this call were from citizens born in Asunción, descendents of Spaniards and indigenous women, without any previous political experience. These citizens were tempted by the promise of getting land in the new city, including local aborigines to work it (Orquera 2006). Out of the 65 heads of household that ended up participating in the expedition (64 men and one woman), 13 were born in Spain and the rest were born in the Americas (Gammalson 1980). In May 1580 Garay arrived by sailing down the Paraná River from Asunción, and named the new city Trinidad and its port Santa María de los Buenos Ayres. But from the very beginning, the city was known as Buenos Aires.

The city of Buenos Aires was formally founded on June 11, 1580. On that day, Garay appointed the initial members of the *cabildo* (Orquera 2006; Gammalsson 1980). The initial *cabildo* consisted of two *alcaldes*, six aldermen, and one city attorney.[2] The

[2] In 1663 the number of aldermen was increased to eight (Zabala and Gandía 1936, p.175).

officials of colonial *cabildos* had different roles. The *alcaldes*, acting in the most important positions in the city government, served as judges of first instance in all criminal and civil cases and acted as presiding officers of the city government. The aldermen were in charge of the administration of the territory. The city attorney was the legal representative of the city.

Only citizens with the status of neighbor were eligible for the positions in the city office.[3] The members of the city government were elected annually (on January 1) by the neighbors of the city, the only ones allowed to vote (Gammalson 1980; Lynch 2006). The vote was not secret. The duration of the mandates was one year, and the officials had to wait one term before being eligible for re-election. The positions in the city government were *ad honorem* and part-time (for example, in the period 1645 to 1655 the *cabildo* met, on average, 17 days per year).

According to González Lebrero (2002, p.86), the location of Buenos Aires, very far from all other important cities at that time, favored the independence and political power of the local *cabildo*. The *cabildo* of Buenos Aires had many roles, including the provision of public goods, such as streets, bridges, and roads (González Lebrero 2002, p.85), the imposition and collection of taxes (González Lebrero 2002, p.92), and the allocation of lands (Rodriguez Molas 1982). The city government was also in charge of solving land disputes between neighbors and establishing the rules and authorization for *vaquerias* (the right to slaughter the wild cattle in the countryside), which jointly with mule breeding were the basis of foreign trade in the 17th and 18th centuries (Coni 1956; De Paula 2011).[4]

3. Natural experiment and data

[3] Only men could achieve the status of neighbor, and not all men leaving in the city had the status of neighbor. For example, in 1602 there were about 1,500 inhabitants in the city, and only 81 had the status of neighbor (González Lebrero 2002, p.152). Residing permanently in the city was a necessary condition to maintain the status of neighbor.

[4] Before the 17th century, there was no livestock in the area, only allowances for *vaquerías* provided by the *cabildo*.

In October 1580, Juan de Garay proceeded to distribute land inside and outside the city limits among the 65 first inhabitants. Inside the city, Garay distributed plots of land (*solares*), most of them of 3,532 squared meters, which were used for residential purposes (Figueira 2006). Inside the city limits, Garay also distributed bigger plots of land of about 10,000 square meters to be used as orchards for the cultivation of vegetables for own consumption (de Vera de Saporiti 1999).

Outside the city limits, Garay distributed farms called *suertes de chacra*.[5] From the very beginning the farms were used to produce wine and cultivate fruits, vegetables, and cereal crops that were sold in the city (Gammalson 1980, pp.41-42). Five years after the foundation of Buenos Aires, the estimated harvest in this area was 472 tons of wheat, 341 tons of barley, and 28 tons of corn (Figueira 2006).

All the farms headed east facing the Río de La Plata and were between 255 and 425 meters wide and approximately 5,200 meters long. The first farm was located just outside the city limits, in the current neighborhood of Retiro, and the last one was located approximately 21 kilometers to the north of the city limits in the current town of San Fernando (see Figure 1). That is, all the farms distributed by Garay were located to the north of the city. The land bordering the river to the south of the city is a swamp, and even today remains unused. The land to the west was occupied by local aborigines.[6]

Using official registries of that time,[7] I constructed a variable that captures the distance of the farm received by each household to the city (Distance, measured in kilometers). The average distance of the farms to the city of Buenos Aires is ten kilometers, with a maximum distance of 21 kilometers.

[5] *Suerte* means luck in Spanish.
[6] In 1582 Garay also distributed bigger plots of land in the countryside, the so-called *estancias*. These lands, however, were not occupied until the end of the 17th century (Pando 1987, p.66).
[7] The output of the assignment of farms can be found in *Fundación de la Ciudad de Buenos Aires, por Don Juan de Garay, con otros Documentos de Aquella Época*. Buenos Aires, Imprenta del Estado, 1836. The original document with the output of the assignment of farms was signed by the scribe of the city, Pedro Fernandez.

