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Banking development, economic structure and income inequality

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Abstract

Using rich, unique data from the Italian local credit markets (provinces), this paper investigates the impact of local banking development on income inequality and the role of the economic structure in this link. Exploiting the Italian historical banking regulation to instrument for the local presence of bank branches, we find that local banking development mitigates income inequality. However, the finance-inequality nexus manifests itself only in relatively advanced areas. When we study the structural channels of influence, we uncover evidence that banking development can reduce inequality by affecting geographical mobility and urbanization, while it has modest effects through the development of material infrastructures and human capital.

JEL Classification: G21; G38; O15

Keywords: Income inequality; Financial development; Economic structure

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Banking development, economic structure and income inequality

Abstract

Using rich, unique data from the Italian local credit markets (provinces), this paper investigates the impact of local banking development on income inequality and the role of the economic structure in this link. Exploiting the Italian historical banking regulation to instrument for the local presence of bank branches, we find that local banking development mitigates income inequality. However, the finance-inequality nexus manifests itself only in relatively advanced areas. When we study the structural channels of influence, we uncover evidence that banking development can reduce inequality by affecting geographical mobility and urbanization, while it has modest effects through the development of material infrastructures and human capital.

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1 Introduction

Growing inequality is one of the biggest economic challenges of our time and its causes are increasingly debated among economists and policy makers (The Economist, 2012). Financial sector development has been shown to be highly effective in promoting economic growth (Levine, 2005), thus suggesting the importance of a deeper analysis of how it can be used to alter income distribution and foster pro-poor economic growth.[1] The relationship between financial development and income distribution is also important for understanding the process of economic development. Income distribution can influence savings decisions, the allocation of resources, incentives to innovate, and public policies (Aghion, Caroli and García-Peñalosa, 1999; Bagchi and Svejnar, 2015).

In this paper, we investigate the impact of local banking development on income inequality using rich, hand-collected data from the Italian local credit markets (the 103 Italian provinces). We also take a step towards understanding whether local banking development affects income distribution by influencing salient aspects of the economic structure, such as urban structure, geographical mobility, development of material and immaterial infrastructures, and formation of human capital. Although these structural factors are viewed as fundamental drivers of income inequality, evidence

[1] Levine (2005) offers a comprehensive survey of theory and empirics of financial development and growth.

on their role in the finance-inequality nexus remains scant. Italy is ideally suited for the purposes of our investigation. The Italian financial system is strongly bank-based, hence banks can play a key role in income distribution.[2] In addition, the banking system is segmented across provinces with provinces exhibiting, in turn, highly heterogenous degree of banking development in the early 2000s (the period of our investigation). Most importantly, this heterogenous banking development can be considered as fairly exogenous as it reflects the historical regulation of the Italian banking system which imposed severe restrictions on lending and branching in the provinces from 1936 till the late 1990s.[3]

Exploiting the heterogenous tightness of the 1936 banking regulation to tackle the possible endogeneity of banking development, and after controlling for a battery of province-specific controls, we find that local banking development has a significant negative effect on the income Gini coefficient. A 10 percent increase of the bank branch density induces a 1.9 percent reduction in the Gini. And this finding is confirmed when using alternative measures of income inequality. However, the detected effect is not robust through the sample, suggesting the existence of non-linearities in the banking development-inequality nexus. When we split our sample according to broad geographical areas, the negative effect of banking development on income inequality is indeed significant only in the northern sub-sample. One possible explanation is that the relationship between banking development and inequality manifests itself only for a sufficiently high level of economic development, given that the North of Italy is more industrialized and rich. That is, as financial development is costly to implement, catch-up effects could start manifesting only after income crosses a certain threshold value.[4]

In the second part of the paper, we explore the channels whereby banking development may affect income inequality. Our focus is on the role of the economic structure, including urban structure, geographical mobility (inter-province migratory flows), development of material and immaterial infrastructures, and human capital formation. The importance of these structural factors for income inequality has been long acknowledged in the literature (see, e.g., Calderon and Serven, 2004; World Bank, 2003; Ferreira, 1995; Lopez, 2003) and yet very little is known about their role in the finance-inequality nexus. Our data can help fill this gap, as structural factors are reputed to have a large influence on income inequality in Italy (Ascher and Krupp, 2010; Farina and Franzini, 2015). Our findings suggest that banking development has a sizeable effect on geographical mobility and urban structure, while it has only modest consequences on the

[2] The capitalization of the Italian stock market is relatively low compared to other advanced economies. For example, according to World Bank data, in 2014 the ratio between the stock market capitalization and the GDP in Italy was 27%, while it was 151% in the United States.

[3] Between 1936 and 1985, in Italy the number of bank branches grew by 87% versus 1228% in the United States.

[4] Our findings are confirmed by employing a rolling regressions technique to show graphically the evolution of the coefficient on financial development when per capita GDP increases. The coefficient becomes negative and significant after a certain level of the median per capita GDP and after the financial sector has achieved a reasonably high level of development. The rolling regression graphs are available from the authors upon request.

formation of human capital and material infrastructures. Further, when we add the indicators of human capital and material infrastructures to the regressions, the effect of banking development on inequality remains essentially unaltered. By contrast, when we control for the indicators of geographical mobility and urban structure, these indicators tend to absorb the effect of banking development on inequality. Overall, the results suggest that urban structure and geographical mobility may constitute two important channels through which banking development shapes the income distribution.

The remainder of the paper unfolds as follows. Section 2 reviews the literature and discusses theoretical predictions. Section 3 provides a general outlook on the history of local banking development in Italy and on the dynamics of income distribution in Italian provinces. Data and methodology are described in Sections 4 and 5, while Sections 6 and 7 present the empirical results. Section 8 concludes.

2 Theoretical predictions and prior literature

Financial development can promote economic growth by mitigating financing constraints. The issue of which segments of the population benefit more from the resulting growth acceleration has not been conclusively addressed. For example, financial development could benefit the poor by expanding labor demand and creating opportunities for small and medium-sized businesses. However, it could also generate higher profit margins for wealthy, established entrepreneurs.

There is a growing empirical literature on how financial development affects income distribution and inequality (see, e.g., Demirguc-Kunt and Levine, 2009, for a review). Some cross-country studies empirically assess the relation between financial development and national Gini coefficients. Li et al. (1998) estimate a negative relationship between financial development (proxied by the ratio of M2 to GDP) and the Gini coefficient in a sample of 49 countries over the 1947-1994 period. Using data for the 1960-2005 period for 72 countries, Beck et al. (2007) find a negative relationship between financial development and the Gini, which holds when controlling for a wide array of country-specific factors, and when using panel instrumental variable methods to control for endogeneity. They also find that financial development exerts a disproportionately positive impact on the relatively poor (the bottom quintile of the income distribution).

In cross-country studies it can be hard to properly address endogeneity issues, for example due to omitted institutional and regulatory factors that could influence both banking development and inequality. Recently, some studies have then performed country-level analyses to mitigate endogeneity. The focus on the local level in a single country allows to exploit within country variation, reducing the risk of omitted variable bias. Gine and Townsend (2004) find that in Thailand increased access to financial services has a negative impact on income inequality through an increase in labor demand. One interesting policy change sometimes used to mitigate endogeneity

problems is bank branch deregulation within a country. Burgess and Pande (2005) study the effects of bank branch deregulation on poverty in Indian states. Beck et al. (2010) assess the impact of bank deregulation on the distribution of income in the U.S. states. They find that deregulation tightened the income distribution by boosting incomes in the lower tail.

