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Abstract

Using a newly collected dataset on inquisitorial activity for seven regions, fourteen provinces and 947 municipalities, I analyze the long-term economic consequences of the Spanish Inquisition (1478-1834). I show that inquisitorial activity is negatively associated to regional and provincial economic growth (an increase of a thousand inquisitorial trials is associated with 3% to 5% lower urbanization rates). At the municipal level, I find that municipalities affected by the Inquisition experienced an annual population growth rate 0.11% lower than their counterparts. This result is robust when controlling for alternative explanatory factors, such as pre-existent religiosity and proxies for trade activity. I explore three channels through which the Inquisition may have had an impact on economic outcomes. While inquisitorial activity is not linked to levels of trust or social polarization, I find it is negatively associated with the adoption of new technologies and the creation of municipal centres of cultural transmission.

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1 Introduction

Pope Sixtus IV created the Spanish Inquisition (1478-1834) to persecute crypto-morality, mainly *judaizers* and *moriscos*.¹ While the main initial objective of the Pope was to preserve religious unity in the kingdoms of Castile and Aragon, the Catholic King's² aim was to obtain a unified kingdom using religion as an instrument (Ángel Alcalá, 1984). Because the Pope did not have the control over the Inquisition, it soon became a political repressive tool of the Spanish Crown from the second half of the 16th century onwards. The Spanish Kings used the Inquisition, the first Spanish institution with the same *de facto* power on all Spanish territories, to persecute political ideologies and behaviors that could jeopardize the established structures of the kingdom (Haliczer, 1990; Vidal-Robert, 2013). Since its creation in 1478, the Inquisition conducted more than 100,000 trials across all over Spanish territories during the three hundred years of its existence. A natural question that arises is whether such a repressive and persistent institution had any impact on economic development.

Using trial activity data on seven Spanish regions, fourteen Spanish provinces and the 947 municipalities in Catalonia, this paper examines the long-run effects of the Spanish Inquisition on economic, political and cultural outcomes.

Specifically, I focus my analysis on Catalan municipalities to determine the effect of the Inquisition on annual population growth, a proxy for economic development (Galor and Weil, 2000). Using population data from 1378 to 1991, I apply a differences-in-differences approach (DID) to determine the effect of the Inquisition. In the baseline specification, I show that inquisitorial activity decreased annual population growth by 0.11% in Catalan municipalities that experienced at least one trial of the Inquisition. This effect, however, vanishes after the first half of the 19th century. I include county fixed effects and year dummies, municipality initial characteristics and allow the impact of these to vary year by year.

The main challenge of measuring the effect of the Inquisition on long-run development is identification. For instance, the pre-existent religiosity of a village could have affected both the activity of the Inquisition and economic outcomes. To address this issue, I control for the

¹*Judaizers* were the Jews converted to Catholicism and *Moriscos* were Muslims converted to Catholicism.

²The Catholic Kings (Isabella I and Ferdinand I) were the Spanish kings when Pope Sixtus IV created the Inquisition.

type of jurisdiction of villages previous to the existence of the Inquisition.³ When controlling for Church jurisdiction the results remain unchanged. Therefore, pre-existent religiosity or religious influence are not driving the results.

Historical proximity to commercial routes or centres (i.e. maritime ports, historical roads and intersections) could be related to both inquisitorial activity and economic development. For example, easy access to villages could facilitate inquisitorial activity as well as economic activity. Omitting distance to Europe may also be problematic. Villages closer to Europe could experience more inquisitorial activity because of higher influence of protestantism, which has been linked to better economic outcomes (Becker and Woessmann, 2009). Results are robust to the inclusion of data on Roman roads, intersections, maritime routes and ports, as well as distance to France.

There is a large literature addressing how historical episodes or institutions have persistent effects on current economic outcomes. Since Engerman and Sokoloff (1997) that focus on the role factor endowments played on different economic paths and Acemoglu et al. (2001, 2002) that explain the effect of colonial origins on current economic outcomes, more recent research has focused on the impact of slave trade (Nunn, 2008), forced labor system (Dell, 2010).⁴ These studies usually relate historical institutions or episodes to current outcomes assuming that the effect found is persistent and consistent through all the period between them. Frankema and van Waijenburg (2012), however, have recently shown that this may not be the case. They present income estimates well above subsistence level for nine British African colonies in 1880-1965. Therefore, they conclude that of the assumptions of structural impediments to growth for Africa should be reconsidered. This paper can show the effects of the Inquisition from its creation until nowadays taking advantage of population data availability for the 947 municipalities in Catalonia. In particular, I show that after a strong negative impact of the Inquisition, its impact on economic growth smoothly decreases over time until it vanishes after two hundred years approximately.

³Villages in early modern Spain were assigned different types of jurisdictions (Royal, Church, Order or Noble); that is, the lord of a village could be either the King, a member of the Church, a member of the nobility, or a military order.

⁴Nunn (2009), Spolaore and Wacziarg (2013) and Alesina and Giuliano (2013) provide a complete and detailed review of this literature.

This paper is also related to the literature that focuses on how cultural transmission (may have) had a direct effect on economic performance or (may have) generated barriers to the flow of ideas and innovations, as described in Spolaore and Wacziarg (2013). Regarding the direct effect, inquisitorial persecution may have led to an economic stagnation process in Spain due to intergenerational transmission of traditional values opposite to new ideas and innovations. For instance, Greif and Tadelis (2010) use a theoretical framework to explain how the persecution of crypto-morality can lead to the decay of a particular moral in a society.⁵ Regarding barriers to ideas, the Inquisition may have also created barriers to interactions between different religions in Spain or Spanish thinkers and new knowledge spread in the rest of Europe.

I explore three possible channels through which the effect of the Inquisition could have persisted over time and that are related to the description in Spolaore and Wacziarg (2013): trust on institutions and between people, social polarization and culture (attitudes towards new technologies and the spread of culture).

Inquisitorial trials were initiated after an anonymous accusation, whose author was never made public. For this reason the effect of the Inquisition could have persisted through a lack of trust not only between people but also a lack of trust towards Spanish institutions, following the same type of argument as in Nunn and Wantchekon (2011). Using World Values Survey (WVS) data and *Centro de Investigaciones Sociologicas* (CIS) surveys I show that there is no significant correlation between the number of trials of the Inquisition and the levels of trust between people.

Historians have often defined the persistence of the inquisitorial mind as the influence of inquisitorial ideas and mentality to current society's behavior, Ángel Alcalá (1984), Abellán (1987) . In particular, they argue that the persecution of ideas that did not correspond to the *status quo* could impact the levels of polarization in society. They define social polarization as the existence of two main groups who would have opposite behaviors and would never reach an agreement. I use political elections' outcomes in the 19th century -as a proxy for social polarization- to calculate polarization levels in Parliament and find no evidence of a

⁵Nonetheless, there are papers showing positive effects of culture or attitudes on growth. For example, Becker and Woessmann (2009) and Botticini and Eckstein (2012) show how Jewish and Protestant regions were more economically prosperous due to human capital formation.

relationship with Inquisitorial activity to support this hypothesis.

Finally, I explore to what extent severe inquisitorial activity affected entrepreneurial behavior, technological innovation and culture. The fear of being punished by the inquisition when proposing new ideas and innovations is likely to have negatively affected the willingness to invest in new technologies.⁶ Using WVS and CIS surveys between 2000 and 2007, I show that indeed, there is a significant negative correlation between inquisitorial activity and people's attitudes towards new technologies.

However, these results do not provide any evidence for the period between the Inquisition and the years of those surveys. Other shocks such as the Civil War (1936-1939) and the Spanish dictatorship (1939-1975) could also affect these attitudes. To address this issue, I obtained data on the number of patents produced by each Spanish region from 1850 onwards and information on the existence of cultural centres in the province of Barcelona (340 municipalities) before 1930. I show that both number of patents and the likelihood of the existence of cultural centres are negatively correlated with inquisitorial activity.

The results of this paper shed light on the long-run consequences of historical institutions. In particular, my results show a negative impact of a repressive institution such as the Spanish Inquisition on economic growth. However, this impact is not consistent and persistent over time. Instead, it slowly decreased over time until it finally vanished after the first half of the 19th century. Interestingly enough, it is during this influence of the Spanish Inquisition on economic growth that Catalonia industrialised. One question that arises, then, is whether the Inquisition affected attitudes or cultural elements that led to the Industrial Revolution. The evidence suggests that negative attitudes towards new technologies and culture arose where inquisitorial activity was more severe.

2 Spanish Inquisition: Historical Background

Pope Sixtus IV created the Spanish Inquisition and ceded its control to the Spanish Crown by issuing the papal bull *Exigit sinceræ devotionis* in 1478. The first institution that had uniform *de facto* power over all of the Spanish territory was just created. From then until its

⁶In fact, regions that were more affected by such repression seem to have adopted new technology later during the Industrial Revolution than those regions that were less affected by it (Carla Rahn Phillips, 1997).

definitive abolition in 1834, the Spanish Inquisition conducted more than 100,000 trials that featured crypto-jews, crypto-muslims, crypto-lutherans and other assorted “heretics”.

Although originally the Inquisition was created to only persecute crypto-morality, it soon became an ideological and political control instrument of the monarchs, Contreras (1987), Bennassar (1987), Vidal-Robert (2013). The Inquisition was a centralised institution very well connected to the Spanish political apparatus. In fact, the general inquisitor was an important member of one of the most relevant political councils through which the Spanish King governed his kingdom, the General Council of Castile, Escudero (1987). As a matter of fact, several presidents of the Council of Castile were also general Inquisitors, either contemporaneously or at a different time in their lives.⁷ Moreover, the General Council of the Inquisition became the second most important political council of the kingdom. This Council ruled the Inquisition and controlled its activities and finances in all regions of Spain. The Inquisition created territorial units to better control and neutralize “the confused and variegated spatial and administrative division that the state could not prevent”, Contreras (1987). The General Council of the Inquisition supervised the activities of these territorial units and controlled their finances.

The Spanish monarchs used Catholicism, the Church of the state, as an excuse and the Inquisition as an instrument to apply and enforce their unique criteria to all social, political and ideological diversity of the Iberian peninsula. Anecdotal evidence shows how the Inquisition would intervene in the case that people’s actions or behaviours interfered with the monarch’s criteria. For instance, Haliczzer (1990) describes how the King used the Inquisition to prohibit the public exhibition of portraits of Padre Francisco Simon, a Valencian hero, or procession or demonstration in favor of his beatification. Movements involving large numbers of people created alarm within the monarchs because they could endanger royal authority. In a different way, Millán (1984) describes how the King told the Inquisition not to persecute Dutch vessels in their visit to Spain in 1650’s in order to improve commercial transactions in the peninsula.

⁷Here is the list of general inquisitors who contemporaneously were president of the Council of Castile: Diego de Espinosa (1566), Juan Bautista de Acevedo (1608), Diego de Arce y Reinoso (1643) and Orbe y Larreátegui (1727). Others occupied the presidency of the Council of Castile and the General Inquisitor position at different points in time. Those are: Alonso Suárez de Valtodano (1506-7, 1494-1506 respectively), Juan Pardo y Tavera (1524-39 and 1539-46 respectively), Fernando de ValdÁ©s y Salas (1539-47 and 1547-66 resp.), Diego Sarmiento de Valladares (1668-69 and 1669-95 resp.) and Antonio IbÁ©ñez de la Riva Herrera (1690-2 and 1709 resp.). These details are taken from Granda (2011). These cases represent between 20-25 % of the approximately forty General Inquisitors.

In fact, the trials against crypto-Islam, crypto-Judaism and crypto-Lutheranism together represent less than 50% of the total activity of the Inquisition. Table 2 shows that the proportion of crypto-moral trials⁸ was lower than the proportion of repression trials. This was the case both at the national level and for all districts with the exception of Valencia, which exhibited the highest concentration of *moriscos* in Spain.⁹ Thus, the data suggests that inquisitorial activity cannot be explained by purely religious motives. In Vidal-Robert (2013) I show that inquisitorial activity had two main purposes: prevent revolts against the Spanish Crown and to persecute ideas that differed from the ideas of the Crown. If persecution of ideas, and not expropriation, were one of the main purposes of inquisitorial activity, we may think that a lack of secure property rights will not be necessarily one channel through which the Inquisition hindered Spanish economic development. However, the flow and adoption of new ideas in the 19th century, for example, could have been affected by a previous repressive activity. This lack of innovation could have harmed economic development.

Common knowledge on the Spanish Inquisition states that executions were the most frequent sentence of an inquisitorial trial. As a consequence the Spanish institution it is seen as one of the bloodiest European institutions of its time. However, the data shows that the Spanish Inquisition was not different, in terms of the rate of executions, from other European tribunals. Table 1 shows that the relative number of executions due to the Spanish Inquisition did not differ from other European countries. The main difference comes from the absolute number of trials and the persistence of its activity, which was much higher and lasted for a considerably longer period in the Spanish case.

To observe the magnitude of the activity of the Spanish Inquisition and compare it with other European institutions or persecution episodes, Figures 1 through 4 provide the number of trials and the intensity (trials per thousands of people) of witchcraft trials and Inquisition trials among European territories and Spanish inquisitorial districts. We observe that not only was the total number of trials higher in the Spanish inquisitorial districts, but the intensity and persistence of the Spanish Inquisition were greater compared to the European witchcrafts trials. This suggests that the Inquisition was more active and more persistent over time than

⁸I label crypto-moral trials as those carried out against Islam, Lutheranism and Judaism.

⁹*Moriscos* were Muslims that converted to Catholicism.

European witchcraft trials; thus, it is more likely that it caused a deeper and longer impact on the society. The only comparable activity in terms of intensity and activity, is the Inquisition of Venice and Geneva. Although this latter Inquisition surpassed the activity and intensity of the Spanish Inquisition in particular years, the Spanish Inquisition lasted longer and was more persistent than the Inquisition observed in these Italian regions. Given the absolute and relative (with respect to other European institutions) magnitude of the activity of the Spanish Inquisition and its persistence over time, it seems reasonable to think that this repressive institution could have long-run effects on economic development.

3 Data

3.1 Inquisition Data

I collected data on trials of the Spanish Inquisition from several published books, articles and catalogues written by historians who directly extracted their information from the National Archives in Madrid (section Inquisition). In particular I use Vignau (1903) for the district of Toledo, Pérez-Ramírez (1982) for Cuenca, Miguel (1987) and Miguel (1990) for Murcia and Barcelona, respectively. Contreras (1982) and Cárcel (1980) and Cárcel (1976) contain the lists of trials in Galicia and Valencia respectively. Ivars (1982) provides the list for trials in the district of Granada. I use these published trial records to first assemble time series data including the number of trials per year for five Spanish regions (Catalunya, Valencia, Murcia, Castilla-la-Mancha and Madrid) and fourteen provinces (Girona, Barcelona, Lleida, Tarragona, Castellón, Valencia, Alicante, Murcia, Guadalajara, Cuenca, Albacete, Ciudad Real, Toledo and Madrid).