The outcome of interest is Political Power, a dummy variable that takes the value of one for those heads of household with posterior political power and/or that had relatives with posterior political power (35 percent of the sample). That is, Political Power takes the value of one if anyone in the genealogical tree across all generations ever held a political position in the city government. The political positions considered are *alcalde*, alderman, and attorney in the city government. This variable was constructed based on the genealogical trees in Gammalson (1980). A difficulty for building the genealogical trees is that surnames in that period were not inherited from parent to child, and often children sharing the same parents had a different surname. Still, there is information available on descendants for 33 out of the 65 first inhabitants. The correlation between Distance and missing data on genealogy is small (0.15) and statistically not significant from zero at the usual levels of confidence. For around 70 percent of these 33 neighbors there is information for at least three generations, and for 55 percent there is information of at least four generations. For those heads of household with no information available on the genealogical tree, I assume that there are no descendants with political power. Then, I show that the results hold when the sample is restricted to those heads of household for whom some genealogical information is available.

From the 65 heads of household that arrived with Garay**,** twelve held a posterior political position (six of them won the position of *alcalde*), and 16 had a relative holding political power in the future.

The database has also information on a set of individual characteristics (previous to the random assignment of land, or pre-treatment) for the 65 heads of household that participated in the foundation of Buenos Aires: Previous Political Power is a dummy variable that takes the value of one for Juan De Garay, his son, and the members of the first city government chosen by Garay (16 percent of the sample); Spaniard is a dummy

variable that takes the value of one if the head of household was born in Spain (20 percent of the sample); and Previous Children is a dummy variable that takes the value of one if the head of household came to the expedition accompanied by his or her children (18 percent of the sample). All the information on the individual characteristics was obtained from Gammalson (1980).

Finally, I create a variable (Width, in meters) to capture the differences in width between farms. Given that farms had similar length (Pando 1987), Width is a proxy variable for farm size.[8] It is not clear from the historical registries the reason why the farms had different widths. But taking into account that Width is not correlated with Distance (the correlation is equal to -0.15, and it is statistically insignificant), two possibilities arise. The first possibility is that Garay randomly awarded farms of different size. In that case, Width would play a similar role to the variable Distance, provided one is willing to accept that larger farms are more valuable. The second possibility is that, even though the order of the farms (that is, the distance of the farm to the city) was randomly allocated, Garay used his discretion to favor some inhabitants by giving them a larger farm. If this were the case, the differences in farm's width would reflect some (pre-treatment) heterogeneity in individual characteristics; for example, how highly considered an individual was by Garay. The latter conjecture is supported by the data: Width is positively correlated with holding previous political power (the correlation is equal to 0.51 and it is significantly different from zero at the one percent level) and with being Spaniard (the correlation is equal to 0.38 and it is significantly different from zero at the one percent level).

Therefore, I assume throughout the paper that differences in width are a proxy for an unobservable individual characteristic capturing some sort of (pre-treatment) social or

[8] Even though it is documented that farms had similar length, I do not have information on the exact length, so it is not possible to include farm size in the econometric analysis.

economic status. Notice that this is the most conservative approach given that Width is positively and significantly correlated with Political Power.

Summary statistics are reported in Table 1.

Natural experiment

Even though it is not clear from the historical record which was the exact procedure for the allocation of land, there are three reasons that suggest that the distance of the farm to the city was randomly assigned.

First, there was a law stating that land had to be randomly allocated. According to the *Real Provisión* of 1573 for new discoveries and foundations (*Disposiciones de Felipe II en las Ordenanzas de 1573: Ordenanza 130)*[9] the land had to be distributed using random assignment among the inhabitants of the new cities. The *Ordenanza 130* reads: "…and if irrigated lands were available, they have to be allocated to the first settlers in equal parts at random …".[10] An explicit mention of the random assignment can be found in Pando (1987, p.60): "The distribution of land in America followed these legal guidelines, one of them the old medieval procedure of random assignment…".[11] Random assignment was also used by Garay for other purposes, for example, to choose the patron of the city, Saint Martin of Tours (Ruiz Guiñazú 1915, p.70).[12]

Second, an implication of random assignment is that the pre-treatment characteristics of the heads of household should not be correlated with Distance. Table 2 reports the results of regressing Distance on the set of the individual pre-treatment characteristics. The pre-treatment characteristics are individually and jointly not significant predictors of Distance (the F statistic p-value for the null hypothesis that the

[9] Buenos Aires was the first city in the region founded under the *Real Provisión* of 1573 for new discoveries and foundations (De Paula 2011).
[10] All translations were made by the author and checked with a philologist specialized in medieval Spanish.
[11] Land was also assigned randomly after the foundation of Montevideo (now the capital of Uruguay), in 1724. See http://www.escueladigital.com.uy/historia/colonizacion/fundmvd.htm.
[12] Bleakley and Ferrie (2013) document a random allocation of land in the State of Georgia, in 1832.

coefficients of all the explanatory variables are equal to zero is equal to 0.37), providing additional evidence that the allocation of land (in terms of the order of the plots) was truly random. Just to give an example of the output of the random allocation, Garay, the two *alcaldes*, and Garay's son (arguably the four most important neighbors of the city) received the plots number 4, 5, 34, and 65 (being the plot number 1 the closest to the city). One potential concern may arise from the inclusion of heads of household with previous political power in the analysis: after all, the objective of the paper is to explore the origins of political power. Therefore, in column (2) I report the same exercise for the sub-sample of heads of household without previous political power and find similar results (the F statistic p-value is equal to 0.75).