There are various channels whereby financial development can reduce inequality. Banerjee and Newman (1993), Galor and Zeira (1993) and Aghion and Bolton (1997) show theoretically that credit constraints can be particularly binding on the poor because the poor lack internal funds or pledgeable collateral. If the poor lack access to credit, they are prevented from investing in education and, hence, from seeking more remunerative jobs. Financial development may allow low-income individuals to invest in education, thus reducing inequality (Galor and Zeira, 1993). A second channel focuses on the ability of the poor to become entrepreneurs. By ameliorating credit constraints, financial development may decrease collateral requirements and borrowing costs, fostering entrepreneurship and firm formation (Banerjee and Newman, 1993). Financial development may also alter the distribution of income through an increased demand for labor by firms rather than through an increased access to credit by the poor (Beck et al., 2010). The increased demand for labor may positively affect low-income workers.

A clear understanding of the socio-economic mechanisms linking finance and inequality is still missing. Beck et al. (2010) test the above mentioned mechanisms (labor demand, entrepreneurship, and firm formation). By contrast, there is far less evidence on the effects that financial development can have on income inequality through its impact on the economic structure, such as urbanization and geographical mobility, material and immaterial infrastructures, and formation of human capital. Yet, a broad literature argues that these structural factors can play a key role in reducing income inequality and poverty (see, e.g., Calderon and Serven, 2004; Ferreira, 1995; Lopez, 2003; World Bank, 2003). And in Italy these factors are reputed to have a strong influence on income inequality, which makes Italy a good empirical laboratory to isolate their possible role in the finance-inequality nexus. In this paper, we take a step towards examining whether these structural channels matter in the relationship between local financial development and inequality.[5]

3 Institutional background

The Italian financial system is dominated by the banking sector, since the capitalization of the stock market is still relatively low.[6] The banking system is in turn segmented across local credit markets (provinces). As a geographical and administrative unit, a province can be compared with

[5] As we elaborate below, it is also possible that some of the described mechanisms kick in at sufficiently advanced stages of development, implying non-linearities in the effect of banking development on inequality (Greenwood and Jovanovic, 1990).

[6] See De Bonis et al. (2012) for an overview of the Italian banking system.

a U.S. county. Provinces represent the appropriate measure of local banking markets in Italy also according to the definition used by public authorities in their regulatory activity. For example, the Italian Antitrust Authority considers the province as the relevant market for banking activities. Moreover, at the time of deregulation of entry in the banking market in the 1990s, the Bank of Italy defined the local market as the provincial one. In Italy, a strong local presence of bank branches is crucial for access to credit because distance matters in bank lending and it is particularly difficult to borrow in a market other than the local one (Petersen and Rajan, 2002; Guiso et al., 2004; Guiso et al., 2013). There is indeed evidence that in Italy, due to informational disadvantages, banks entering new provincial markets suffer from higher loan default rates (Bofondi and Gobbi, 2006).[7]

As noted, the estimated effects of banking development on income distribution may suffer from endogeneity problems. That is, although we control for a battery of relevant characteristics of the provinces, unobserved factors could drive both banking development and income inequality (or economic structure, in the second part of the analysis). And reverse causality could also affect the estimates, as the income distribution in a province might influence the local presence of bank branches. To tackle the possible endogeneity of banking development, we then construct instruments capturing exogenous restrictions on the entry of banks into local credit markets. To this end, we exploit information on the regulation of local banking markets introduced in Italy in the late 1930s. In response to the 1930-31 banking crisis, in 1936 the Italian Government approved a Banking Law with the objective of enhancing bank stability through severe restrictions on bank entry. The Banking Law imposed strict limits on the ability of different types of banking institutions to open new branches. Guiso et al. (2003, 2004) show that this banking law deeply affected local credit markets in the decades that followed. Entry into the provincial banking markets was liberalized only at the end of the 1990s, thanks also to the introduction of European directives about the coordination of banking regulations across the European Union.

Two elements make our instruments suitable. First, the 1930s regulation deeply affected the structure of local banking markets for several decades, and indeed at the end of the 1990s this structure closely resembled that of the 1930s (Guiso et al., 2004; Minetti et al., 2015). Second, as shown by Guiso et al. (2003, 2004), the constrictiveness of the regulation in the provinces stemmed from "historical accident" and in particular it reflected the interaction between waves of bank creation prior to 1936 and the history of Italian unification. Therefore, the tightness of the banking regulation was not correlated with economic features of the provinces.

[7] Degryse and Ongena (2005) also find that small firms' loan conditions depend on distance and there is some narrative evidence that Italian banks follow the rule of thumb of avoiding lending to applicants that are located more than three miles from the branch (Guiso et al., 2004, 2013).

4 Data and measurement

This section describes our indicators and data for income inequality and financial development as well as the set of conditioning information. We collected data from four main sources. First, we hand-collected and elaborated data from the municipality-level database on tax revenue compiled by the Department of Finance of the Italian Ministry of Economy and Finance. We also obtained data from the Statistical Bulletin of the Bank of Italy; the province-level database of the Italian National Statistics Office (Istat); and the Geoweb Starter, a database containing local, provincial and regional statistical information produced by the Istituto Guglielmo Tagliacarne (a major Italian research institute).

Since measures of income distribution by province are not available, we computed them starting from the income data. We obtained from the Department of Finance the spreadsheets on the distribution of taxable income for each of the 8,056 Italian municipalities over the 2001-2011 period. For each municipality and each year, we have the frequency and the average income of 28 to 30 income classes. Employing this information, we aggregated the data assigning each municipality to its province and then computed the indicators employed in the inequality literature.[8] First, we derived the Gini coefficient of income distribution from the Lorenz curve. Larger values of the Gini imply greater income inequality. The Gini coefficient is equal to 0 if everyone has the same income, and it is equal to 100 if a single individual receives the income of the entire economy. As an alternative measure of income distribution, we computed the Theil index. Similar to the Gini, the Theil is also increasing in the degree of income inequality: if all individuals have the same income, the index equals 0, while it is equal to $ln(n)$ if one individual receives all of the economy's income, where n is the number of individuals. As a robustness check, we also computed other income inequality metrics, such as the income ratio between the median and various percentiles, to study the effect of banking development not only on inequality in the population as a whole, but also on the shape of the income distribution. Results, available upon request, are qualitatively similar.

The literature on the relationship between local banking development and economic growth has put forward several indicators to proxy for the ability of financial intermediaries to improve loan monitoring and screening. We concentrate on bank branch density by province (number of branches normalized by the population) as a measure of the level of development of the local credit markets. This is a standard measure in the empirical banking literature (see, e.g., Degryse and Ongena, 2005). The rationale behind this variable is, on the one hand, that geographical proximity increases banks' ability to collect "soft" information, easing banks' screening and monitoring of borrowers (see, e.g., Petersen and Rajan, 1994; Presbitero and Rebelotti, 2013).[9] On the other

[8] Acciari et al. (2013) also use tax records to study the geography of income inequality in Italy.