I also built a dataset containing the individual data of 35,000 trials from the following five districts: Barcelona, Valencia, Murcia, Cuenca and Toledo. These published trial records contain information on the names of the accused, the location where they lived, the year of their trials, the charges against them and their final sentence. Location information allows me to construct municipal level data of the activity of the Inquisition. This paper focuses on the activity in Catalonia (trials from Barcelona district and some trials from Valencia district). Appendix B, Appendix C and Appendix D show the evolution of the activity of the Inquisition

in the 947 Catalan municipalities.

3.2 Population and Urbanization Data

3.2.1 Regions and Provinces

Spanish population data are obtained from several sources: the Census of 1591 (contained in de Retana (1990)), Nadal (1984), and Cerrillo-Cruz (2000), Cárcel (1976), Salomon (1964). Spanish urbanization¹⁰ data are obtained from Pérez (1995), Iglésies (1957), Vilar (1970), Albert Carreras (2005), Cárcel (1976), Álvarez Nogal and de-la Escosura (2007), Pérez-Puchal (1972), González (1829).

3.2.2 Municipalities

I use population data collected by *Centre d'Estudis Demogràfics* at Universitat Autònoma de Barcelona for all Catalan municipalities (947) from 1497 to 1991 and Redondo Garcia (2002) for 1378. Data is available for years 1378, 1497, 1515, 1553, 1717, 1787, 1857, 1860, 1877, 1887, 1897, 1900, 1910, 1920, 1930, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1981, 1986, 1991. Appendix D shows the evolution of population density in Catalonia.

To classify villages where trials took place, I use Bautista-Golobardas (1831) and Frigola (1824). Villages could be classified as *Realengas* if they were under the jurisdiction of the King (hereafter denominated King); Lord if they were under the jurisdiction of a Noble; or *Eclesiàsticas* or *Abadengas* if they belonged to the Church (hereafter Church). If villages could not be classified with the above mentioned sources, I went through the city hall's websites and the *Enciclopèdia Catalana*.

3.3 Additional Data

I use alternative data to control for stories that potentially could explain both inquisitorial activity and population growth. Appendix F shows the maps for Roman roads, accessibility in Roman times, altitude and ruggedness.

¹⁰I define urbanization as the percentage of people, who live in villages with more than 5,000 inhabitants

3.3.1 Historical access to commercial routes

De Soto (2010) provides GIS maps on Roman roads, maritime routes, and an index of village accessibility in Roman times. I use the distance of each village to those routes as well as to their intersections and Roman ports. Also, I use his index of accessibility.

3.3.2 Channels of persistence

I use questions on trust and technology advances provided in WVS and CIS surveys. WVS data include information on the region where the respondent lives at the time of the survey, while CIS surveys include information on the province of the respondent. I also use information on economic and educational status as well as age from these surveys.¹¹ I also use the number of patents produced per region from 1850 until nowadays provided by Albert Carreras (2005). To test the social polarization hypothesis, I use outcomes of elections in Spain during the 19th century from Lozano (2010). In particular there is available data on the number of seats that each party obtained in the Parliament. From this information I calculate polarization and fractionalization indexes, as proposed by Montalvo and Reynal-Querol (2005). Finally, I am able to use information on the existence of cultural centres in the province of Barcelona in late 19th century and beginning of the 20th century, Using a dataset on seven regions, fourteen provinces and 947 municipalities on inquisitorial activity, population and economic outcomes, I show that regions that were more affected by the Inquisition are associated with a lower economic development than regions less affected by it. This association is more significant in the beginning of the 19th century and in the beginning of the 20th century, Bosch-Datzira (1991) . I test if the likelihood of having a cultural center is lower for a village that experienced at least one trial of the Inquisition to observe if there is any correlation between Inquisition and culture.

¹¹The waves of the WVS are taken in 1981, 1990, 1995/1998, 1999/2000, 2005/2008. CIS surveys considered are 2398, 2412, 2440, 2442, 2443, 2588, 2632, 2736 and 2752. The first one was taken in year 2000 and the last one in year 2008.

4 Effects of the Spanish Inquisition

4.1 Urbanization - Regional Level

I assemble time series data for seven regions (CCAA) of Spain regarding activities of the Inquisition, population and urbanization outcomes.¹² Figure 5 shows the level of inquisitorial activity (absolute number of trials) at a regional level. The goal is to associate these different inquisitorial activity levels with different economic patterns of development.¹³ Figure 6 shows the urbanization path between 1530 and 2001 for 6 regions. I put together regions with a urbanization rate greater than 20% in 1530 together (Murcia, Madrid, Comunidad Valenciana and Andalucia) and regions with a urbanization rate smaller than 20% in 1530 (Catalunya and Castilla la Mancha). Figure 6 shows the average urbanization rate for both groups between 1530 and 2001. We observe that there is a gap between these two groups that remains constant until 1787 approximately. It is during the 19th century and early 20th century when we observe that this gap closes almost completely. During the rest of the 20th century the gap remains constant again. The urbanization gap closes precisely during the introduction of the Industrial Revolution in Spain and one may wonder the reason why this happened and if it has some relation with the Inquisition. The Spanish Inquisition persecuted ideas that differed from the already accepted ideas and ideologies of the Kings. If new and original ideas were more persecuted in specific regions, maybe those regions are less likely to accept and adopt new ideas afterwards.¹⁴ Both groups (high and low urbanization) also differ in the absolute number of inquisitorial trials per square kilometer. While the high urbanized group averages .33 trials per square kilometer, the low urbanized group averages .17 trials per square kilometer. In this section I focus on the association between trials of the Inquisition and urbanization growth.

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¹²Spain is organized in 17 regions or *Comunidades Autonomas* (CCAA) and 50 provinces. Each province is then subdivided in smaller units called *comarca*, similar to US county.

¹³With only 5 regions or *CCAA* this association has to be taken carefully.

¹⁴Phillips and Phillips (1997) describe that regions in the south of Spain adopted the industrial revolution technology later than Catalunya, for example. It is the case that this coincides with different degrees of inquisitorial activity. The South experienced higher volume of inquisitorial activity. However, is it enough to explain different patterns of development? The Inquisition may explain part of this divergence, but obviously it will not be the only explanation. For example, Drelichman (2005) suggests that American silver inflow and an increasing rent seeking society also affected long run development.

¹⁵Next section focuses on possible channels of this association.

Table 3 shows summary statistics of the CCAA (regions) under analysis as well as information on geographical characteristics and the number of trials of the Inquisition. From the first columns and the activity of the Inquisition, it seems reasonable to think that regions initially more urbanized seem to experience a higher volume of inquisitorial activity as well as lower urbanization growth. Therefore, I will control for initial urbanization and population levels in my econometric approach.

The objective is to study if there is any association between inquisitorial activity and urbanization growth. The basic econometric specification proceeds as follows:

$$urb_{i,t} = \beta_0 + \beta_1 inquisition_{i,t} + \beta_2 urb_{i,0} + \beta_3 geography_i + f(time) \quad (1)$$

where $urb_{i,t}$ indicates urbanization growth in region i between year t and $t - 1$; $inquisition_i$ represents the accumulated number of trials of the inquisition in region i at time t ; $geography_i$ includes geographic variables of region i such as latitude, longitude, area and altitude; $f(time)$ includes a linear time trend. I also control for initial urbanization rate and initial population, defined as the level of urbanization and population for the first year with available data (in this case 1530).¹⁶

β_1 is the coefficient of interest. I would expect that regions that were more affected by the Inquisition would exhibit a lower urbanization rate or lower growth of urbanization.

Table 4 shows the estimates at a regional level. The results show the association of the number of trials on urbanization growth. All regressions include latitude, longitude and square kilometers for each region. The first column uses the whole sample of the regional database. We observe a negative and not significant association between the number of trials and urbanization growth after controlling for initial urbanization level and current population. To be more specific, a region with 1,000 trials more would be associated with 1% lower urbanization growth.¹⁷ Column 2 runs the same regression just taking into account years before the Spanish Civil War (1936-1939); column 3 shows the results for years after the Civil War. I want to observe if the converging path in urbanization levels in the 19th and beginning of

¹⁶I have information on urbanization for all CCAA for the following years: 1530, 1591, 1694, 1787, 1857, 1900, 1930, 1960 and 2001.

¹⁷Again, the relationship is not significant.

the 20th century that we observed in figure 6 is due in part to different levels of inquisitorial activity. In other words, if regions that experienced a more severe activity of the inquisition are related to lower urbanization growth. Columns 2 and 3 show that there is a significant relationship at a 10% level for years before 1936. In particular, a region with 1,000 trials more would be associated with 2% lower urbanization growth. For years after 1936 I do not find any significant correlation. These results suggest that, if any, there is a negative association between inquisitorial activity and urbanization growth before the Spanish Civil War.

The results of Table 4 suggest that inquisitorial activity (number of trials) is associated with lower urbanization growth. However, this association appears to be significant until the 19th century and beginning of the 20th century.

4.2 Urbanization - Province Level

This section shows In this section I show the analysis on provincial data. I assemble time series data for fourteen Spanish provinces on urbanization, inquisitorial activity and population outcomes. Figures 7 and 8 show the severity of the Inquisition in these provinces. They show both the degree of the absolute number of trials and the trials that were not against Judaism, Lutheranism or Islam (I call them Repressive trials) for these fourteen provinces.¹⁸ In the analysis I take into account trials that are against religions other than Catholicism to find if what matter is the persecution of ideas and not just the persecution of “rival” religions.

Table 5 shows summary statistics of the Spanish provinces under analysis as well as information on geographical characteristics and the number of trials of the Inquisition. As with the case of the Spanish regions, it seems that provinces initially more urbanized experience a higher volume of inquisitorial activity as well as lower urbanization growth. Therefore, I will control for initial urbanization and population levels in my econometric approach.

Table 6 shows the estimates at the province level. The first three columns use the whole sample, columns 4 to 6 show the results when I restrict the sample to years after 1808 and the last three columns only include years after 1936. The objective is to identify if there is a specific period for which the activity of the inquisition is more associated with urbanization.¹⁹

¹⁸A darker red means that a region experienced more trials.

¹⁹The choice of these periods is done given the relevance of historical events. In 1808 the Inquisition was abolished after Napoleon conquered Spain. In 1936 the Spanish Civil War started leading to a a more than 30

For each subsample I use three measures of inquisitorial activity: absolute number of trials, crypto-moral trials and repressive trials. For all samples we observe that crypto-moral trials do not appear to have a significant association with urbanization. Moreover, the coefficient changes its sign when we restrict the sample to years after 1936. Although the absolute number of trials is negatively associated with urbanization, it is not significant. Only when I restrict the sample to years after 1936 it is significant at a 10% level. However, if we only take into account repressive trials we observe that they are negative and significantly correlated with urbanization levels when I use the three samples. In particular, 1,000 trials are correlated with 5-7% lower urbanization level. These results suggest that persecution of ideas hindered economic development, but persecution of other religions do not seem to have any relation with urbanization growth in the long-run. These results suggest a negative relation between inquisitorial activity and urbanization. However, they do not provide the channel of causality. Limited data availability prevents this to be explored at the regional or provincial level.

4.3 Population - Municipalities

4.3.1 Differences-in-Differences approach

In this section I compare changes in municipalities population growth before and after the Inquisition tried a person. This approach allows me to eliminate the fixed differences that exist between municipalities exposed to the Inquisition and municipalities that were not directly exposed to it by taking the difference before and after the Inquisition carried out a trial. Moreover, I can eliminate any aggregate shock contemporaneous to the first trial of the Inquisition by taking the difference of the change in population growth between municipalities affected by the Inquisition and municipalities not directly affected by it.

However, municipalities did not suffered the first Inquisition trial at the same time. Therefore, I cannot implement the classic differences-in-differences methodology since there is not a unique year when all municipalities experienced the first trial of the Inquisition. For this reason, I econometrically allow each municipality to have a different year for its first trial.²⁰ In this specification I take as the control group municipalities where inquisition trials never

year dictatorship.

²⁰I follow a similar empirical strategy discussed by Bertrand and Mullainathan (1999).

occurred.

Table 7 presents summary statistics of the variables of interest for treatment and control groups, excluding Barcelona. Treatment villages represent 48% of all municipalities. We can observe that there are significant differences between treatment and control groups in initial population and area of municipalities. When I include Barcelona in the sample, the magnitude of the difference remains similar. The difference in area and initial population (i.e. population in 1378) is both significant and large. This could create a certain long-run path dependence for my results on population growth. I will use the vector of covariates that I described before to avoid a bias in my results due to the influence of time-invariant characteristics across time. That is, I control for initial population and its interaction with year dummies.

For municipalities where the Inquisition carried out at least one trial, I identify the period after the Inquisition as the period after the occurrence of the first trial. For the control group, I define *after* as the period after the first trial occurred in a neighbour village. I am able to include year dummies in the specification to control for possible common aggregate shocks, as well as county fixed effects. The basic specification, therefore, proceeds as follows:

$$populationgrowth_{i,t} = \alpha_t + \beta_c + inquisition_i + after_{c,t} + \gamma_{i,t} X_{i,t} + \delta inquisition_i * after_{c,t} + \epsilon_{i,t} \quad (2)$$

where $populationgrowth_{i,t}$ is the average annual population growth at municipality i between t and $t-1$. $inquisition_i$ is the treatment variable (it takes the value of 1 if a municipality experienced at least an inquisitorial trial); and $X_{i,t}$ is a vector of time-invariant variables of each municipality interacted with the set of year fixed effects. Adding the vector $X_{i,t}$ to my analysis will allow me to control for possible initial differences between municipalities that may had an influence not only on inquisitorial trials, but also on population growth. Variable $after_{i,t}$ is a dummy variable for the period after the first trial of the Inquisition takes place in village i or in a neighbour village (for the control group). I also control for year and county fixed effects.

Table 8 shows the results of the analysis considering the whole sample (i.e. all years) in

the first two columns and a restricted sample for the rest of the table. Odd columns show the results for the whole sample while even columns show the results when Barcelona is not in the sample. We observe a negative association of the Inquisition on population growth after a municipality has experienced an inquisitorial trial. However, this effect is significant until the first half of the 19th century. In particular, I find that the Inquisition lead to a 0.11% lower annual population growth. However, as we observe this effect is not significant when I use all years available from 1378 to 2001 or when I restrict the sample to years up to 1930. These results do not change when Barcelona is excluded from the sample. For this reason all the remaining tables include Barcelona in their sample, unless it is explicitly said otherwise.