Of course, lack of statistically significant evidence is different from finding evidence that the correlation is close to zero. This is particularly relevant given the relatively small number of observations available. To address this concern I also report p-values from permutation tests based on Monte Carlo simulations (1,000 random permutations). The key advantage of permutation testing in this setting is its validity even with very small samples and regardless of the distributional characteristics of the data.[13]

Finally, in section 5 I report the main regressions controlling for the set of individual characteristics. As expected if land allocation was random, the main results in the paper do not change substantially when the set of individual characteristics are included as controls.

4. Econometric model

As discussed above, unobserved characteristics may potentially bias OLS estimates of wealth in a regression model for political power. To overcome this problem I use the randomly allocated distance of the farm to the city as proxy variable for wealth. Since

[13] See Anderson and Robinson (2001) for a discussion on permutation tests in multivariate linear regression models.

wealth data is not available at the individual level, I estimate the following reduced form regression:

$$\text{Political Power}_i = \alpha + \gamma \text{ Distance}_i + \beta X_i + \varepsilon_i \quad (1)$$

where γ is the (reduced form) parameter of interest, X_i is a matrix of individuals' characteristics, and ε_i is the error term.

Important for the causal interpretation of the parameter γ is that Distance meets two conditions: to be a relevant proxy variable for wealth and to satisfy the exclusion restriction.

Relevance

In October 1607 the *cabildo* was worried because the only barber in the city (who was also the doctor and the dentist) wanted to leave Buenos Aires. To prevent the barber from leaving the city, the *cabildo* asked for a voluntary contribution (González Bonorino and Lux-Wurm 2001). Under the assumption that wealthier individuals were willing to make a higher contribution, the information on the contribution to the barber may provide information on individual's wealth.[14] As reported in Table 3, the coefficient of Distance is negative and statistically significant in a model for the contribution, suggesting that those individuals that received land closer to the city were wealthier 27 years after the foundation. The result is quantitatively important: being allocated a farm ten kilometers further away from Buenos Aires increased the contribution by five pesos (the average contribution is 6.82 pesos). The results hold when I exclude from the sample those individuals with previous political power.

Indirect additional evidence on the negative correlation between Distance of the farm to the city and individual wealth is provided by the information available on the

[14] The data comes from González Bonorino and Lux-Wurm (2001). There are records of the amount of the contribution for only 17 out of the 65 foundational neighbors. Other foundational neighbors also made contributions, but the amount they contributed is not available.

price of the land in colonial times. According to Garavaglia (1995), there was a negative relationship between value of the land and distance to Buenos Aires. As a general rule, and considering that the soil in this area is of similar quality, the drivers of the price of the land in the main agricultural regions around Buenos Aires were the distance to the city and the risks of attacks by the aborigines (Garavaglia 1995, p.95).[15] Distance was important because of its direct impact on transport costs. The higher transport cost for the land relatively more distant to the city is explicitly mentioned by a crop producer, Juan de Borda, who in 1643 wrote that for farms located far from the city "… the costs of collecting the production are higher than its value, and the production is lost…".[16] The risk of attacks by the local aborigines was also important in a context in which the farms were frequently attacked and stolen by aborigines (González Lebrero 2002, p.47 and p.84; Canals Frau 1986, p.210), and those farms closer to the city fort were more protected. Garay himself, in the act for the distribution of land in October 1580, makes an explicit recognition of "…the risk that exists in the present because of the aborigines…".[17] The risks mentioned by Garay were real: Garay was killed in 1583 in an attack by local aborigines when travelling between the cities of Buenos Aires and Santa Fé (Zabala and Gandía 1936, p.147).

All the above reasons provide evidence that Distance is negatively correlated with wealth. Indeed, as shown in Figure 2, even today there is a negative relationship between the price of the land and the distance to the city in the geographic area to the north of Buenos Aires.

The exclusion restriction

[15] A third factor that was potentially important is access to water. However, all the farms allocated by Garay were similar in terms of their access to water.
[16] Archivo General de la Nación, 23/4/1643, s9 13-5-1. Quoted in González Lebrero (1995).
[17] In Julio Torrente, *Compilación de referencias documentales*, tomo II, La Plata, Ministerio de Obras Públicas de la Provincia de Buenos Aires, 1933, p.19.