[9] Furthermore, Bonaccorsi Di Patti and Gobbi (2001) show that provinces with a high number of bank branches

hand, bank branch density shows a large inter-provincial dispersion and captures the dimension of banking development that is largely affected by the 1936 banking regulation (see Benfratello et al., 2008, and Section 3). In line with the literature, we also use the Herfindahl-Hirschman Index (HHI) of branch concentration in the province, to study the effect of local banking competition on income inequality (see Berger et al., 2004). Data on local branch density and concentration were obtained from the Statistical Bulletin of the Bank of Italy.

We use information from Istat for per capita GDP, unemployment rate, the distribution of workers among sectors, export data, the percentage of population in small municipalities, the inter-province migratory flows and the percentage of the population with at least a secondary school degree. The index of infrastructure endowment, as well as the indices of street, railway, IT and broadband, education and cultural structures are instead obtained from the Geoweb Starter database of the Istituto Guglielmo Tagliacarne.

Table 1 contains summary statistics at the regional level (a region comprises different provinces).[10] The table reveals that the average income inequality, measured by the Gini index or the Theil index, is similar among the three Italian macro-areas (North, Center and South). The regions located in the South of Italy exhibit, on average, a lower per capita GDP (14,925 euro, that is lower than the national average of 20,987 euro) and a higher unemployment rate (13.20 versus a national average of 7.91). Table 2 reports the correlation matrix. The Gini and the Theil index are highly positively correlated with each other. Per capita GDP shows a low correlation with the inequality indicators, suggesting that inequality is not necessarily driven by economic development.

Figure 1 displays a map of the 103 Italian provinces organized by the value of the Gini coefficient. The North features the highest number of provinces with the lowest value of the Gini coefficient. If we consider the average trend of inequality per macro areas (Figure 2), we can notice that, although slightly declining in all areas, on average southern provinces exhibit higher level of inequality than northern ones.[11] Figure 3 plots the average (2003-2010) of branch density and the Gini index of inequality at the regional level, slightly less disaggregated than the provincial one. Income inequality tends to be lower when the level of banking development is higher (we interpolate the data using a weighted least squares method that provides a generally smooth curve). Such preliminary considerations call for a deeper analysis of the interactions between local banking development and inequality.

relative to their population have larger credit supply.

[10] For matter of space, we relegate the statistics at the provincial level to Table A.1 of the Appendix.

[11] In 2009, Istat data on income distribution show that most resident households in Italy (about 58 percent) had a net income lower than the average annual amount (29,766 euro).

5 Methodology

We assess the relationship between local banking development and income distribution using the following regression set-up

$$Y_p = a_1 + b_1 B_p + b_2 C_p + \varepsilon_p \tag{1}$$

with $p = 1, ..., 103$. Y_p is a measure of income inequality (e.g., the logarithm of the Gini index or of the Theil index) in province p, C_p is a vector of province level control variables, and ε_p is the error term. The variable of interest is B_p, a measure of local financial development (e.g., the log of bank branch density) in province p. The coefficient b_1 captures the impact of banking development on income inequality. In running the cross-sectional regressions, we experiment both with the year 2001 and with the average over the years 2001-2011. In addition to the cross-sectional specification, we also perform regressions using panel data for the 2001-2011 period.[12]

As noted, considering the local entities (provinces) of a single country enables us to reduce the risk of omitted variable bias and to implicitly control for differences in formal institutions. Nevertheless, there remains the possibility that banking development and inequality are jointly determined and that unobserved factors are correlated with both. To address these possible endogeneity issues, we use an instrumental variable (IV) approach. Let I_p be a vector of instruments that are correlated with local banking development but affect income inequality only through the banking channel. The effect of these instruments on B_p is captured by b_4 in the local banking development equation:

$$B_p = b_3 C_p + b_4 I_p + u_p \tag{2}$$

where C_p refers to the control variables in (1), I_p is the vector of instruments and u_p is the residual.

We first estimate the empirical model in (1) by OLS. Then, we estimate the model (1)-(2) using a two-stage least square (2SLS) estimator. Finally, in the panel specification for the 2001-2011 period, we use the Arellano-Bond model, to account for the dynamic dimension of the panel.

For the IV approach, we need an appropriate set of instruments. Following Guiso et al. (2004) and Herrera and Minetti (2007), we exploit the 1936 banking law which subjected the Italian banking system to strict regulation of entry until the 1990s. The 1936 banking law imposed strict limits on the ability of different types of banking institutions to open new branches. In particular, each banking institution was assigned a specific geographical area of competence based on its presence in 1936. Banks' ability to grow and lend was restricted to that area. A further directive issued in 1938 specified that national banks (*banche di interesse nazionale*) could open branches only in the main cities; local commercial banks and cooperative banks could open branches within the boundaries of the province where they operated in 1936; savings banks could operate within

[12] In the panel specification, by considering 103 provinces and eleven years of data (2001-2011), we end up with 1,133 province-year observations.

the boundaries of a region (which includes various provinces). Since in 1936 the prevalence of the different categories of banking institutions varied across Italian provinces, the tightness of the banking regulation in the following decades was highly heterogenous across provinces. Bank entry in local credit markets was liberalized only towards the end of the 1990s. Guiso et al. (2004) demonstrate that these banking laws deeply affected creation and location of new bank branches in the decades that followed 1936. Thus, we expect that the regulation shaped the local banking structure during the decades in which it was in place and that this impact persisted for several years after the removal of the regulation. Hence, we expect the local tightness of the 1936 banking regulation to be correlated with the current local banking development. On the other hand, as shown by Guiso et al. (2003, 2004), the distribution of types of banks across provinces in 1936, and hence the constrictiveness of regulation in a province, stemmed from "historical accident". For instance, the strong presence of savings banks in provinces of the North East and the Center stemmed from the fact that this institution originated in Austria and started to operate first in the provinces dominated by the Austrian Empire (Lombardia and the North East) and in close-by states (especially Tuscany and the Papal States). In addition, the regulation was not designed looking at the needs of the single provinces. The differences in the restrictions imposed on the various types of banks were related to differences in the connections of the different types of banks with the Fascist regime. Therefore, the regulation is unlikely to have any direct impact on income inequality nowadays.

We choose as instruments two indicators that Guiso et al. (2004) employ to characterize the local structure of the banking system in 1936: the number of bank branches in the province (per 100,000 inhabitants) and the number of savings banks in the province (per 100,000 inhabitants). Based on the discussion above, provinces with more bank branches in 1936 and with relatively more savings banks should have suffered less from the regulatory freeze.

After estimating the baseline empirical model on the full sample, we split the data in three subsamples corresponding to the three broad geographical areas (North, Center, South) in which Italy is usually subdivided. Our goal is to study the presence of non-linearities in the finance-inequality nexus. Finally, we explore dimensions of the economic structure of the Italian provinces through which banking development may have affected income inequality. In particular, we focus on the role of urban structure, migration, education and material infrastructures.