There are alternative stories that could explain both the presence of the Inquisition in a village and its growth. For instance, it could be argued that historical access to commercial routes could have affected both. On the one hand, being close to a historical route could imply an easy access for the Inquisition, or that the Inquisition could have more interest in being present. On the other hand, being close to a commercial route could have implications for growth. Table 9 controls for historical access to commercial routes. In the first two columns I control for distances to Roman roads, Roman maritime routes and navigable rivers in Roman times. However, one could argue that what is more important is not the distance to commercial routes, but the distance to commercial centres. For this reason, in columns three and four I control for distances to Roman roads intersections and ports. Finally, in the last two columns, I control for an index of accessibility, which takes into account access to these routes and ports. The results show the same pattern as in Table 8. That is, the Inquisition lead to a 0.12% lower annual population growth, but the effect vanishes after the first half of the 19th century.

Another concern that may arise is that I am capturing a “migration” effect rather than an effect of the Inquisition on economic growth. In Table 10 I include the number of trials that occurred in the neighbor villages of the municipality under analysis. Results show a positive impact of the trials occurred in other villages when I include the whole sample. This result suggests that there existed a “migration” effect. However, the results of our coefficient of interest do not change. Therefore, it is not the case that the Inquisition just affected population growth through a migration effect.

Also, it could be argued that the Inquisition would like to control those areas that are close to France, because of the influence of lutheranism and this could have an impact on the results. In a different way, distance to rivers that were used as localization for electric and textile industries in the 19th century, could have an impact on population growth that would not be due to the Inquisition. Table 10 controls for both explanations distance to France (columns 3 and 4) and distance to rivers (columns 5 and 6). Results show the same pattern as before and they appear to be more significant.

As stated in the introduction, the Spanish Inquisition was created to persecute cryptomorality, cryptojudaism and cryptoislamism. However, from the mid 16th century it was used to persecute political ideologies as well. For this reason, I want to disentangle if the effect found in the previous tables is due to trials against other religions (or cryptomorality trials) or to trials against Catholic people. Table 11 show the same specification as in Table 10 using all trials (columns 1 and 2), trials against catholics (columns 3 and 4) and trials against other religions (last two columns). The results show that the effect of the Inquisition is driven by trials against Catholics. Trials against other religions do not seem to matter.

Given the religious origin of the institution, it could be argued that preexistent religiosity of a village could be related to the presence of the Inquisition and could have affected population growth. One possible way to test this alternative story is to control for the ecclesiastical jurisdiction of a village. In Spain, villages could be under the jurisdiction of the King, under the jurisdiction of the Church, under the jurisdiction of a noble or under the jurisdiction of a military order. If the alternative story is right, the effect found of inquisitorial activity on growth would be caused by the presence of the Church. Therefore, we should not observe any significant effect of the inquisition when I control for ecclesiastical jurisdiction. Table 13 shows the results when I include a Church variable interacted with year dummies. The results are robust, the Inquisition decreased annual population growth by 0.13%.

Another concern that may arise is that I have treated the first trial of the Inquisition as an exogenous episode. In other words, the first trial of the Inquisition can be the result of economic conditions that can be correlated with population growth and, therefore, can bias my previous results. In particular, I am concerned that the first trial of the Inquisition is

the result of previous conditions in the municipality under analysis. Following Bertrand and Mullainathan (1999) I address this concern by using municipality leads to see if the effects of the Inquisition were already happening before the trials of the Inquisition took place.

Table 14 shows the results for this analysis. Columns 1 and 2 show the results when I include leads to the analysis with the whole sample. Columns 3 and 4 show the results for trial against Catholics and the last two columns show the results for trials against other religions or cryptomorality trials. In the three cases, there is no evidence that supports the existence of a previous trend that lead to the first trial of the Inquisition. In other words, treatment and control municipalities did not differ significantly in the trend previous to the presence of the Inquisition.

It is also interesting to observe the timing of the effect of the Inquisition. In particular I define variables that correspond to the period after the first trial of the Inquisition took place, to two periods after the first trial occurred and to three or more periods afterwards. Table 15 shows the results of the dynamics of the effect of the Spanish Inquisition. The results show that the period after the first trial occurs is the most relevant. However, if I restrict the sample to the years before 1860, all periods are relevant and their magnitude is increasing over time. That would show the most significant impact of the Inquisition occurred in the first half of the 19th century.

5 Channels of Persistence: Trust, Social Polarization and Adoption of New Technologies

5.1 Trust

Trials of the Spanish Inquisition started after an anonymous accusation, whose author was never made public. Although, the Inquisition persecuted false witnesses as well, anonymous accusations could have harmed trust levels. On the one hand, it could have created an insecurity level making people from the same village less cooperative. On the other hand, future institutions would be weaker and therefore less trustworthy.

To test if a decrease on trust levels persisted over time, I obtained answers from the World

Values Survey questions addressing trust on institutions and trust on people.²¹ Table 18 shows the results of regressing the answers to these questions on the inquisitorial level of the region of the respondent. I control for the education and the economic levels of the respondent. The first two rows show that respondents, who live in a region that was more affected by the Inquisition are associated with higher levels of trust on the government and the parliament. However, no significant correlations were found regarding levels on trust between people.

Table 19 shows the results of the same questions using CIS surveys. In this case, the surveys provide information on the province of the respondent not just the region. The results on trust on institutions are not robust. Trust between friends or on people you first meet does not seem related to the trials of the province of the respondent. Column x shows the results on the level of mistrust on the Church. There is no evidence suggesting that trust on the Church is related to the severity of the Inquisition.

5.2 Social Polarization

Historians have often defined the persistence of the inquisitorial mind as the influence of inquisitorial ideas and mentality to current society's behavior, Ángel Alcalá (1984). In particular, they have argued that persecution of ideas that did not correspond to the *status quo* could have some effects on the levels of polarization in society. They define social polarization as the existence of two main groups who would have opposite behaviors and that they would never reach an agreement.

To show if the Inquisition had any relation with a possible social polarization as it is argued by historians, I calculate polarization measures obtained from electoral outcomes in the 19th century. Table 20 shows the correlation between polarization and inquisitorial trials at the province level. We can see that there is no significant correlation between any type of trials and the level of polarization. Therefore, there is no evidence suggesting that the Inquisition is correlated with social polarization.

²¹Mistrust levels go from 1 to 5, where 5 indicates the highest level of mistrust.

5.3 Culture and adoption of new technology

As shown in Table 2, more than half of the trials of the Spanish Inquisition were not carried out against other religions. This suggests that the objective of the Inquisition was also to persecute ideas or political ideologies that could jeopardize the structures of the kingdom as shown by Haliczzer (1990) and Vidal-Robert (2013). This repressive behavior could have negatively affected the willingness to innovate or to invest in new technology and culture. The fear of being punished by the Inquisition would decrease innovation and culture.

I test this hypothesis by using WVS and CIS Surveys on attitudes towards new technology. The last two rows of Table 18 show that respondents, who live in regions more affected by the Inquisition, are more reluctant to adopt or to have a positive attitude towards new scientific advances. Similarly, first column in Table 19 show that respondents, who live in provinces where the inquisition was more severe, answer that new technologies would harm development in some degree. In particular, a person who lives in a region or province with 1,000 trials is 1.5% less likely to think that scientific advances are positive for progress.

I also regress a similar specification as equation 3, which includes the number of patents in each region in a given year as the dependent variable. We observe a negative and significant association between inquisitorial activity and the number of patents produced by a region. One more inquisitorial trial per year is associated with six patents less produced in a region.

Finally, I also test if the Inquisition could be related to the spread of culture. For this purpose, I collected data on cultural centres that existed in municipalities in the province of Barcelona in the second half of the 19th century and beginning of the 20th century. Table 21 shows correlations between the number of trials of the Inquisition and the likelihood that exists a cultural center in a municipality of the province of Barcelona. One more trial of the Inquisition is associated with a 1.7% lower likelihood of the existence of a cultural centre. If we focus on crypto-moral trials, I show that one trial is associated with a 3.7% lower likelihood of the existence of a cultural centre. This association is not significant, but still negative, for repressive trials.

These results suggest that the Spanish Inquisition is associated with a long and negative influence on innovation and culture.

6 Conclusions

This paper relates to the literature on the long-run impact of historical institutions on economic outcomes. In particular, I explore the role of the Spanish Inquisition on Spanish economic development. Given data availability, I can provide results not only of the impact of the Inquisition on current outcomes but also on economic trajectories since its disappearance. This is a relevant issue to understand the persistence of the effect of historical institutions as well as the mechanisms through which these institutions may have interacted with cultural factors and hindered economic development paths. For instance, Frankema and van Waijenburg (2012) use pre-1950 data on urban unskilled real wages in nine British African colonies to show that they were well above subsistence level, disregarding then theories that stress persistent African structural growth impediments, such as extractive colonial institutions or slave exports.²² Therefore we should look deeper to understand either other factors that contributed to African backwardness or why those institutions have an impact on current outcomes and not during all development paths.

This paper shows that the Inquisition had an impact on population growth, as a proxy for economic development, until the first half of the 19th century. In particular, I show that villages that suffered at least one trial of the Inquisition grew at 0.11% lower rate than those that did not suffered any trial. The significance of this effect smoothly vanishes after 1860.

I also explore three possible channels or mechanisms through which the Inquisition may have had an impact either on economic outcomes or on the society's behavior. The results do not show significant associations between inquisitorial activity and trust levels or social polarization. On the contrary, it shows significant negative associations between trials of the Inquisition and attitudes towards new technologies or the spread of culture. In particular, I show that people that live in areas in which the activity of the Inquisition was more severe are more likely to think that new technologies will harm them (4% more likely with a difference of 1,000 trials). I also show that municipalities that experienced trials of the Inquisition were less likely to have a cultural center between 1860 and 1930. These results suggest that the effect of the Inquisition on economic performance would have been through entrepreneurship

²²See Acemoglu et al. (2001) or Nunn (2008).

incentives and lack of new technology adoption given the motivations of its activity.

References

- Abellán, J. L. (1987). The persistence of the inquisitorial mind in contemporary spanish life and culture and the theory of the two spains. In Ángel Alcalá, editor, *The Spanish Inquisition and the inquisitorial mind*.
- Acemoglu, D., Cantoni, D., Johnson, S., and Robinson, J. A. (2011). The consequences of radical reform: The french revolution. *American Economic Review*, 101(7):3286–3307.
- Acemoglu, D., Johnson, S., and Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *The American Economic Review*, 91:1369–1401.
- Acemoglu, D., Johnson, S., and Robinson, J. A. (2002). Reversal of fortune: Geography and institutions in the making of the modern world income distribution. *Quarterly journal of Economics*, 117:1231–1294.
- Albert Carreras, X. T. (2005). *Estadísticas Históricas de España, siglos XIX-XX*. Fundacion BBVA.
- Alesina, A. and Giuliano, P. (2013). Culture and institutions. *NBER Working Paper Series*, December(19750).
- Álvarez Nogal, C. and de-la Escosura, L. P. (2007). Searching for the roots of retardation: Spain in european perspective, 1500-1850. *Working Papers in Economic History (Universidad Carlos III)*.
- Ángel Alcalá (1984). *Inquisición Española y Mentalidad Inquisitorial*. Ariel Universitaria.
- Banerjee, A. and Iyer, L. (2005). History, institutions, and economic performance: The legacy of colonial land tenure systems in india. *American Economic Review*, 95(4):1190–1213.
- Bean, R. (1973). War and birth of the nation state. *The Journal of Economic History*, 33(1):203–221.
- Becker, S. and Woessmann, L. (2009). Was weber wrong? a human capital theory of protestant economic history. *Quarterly Journal of Economics*, 124(2):531–596.

- Bennassar, B. (1987). Patterns of the inquisitorial mind as the basis for a pedagogy of fear. In Ángel Alcalá, editor, *The Spanish Inquisition and the inquisitorial mind*.
- Bertrand, M. and Mullainathan, S. (1999). Is there a discretion in wage setting? a test using takeover legislation. *RAND Journal of Economics*, 30(3):535–554.
- Blaydes, L. and Chaney, E. (2013). The feudal revolution and europe’s rise: Political divergence of the christian west and the muslim world before 1500 ce. *American Political Science Review*, 107(1):16–34.
- Boeglin, M. (1993). Moral y control social: El tribunal de la inquisición de sevilla (1560-1700).
- Bosch-Datzira, A. (1991). *Els ateneus de Catalunya, 1854-1990*. Rubrica Editorial.
- Botticini, M. and Eckstein, Z. (2012). *The Chosen Few: How Education Shaped Jewish History, 70-1492*. Princeton University Press.
- Bouzas, P. and Domelo, X. A. (2000). *Mitos, ritos y leyendas de Galicia*. Martinez Roca.
- Brewer, J. (1990). *The Sinews of Power*. Harvard University Press.
- Cárcel, R. G. (1976). *Orígenes de la Inquisición Española. El Tribunal de Valencia 1478-1530*. Peninsula.
- Cárcel, R. G. (1980). *Herejía y Sociedad en el Siglo XVI: La Inquisición en Valencia, 1530-1609*. Peninsula.
- Carla Rahn Phillips, W. D. P. (1997). *Spain’s golden fleece: wool production and the wool trade from the Middle Ages to the nineteenth century*. Johns Hopkins University.
- Catalana, E. (1998). *www.encyclopedia.cat*. Gran Enciclopèdia Catalana.
- Cerrillo-Cruz, G. (1981). Los familiares de la inquisición, 1478-1700. *Manuscript*.
- Cerrillo-Cruz, G. (2000). *Los familiares de la Inquisición española*. Junta de Castilla y León.
- Contreras, J. (1982). *El Santo Oficio de la Inquisición de Galicia*. Akal Universitaria.