Even if the distance of the farms to the city was randomly allocated, a concern would still arise if distance had a direct effect on the possibility of having a political position, for example through time availability for political activities (potentially important if the neighbors resided on the farms). There are reasons, however, to discard this concern. First, most of the farms were not worked by the original owners but instead were leased to farmers that paid a proportion of the production to the owner (Garavaglia 1989). Gutman and Hardoy (1992), for instance, document that neighbors resided in the city and the only people residing permanently in the farms were the foremen and the slaves. Second, those farms that were not leased were worked by aborigines (and also by slaves)[18] allocated by Garay by means of *encomiendas* to help the neighbors put the farms into production (González Lebrero 2002, p.111). The aborigines and slaves were supervised and controlled by foremen, who received a salary or a proportion of the production (González Lebrero 2002, p.148). Thus, the supply of time available for political activities was not directly affected by the distance of the farm to the city.

In addition, holding a position at the *cabildo* was a part-time avocation compatible with agricultural activities. In the period 1646 to 1655 the *cabildo* had, on average, only 17 meetings per year. Figure 3 reports the average number of meetings by month during that period. January was the month with more political activity (18 percent of the annual meetings). Interestingly, January is the month with less agricultural activity throughout the year; neither sowing nor harvests are carried on during this month. The agricultural cycle for wheat and barley corresponds with June and July (harvest) and November and December (sowing); for corn, the cycle is the period from September to November (sowing) and from April to June (harvest). As observed in Figure 3, for those months the sample presents a much lower average of meetings compared to January: the average of

[18] See González Lebrero 2002, p.147.

meetings of the *cabildo* in January triples the average for April, June, July, September, November, and December; and doubles the average for May and October. All this evidence indicates that even if neighbors had agricultural obligations, these would not be at odds with their participation in political activities.

5. Results

A preview of the main results is shown in Figure 4. This figure represents the proportion of heads of household with posterior political success in terms of the distance of the farm to the city. It indicates that the probability of having posterior political success is negatively related to the distance of the farm to the city: 50 percent of the heads of household that received a farm located within seven kilometers from the city limits have some sort of posterior political power, compared to 14 percent of those receiving lands located between 14 and 21 kilometers from the city limits (the difference is statistically significant at the one percent level).

The main results are reported in Table 4. As shown in column (1), Distance is a significant predictor of the probability of having posterior political success. The effect is not only statistically significant but also quantitatively substantial. An increase of one standard deviation in the distance of the farm to the city (six kilometers) decreases the probability of having posterior political power by about twelve percentage points.

As observed in column (2), the value and significance of the coefficient of Distance remains unchanged when I control for holding previous political power. The coefficient of Previous Political Power is interesting in itself: holding a previous political position increases the probability of having posterior political success by about 28 percentage points. This is in line with previous findings on the self-perpetuation of political power (see Dal Bó, Dal Bó, and Snyder 2009; Querubín 2011; Rossi 2011).

In column (3), I control for the set of pre-treatment characteristics available. Again, the value of the coefficient on Distance is negative and statistically significant at the ten percent level, and its value is similar to the previous ones. In this model, the coefficient corresponding to Width is positive and significant, and the magnitude of the coefficient suggests that an increase of one standard deviation in the farm's width (35 meters) increases the probability of having political success in the future by about 15 percentage points.

The impact of Distance on Political Power is significant when the sample is restricted to those heads of household without previous political power (without and with controls) and when Ana Díaz is excluded from the sample (columns (4) to (6)). The latter is of potential relevance given that women were not eligible for political positions.

Overall, the results indicate that individuals that received land closer to the city of Buenos Aires (that is, individuals more likely to be wealthier) are more likely to have posterior political success.

Robustness checks

I also run a series of additional robustness checks. First, I define posterior political power as the number of family members that held a position in the city council (instead of a dummy variable) after 1580. Again, as reported in column (1) in Table 5, Distance is negatively correlated with the alternative measure of posterior political success.

Second, I restrict the analysis to those heads of household for whom the genealogical tree is available (thus excluding, for example, migrants). As shown in column (2) in Table 5, the negative relationship between distance and the probability of having posterior dynastic power persists in the restricted sample, suggesting that the availability of data on descendants is not driving the results. As mentioned before, the

correlation between missing data on the genealogical tree and Distance is small and statistically insignificant at the usual levels of confidence.

Third, I run a regression to reassure that the reported correlation between the distance of the farms to the city and posterior political power is not emerging from a spurious negative correlation between availability of information on descendants and distance to the city. I create a dummy variable that takes the value of one for those heads of household with posterior relatives in the military (captain or superior), again using the genealogical trees available. It is worth noting that these data come from the same source as the data on political power. As reported in columns (3) and (4) in Table 5, the coefficient on Distance is both not significant and small. The coefficients on distance are three to thirteen times larger (depending on the particular regression) in the models of political power compared to the models of serving in the military. Interestingly, there is a dynastic component in the military careers: holding a military position increases the probability of having a posterior relative in the military by about 27 percentage points, a figure that is similar to the one obtained in the model of political power.

Interpretation of the results and possible mechanisms

Having provided evidence on the causal relationship between individual wealth and posterior political power, the following step is to interpret this finding and explore possible mechanisms behind the result.