6 Banking development and income inequality

In this section, we investigate the relationship between local banking development and income inequality. Table 3 displays the baseline results (heteroskedasticity-robust standard errors, clustered at the province level, are reported in parentheses). The regressions in columns 1-5 study the impact of local banking development on the Gini coefficient, while columns 6-8 present results

with the (log) Theil index as the dependent variable.[13] In columns 1-2 and 6-7, we use data from the year 2001, while columns 3-4 report the regressions for the 2001-2011 average, and columns 5 and 8 use panel data from 2001 to 2011.

Column 1 shows the OLS results. The estimated coefficient of bank branch density equals -0.051 and is significant at the 5% level. In column 2, we treat bank branch density as endogenous and instrument for it using the number of bank branches and the number of savings banks in the province in 1936. The estimated coefficient is -0.193 (again significant at the 5% level). To conserve space, we only show the coefficients on the instrumental variables from the first-stage regression (bottom row of column 2). As expected, branch density in 2001 increases with the number of bank branches and savings banks in the province in 1936. Based on the prescriptions of the 1936 Italian banking regulation (see Guiso, Sapienza and Zingales, 2003), provinces with a larger number of bank branches and savings banks should have suffered less from the regulatory freeze. Results are very similar when we consider the 2001-2011 averages and the panel data. In particular, in column 5 we report the results of the Arellano Bond model in which we employ lagged values of the regressors as internal instruments as well as the set of external instruments comprising the indicators of tightness of the 1936 banking regulation. The coefficient on bank branch density is significant at the 5% level and equal to -0.155.

Altogether, the findings in Table 3 support the hypothesis that bank branch density tightens the income distribution. Looking at the set of controls, we find that a higher level of per capita GDP is associated with a higher level of income inequality. Moreover, the percentage of workers in the manufacturing sector is negatively correlated with the Gini index. Finally, inequality appears to be more pronounced in southern provinces.

The literature suggests that the effect of financial development on income inequality might be non-linear. The general equilibrium model of Greenwood and Jovanovic (1990) predicts an inverted U-shaped relationship between financial intermediary development and income inequality. That is, financial development could widen income inequality during the early stages of development, then tend to lessen it as average income rises and more households gain access to financial services. The distributional effect of financial deepening is thus adverse for the poor at early stages, but positive after a turning point. In Table 4, we report regression results for subsamples of provinces according to broad geographical areas (North, Center, South). Local banking development enters significantly, and with the expected sign, in the regression for the northern provinces. Coefficients on the control variables behave as in the full sample. Across all the empirical models, the coefficient on financial development is instead no longer significant for southern provinces; this is also partially true for the Center, with the exception of the regression using the year 2001. Since the North of Italy is the area with the highest level of per capita GDP, these findings suggest that the effectiveness

[13] From now on, we show only results from the estimations with the Gini index as dependent variable. Results are robust to using the Theil index as a measure of inequality.

of banking development in reducing income inequality varies according to the stage of economic development.

As a robustness check, in Table 5 we add to the regressions the Herfindahl-Hirschman Index (HHI) of bank branches in the province to allow for a possible role of bank concentration in income inequality. The literature suggests that bank concentration might affect the access to finance (see, e.g., Beck and Demirguc-Kunt, 2008; Degryse and Ongena, 2005). The reader might then wonder whether our instruments affect bank concentration and, in turn, bank concentration shapes the income distribution in the provinces (possibly leading to a violation of the exclusion restriction on the instruments). To assuage such possible concerns we then study whether bank concentration has a role in addition to local banking development. The estimates in Table 5 reveal that (this proxy for) bank competition has no statistically significant effect on income inequality. Further, the results for the impact of banking development on inequality remain essentially unaltered.

7 Economic structure and the banking-inequality nexus

Banking development can reduce income inequality through various channels. The extant literature has especially concentrated on mechanisms such as labor demand, entrepreneurship, and firm formation. By contrast, there is very limited evidence on the effects that financial development can have on income inequality through its impact on the economic structure. Yet, there is compelling evidence that structural factors such as urban structure and migration, infrastructures, and education can play a key role in income distribution (see, e.g., Calderon and Serven, 2004; World Bank, 2003; Ferreira, 1995; Lopez; 2003; and references therein). In Italy these structural factors are reputed to have a strong influence on income inequality (Ascher and Krupp, 2010; Farina and Franzini, 2015), and this makes Italy a good empirical laboratory to isolate the possible role of these factors in the finance-inequality nexus.

The availability of bank credit can influence agents' ability to purchase houses and land and move across geographical areas, thus affecting migratory flows. Banking development can also allow to finance material and immaterial infrastructures. Infrastructures can help smooth out inequalities, for example by promoting better access to investment opportunities for the poor. Further, a more developed local banking sector can improve agents' ability to accumulate human capital, helping them finance the costs of education and also making available the resources to finance the development and improvement of schools. Clearly, these structural factors do not necessarily work in the direction of mitigating income inequality. For instance, the development of IT infrastructures may widen the income gap between highly skilled workers and low skilled ones, due to the different ability of skilled and unskilled workers to take advantage of advances in information technology (see, e.g., Autor, 2014). In Tables 6-8 we explore different structural channels through which banking development can influence inequality. In Table 6, we focus on

the role of urban structure and geographical mobility (inter-province migratory flows). In Table 7, we consider the role of material and immaterial infrastructures. In Table 8, we study the role of human capital formation and education. In each table, we perform two kinds of tests. In Panel A, we add the indicators of economic structure to the baseline regressions and verify to what extent they tend to absorb the estimated effect of banking development on income inequality. In Panel B, we test directly the effect of banking development on the indicators of economic structure.

In Table 6, columns 1, 5 and 9 carry over the baseline results of Table 3. The specifications in columns 1-4 are the 2SLS regressions using data for year 2001, while those in columns 5-8 are the 2SLS regressions for the 2001-2011 averages. Finally, columns 9-12 report Arellano-Bond estimates. In column 2, 6 and 10 we add to the baseline specification a proxy for urban structure (the diffusion of urbanization), whereas in columns 3-4, 7-8 and 11-12 we insert two indicators of inter-province migratory flows. We capture the urban structure of the province using the percentage of population living in small municipalities (less than 15,000 inhabitants) in 2001. To capture migration, instead, we consider, alternatively, the (log) gross migratory flow of the province (sum of immigration and emigration flow) and the net migratory flow of the province (immigration minus emigration flow) in 1991. We focus on lagged values of the migratory flows to minimize endogeneity problems. The sign of the coefficient on bank branch density remains negative in all the specifications. However, interestingly, the newly added regressors tend to absorb the effect of the banking development indicator. In particular, the percentage of the population living in small municipalities has a negative and statistically significant effect on the Gini. That is, provinces with more diffused urbanization tend to have lower income inequality. When considering migration, both the gross and the net migratory flow positively affect the Gini. This could support the view that migration can exacerbate inequality inside local communities because only the relatively wealthy can sustain the sizeable costs of migration. Most interestingly, while the net migratory flow has no bearing for the results on banking development, when we insert in the regressions the gross migratory flow, the coefficient for banking development tends to lose its statistical significance. In Panel B of Table 6, we further obtain that banking development has a positive and significant effect on the percentage of the population living in small municipalities, and a negative effect on gross migratory flows. Overall, the results in the table suggest that geographical mobility and urban structure could be an important channel whereby banking development affects income distribution.