- Contreras, J. (1987). The social infrastructure of the inquisition: familiars and commissioners. In Ángel Alcalá, editor, *The Spanish Inquisition and the inquisitorial mind*.
- de Retana, L. F. (1990). España en tiempo de felipe ii (1556-1598). In Menéndez-Pidal, R., editor, *Historia de España*. Espasa Calpe.
- de Soto, P. (2010). *Anàlisi de la xarxa de comunicacions i del transport a la Catalunya romana: estudis de distribució i mobilitat*. PhD thesis, Universitat Autònoma de Barcelona.
- Dell, M. (2010). The persistent effects of peru’s mining mita. *Econometrica*, 78(6):1863–1903.
- Drelichman, M. (2005). All that glitters: Precious metals, rent seeking and the decline of spain. *European Review of Economic History*, 9(3):313–336.
- Engerman, S. and Sokoloff, K. (1997). Factors endowments, institutions, and differential paths of growth among new world economies. In Haber, S., editor, *How Latin America Fell Behind*, pages 260–304. Stanford University Press.
- Escandell, B. (1987). The persistence of the inquisitorial model of social control. In Ángel Alcalá, editor, *The Spanish Inquisition and the inquisitorial mind*.
- Escudero, J. A. (1987). The origin of the suprema. In Ángel Alcalá, editor, *The Spanish Inquisition and the inquisitorial mind*.
- Frankema, E. and van Waijenburg, M. (2012). Structural impediments to african growth? new evidence from real wages in british africa, 1880-1965. *Journal of Economic History*, 72(4):895–926.
- Galor, O. and Weil, D. N. (2000). Population, technology, and growth: From malthusian stagnation to the demographic transition and beyond. *The American Economic Review*, 90(4):806–828.
- Goerlich-Gisbert, F. J. and Cantarino-Martí, I. (2010). Rugosidad del terreno: una característica del paisaje poco estudiada. *Documentos de Trabajo FBBVA*, October(10).

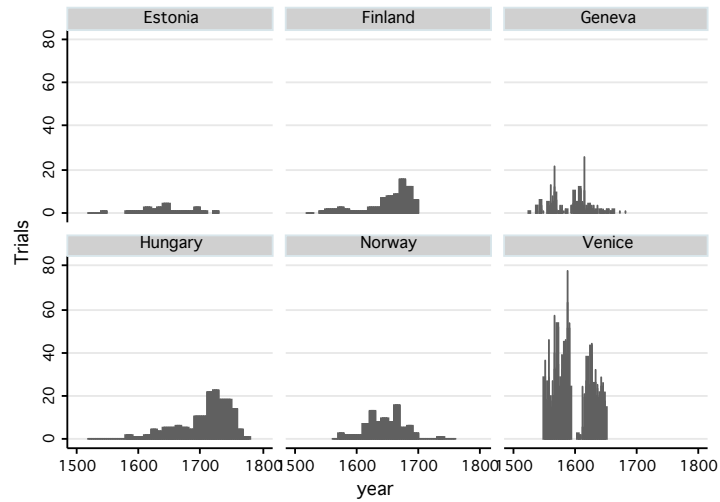
- González, T. (1829). *Censo de Población de las Provincias y Partidos de la Corona de Castilla en el siglo XVI*. Imprenta Real.
- Grafe, R. (2012). *Distant Tyranny: Markets, Power and Backwardness in Spain, 1650-1800*. Princeton University Press.
- Granda, S. (2011). El presidente del consejo de castilla y el generalato de la suprema. *Revista de la Inquisición*, 15(1):27–83.
- Greif, A. and Tadelis, S. (2010). A theory of moral persistence: crypto-morality and political legitimacy. *Journal of Comparative Economics*, 38(3):229–244.
- Haliczer, S. (1990). *Inquisition and Society in the Kingdom of Valencia*. University of California Press.
- Iglésies, J. (1957). Distribució comarcal de la població catalana a la primera meitat del segle xvi. *WP (Institut d'Estudis Catalans)*.
- Ivars, F. G. (1982). *La Represión en el Tribunal Inquisitorial de Granada*. Akal Universitaria.
- Kamen, H. (1965). *The Spanish Inquisition*. Weidenfeld and Nicolson.
- Llorente, J. A. (1822). *Historia Crítica de la Inquisición*. Imprenta del Censor.
- Lozano, C. (2010). *www.historiaelectoral.com*. Carles Lozano.
- Martín, A. M. (2000). *España en Los Siglos XVI, XVII y XVIII: Economía y Sociedad*. Critica.
- Miguel, E. (2005). Poverty and witch killing. *Review of Economic Studies*.
- Miguel, J. B. (1987). *Catálogo de los Procesos Inquisitoriales del Tribunal del Santo Oficio de Murcia*. Academia Alfonso X el Sabio.
- Miguel, J. B. (1990). Catálogo de los procesos inquisitoriales del tribunal del santo oficio de barcelona. *Espacio, Tiempo y Forma, Serie IV, Historia Moderna*, 3.
- Millán, J. M. (1984). *La Hacienda de la Inquisición*. CSIC.

- Montalvo, J. G. and Reynal-Querol, M. (2005). Ethnic polarization, potential conflict, and civil wars. *American Economic Review*, 95(3):796–816.
- Nadal, J. (1984). *La Población Española: siglos XVI a XX*. Ariel.
- Netanyahu, B. (1995). *The Origins of the Inquisition in Fifteenth-Century Spain*. Random House.
- North, D. C. (1991). Institutions. *The Journal of Economic Perspectives*, 5(1):97–112.
- North, D. C. and Thomas, R. P. (1973). *The Rise of the Western World*. Cambridge University Press.
- Nunn, N. (2008). The long-term effects of africa’s slave trades. *Quarterly Journal of Economics*, 123(1):139–176.
- Nunn, N. (2009). The importance of history for economic development. *Annual Review of Economics*, 1(1):65–92.
- Nunn, N. and Wantchekon, L. (2011). The slave trade and the origins of mistrust in africa. *American Economic Review*, 101(7):3221–52.
- Oster, E. (2004). Witchcraft, weather and economic growth in renaissance europe. *Journal of Economic Perspectives*, 18(1):215–228.
- Pérez, J. F. (1995). Las ciudades de la corona de castilla en el antiguo régimen: una revisión historiográfica. *Boletín de la Asociación de Demografía Histórica*.
- Pérez-Puchal, P. (1972). La población del país valenciano hasta la Época estadística. *Manuscript*.
- Pérez-Ramírez, D. (1982). *Catálogo del Archivo de la Inquisición de Cuenca*. Fundación Universitaria Española.
- Salomon, N. (1964). *La campagne de Nouvelle Castile a la fin du XVIIe siecle d’apres les Relaciones Topográficas*. SEVPEN.

- Spolaore, E. and Wacziarg, R. (2013). How deep are the roots of economic development? *Journal of Economic Literature*, 51(2):325–369.
- Tilly, C. (1985). War making and state making as organized crime. In Evans, P., Rueschemeyer, D., and Skocpol, T., editors, *Bringing the State Back In*. Cambridge University Press.
- Vidal-Robert, J. (2013). War and inquisition: Repression in early modern Spain. *CAGE Working Paper Series*, (119).
- Vignau, V. (1903). *Catálogo de causas contra la fe seguidas ante el Tribunal del Santo Oficio de la Inquisición de Toledo y de las informaciones genealógicas de los pretendientes a oficios del mismo, con un apéndice en que se detallan los fondos existentes en este Archivo de los demas Tribunales de España, Italia y América*. Tipografía de la Revista de los Archivos, Bibliotecas y Museos.
- Vilar, P. (1970). Estructures de la societat espanyola cap al 1750. alguns lliçons del cadastre d'ensenada. *Recerques: historia, economia i cultura*, 1:9–32.
- Voigtlaender, N. and Voth, H.-J. (2012). Persecution perpetuated: The medieval origins of anti-semitic violence in Nazi Germany. *Quarterly Journal of Economics*, 127(3):1339–1392.

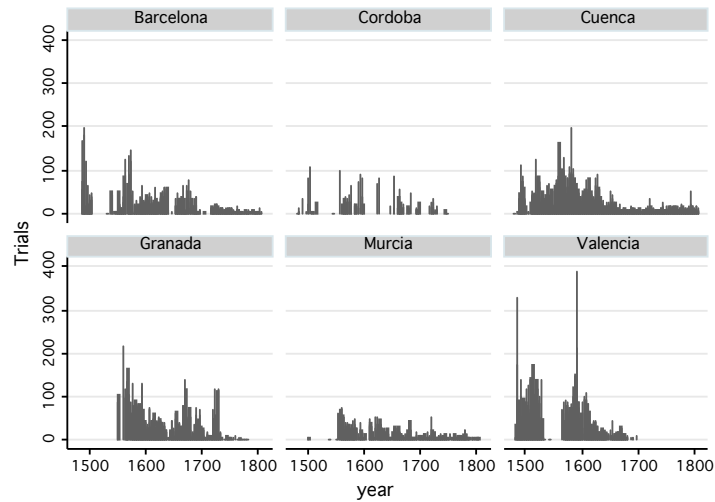
Figures

Figure 1: Witchcraft and Inquisition Trials in Europe



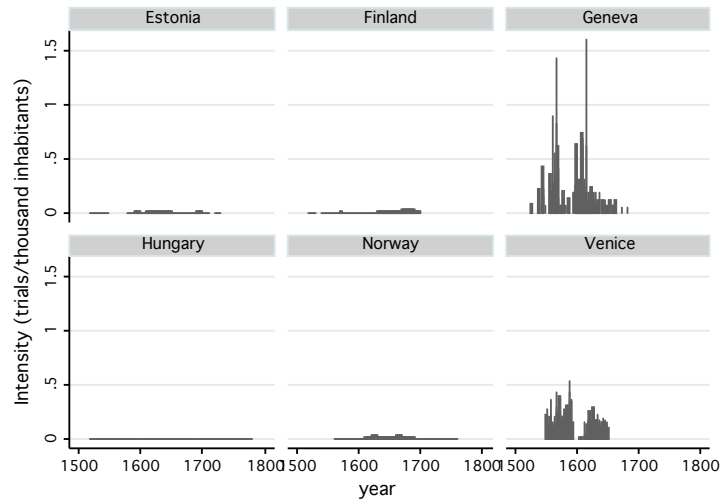
Graphs for Estonia, Finland, Hungary and Norway show the number of witchcraft trials in those countries between 1500 and 1800. Geneva and Venice graphs show inquisitorial trials in those areas between 1500 and 1800.

Figure 2: Inquisition Trials in Spain



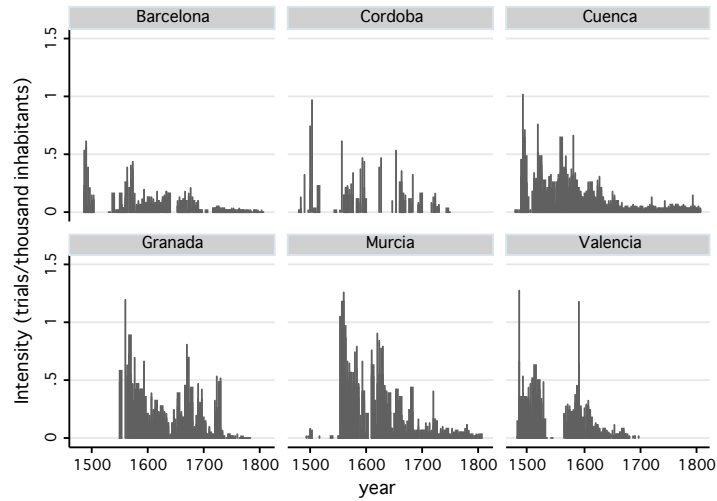
The graphs show the number of trials of the Inquisition in the Spanish districts of Barcelona, Cordoba, Cuenca, Granada, Murcia and Valencia between 1478 and 1808.

Figure 3: Witchcraft and Inquisition Intensity in Europe



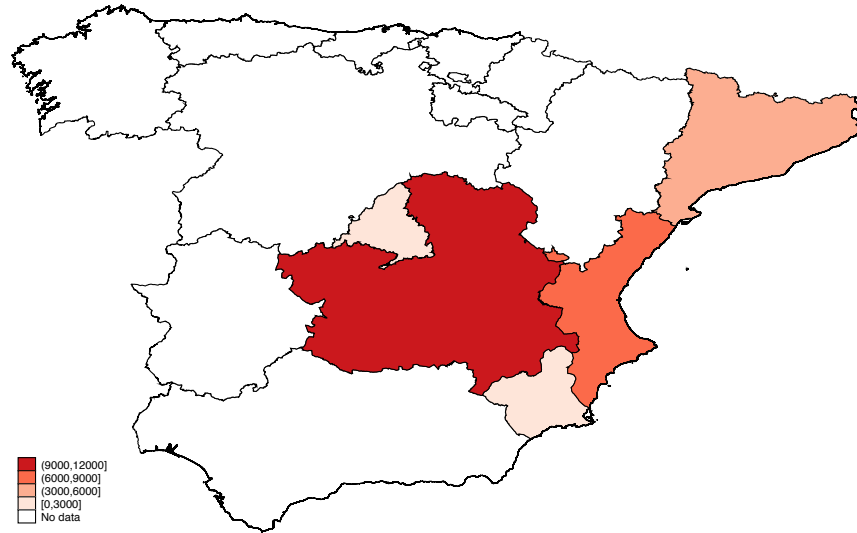
Graphs for Estonia, Finland, Hungary and Norway show the number of witchcraft trials per 1,000 inhabitants in those countries between 1500 and 1800. Geneva and Venice graphs show inquisitorial trials per 1,000 inhabitants in those areas between 1500 and 1800.

Figure 4: Inquisition Intensity in Spain



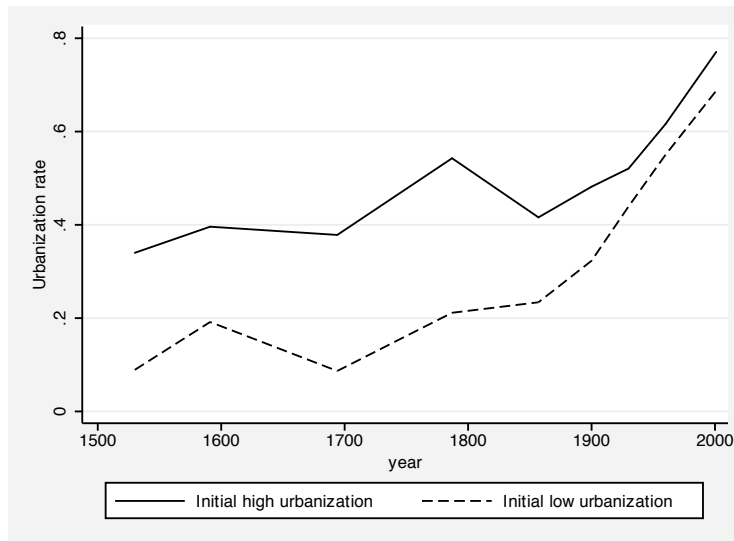
The graphs show the number of trials of the Inquisition per 1,000 inhabitants in the Spanish districts of Barcelona, Cordoba, Cuenca, Granada, Murcia and Valencia between 1478 and 1808.