In terms of the interpretation, the first question is whether wealth makes it easier to access politics or just makes it more important to have political power. After all, maybe this is all about willingness to have political power (that is, the ownership of valuable land makes it more important to have political power in order to protect one's assets). However, there is evidence that at the beginning of colonial times being a member of the city government was desirable for all neighbors, not just for those holding valuable land

(González Lebrero 2002, p.93). Just to provide an example of the importance of being a member of the *cabildo*, in April 1609 the city government gave allowances for *vaquerías* to only a few neighbors, and the beneficiaries were mostly members or previous members of the city government.[19]

Regarding the possible mechanisms behind the result that wealth is causing representative political power, there is evidence that the main result of the paper is not emerging from a correlation between wealth and the number of direct descendants (see column (1) and (2) in Table 6).[20]

I also explore the possibility that the result is driven by wealthier neighbors purchasing their positions in office; after all, from the end of the 16th century some of the positions in the *cabildo* were available for sale (the positions of alderman and city attorney could be legally sold in public auction, whereas the position of *alcalde* was not for sale). To explore the purchasing-of-positions mechanism, I re-define the political power variable to consider only the position of *alcalde*, the position in the *cabildo* that was not available for sale. The main result is maintained for the restricted definition of political power (see column (3) in Table 6).[21]

Finally, I distinguish between holding posterior political power (Own Posterior Political Power) and having posterior relatives holding political power (Post Relative Posterior Power). Interestingly, the relationship between wealth and political power is small and not significant for the generation of the neighbors that arrived with Garay, and larger (in absolute value) and statistically significant for posterior generations (see columns (4) and (5) in Table 6). This result is compatible with various hypotheses. One of them is that, regardless of the particular mechanism involved, the differences in wealth

[19] See *Acuerdos del Extinguido Cabildo de Buenos Aires*, 22 April 1609.
[20] There is only information available on recognized children, that is, children that the neighbors had with their wives.
[21] When the political power variable is re-defined in order to consider only the positions that were available for sale, the coefficient is equal to -0.012 with a p-value of 0.18.

only arose after some time. Another one is a story in which voters are interested in hiring the candidate with the highest ability. For the generation of agents that participated in the random allocation of lands, the variability of wealth arising from the differences in the distance of the farm to the city of Buenos Aires is not informative on their ability. Therefore, for this group of individuals, being assigned a farm closer to the city of Buenos Aires should not increase the probability of being elected into office, at least not through this channel. From an intergenerational perspective, however, wealth and ability are likely to be correlated, in the sense that a higher level of wealth in generation t is positively correlated with higher ability in generation t+1. This positive correlation could arise, for example, from better nutrition and education, important in a context of general under-nutrition and paid education (Solari 1949; Zabala and De Gandía 1936, p.196). This context implies that for those generations coming after that of the first neighbors, wealth provides a signal for ability. Thus, the observed correlation between Distance and Political Power is implied to be weaker for the first neighbors compared to their descendants, which is exactly what I find.

To round off, the evidence is not conclusive on which is the mechanism behind the finding that wealth is an important driver of posterior political power. The fact that the result mostly arises from descendants of the first neighbors is compatible with many stories, including one in which wealth in a given generation increases the ability of future generations to administrate the city government. Of course, it may also reflect the fact that more valuable land took some time to become profitable and productive. That is, it is possible that getting land closer to Buenos Aires may have led, independently of the mechanism involved, to more wealth only for future generations.

6. Conclusions

I use historical data from the second foundation of Buenos Aires to study the origins of representative political power. I find that those first neighbors receiving more valuable land (i.e., closer to the city) have a higher probability of having political success, thus providing support for the hypothesis that wealth causes political power.

To the best of my knowledge this is the first paper identifying empirically the existence of a causal relationship between individual wealth and representative political power. I also explore possible mechanisms, and find some evidence that the result does not emerge from a correlation between wealth and the number of direct descendants or from the legal purchase of political positions. I do find some support for the hypothesis that wealth is providing a signal for type in an asymmetric information environment, or just increasing the ability (via higher education) of posterior generations to administrate the city government in a context in which the ability of the candidates is observed by the voters. If this were the mechanism involved, the results could have implications on the modern day relationship between wealth and political power: wealthier people, who are likely to be more educated, have an advantage in terms of the possibility of accessing political power.

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Table 1. Summary statistics

	Mean	Standard deviation
Distance (in kilometers)	10.64	6.15
Political Power	0.35	0.48
Previous Political Power	0.17	0.38
Own Political Power	0.18	0.39
Post Relative Political Power	0.25	0.43
Political Power *Alcalde*	0.14	0.35
Number of Descendants with Political Power	0.25	0.89
Posterior Relatives in the Military	0.28	0.45
Contribution	6.06	3.72
Spaniard	0.20	0.40
Previous Children	0.18	0.39
Number of Children	2.76	2.17
Number of Sons	1.24	1.46
Width (in meters)	319.52	35.46

Note: The total number of observations is 65, except for Contribution (17 observations).