In Table 7, we investigate the effect of material and immaterial infrastructures. As noted, material infrastructures can reduce inequality by easing the access to productive opportunities by the poor (World Bank, 2003; Ferreira, 1995; Lopez; 2003). In Panel A, we find that a broad indicator of the material infrastructures of the province reduces income inequality. When we consider finer categories of infrastructures, we detect no significant effect of railway and road infrastructures on inequality, while we obtain some weak evidence that IT infrastructures exacerbate inequality. Mostly important for our purposes, we find that the estimated effect of banking development re-

mains essentially unaltered when we control for the various indicators of material infrastructures. Further, in Panel B we uncover no evidence that banking development significantly affects material infrastructures in the provinces. This might reflect the fact that in Italy a significant portion of infrastructures is financed through public (central and local government) budgets rather than through bank financing.

In Table 8, we turn to the role of human capital formation. In Panel A, we first add, as a proxy for education, the percentage of the provincial population with at least a secondary school degree (columns 2, 6, and 10). Higher education in the province appears to be associated with lower income inequality, confirming some of the implications of the Galor and Zeira (1993) model on the importance of education in the distribution of income. However, this result is only marginally significant (column 2). Next, we experiment by including an indicator for the quality of infrastructures for education (see columns 3, 7 and 11) and, more broadly, for the quality of infrastructures for cultural advancement. These indicators appear to have little power in explaining income inequality in the provinces. In Panel B, we test the impact of local banking development on the indicator for higher education, and on the two indices for education and cultural infrastructures. We find no evidence of a significant impact of banking development on the indicators. Plausibly, this could again reflect the relevant role of public budgets in financing education and school development in Italy (and, correspondingly, the limited influence of bank funding).

Overall, the results in Tables 6-8 support the hypothesis that, to the extent that the economic structure acts as a link between banking development and inequality, this link manifests itself especially through the impact of banks on geographical mobility and urban structure. By contrast, little evidence is found for a possible role of material infrastructures and human capital formation in the finance-inequality nexus.

8 Conclusion

In this paper, we have empirically investigated the relationship between financial development and income distribution and the role of the economic structure in this relationship. In particular, we have analyzed the impact of local banking development, measured by bank branch density, on income inequality in Italian provinces. Exploiting the Italian banking regulation of the 1930s to tackle endogeneity issues, we have found that local banking development has a significant negative effect on the Gini coefficient and other measures of inequality. When considering Italian macro areas (North, Center, South), the result is however significant only for the North, suggesting that the banking development-inequality nexus is non linear and depends on the stage of economic development.

In the second part of the paper, we have investigated the channels of influence of banking development on inequality, with an emphasis on structural aspects of the economy. We have studied

the influence of urban structure, geographical mobility, material and immaterial infrastructures, human capital formation, and education. The results suggest that urban structure and geographical mobility may play a relatively important role in the finance-inequality relation. The tests instead suggest limited influence of material infrastructures and education in the finance-inequality nexus. We have argued that these results can reflect the predominant role played by the State (relative to the banking sector) in financing the development of infrastructures and the education system.

Our empirical findings confirm the importance of financial development for the distribution of income. They also suggest relevant mechanisms of influence tied to the economic structure. More work is clearly needed to ascertain the contribution of structural factors to the finance-inequality nexus. We leave this and other relevant issues for future research.

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Table 1. Summary statistics

	Gini index		Theil index		Branches per 1,000 inhab		GDP per capita		Unemployment	
	Mean	*Std. Dev.*	Mean	*Std. Dev.*	Mean	*Std. Dev.*	Mean	*Std. Dev.*	Mean	*Std. Dev.*
Piemonte	0.346	*0.025*	0.263	*0.033*	0.666	*0.118*	23,330.94	*2,384.93*	5.316	*1.559*
Valle D'aosta	0.357	*0.024*	0.264	*0.040*	0.779	*0.016*	25,890.79	*1,541.18*	5.073	*3.031*
Lombardia	0.359	*0.028*	0.286	*0.048*	0.679	*0.079*	26,011.17	*3,266.72*	4.102	*1.128*
Trentino-Alto Adige	0.374	*0.032*	0.294	*0.046*	0.948	*0.103*	27,493.33	*2,311.03*	3.105	*0.866*
Veneto	0.351	*0.030*	0.271	*0.042*	0.740	*0.089*	25,626.58	*2,032.74*	4.312	*1.068*
Friuli-Venezia Giulia	0.342	*0.026*	0.250	*0.037*	0.737	*0.102*	24,456.03	*2,033.57*	4.534	*0.991*
Liguria	0.364	*0.029*	0.273	*0.040*	0.593	*0.043*	22,065.15	*1,950.35*	6.361	*2.072*
Emilia-Romagna	0.359	*0.025*	0.277	*0.035*	0.801	*0.093*	26,392.75	*2,503.59*	3.928	*1.454*
North	0.355	*0.028*	0.274	*0.042*	0.721	*0.120*	25,144.64	*2,917.70*	4.523	*1.607*
Toscana	0.355	*0.027*	0.267	*0.036*	0.645	*0.078*	23,308.66	*2,581.07*	5.380	*1.620*
Umbria	0.342	*0.026*	0.244	*0.031*	0.607	*0.059*	20,228.66	*1,330.33*	5.955	*1.115*
Marche	0.348	*0.025*	0.256	*0.032*	0.739	*0.069*	22,082.28	*2,185.21*	5.202	*1.469*
Lazio	0.360	*0.042*	0.262	*0.065*	0.479	*0.115*	21,185.24	*4,282.57*	9.047	*1.688*
Center	0.354	*0.031*	0.261	*0.044*	0.620	*0.122*	22,276.15	*3,117.72*	6.274	*2.209*
Abruzzo	0.350	*0.031*	0.250	*0.043*	0.508	*0.057*	18,158.83	*991.08*	7.923	*1.524*
Molise	0.357	*0.034*	0.253	*0.046*	0.424	*0.049*	16,438.18	*1,407.66*	9.332	*1.077*
Campania	0.364	*0.036*	0.262	*0.050*	0.285	*0.039*	14,112.28	*1,164.06*	13.018	*3.010*
Puglia	0.362	*0.040*	0.263	*0.054*	0.327	*0.035*	14,044.20	*1,324.22*	13.633	*2.362*
Basilicata	0.352	*0.037*	0.246	*0.049*	0.415	*0.014*	15,808.56	*1,317.85*	12.345	*1.849*
Calabria	0.362	*0.040*	0.256	*0.054*	0.252	*0.023*	13,734.90	*1,422.49*	14.351	*3.559*
Sicilia	0.373	*0.040*	0.271	*0.056*	0.357	*0.031*	13,856.99	*1,382.53*	16.170	*4.913*
Sardegna	0.348	*0.034*	0.239	*0.046*	0.439	*0.060*	16,502.94	*2,133.14*	12.411	*2.497*
South	0.361	*0.038*	0.258	*0.052*	0.361	*0.088*	14,925.29	*2,066.91*	13.201	*4.167*
Italy	0.357	*0.033*	0.266	*0.046*	0.575	*0.195*	20,987.99	*5,308.80*	7.913	*4.865*