Figure 5: Regional Inquisitorial Activity



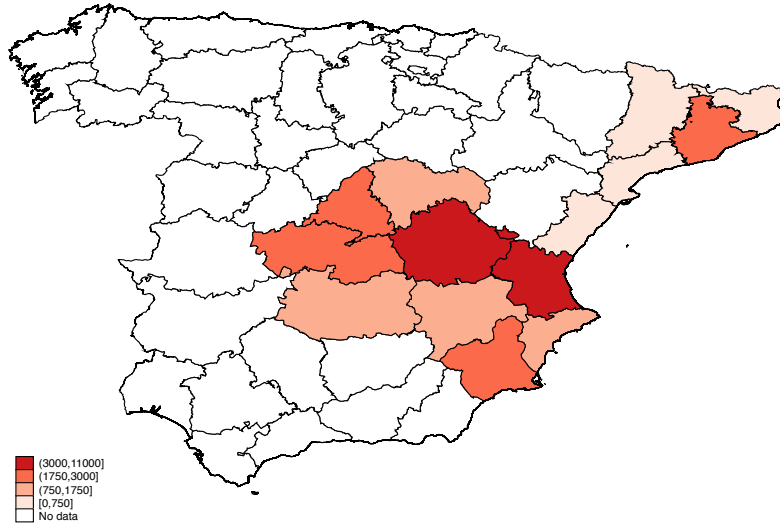
The map shows levels of Inquisition trials in the regions of Catalunya, Madrid, Castilla la Mancha, Murcia and Valencia. Darker red is linked to more trials of the Inquisition. The classification considers Inquisition trials in those regions between 1478 and 1808.

Figure 6: Urbanization



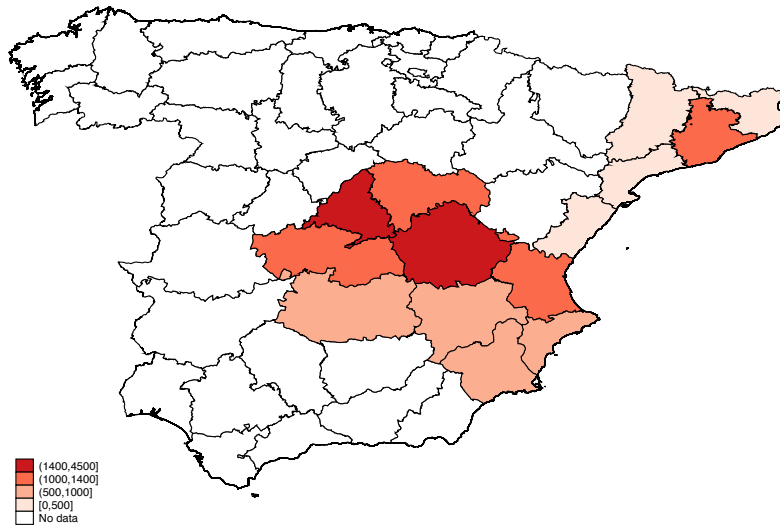
The graph shows the average urbanization rate between 1530 and 2001 of regions with an initial urbanization rate of at least 20% (solid line) and the average urbanization rate of those regions with less than 20% initial urbanization rate (dashed line). Regions with high initial urbanization rate are Murcia, Madrid, Comunidad Valenciana and Andalucia. Regions with low initial urbanization rate are Catalunya and Castilla la Mancha.

Figure 7: Province Inquisitorial Activity



The map depicts the level of Inquisition trials in the provinces with available data for the period 1478-1808. Darker red provinces are associated with more Inquisition trials. All Inquisition trials are considered.

Figure 8: Province Inquisitorial Activity



The map depicts the level of Inquisition trials in the provinces with available data for the period 1478-1808. Darker red provinces are associated with more Inquisition trials. Repressive trials (all trials excluding crypto-moral trials) are considered.

Tables

Table 1: European Tribunals Activity

Tribunal	Period	Trials	Trials/year	Executions
Spanish Monarchy	1540-1700	49,092	305	3%
Venetian Inquisition	1541-1592	1,560	30	1%
Toulouse Parliament	1500-1560	1,074	18	6%
Bordeaux Parliament	1541-1559	477	25	4%
Chambre Ardente (Paris)	1547-1550	557	139	7%
Coimbra Inquisition	1567-1631	3,837	59	7%

Source: Parker (1982).

Table 2: Typology of trials

Heresy / District	Barcelona	Cordoba	Cuenca	Galicia	Granada	Murcia	Valencia	Spain
Crypto-moral Trials	0.390	0.448	0.329	0.339	0.503	0.405	0.699	0.467
Judaism	0.207	0.359	0.260	0.206	0.279	0.201	0.346	0.271
Islam	0.039	0.080	0.059	0.036	0.224	0.204	0.323	0.161
Lutheranism	0.144	0.009	0.010	0.097	0.000	0.000	0.030	0.035
Social control trials	0.610	0.552	0.671	0.661	0.497	0.595	0.301	0.533
Bigamy	0.059		0.022			0.060	0.009	
Blasphemy	0.042		0.096			0.066	0.026	
Superstition	0.096	0.025	0.050	0.063	0.064	0.052	0.043	0.057

The table shows the proportion of different type of trials for the districts with available data between 1478 and 1808. The last column, called Spain, shows the proportion when all the districts with available data are considered. Crypto-moral trials are those trials against Judaism, Lutheranism and Islam. Social control trials are those against “minor heresies” such as bigamy, blasphemy, superstition, fornication, acts against the Inquisition,.. that do not include religions other than Catholicism.

Table 3: Summary statistics: Regions

	Urbanization	Urbanization growth	Population	Trials	Population 1530	Urbanization 1530	Patents	Literacy	Area	Latitude	Longitude
Catalunya	12.934 (5.914)	30.740 (16.872)	348987.4 (200684.2)	6070	237740	.108	467.341 (582.759)	65.8 (26.624)	32113	41	2
Comunidad Val	24.766 (10.886)	15.715 (50.328)	408725 (248063.2)	8842	251000	.219	87.088 (101.225)	50 (28.802)	23255	39	0
Murcia	44.080 (20.170)	15.715 (50.328)	151466 (121599.2)	2729	74000	.26	10.629 (12.953)	42.6 (23.571)	11313	37	1
Castilla la M	12.997 (10.688)	15.715 (50.328)	935296.5 (210768.2)	12035	999848	.07	12.232 (12.936)	49.9 (21.486)	79462	39	-4
Madrid	55.071 (3.423)	15.715 (50.328)	154961 (106760.8)	3069	49152	.531	236.476 (251.901)	79.1 (17.419)	8028	40	-3
Total	25.968 (19.467)	18.720 (39.073)	391403.9 (318359.9)	6469.167 (3296.309)	308246.7 (326651.9)	.216 (.159)			31047.33 (24051.78)	39.5 (1.414)	-333 (2.408)

The table shows summary statistics for 5 Spanish Regions (Catalunya, Comunidad Valenciana, Murcia, Castilla la Mancha and Madrid) for years 1530, 1591, 1698, 1787, 1860 and 1900-2000 in 10 years intervals. Urbanization, urbanization growth and literacy are in %. Area is in squared kilometers. Standard deviations in parentheses.

Table 4: Urbanization Growth and Inquisition: Regional Level

Dependent variable: Urbanization growth (in %)			
	Whole sample	Until 1936	From 1936
Trials	-0.001 (0.001)	-0.002* (0.001)	0.000 (0.001)
Observations	56	42	14
Geography	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Population	Yes	Yes	Yes
Initial Urbanization	Yes	Yes	Yes

The dependent variable is urbanization rate (in %). Trials are the accumulated inquisitorial trials up to the year under analysis. Geography include latitude, longitude and area variables. Initial urbanization is urbanization rate in 1530. Years: 1530, 1591, 1698, 1787, 1860, 1900, 1950, 2000. Standard errors in parentheses.

Table 5: Summary statistics: Provinces

Province	Urbanization	Population	Trials	Repressive trials	Population 1591	Urbanization 1591	Intensity	Area	Coast	Altitude	Latitude
Girona	22.771 (12.480)	337320.9 (111343.4)	531	409	80708	7	6.579	5909	260	514	42.07
Lleida	15.376 (13.011)	293058.8 (73269.23)	442	358	75209	7	5.877	12172	0	934	42.07
Barcelona	64.194 (19.375)	2015870 (1580822)	2307	1227	84060	34	27.445	7728	161	516	41.76
Tarragona	28.047 (11.160)	359931.8 (123946.2)	652	379	60260	7	10.820	6302	278	339	41.05
Castellon	37.018 (16.444)	314219.8 (98521.37)	528	126	66672	8	7.919	6636	139	593	40.25
Valencia	50.182 (15.948)	1128637 (615225.6)	3603	1175	141962	36	25.380	10807	135	491	39.45
Alicante	44.812 (16.390)	636249.1 (371206.5)	1151	504	67325	27	17.096	5817	244	398	38.37
Murcia	43.347 (12.747)	648299.7 (272478.9)	1869	965	142350	21	13.130	11313	274	501	38.07
Cuenca	12.1 (11.596)	260833.8 (45489.05)	4798	3674	306513	6	15.653	17140	0	960	39.95
Toledo	26.818 (9.535)	425437.2 (82830.18)	1874	1392	366318	24	5.116	15369	0	577	39.79
Guadalajara	11.323 (13.843)	187704.7 (22965.76)	1740	1043	196925	10	8.836	12214	0	1069	40.74
Ciudad Real	56.206 (11.628)	387644.6 (144015.7)	1021	718	97075	50	10.518	19813	0	712	38.97
Albacete	32.188 (14.255)	280173.4 (88070.71)	874	613	91125	13	9.591	14926	0	845	38.72
Madrid	71.988 (14.589)	1887104 (1741001)	2990	1452	269726	41	11.085	8027	0	817	40.52
Total	36.883 (22.963)	654463.2 (868053.9)	1741.429 (1260.589)	1002.5 (846.073)	146159.1 (96782.57)	20.786 (14.289)	12.503 (6.592)	11012.36 (4370.489)	106.5 (114.937)	661.857 (219.688)	40.127 (1.280)

Repressive trials are trials not against Judaism, Lutheranism or Islam. Intensity is defined as the total number of trials in one region divided by population in 1591 in that region. Urbanization and urbanization in 1591 are in %. Area is in squared kilometers and coast is in kilometers. Altitude is in meters. Standard deviations in parentheses.

Table 6: Urbanization and Inquisition: Province Level

	Whole Sample			After 1808			After 1936		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Inquisition Trials	-0.001 (0.001)			-0.001 (0.001)			-0.003* (0.002)		
Crypto-moral Trials		0.004 (0.003)			0.003 (0.003)			-0.001 (0.004)	
Repressive Trials			-0.005** (0.002)			-0.005** (0.002)			-0.007*** (0.003)
Observations	112	112	112	84	84	84	42	42	42
R-squared	0.673	0.679	0.690	0.683	0.684	0.701	0.731	0.703	0.757
Geography	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Population	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Urbanization rate (in %) is the dependent variable. Trials are all trials of the Inquisition. Crypto-moral trials are trials against Islam, Judaism or Lutheranism. Repressive trials are those trials that are not against other religions. Geography variables include latitude, longitude, Coast, and Area. Years: 1591, 1787, 1877, 1900, 1930, 1960, 1991, 2001. Standard errors in parentheses.

Table 7: Summary Statistics: Municipal Level (Catalunya)

	No Inquisition	Inquisition	(1)-(2)	t
Trials		4.869 (12.530)		
Annual Growth (1378-1991)	0.276 (0.236)	0.330 (0.255)	-0.055*** (0.004)	-15.149
Area	29.781 (28.988)	38.651 (39.859)	-8.870*** (2.261)	-3.923
Population in 1378	112.957 (127.133)	287.548 (525.759)	-174.591*** (24.517)	-7.121
Density in 1378	5.467 (6.732)	12.438 (49.859)	-6.970** (2.277)	-3.062
Church	0.288 (0.453)	0.257 (0.438)	0.031 (0.029)	1.070
Dist. to main rivers (m)	4926.800 (8493.699)	6101.439 (8711.101)	-1174.639* (561.375)	-2.092
Dist. to rivers (m)	3484.269 (7427.669)	4182.680 (7095.728)	-698.412 (474.651)	-1.471
Dist. to Navigable rivers (m)	19121.890 (21686.742)	18741.753 (21158.270)	380.137 (1399.399)	0.272
Dist. Maritime routes (m)	43541.974 (34275.450)	39791.349 (37306.301)	3750.625 (2334.735)	1.606
Dist. to Ports (m)	38820.772 (33371.297)	35491.493 (35721.643)	3329.279 (2253.603)	1.477
Dist. to Roads (m)	1818.279 (2895.344)	1720.806 (3127.983)	97.473 (196.459)	0.496
Dist. to intersection (m)	9561.370 (7867.942)	8478.700 (7677.390)	1082.670* (507.738)	2.132
Number of intersections	0.043 (0.213)	0.122 (0.467)	-0.079*** (0.023)	-3.378
Dist. to France (m)	78543.620 (52527.781)	71443.283 (45072.459)	7100.338* (3205.070)	2.215
Dist. to Sea (m)	40683.872 (34720.065)	37357.637 (37689.334)	3326.236 (2361.726)	1.408
Dist. to Regions (m)	87709.808 (57774.467)	99903.216 (57216.959)	-12193.408** (3754.456)	-3.248
Accessibility	0.425 (0.128)	0.426 (0.127)	-0.000 (0.008)	-0.042
Latitude	41.718 (0.440)	41.755 (0.401)	-0.037 (0.028)	-1.342
Longitude	1.669 (0.804)	1.844 (0.764)	-0.175*** (0.051)	-3.414
Ruggedness	36.824 (25.147)	35.497 (23.870)	1.327 (1.602)	0.828
Altitude (m)	479.138 (431.709)	433.999 (401.534)	45.139 (27.257)	1.656
Observations	490	451		

The sample does not include Barcelona. To see summary statistics when Barcelona is included see Appendix A. No Inquisition is the sample of municipalities that did not experience a trial of the Inquisition. Inquisition is the sample of municipalities that experienced at least one trial of the Inquisition. Annual growth is annual population growth during the period 1378-1991. Density in 1378 is the population in 1378 divided by area. Church is the proportion of municipalities of each group that were under the jurisdiction of the Church. Distances are in meters. Distance to intersection is the minimum distance of a municipality to the closest intersection of Roman roads. Distance to Regions is the minimum distance between a municipality and the border of Catalunya with Aragon or Valencia. Accessibility is an index of how accessible was a municipality in Roman times. See De Soto (2010).