Table 2. Relationship between the distance of the farm to the city and the pre-treatment characteristics

	Dependent variable: Distance	
	(1)	(2)
Previous Political Power	-2.240	
	(2.717)	
	[2.925]	
Spaniard	0.390	1.763
	(2.271)	(2.617)
	[2.446]	[2.880]
Previous Children	-1.913	-0.461
	(1.987)	(2.569)
	[2.156]	[2.717]
Width	-0.014	0.025
	(0.024)	(0.033)
	[0.027]	[0.034]
p-value for the F-Statistic	{0.48}	{0.76}
Observations	65	54

Notes: Robust standard errors are in parentheses. Bootstrapped standard errors (1000 replications) are in brackets. P-values based on Monte Carlo permutation tests (1000 permutations) are in braces. Model (2) excludes individuals with previous political power. All models include an intercept and are estimated by OLS.

Table 3. Distance of the farms to the city and individuals' "wealth"

	Ln(Contribution)	Contribution	
	(1)	(2)	(3)
Distance	-0.085	-0.516	-0.432
	(0.024)***	(0.165)***	(0.157)**
	[0.025]***	[0.195]***	[0.162]***
	{0.00}	{0.00}	{0.00}
Constant	2.424	11.434	9.822
	(0.247)***	(2.169)***	(1.964)***
	[0.256]***	[2.186]***	[1.909]***
Observations	17	17	12

Notes: Robust standard errors are in parentheses. Bootstrapped standard errors (1000 replications) are in brackets. P-values based on Monte Carlo permutation tests (1000 permutations) are in braces. Model (3) excludes individuals with previous political power. All models are estimated by OLS. The data on contributions are in pesos and correspond to 1607. **Significant at the 5% level. ***Significant at the 1% level.

Table 4. Estimates for the probability of having posterior political success

	Dependent variable: Political Power					
	(1)	(2)	(3)	(4)	(5)	(6)
Distance	-0.022	-0.018	-0.016	-0.020	-0.024	-0.024
	(0.009)**	(0.009)**	(0.009)*	(0.009)**	(0.009)***	(0.010)***
	[0.009]**	[0.008]**	[0.009]*	[0.009]**	[0.009]**	[0.010]**
	{0.03}	{0.12}	{0.10}	{0.05}	{0.30}	{0.23}
Previous Political Power		0.283	0.045			
		(0.170)*	(0.227)			
		[0.175]	[0.240]			
Spaniard			0.024		0.188	0.192
			(0.180)		(0.211)	(0.211)
			[0.189]		[0.217]	[0.227]
Previous Children			0.095		0.097	0.085
			(0.159)		(0.202)	(0.226)
			[0.169]		[0.221]	[0.246]
Width			0.004		0.004	0.004
			(0.001)***		(0.002)**	(0.002)**
			[0.002]***		[0.002]**	[0.002]**
Constant	0.583	0.500	-0.918	0.521	-0.834	-0.867
	(0.119)***	(0.129)***	(0.467)**	(0.135)***	(0.600)	(0.626)
	[0.119]***	[0.126]***	[0.487]*	[0.135]***	[0.667]	[0.663]
Observations	65	65	65	54	54	53

Notes: Robust standard errors are in parentheses. Bootstrapped standard errors (1000 replications) are in brackets. P-values based on Monte Carlo permutation tests (1000 permutations) are in braces. Models (4) to (6) exclude from the sample those individuals with previous political power. Model (6) also excludes Ana Díaz (the only woman that was a head of household). All models are estimated by OLS. *Significant at the 10% level. **Significant at the 5% level. ***Significant at the 1% level.

Table 5. Robustness checks

	Number of Descendants with Political Power	Political Power	Posterior Relatives in the Military	
	(1)	(2)	(3)	(4)
Distance	-0.040	-0.029	-0.005	-0.001
	(0.023)*	(0.013)**	(0.009)	(0.008)
	[0.024]*	[0.013]**	[0.009]	[0.008]
	{0.01}	{0.05}	{0.58}	{0.10}
Military				0.269
				(0.159)*
				[0.160]*
Constant	0.671	0.890	0.329	0.241
	(0.339)**	(0.137)***	(0.114)***	(0.104)**
	[0.349]**	[0.142]***	[0.116]***	[0.102]**
Observations	65	33	65	65

Notes: Robust standard errors are in parentheses. Bootstrapped standard errors (1000 replications) are in brackets. P-values based on Monte Carlo permutation tests (1000 permutations) are in braces. Model (2) restricts the sample to those heads of household for whom the genealogical tree is available All models are estimated by OLS. *Significant at the 10% level. **Significant at the 5% level. ***Significant at the 1% level.