Table 2. Correlation matrix

	Gini index	Theil index	Branches per 1,000 inhab	GDP per capita	Unemployment	Agriculture (share)	Manufacturing (share)	Construction (share)	Trade openness
Gini index	1.000								
Theil index	0.949	1.000							
	0.000								
Branches per 1,000 inhab	-0.134	0.064	1.000						
	0.000	*0.030*							
GDP per capita	-0.147	0.097	0.839	1.000					
	0.000	*0.001*	*0.000*						
Unemployment	0.116	-0.110	-0.829	-0.845	1.000				
	0.000	*0.000*	*0.000*	*0.000*					
Agriculture (share)	0.051	-0.153	-0.493	-0.694	0.546	1.000			
	0.084	*0.000*	*0.000*	*0.000*	*0.000*				
Manufacturing (share)	-0.150	0.055	0.558	0.572	-0.637	-0.497	1.000		
	0.000	*0.062*	*0.000*	*0.000*	*0.000*	*0.000*			
Construction (share)	-0.093	-0.191	-0.245	-0.275	0.234	0.261	-0.240	1.000	
	0.002	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*		
Trade openness	-0.095	0.084	0.524	0.646	-0.590	-0.612	0.638	-0.270	1.000
	0.001	*0.005*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	

Note: The table reports the pairwise correlation coefficients for the variables included in the regression analysis. P-values are reported in italics.

Table 3. Banking development and income inequality: baseline estimations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Year 2001		Average 2001-2011		Panel 2001-2011	Year 2001		Panel 2001-2011
	OLS	2SLS	OLS	2SLS	Arellano-Bond	OLS	2SLS	Arellano-Bond
VARIABLES	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Theil (log)	Theil (log)	Theil (log)
Branch density (log)	-0.051**	-0.193**	-0.050**	-0.174***	-0.155**	-0.111**	-0.436***	-0.350**
	(0.021)	(0.076)	(0.022)	(0.064)	(0.061)	(0.044)	(0.168)	(0.135)
Per capita GDP (log)	0.066	0.131**	0.198***	0.254***	0.245***	0.239**	0.389***	0.593***
	(0.042)	(0.060)	(0.061)	(0.067)	(0.060)	(0.099)	(0.136)	(0.134)
Unemployment (log)	0.006	-0.023	-0.001	-0.043	-0.013	0.006	-0.059	-0.031
	(0.015)	(0.018)	(0.023)	(0.030)	(0.010)	(0.031)	(0.039)	(0.021)
Agriculture (share)	0.033	0.175	-0.204	-0.117	-0.051	-0.061	0.267	-0.245
	(0.100)	(0.144)	(0.138)	(0.143)	(0.135)	(0.210)	(0.320)	(0.298)
Manufacturing (share)	-0.194**	-0.220***	-0.234***	-0.220***	-0.193**	-0.194	-0.252*	-0.151
	(0.078)	(0.071)	(0.074)	(0.075)	(0.075)	(0.156)	(0.148)	(0.160)
Construction (share)	-0.055	0.357	-0.186	-0.197	-0.242	-0.443	0.506	-0.673
	(0.267)	(0.411)	(0.306)	(0.310)	(0.266)	(0.574)	(0.891)	(0.589)
Trade openness (log)	-0.011*	-0.010	-0.011	-0.013	-0.009	-0.029**	-0.027	-0.023
	(0.006)	(0.008)	(0.007)	(0.008)	(0.006)	(0.014)	(0.019)	(0.014)
Center	0.008	0.003	0.000	0.004	-0.000	-0.008	-0.021	-0.030
	(0.010)	(0.011)	(0.010)	(0.010)	(0.011)	(0.021)	(0.023)	(0.024)
South	0.058***	0.020	0.061***	0.046**	0.025	0.098**	0.010	0.009
	(0.021)	(0.028)	(0.023)	(0.023)	(0.023)	(0.043)	(0.062)	(0.053)
North East	0.007	0.019	-0.005	0.004	0.006	-0.002	0.025	-0.001
	(0.014)	(0.014)	(0.013)	(0.013)	(0.014)	(0.029)	(0.030)	(0.030)
Instruments								
Saving banks 36		0.122***		0.134***			0.122***	
		(0.042)		(0.041)			(0.042)	
N. branches 36		0.004**		0.004**			0.004**	
		(0.002)		(0.002)			(0.002)	
Year fixed effects	N	N	N	N	Y	N	N	Y
Observations	103	103	103	103	1,133	103	103	1,133
R-squared	0.687	0.552	0.362	0.177		0.435	0.153	
F instruments		9.006		11.92			9.006	
Overid p value		0.460		0.911	0.999		0.356	0.999

Note: The table reports regression coefficients and associated standard errors (in parentheses). The time-span of the regressions, the dependent variables and the estimation method are reported at the top of each column. The set of instruments includes the number of bank branches in the province in 1936 (per 100,000 inhabitants) and the number of savings banks in the province in 1936 (per 100,000 inhabitants). *** significant at 1%, ** significant at 5%, * significant at 10%. The table reports the value of the R2 and the value of the F-statistics for a test of the weakness of the instruments. The table also reports the p-values of a Sargan test, as a test of overidentifying restrictions.

Table 4. Banking development and income inequality: non-linearity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Year 2001			Average 2001-2011			Panel 2001-2011		
	2SLS			2SLS			Arellano-Bond		
	North	Center	South	North	Center	South	North	Center	South
VARIABLES	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)
Branch density (log)	-0.227**	-0.137**	-0.096	-0.295***	-0.070	0.056	-0.247**	-0.090	0.061
	(0.110)	(0.069)	(0.137)	(0.104)	(0.081)	(0.134)	(0.099)	(0.072)	(0.131)
Per capita GDP (log)	0.295***	0.066	-0.061	0.431***	0.280***	-0.178	0.410***	0.233***	-0.156
	(0.080)	(0.045)	(0.085)	(0.075)	(0.085)	(0.187)	(0.073)	(0.046)	(0.150)
Unemployment (log)	-0.027	-0.006	0.019	-0.088***	0.030	-0.015	-0.024*	0.005	-0.000
	(0.020)	(0.028)	(0.033)	(0.031)	(0.051)	(0.044)	(0.012)	(0.024)	(0.019)
Agriculture (share)	0.583	0.073	-0.026	0.386	0.027	-0.460**	0.311	0.102	-0.397**
	(0.498)	(0.172)	(0.122)	(0.469)	(0.227)	(0.212)	(0.450)	(0.186)	(0.191)
Manufacturing (share)	-0.172	-0.073	-0.119	-0.193*	-0.142*	-0.399*	-0.182*	-0.174*	-0.362*
	(0.112)	(0.070)	(0.151)	(0.113)	(0.078)	(0.232)	(0.105)	(0.095)	(0.190)
Construction (share)	0.156	-1.540*	0.752*	-0.182	-1.506*	0.570	-0.001	-1.698***	0.272
	(0.545)	(0.837)	(0.447)	(0.423)	(0.899)	(0.552)	(0.376)	(0.571)	(0.404)
Trade openness (log)	-0.045*	-0.040**	-0.001	-0.026	-0.036**	0.002	-0.005	-0.030*	0.002
	(0.026)	(0.017)	(0.005)	(0.029)	(0.017)	(0.008)	(0.021)	(0.015)	(0.007)
Instruments									
Saving banks 36	0.068	0.120**	0.224	0.089	0.100*	0.196			
	(0.063)	(0.056)	(0.228)	(0.070)	(0.059)	(0.216)			
N. branches 36	0.004**	0.013**	0.007	0.003*	0.009**	0.007			
	(0.002)	(0.005)	(0.006)	(0.002)	(0.003)	(0.006)			
Year fixed effects	N	N	N	N	N	N	Y	Y	Y
Observations	46	21	36	46	21	36	506	231	396
R-squared	0.046	0.591	0.541	0.210	0.816	0.366			
F instruments	5.998	4.513	0.985	6.491	4.241	1.236			
Overid p value	0.760	0.229	0.947	0.744	0.511	0.128	0.991	0.671	0.592