Table 8: Population and Inquisition: Municipal Level (Catalonia)

Dependent variable: Annual Population Growth (in %)						
	All years		Before 1860		Before 1930	
	Whole sample	Without Barcelona	Whole sample	Without Barcelona	Whole sample	Without Barcelona
Inquisition x After	0.078 (0.086)	0.065 (0.086)	-0.117* (0.064)	-0.112* (0.064)	-0.078 (0.072)	-0.079 (0.072)
Inquisition	0.036 (0.074)	0.034 (0.074)	0.065 (0.059)	0.073 (0.059)	0.073 (0.062)	0.079 (0.062)
After	0.124 (0.089)	0.129 (0.090)	0.032 (0.075)	0.041 (0.075)	0.019 (0.078)	0.027 (0.079)
Observations	22,343	22,318	4,732	4,726	10,238	10,226
R-squared	0.180	0.181	0.129	0.130	0.115	0.115
Capital	Yes	Yes	Yes	Yes	Yes	Yes
Population 1378	Yes	Yes	Yes	Yes	Yes	Yes
Geography	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Dependent variable is annual population growth (in %). Whole sample is considered in the first two columns, a sub-sample for years before 1860 is used for columns 3 and 4 and a sub-sample for years before 1930 is used for the last two columns. Inquisition is a dummy for municipalities that experienced at least one trial of the Inquisition, as defined in Section 4.3. After is a dummy with value 1 after the first trial of the Inquisition occurs in a municipality or a neighbour municipality, as defined in Section 4.3. Standard errors clustered at the town level. Geography variables include Altitude and ruggedness. Population 1378 is a variable that includes population in year 1378. Years: 1497, 1515, 1553, 1717, 1787, 1857, 1860, 1877, 1887, 1900, 1910, 1920, 1930, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1981, 1986, 1991.

Table 9: Historical access to commercial routes: Municipal Level (Catalonia)

Dependent variable: Annual Population Growth (in %)						
	Dist. Routes		Dist eco centers		Accessibility	
	All years	Before 1860	All years	Before 1860	All years	Before 1860
Inquisition x After	0.032 (0.085)	-0.123* (0.064)	0.044 (0.084)	-0.120* (0.064)	0.087 (0.084)	-0.116* (0.064)
Inquisition	0.080 (0.073)	0.068 (0.059)	0.069 (0.072)	0.070 (0.059)	0.027 (0.072)	0.064 (0.059)
After	0.162* (0.088)	0.047 (0.075)	0.134 (0.091)	0.026 (0.077)	0.168* (0.088)	0.038 (0.075)
Observations	22,343	4,732	22,343	4,732	22,343	4,732
R-squared	0.205	0.148	0.200	0.140	0.188	0.131
Capital	Yes	Yes	Yes	Yes	Yes	Yes
Population 1378	Yes	Yes	Yes	Yes	Yes	Yes
Geography	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Dependent variable is annual population growth (in %). Columns with title *All years* include the whole sample. Columns with title *Before 1860* include a sub-sample for years before 1860. Columns under *Dist. to routes* include distance to the closest Roman route to the municipality. Columns under *Dist. eco centers* include distance to the closest intersection of Roman routes to a municipality. Columns under *Accessibility* include the *Accessibility* variable as defined in Section 4.3. *Inquisition* is a dummy for municipalities that experienced at least one trial of the Inquisition, as defined in Section 4.3. *After* is a dummy with value 1 after the first trial of the Inquisition occurs in a municipality or a neighbour municipality, as defined in Section 4.3. Standard errors clustered at the town level. Geography variables include Altitude and ruggedness. Population 1378 is a variable that includes population in year 1378. Years: 1497, 1515, 1553, 1717, 1787, 1857, 1860, 1877, 1887, 1900, 1910, 1920, 1930, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1981, 1986, 1991.

Table 10: Migration, Distance to France and Rivers: Municipal Level (Catalonia)

Dependent variable: Annual Population Growth (in %)						
	Neigh. trials		Dist. borders		Dist. rivers	
	All years	Before 1860	All years	Before 1860	All years	Before 1860
Inquisition x After	0.081 (0.083)	-0.117* (0.064)	0.038 (0.082)	-0.126** (0.063)	0.055 (0.081)	-0.131** (0.063)
Inquisition	0.026 (0.071)	0.064 (0.059)	0.075 (0.070)	0.067 (0.058)	0.058 (0.069)	0.071 (0.058)
After	0.154* (0.090)	0.037 (0.075)	0.043 (0.087)	0.003 (0.075)	0.033 (0.083)	0.011 (0.074)
Trials (neighbours)	0.0005*** (0.000)	0.0000 (0.000)	0.0005*** (0.000)	0.0000 (0.000)	0.0004*** (0.000)	0.0000 (0.000)
Observations	22,343	4,732	22,343	4,732	22,343	4,732
R-squared	0.189	0.131	0.210	0.157	0.218	0.161
Capital	Yes	Yes	Yes	Yes	Yes	Yes
Population 1378	Yes	Yes	Yes	Yes	Yes	Yes
Geography	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Historic access	Yes	Yes	Yes	Yes	Yes	Yes
Border distances			Yes	Yes	Yes	Yes

Dependent variable is annual population growth (in %). Columns with title *All years* include the whole sample. Columns with title *Before 1860* include a sub-sample for years before 1860. Columns under *Dist. to borders* include distance to France, the Mediterranean sea, and regional borders. Columns with title *Dist. to rivers* include distance to main rivers, *Inquisition* is a dummy for municipalities that experienced at least one trial of the Inquisition, as defined in Section 4.3. *After* is a dummy with value 1 after the first trial of the Inquisition occurs in a municipality or a neighbour municipality, as defined in Section 4.3. Standard errors clustered at the town level. Geography variables include Altitude and ruggedness. Population 1378 is a variable that includes population in year 1378. Historic access include the accessibility variable. Border distances include *Dist. to borders*. Trials (neighbours) are the trials in neighbour municipalities. Years: 1497, 1515, 1553, 1717, 1787, 1857, 1860, 1877, 1887, 1900, 1910, 1920, 1930, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1981, 1986, 1991.

Table 11: Type of trials: Municipal Level (Catalonia)

Dependent variable: Annual Population Growth (in %)						
	All trials		Repressive trials		Crypto-moral trials	
	All years	Before 1860	All years	Before 1860	All years	Before 1860
Inquisition x After	0.055 (0.081)	-0.131** (0.063)	0.074 (0.079)	-0.135** (0.061)	0.313*** (0.110)	-0.029 (0.067)
Inquisition	0.058 (0.069)	0.071 (0.058)	0.034 (0.066)	0.068 (0.055)	-0.064 (0.092)	-0.010 (0.059)
After	0.033 (0.083)	0.011 (0.074)	-0.184** (0.077)	-0.131** (0.067)	-0.080 (0.050)	-0.002 (0.036)
Observations	22,343	4,732	22,343	4,732	22,343	4,732
R-squared	0.218	0.161	0.218	0.162	0.218	0.161
Capital	Yes	Yes	Yes	Yes	Yes	Yes
Population 1378	Yes	Yes	Yes	Yes	Yes	Yes
Geography	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Historic access	Yes	Yes	Yes	Yes	Yes	Yes
Border distances	Yes	Yes	Yes	Yes	Yes	Yes
Trials	Yes	Yes	Yes	Yes	Yes	Yes

Dependent variable is annual population growth (in %). Columns with title *All years* include the whole sample. Columns with title *Before 1860* include a sub-sample for years before 1860. First two columns replicate the results of the last two columns of Table 10 when all trials are considered. Columns under *Crypto-moral trials* only include trials against Judaism, Lutheranism or Islam. Columns under *Repressive trials* include all trials excluding crypto-moral trials. *After* is a dummy with value 1 after the first trial of the Inquisition occurs in a municipality or a neighbour municipality, as defined in Section 4.3. Standard errors clustered at the town level. Geography variables include Altitude and ruggedness. Population 1378 is a variable that includes population in year 1378. Historic access include the accessibility variable. Border distances include Dist. to borders. Trials (neighbours) are the trials in neighbour municipalities. Years: 1497, 1515, 1553, 1717, 1787, 1857, 1860, 1877, 1887, 1900, 1910, 1920, 1930, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1981, 1986, 1991.

Table 12: Number of trials: Municipal Level (Catalonia)

Dependent variable: Annual Population Growth (in %)						
	All trials		Repressive trials		Crypto-moral trials	
	All years	Before 1860	All years	Before 1860	All years	Before 1860
Inquisition x After	0.044 (0.082)	-0.126** (0.063)	0.055 (0.081)	-0.130** (0.062)	0.297*** (0.112)	-0.016 (0.068)
Inq x After x Trials	-0.0015 (0.002)	-0.0004 (0.002)	0.0022 (0.004)	-0.0032 (0.003)	-0.0057** (0.002)	0.0002 (0.003)
Inquisition	0.056 (0.069)	0.079 (0.058)	0.033 (0.066)	0.080 (0.055)	-0.078 (0.094)	0.013 (0.059)
After	0.039 (0.084)	0.020 (0.074)	-0.177** (0.077)	-0.127* (0.067)	-0.072 (0.050)	0.001 (0.036)
Observations	22,318	4,726	22,318	4,726	22,318	4,726
R-squared	0.219	0.162	0.219	0.163	0.219	0.161
Capital	Yes	Yes	Yes	Yes	Yes	Yes
Population 1378	Yes	Yes	Yes	Yes	Yes	Yes
Geography	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Historic access	Yes	Yes	Yes	Yes	Yes	Yes
Border distances	Yes	Yes	Yes	Yes	Yes	Yes
Trials	Yes	Yes	Yes	Yes	Yes	Yes

Dependent variable is annual population growth (in %). Columns with title *All years* include the whole sample. Columns with title *Before 1860* include a sub-sample for years before 1860. First two columns replicate the results of the last two columns of Table 10 when all trials are considered. Columns under *Crypto-moral trials* only include trials against Judaism, Lutheranism or Islam. Columns under *Repressive trials* include all trials excluding crypto-moral trials. *After* is a dummy with value 1 after the first trial of the Inquisition occurs in a municipality or a neighbour municipality, as defined in Section 4.3. Standard errors clustered at the town level. Geography variables include Altitude and ruggedness. Population 1378 is a variable that includes population in year 1378. Historic access include the accessibility variable. Border distances include Dist. to borders. Trials (neighbours) are the trials in neighbour municipalities. Years: 1497, 1515, 1553, 1717, 1787, 1857, 1860, 1877, 1887, 1900, 1910, 1920, 1930, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1981, 1986, 1991.

Table 13: Church jurisdiction: Municipal Level (Catalonia)

Dependent variable: Annual Population Growth (in %)						
	All trials		Repressive trials		Crypto-moral trials	
	All years	Before 1860	All years	Before 1860	All years	Before 1860
Inquisition x After	0.055 (0.081)	-0.131** (0.063)	0.075 (0.079)	-0.134** (0.061)	0.316*** (0.111)	-0.028 (0.067)
Inquisition	0.060 (0.069)	0.072 (0.058)	0.037 (0.066)	0.069 (0.055)	-0.071 (0.093)	-0.012 (0.060)
After	0.037 (0.084)	0.012 (0.074)	-0.183** (0.076)	-0.131** (0.066)	-0.087* (0.050)	-0.006 (0.036)
Observations	22,343	4,732	22,343	4,732	22,343	4,732
R-squared	0.219	0.162	0.220	0.163	0.219	0.161
Church	Yes	Yes	Yes	Yes	Yes	Yes
Capital	Yes	Yes	Yes	Yes	Yes	Yes
Population 1378	Yes	Yes	Yes	Yes	Yes	Yes
Geography	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Historic access	Yes	Yes	Yes	Yes	Yes	Yes
Border distances	Yes	Yes	Yes	Yes	Yes	Yes
Trials	Yes	Yes	Yes	Yes	Yes	Yes

Dependent variable is annual population growth (in %). Columns with title *All years* include the whole sample. Columns with title *Before 1860* include a sub-sample for years before 1860. First two columns include all types of trials. Columns under *Crypto-moral trials* only include trials against Judaism, Lutheranism or Islam. Columns under *Repressive trials* include all trials excluding crypto-moral trials. *After* is a dummy with value 1 after the first trial of the Inquisition occurs in a municipality or a neighbour municipality, as defined in Section 4.3. Standard errors clustered at the town level. Church is a dummy variable that identifies those municipalities under Church jurisdiction. Geography variables include Altitude and ruggedness. Population 1378 is a variable that includes population in year 1378. Historic access include the accessibility variable. Border distances include Dist. to borders. Trials (neighbours) are the trials in neighbour municipalities. Years: 1497, 1515, 1553, 1717, 1787, 1857, 1860, 1877, 1887, 1900, 1910, 1920, 1930, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1981, 1986, 1991.

Table 14: Previous trends: Municipal Level (Catalonia)

Dependent variable: Annual Population Growth (in %)						
	All trials		Repressive trials		Crypto-moral trials	
	All years	Before 1860	All years	Before 1860	All years	Before 1860
Inquisition x After	0.046 (0.105)	-0.153* (0.090)	0.050 (0.104)	-0.171* (0.090)	0.299** (0.129)	0.299** (0.129)
Inquisition x Before	-0.046 (0.119)	-0.065 (0.117)	-0.112 (0.122)	-0.114 (0.120)	-0.026 (0.157)	-0.026 (0.157)
Inquisition	0.075 (0.094)	0.094 (0.086)	0.066 (0.093)	0.106 (0.085)	-0.059 (0.118)	-0.059 (0.118)
After	0.040 (0.082)	0.003 (0.074)	-0.214*** (0.079)	-0.157** (0.064)	-0.057 (0.048)	-0.057 (0.048)
Observations	22,343	4,732	22,343	4,732	22,343	22,343
R-squared	0.217	0.161	0.217	0.162	0.217	0.217
Capital	Yes	Yes	Yes	Yes	Yes	Yes
Population 1378	Yes	Yes	Yes	Yes	Yes	Yes
Geography	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Historic access	Yes	Yes	Yes	Yes	Yes	Yes
Border distances	Yes	Yes	Yes	Yes	Yes	Yes
Trials	Yes	Yes	Yes	Yes	Yes	Yes

Dependent variable is annual population growth (in %). Columns with title *All years* include the whole sample. Columns with title *Before 1860* include a sub-sample for years before 1860. First two columns include all types of trials. Columns under *Crypto-moral trials* only include trials against Judaism, Lutheranism or Islam. Columns under *Repressive trials* include all trials excluding crypto-moral trials. *After* is a dummy with value 1 after the first trial of the Inquisition occurs in a municipality or a neighbour municipality, as defined in Section 4.3. *Before* is a dummy variable for the period before the first trial occurred in a municipality. Standard errors clustered at the town level. Geography variables include Altitude and ruggedness. Population 1378 is a variable that includes population in year 1378. Historic access include the accessibility variable. Border distances include Dist. to borders. Trials (neighbours) are the trials in neighbour municipalities. Years: 1497, 1515, 1553, 1717, 1787, 1857, 1860, 1877, 1887, 1900, 1910, 1920, 1930, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1981, 1986, 1991.