Table 6. Exploring mechanisms

	Number of Children	Number of Sons	Political Power *Alcalde*	Own Political Power	Post Relative Political Power
	(1)	(2)	(3)	(4)	(5)
Distance	-0.066	-0.029	-0.010	-0.005	-0.013
	(0.057)	(0.036)	(0.006)*	(0.007)	(0.009)*
	[0.059]	[0.036]	[0.006]*	[0.007]	[0.008]**
	{0.29}	{0.44}	{0.16}	{0.54}	{0.05}
Constant	3.401	1.527	0.242	0.240	0.368
	(0.761)***	(0.469)***	(0.092)***	(0.097)**	(0.116)***
	[0.757]***	[0.470]***	[0.091]***	[0.100]**	[0.109]***
Observations	33	33	65	65	65

Notes: Robust standard errors are in parentheses. Bootstrapped standard errors (1000 replications) are in brackets. P-values based on Monte Carlo permutation tests (1000 permutations) are in braces. All models are estimated by OLS. *Significant at the 10% level. **Significant at the 5% level. ***Significant at the 1% level.

Figure 1. Location of the lands distributed by Juan de Garay in 1580

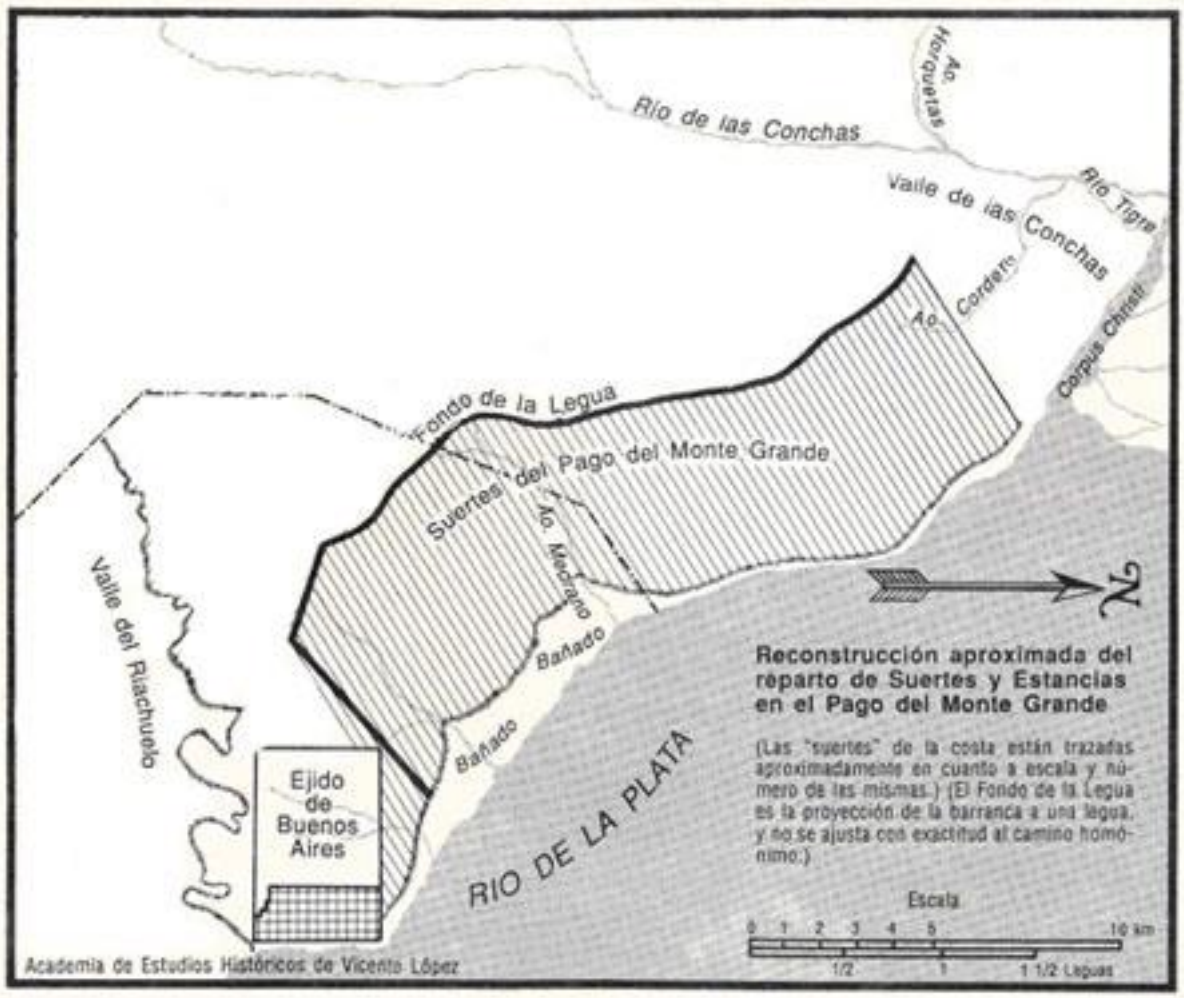
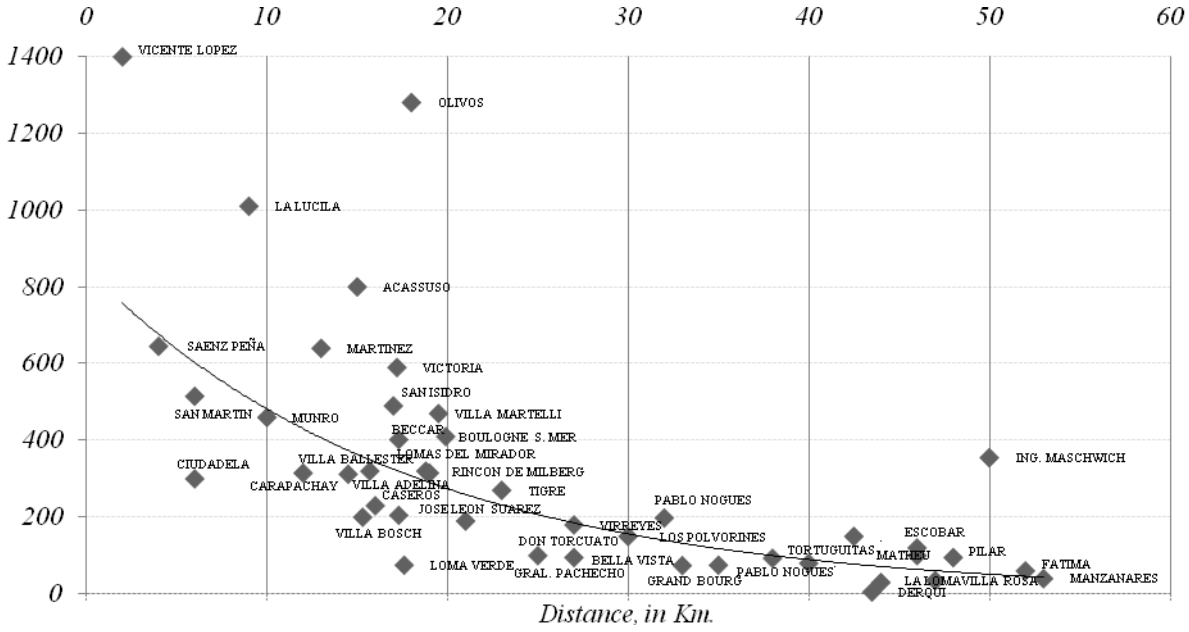