Note: The table reports regression coefficients and associated standard errors (in parentheses). The time-span of the regressions, the dependent variables and the estimation method are reported at the top of each column. The set of instruments includes the number of bank branches in the province in 1936 (per 100,000 inhabitants) and the number of savings banks in the province in 1936 (per 100,000 inhabitants). *** significant at 1%, ** significant at 5%, * significant at 10%. The table reports the value of the R2 and the value of the F-statistics for a test of the weakness of the instruments. The table also reports the p-values of a Sargan test, as a test of overidentifying restrictions.

Table 5. Banking development, bank competition, and income inequality

VARIABLES	(1) Year 2001 2SLS Gini (log)	(2) Average 2001-2011 2SLS Gini (log)	(3) Panel 2001-2011 Arellano-Bond Gini (log)
Branch density (log)	-0.248***	-0.179***	-0.153***
	(0.091)	(0.062)	(0.056)
HHI of branches	-0.634	-0.123	-0.006
	(0.898)	(1.054)	(0.186)
Per capita GDP (log)	0.147**	0.262***	0.244***
	(0.067)	(0.074)	(0.056)
Unemployment (log)	-0.051	-0.047	-0.013
	(0.040)	(0.042)	(0.010)
Agriculture (share)	0.413	-0.073	-0.050
	(0.404)	(0.366)	(0.132)
Manufacturing (share)	-0.233**	-0.223***	-0.193**
	(0.093)	(0.086)	(0.075)
Construction (share)	0.541	-0.261	-0.244
	(0.621)	(0.692)	(0.292)
Trade openness (log)	-0.018	-0.015	-0.009
	(0.017)	(0.018)	(0.006)
Instruments			
Saving banks 36	0.068	0.120**	
	(0.063)	(0.056)	
N. branches 36	0.004**	0.013**	
	(0.002)	(0.005)	
Region fixed effects	Y	Y	Y
Year fixed effects	N	N	Y
Observations	103	103	1,133
R-squared	0.234	0.229	

Note: The table reports regression coefficients and associated standard errors (in parentheses). The time-span of the regressions, the dependent variables and the estimation method are reported at the top of each column. The set of instruments includes the number of bank branches in the province in 1936 (per 100,000 inhabitants) and the number of savings banks in the province in 1936 (per 100,000 inhabitants). *** significant at 1%, ** significant at 5%, * significant at 10%. The table reports the value of the R^2 and the value of the F-statistics for a test of the weakness of the instruments. The table also reports the p-values of a Sargan test, as a test of overidentifying restrictions.

Table 6. Banking development and economic structure: urbanization and migration

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	15)
	Panel A												Panel B		
	Year 2001				Average 2001-2011				Panel 2001-2011				Year 2001	Year 1991	Year 1991
	2SLS				2SLS				Arellano-Bond					2SLS	
VARIABLES	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Small Muncipality	Gross flow	Net flow
Branch density (log)	-0.193**	-0.179**	-0.187*	-0.238***	-0.174***	-0.141**	-0.099	-0.234***	-0.155**	-0.124**	-0.074	-0.221***	0.374**	-1.944**	-0.818
	(0.076)	(0.078)	(0.113)	(0.088)	(0.064)	(0.062)	(0.076)	(0.066)	(0.061)	(0.061)	(0.072)	(0.074)	(0.175)	(0.771)	(1.187)
Small municipality 2001 (share)		-0.043				-0.090***				-0.076***					
		(0.031)				(0.024)				(0.026)					
Gross flow 1991 (log)			0.003				0.027**				0.029**				
			(0.017)				(0.013)				(0.012)				
Net flow 1991 (log)				0.008				0.022***				0.023***			
				(0.007)				(0.006)				(0.006)			
Per capita GDP (log)	0.131**	0.122**	0.124	0.192**	0.254***	0.222***	0.161*	0.253***	0.245***	0.224***	0.158**	0.250***	-0.253*	1.662**	4.543***
	(0.060)	(0.062)	(0.093)	(0.076)	(0.067)	(0.064)	(0.083)	(0.065)	(0.060)	(0.058)	(0.072)	(0.062)	(0.149)	(0.745)	(1.613)
Unemployment (log)	-0.023	-0.024	-0.023	-0.014	-0.043	-0.053*	-0.045*	-0.071**	-0.013	-0.016*	-0.014	-0.024**	-0.010	0.193	-0.066
	(0.018)	(0.018)	(0.019)	(0.017)	(0.030)	(0.027)	(0.026)	(0.028)	(0.010)	(0.009)	(0.009)	(0.010)	(0.056)	(0.243)	(0.386)
Agriculture (share)	0.175	0.202	0.182	0.254	-0.117	-0.088	-0.053	-0.139	-0.051	-0.011	0.023	-0.041	0.553	-2.182	11.765**
	(0.144)	(0.131)	(0.136)	(0.231)	(0.143)	(0.119)	(0.109)	(0.210)	(0.135)	(0.113)	(0.098)	(0.215)	(0.507)	(2.677)	(5.111)
Manufacturing (share)	-0.220***	-0.204***	-0.219***	-0.112	-0.220***	-0.200***	-0.235***	-0.168**	-0.193**	-0.170**	-0.205***	-0.130*	0.376*	-1.147	2.709
	(0.071)	(0.070)	(0.071)	(0.086)	(0.075)	(0.070)	(0.063)	(0.068)	(0.075)	(0.070)	(0.060)	(0.067)	(0.226)	(1.170)	(1.922)
Construction (share)	0.357	0.566	0.406	0.238	-0.197	0.149	0.111	-0.105	-0.242	0.003	0.048	-0.128	4.631***	-9.028	-7.014
	(0.411)	(0.362)	(0.368)	(0.450)	(0.310)	(0.258)	(0.248)	(0.289)	(0.266)	(0.217)	(0.207)	(0.254)	(1.198)	(7.459)	(12.305)
Trade openness (log)	-0.010	-0.011	-0.010	-0.039***	-0.013	-0.017**	-0.010	-0.044***	-0.009	-0.012**	-0.007	-0.032***	-0.036	0.076	-0.316
	(0.008)	(0.007)	(0.008)	(0.015)	(0.008)	(0.007)	(0.007)	(0.012)	(0.006)	(0.005)	(0.006)	(0.010)	(0.028)	(0.129)	(0.282)
Instruments															
Saving banks 36	0.123***	0.121***	0.087**	0.096*	0.134***	0.133***	0.106**	0.110*					0.123***	0.079	0.080*
	(0.042)	(0.043)	(0.044)	(0.052)	(0.041)	(0.042)	(0.042)	(0.048)					(0.042)	(0.063)	(0.065)
N. branches 36	0.004**	0.004**	0.003	0.004*	0.004**	0.004**	0.002	0.003					0.004**	0.010***	0.006**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)					(0.002)	(0.003)	(0.003)
Region fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	N	N	N	N	N	N	N	N	Y	Y	Y	Y	N	N	N
Observations	103	103	103	65	103	103	103	65	1,133	1,133	1,133	715	103	103	65
R-squared	0.552	0.586	0.564	0.301	0.177	0.340	0.426	0.301					0.449	0.021	0.461
F instruments	9.006	7.421	3.448	5.200	11.92	10.08	5.298	6.448					9.006	5.499	3.825
Overid p value	0.460	0.388	0.504	0.681	0.911	0.619	0.504	0.681	0.999	0.975	0.897	0.999	0.154	0.350	0.0807