Table 15: Dynamics: Municipal Level (Catalonia)

Dependent variable: Annual Population Growth (in %)						
	All trials		Repressive trials		Crypto-moral trials	
	All years	Before 1860	All years	Before 1860	All years	Before 1860
Inquisition x <i>After</i> ₁	-0.120** (0.057)	-0.119** (0.056)	-0.122** (0.056)	-0.137** (0.055)	-0.090 (0.099)	-0.090 (0.099)
Inquisition x <i>After</i> ₂	-0.018 (0.080)	-0.131** (0.052)	-0.020 (0.081)	-0.160*** (0.053)	-0.259*** (0.090)	-0.259*** (0.090)
Inquisition x <i>After</i> ₃	0.123* (0.063)	-0.226*** (0.052)	0.135** (0.066)	-0.351*** (0.087)	0.163 (0.101)	0.163 (0.101)
Observations	22,343	4,732	22,343	4,732	22,343	22,343
R-squared	0.217	0.162	0.217	0.163	0.218	0.218
Capital	Yes	Yes	Yes	Yes	Yes	Yes
Population 1378	Yes	Yes	Yes	Yes	Yes	Yes
Geography	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Historic access	Yes	Yes	Yes	Yes	Yes	Yes
Border distances	Yes	Yes	Yes	Yes	Yes	Yes
Trials	Yes	Yes	Yes	Yes	Yes	Yes

Dependent variable is annual population growth (in %). Columns with title *All years* include the whole sample. Columns with title *Before 1860* include a sub-sample for years before 1860. First two columns include all types of trials. Columns under *Crypto-moral trials* only include trials against Judaism, Lutheranism or Islam. Columns under *Repressive trials* include all trials excluding crypto-moral trials. *After*₁ is a dummy with value 1 for the period just after the first trial of the Inquisition occurs in a municipality or a neighbour municipality. *After*₂ is a dummy variable for the second period after the first trial occurs. *After*₃ is a dummy variable for the rest of the periods after the first trial. Standard errors clustered at the town level. Geography variables include Altitude and ruggedness. Population 1378 is a variable that includes population in year 1378. Historic access include the accessibility variable. Border distances include Dist. to borders. Trials (neighbours) are the trials in neighbour municipalities. Years: 1497, 1515, 1553, 1717, 1787, 1857, 1860, 1877, 1887, 1900, 1910, 1920, 1930, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1981, 1986, 1991.

Table 16: Dynamics II: Municipal Level (Catalonia)

Dependent variable: Annual Population Growth (in %)			
	All trials	Repressive trials	Crypto-moral trials
Inquisition x After	-0.274** (0.120)	-0.251** (0.126)	0.006 (0.152)
Inquisition x After x Influence	0.001*** (0.000)	0.001*** (0.000)	0.001* (0.001)
Inquisition	0.053 (0.069)	0.032 (0.066)	-0.078 (0.096)
After	0.099 (0.087)	-0.112 (0.081)	-0.051 (0.052)
Observations	22,343	22,343	22,343
R-squared	0.218	0.219	0.218
Capital	Yes	Yes	Yes
Population 1378	Yes	Yes	Yes
Geography	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Historic access	Yes	Yes	Yes
Border distances	Yes	Yes	Yes
Trials	Yes	Yes	Yes

Dependent variable is annual population growth (in %). First column includes all types of trials. Column under *Crypto-moral trials* only includes trials against Judaism, Lutheranism or Islam. Column under *Repressive trials* includes all trials excluding crypto-moral trials. Standard errors clustered at the town level. *Influence* reports the number of years after the first trial occurred in a municipality. Geography variables include Altitude and ruggedness. Population 1378 is a variable that includes population in year 1378. Historic access include the accessibility variable. Border distances include Dist. to borders. Trials (neighbours) are the trials in neighbour municipalities. Years: 1497, 1515, 1553, 1717, 1787, 1857, 1860, 1877, 1887, 1900, 1910, 1920, 1930, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1981, 1986, 1991.

Table 17: Patents and Inquisition: Regional Level

Dependent variable: Number of patents				
	(1)	(2)	(3)	(4)
Trials per Year	-2.6038 (6.2848)	-6.8616 (13.0013)	-6.8769*** (1.2840)	-6.3997*** (1.7845)
Linear Time Trend	2.2648*** (0.1318)	2.2651*** (0.1317)	2.2634*** (0.1315)	2.2660*** (0.1317)
Initial Urbanization			733.3616*** (50.6286)	720.6102*** (60.5033)
Initial Population				-0.000 (0.0001)
Geographic Variables		Yes	Yes	Yes
Obs	1,105	1,105	1,105	1,105

Dependent variable is the number of patents produced in a year. Sample covers 1850-2000. Trials per year are the average number of trials per region during the period 1478-1808. Initial population and urbanization are from 1530. Geographic variables include latitude, longitude, area. Standard errors are in parentheses.

Table 18: Levels of Trust and Attitudes towards Scientific Advances: Regional Advances

Dependent variable	Coefficient for Inquisitorial Trials (in 1,000)	Observations
Mistrust of Government	-0.024*** (0.009)	969
Mistrust of Parliament	-0.017* (0.009)	957
Mistrust of Justice System	0.006 (0.012)	425
Mistrust of Friends	0.029 (0.024)	546
Mistrust of People You First Meet	0.024 (0.018)	551
Opinion on Scientific Advances	0.035*** (0.009)	929
Scientific Advances (1 if they will help)	-0.015*** (0.006)	929

Dependent variable is the answer to the question regarding Mistrust levels. For example Mistrust level of government goes from 1-5 where 1 represents the highest level of trust and 5 the highest mistrust level of government. Opinion on scientific advances takes the value of 1 if the respondent thinks scientific advances will help development, 2 if she thinks scientific advances will both harm and help development and 3 if she thinks they will harm development. Scientific advances is a dummy where 0 represents values 2 and 3 in the previous answer. The table shows the Trials coefficient, that is the association between the number of trials that occurred in the region where the respondent lives and her answer to the survey. World Value Surveys were done between 2000 and 2005. Control variables include age, age square, dummy variables for educational attainment, size of the town where the respondent is living and socio-economic status.

Table 19: Levels of Trust and Attitudes towards Scientific Advances: Province level

	Scientific Advances	Parliament	Justice	Army	Church	Government	Political parties	People
Trials (in 1,000)	-0.014** (0.007)	0.210** (0.088)	-0.232** (0.104)	-0.053 (0.081)	0.006 (0.071)	0.006 (0.104)	0.203*** (0.072)	0.0003 (0.006)
Observations	9,184	2,138	1,472	2,138	2,138	682	1,348	9,184
R-squared	0.397	0.077	0.091	0.056	0.085	0.120	0.070	0.189

Dependent variable is the answer to the question regarding Mistrust levels. For example Mistrust level of government goes from 1-5 where 1 represents the highest level of trust and 5 the highest mistrust level of government. Scientific advances is a dummy that is 0 if the respondent thinks scientific advances will harm in some way economic development. The table shows the Trials coefficient, that is the association between the number of trials that occurred in the province where the respondent lives and her answer to the survey. CIS Surveys included were completed before 2007. Control variables include year of the survey dummy, age, age square, dummy variables for educational attainment, size of the town where the respondent is living and socio-economic status. Standard errors in parentheses.

Table 20: Electoral polarization and Inquisition: Provincial Level

Dependent variable: political polarization			
	(1)	(2)	(3)
All trials	0.0095 (0.006)		
Repressive trials		-0.0022 (0.001)	
Crypto-moral trials			0.0018 (0.001)
Observations	336	336	336
R-squared	0.276	0.276	0.276
Year FE	Yes	Yes	Yes
Province FE	Yes	Yes	Yes
Population	Yes	Yes	Yes
Geography	Yes	Yes	Yes

Political polarization is the dependent variable. It is calculated using the number of seats of the Parliament obtained by each party in each province and Montalvo and Reynal-Querol polarization measure. Crypto-moral trials only include trials against Judaism, Lutheranism or Islam. Repressive trials include all trials excluding crypto-moral trials. Standard errors clustered at the province level. Geography variables include latitude, longitude, and area.

Table 21: Cultural Centers and Inquisition: Municipal Level (Barcelona province)

Dependent variable: Existence of cultural center			
	All trials	Repressive trials	Crypto-moral trials
Trials	-0.017*** (0.005)	-0.007 (0.006)	-0.037*** (0.009)
Observations	308	308	308
R-squared	0.352	0.389	0.314
Capital	Yes	Yes	Yes
Population	Yes	Yes	Yes
Geography	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Historic access	Yes	Yes	Yes
Border distances	Yes	Yes	Yes
Trials (neighbours)	Yes	Yes	Yes

Dependent variable is the existence of a cultural center between 1850 and 1930. Crypto-moral trials only include trials against Judaism, Lutheranism or Islam. Repressive trials include all trials excluding crypto-moral trials. Standard errors clustered at the town level. Geography variables include Altitude and ruggedness.

Appendix A Summary Statistics: Municipal level including Barcelona

	No Inquisition	Inquisition	(1)-(2)	t
Trials		7.681 (75.209)		
Annual Growth (1378-1991)	0.276 (0.236)	0.331 (0.255)	-0.055*** (0.004)	-15.404
Area (km^2)	29.781 (28.988)	38.784 (39.914)	-9.003*** (2.262)	-3.980
Population in 1378	112.957 (127.133)	355.000 (1527.196)	-242.043*** (69.318)	-3.492
Density in 1378	5.467 (6.732)	13.100 (51.759)	-7.633** (2.362)	-3.232
Church	0.288 (0.453)	0.257 (0.437)	0.032 (0.029)	1.090
Dist. to main rivers (m)	4926.800 (8493.699)	6087.940 (8706.169)	-1161.140* (560.903)	-2.070
Dist. to rivers (m)	3484.269 (7427.669)	4173.426 (7090.587)	-689.158 (474.209)	-1.453
Dist. Navigable rivers (m)	19121.890 (21686.742)	18700.376 (21153.099)	421.514 (1398.414)	0.301
Dist. Maritime routes (m)	43541.974 (34275.450)	39703.315 (37311.891)	3838.659 (2333.684)	1.645
Distance to Ports (m)	38820.772 (33371.297)	35412.972 (35721.047)	3407.800 (2252.371)	1.513
Distance to Roads (m)	1818.279 (2895.344)	1716.999 (3125.562)	101.280 (196.275)	0.516
Distance to intersection (m)	9561.370 (7867.942)	8459.941 (7679.237)	1101.428* (507.496)	2.170
Number of intersections	0.043 (0.213)	0.126 (0.475)	-0.083*** (0.024)	-3.509
Distance to France (m)	78543.620 (52527.781)	71503.290 (45040.534)	7040.330* (3202.039)	2.199
Distance to Sea (m)	40683.872 (34720.065)	37274.987 (37688.511)	3408.885 (2360.447)	1.444
Distance to Interior (m)	87709.808 (57774.467)	99970.446 (57171.360)	-12260.638** (3750.854)	-3.269
Accessibility	0.425 (0.128)	0.426 (0.127)	-0.000 (0.008)	-0.011
Latitude	41.718 (0.440)	41.754 (0.401)	-0.036 (0.028)	-1.313
Longitude	1.669 (0.804)	1.844 (0.764)	-0.176*** (0.051)	-3.432
Ruggedness	36.824 (25.147)	35.473 (23.849)	1.351 (1.601)	0.844
Altitude	479.138 (431.709)	433.278 (401.381)	45.860 (27.236)	1.684
Observations	490	452		

No Inquisition is the sample of municipalities that did not experience a trial of the Inquisition. Inquisition is the sample of municipalities that experienced at least one trial of the Inquisition. Annual growth is annual population growth during the period 1378-1991. Density in 1378 is the population in 1378 divided by area. Church is the proportion of municipalities of each group that were under the jurisdiction of the Church. Distances are in meters. Distance to intersection is the minimum distance of a municipality to the closest intersection of Roman roads. Distance to Regions is the minimum distance between a municipality and the border of Catalunya with Aragon or Valencia. Accessibility is an index of how accessible was a municipality in Roman times. See De Soto (2010).