Figure 2. Price of the land and the distance to Buenos Aires



Notes: The vertical axis is the price of the land (squared meter) in US Dollars, as in June 2010. The horizontal axis is the distance from the town to the city of Buenos Aires, in kilometers. The dots correspond to towns located in the geographic area to the north of the city of Buenos Aires.
Source: Unidad de Sistemas de Inteligencia Territorial. Subsecretaría de Planeamiento. Ministerio de Desarrollo Urbano. Gobierno de la Ciudad de Buenos Aires.

Figure 3. Average number of meetings of the *cabildo*, per month (1646-1655)

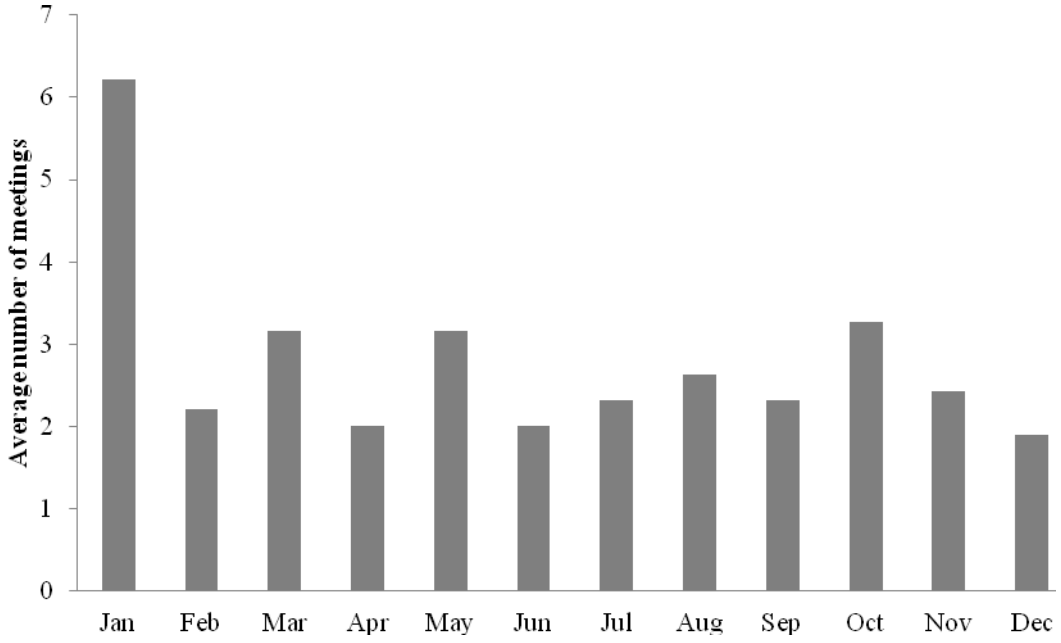


Figure 4. Relationship between the distance of the farm to the city and posterior political success