Appendix B The Spanish Inquisition in Catalonia

Figure 9: Trials in 1497

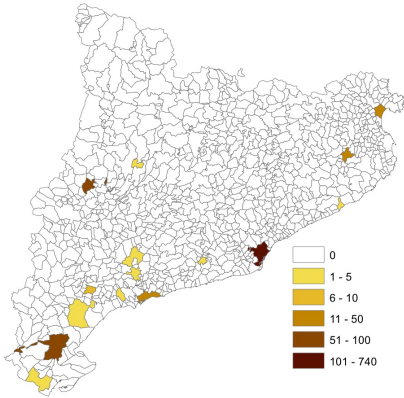


Figure 12: Trials in 1515

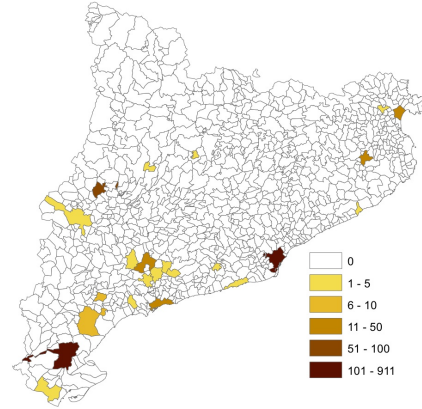


Figure 10: Trials in 1553

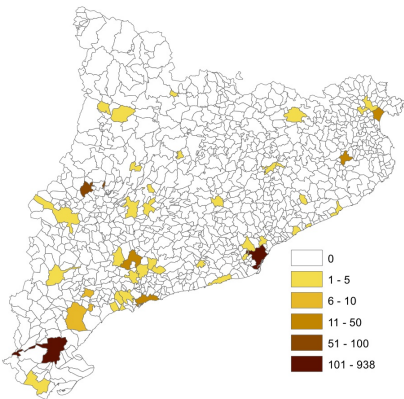


Figure 13: Trials in 1717

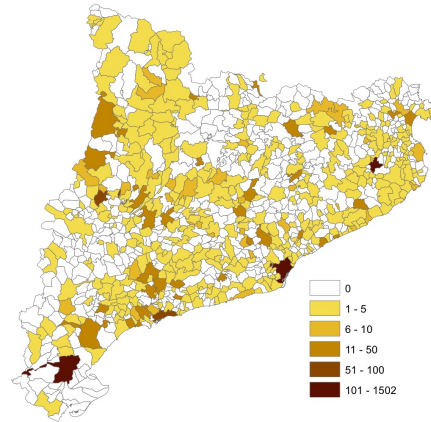


Figure 11: Trials in 1787

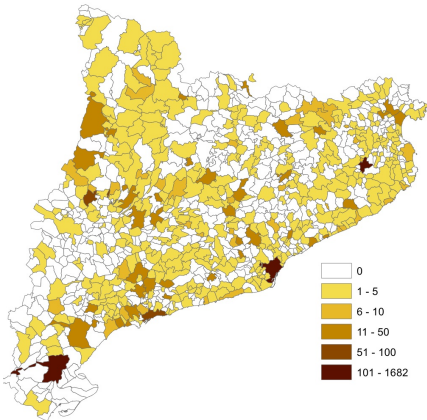
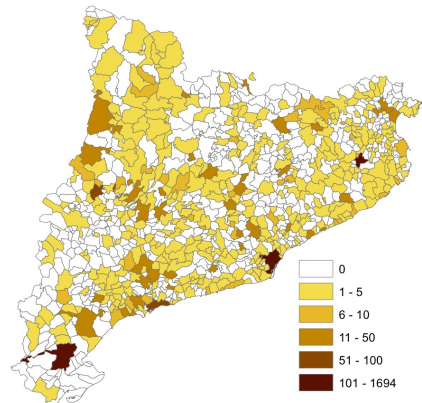


Figure 14: Trials in 1857



Appendix C Crypto-moral trials in Catalonia

Figure 15: Crypto-moral trials in 1497

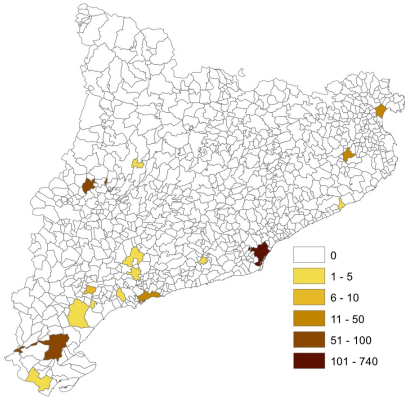


Figure 18: Crypto-moral trials in 1515

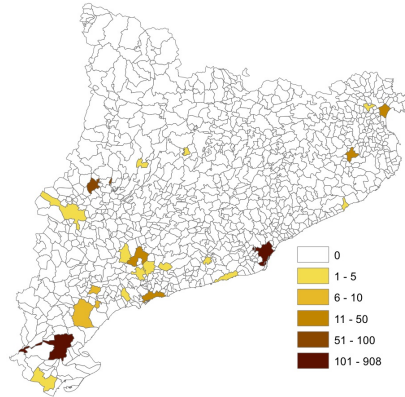


Figure 16: Crypto-moral trials in 1553

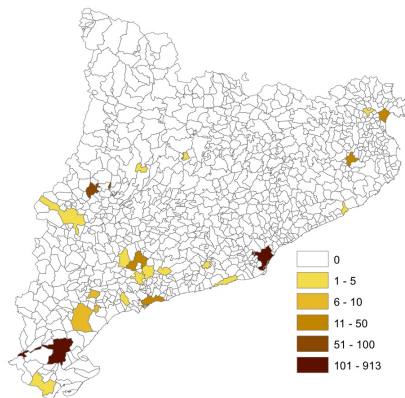


Figure 19: Crypto-moral trials in 1717

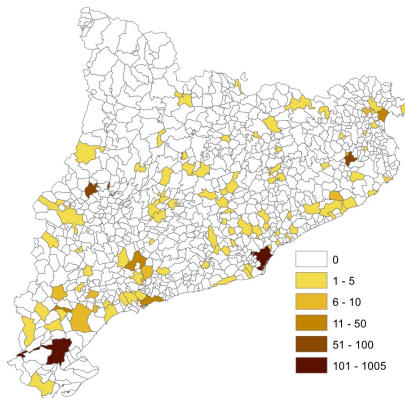


Figure 17: Crypto-moral trials in 1787

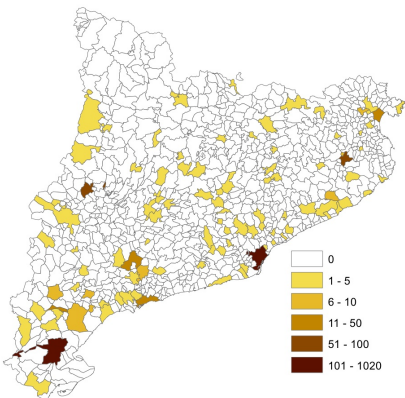
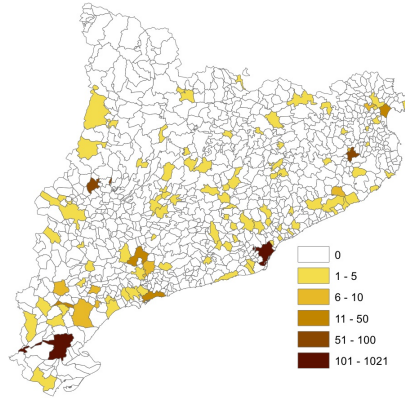


Figure 20: Crypto-moral trials in 1857



Appendix D Repressive trials in Catalonia

Figure 21: Repressive trials in 1497



Figure 24: Repressive trials in 1515

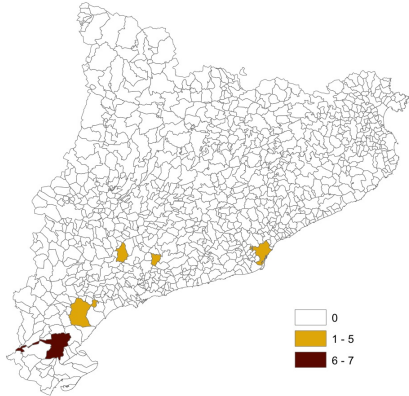


Figure 22: Repressive trials in 1553

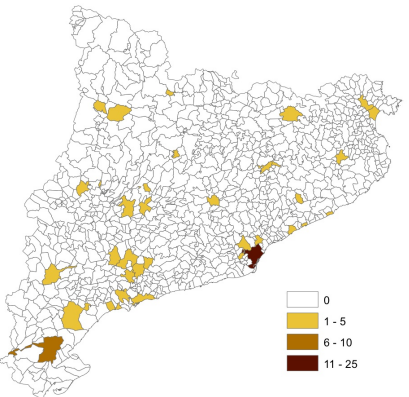


Figure 25: Repressive trials in 1717

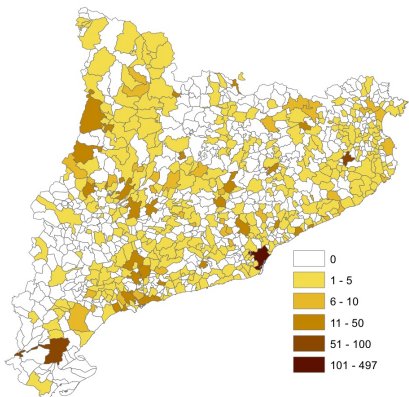


Figure 23: Repressive trials in 1787

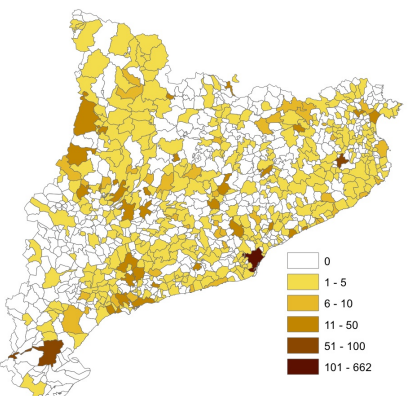
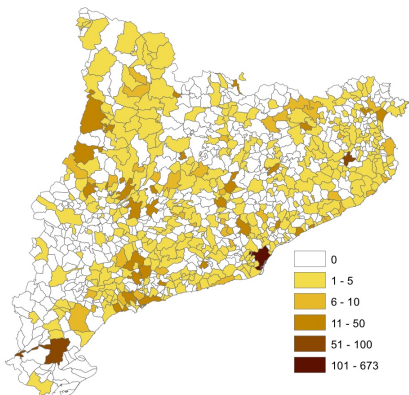


Figure 26: Repressive trials in 1857



Appendix E Population density in Catalonia

Figure 27: Density in 1497

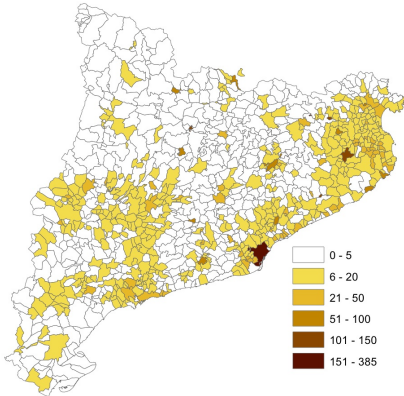


Figure 30: Density in 1515

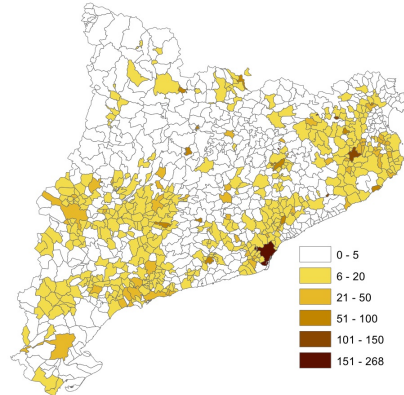


Figure 28: Density in 1553

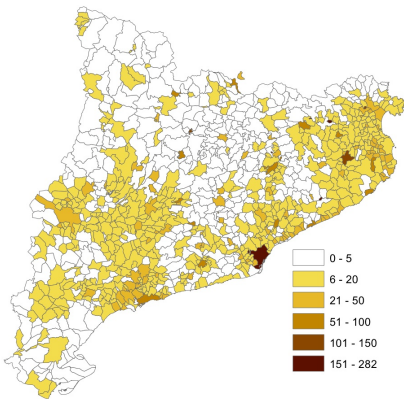


Figure 31: Density in 1717

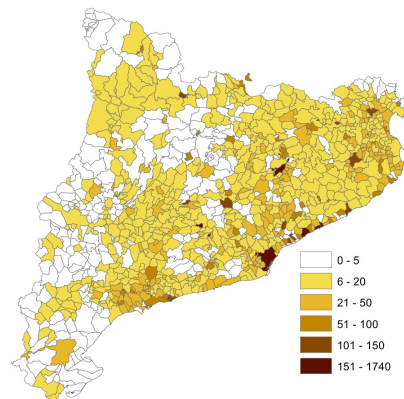


Figure 29: Density in 1787

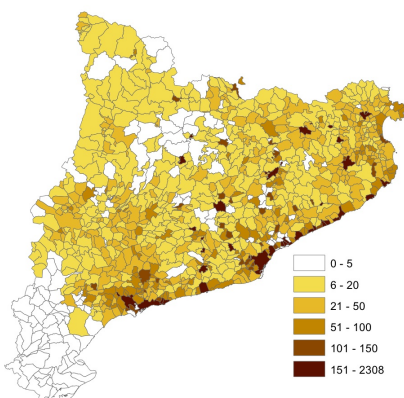
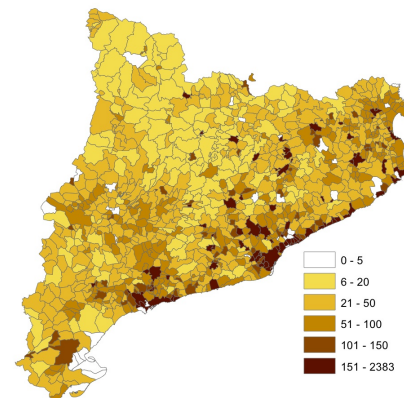
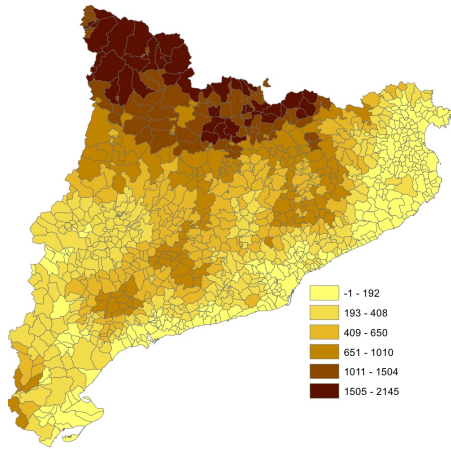


Figure 32: Density in 1857



Appendix F Roman routes and accessibility, ruggedness, rivers

Figure 33: Altitude (m) in Catalonia



Goerlich (2010)

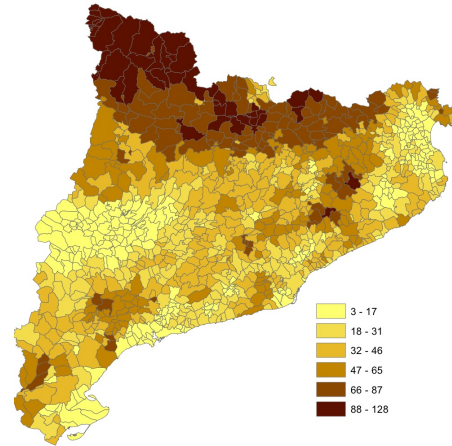
Figure 34: Accessibility in Roman times



DeSoto (2010)

Figure 35: Map municipal accessibility in Roman era

Figure 36: Ruggedness



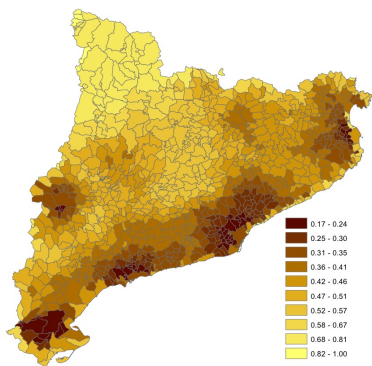
Goerlich (2010)

Figure 37: Roman roads



DeSoto2010

Figure 38: Main rivers in Catalonia



(2010)

DeSoto