Note: The table reports regression coefficients and associated standard errors (in parentheses). The time-span of the regressions, the dependent variables and the estimation method are reported at the top of each column. In Panel A, we add the indicators of economic structure to the baseline regressions. In Panel B, we test the effect of banking development on the indicators of economic structure. The set of instruments includes the number of bank branches in the province in 1936 (per 100,000 inhabitants) and the number of savings banks in the province in 1936 (per 100,000 inhabitants). *** significant at 1%, ** significant at 5%, * significant at 10%. The table reports the value of the R2 and the value of the F-statistics for a test of the weakness of the instruments. The table also reports the p-values of a Sargan test, as a test of overidentifying restrictions.

Table 7. Banking development and economic structure: material infrastructure

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Panel A												Panel B			
	Year 2001				Average 2001-2011				Panel 2001-2011				Year 2001			
	2SLS				2SLS				Arellano-Bond				2SLS			
VARIABLES	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Material Infrastr.	Street index	Railway index	IT Broad. index
Branch density (log)	-0.209***	-0.184**	-0.198***	-0.179**	-0.176***	-0.173**	-0.177***	-0.144*	-0.156**	-0.152**	-0.156**	-0.123*	0.126	0.226	-0.120	-0.819*
	(0.073)	(0.080)	(0.071)	(0.090)	(0.060)	(0.069)	(0.066)	(0.074)	(0.059)	(0.065)	(0.060)	(0.070)	(0.734)	(0.540)	(1.140)	(0.450)
Material infrastructure	-0.044**				-0.031*				-0.008							
	(0.022)				(0.019)				(0.007)							
Street index		-0.003				-0.004				-0.005						
		(0.013)				(0.014)				(0.014)						
Railway index			-0.019*				-0.008				-0.007					
			(0.010)				(0.010)				(0.009)					
IT and broadband index				0.011				0.032*				0.032*				
				(0.019)				(0.017)				(0.016)				
Per capita GDP (log)	0.126**	0.128**	0.121**	0.118	0.247***	0.252***	0.245***	0.210***	0.244***	0.242***	0.239***	0.207***	-0.357	-0.020	-0.613	1.071***
	(0.056)	(0.060)	(0.054)	(0.074)	(0.065)	(0.072)	(0.062)	(0.073)	(0.058)	(0.064)	(0.055)	(0.068)	(0.485)	(0.410)	(0.689)	(0.386)
Unemployment (log)	-0.022	-0.021	-0.025	-0.023	-0.038	-0.043	-0.046	-0.050*	-0.013	-0.013	-0.014	-0.016*	0.060	0.171	-0.099	0.088
	(0.016)	(0.019)	(0.018)	(0.018)	(0.028)	(0.030)	(0.032)	(0.027)	(0.010)	(0.010)	(0.010)	(0.009)	(0.179)	(0.152)	(0.370)	(0.128)
Agriculture (share)	0.006	0.169	0.147	0.211*	-0.176	-0.118	-0.128	0.018	-0.074	-0.052	-0.059	0.088	-5.062***	0.417	-1.632	-3.853***
	(0.128)	(0.142)	(0.130)	(0.122)	(0.140)	(0.145)	(0.143)	(0.130)	(0.127)	(0.136)	(0.132)	(0.117)	(1.535)	(1.071)	(2.275)	(0.901)
Manufacturing (share)	-0.300***	-0.219***	-0.253***	-0.216***	-0.295***	-0.223***	-0.238***	-0.220***	-0.209***	-0.197**	-0.207***	-0.188***	-2.779***	-0.307	-1.674	-0.296
	(0.079)	(0.072)	(0.074)	(0.069)	(0.071)	(0.083)	(0.074)	(0.070)	(0.068)	(0.083)	(0.071)	(0.070)	(0.745)	(0.605)	(1.222)	(0.546)
Construction (share)	-0.149	0.346	0.193	0.490	-0.499*	-0.189	-0.272	0.172	-0.303	-0.233	-0.291	0.080	-14.656***	3.344	-8.962	-13.817**
	(0.313)	(0.393)	(0.344)	(0.315)	(0.298)	(0.298)	(0.314)	(0.259)	(0.244)	(0.254)	(0.263)	(0.214)	(5.115)	(2.969)	(6.128)	(2.791)
Trade openness (log)	-0.005	-0.010	-0.009	-0.010	-0.008	-0.013	-0.012	-0.015**	-0.008	-0.009	-0.008	-0.011*	0.103**	0.061	0.068	0.048
	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.045)	(0.056)	(0.106)	(0.054)
Instruments																
Saving banks 36	0.139***	0.100**	0.130***	0.097**	0.139***	0.112***	0.130***	0.115**					0.123***	0.123***	0.123***	0.123***
	(0.043)	(0.040)	(0.043)	(0.046)	(0.043)	(0.039)	(0.043)	(0.044)					(0.042)	(0.042)	(0.042)	(0.042)
N. branches 36	0.004**	0.005***	0.004**	0.004**	0.004**	0.005***	0.004**	0.004**					0.004**	0.004**	0.004**	0.004**
	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)					(0.002)	(0.002)	(0.002)	(0.002)
Region fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	N	N	N	N	N	N	N	N	Y	Y	Y	Y	N	N	N	N
Observations	103	103	103	103	103	103	103	103	1,133	1,133	1,133	1,133	103	103	103	103
R-squared	0.555	0.568	0.576	0.579	0.205	0.180	0.177	0.316					0.521	0.101	0.154	0.678
F instruments	8.956	8.741	9.092	6.464	12.26	12.10	9.988	8.704					9.006	9.006	9.006	9.006
Overid p value	0.571	0.477	0.531	0.467	0.982	0.982	0.950	0.999	0.999	0.995	0.991	0.999	0.667	0.001	0.448	0.250

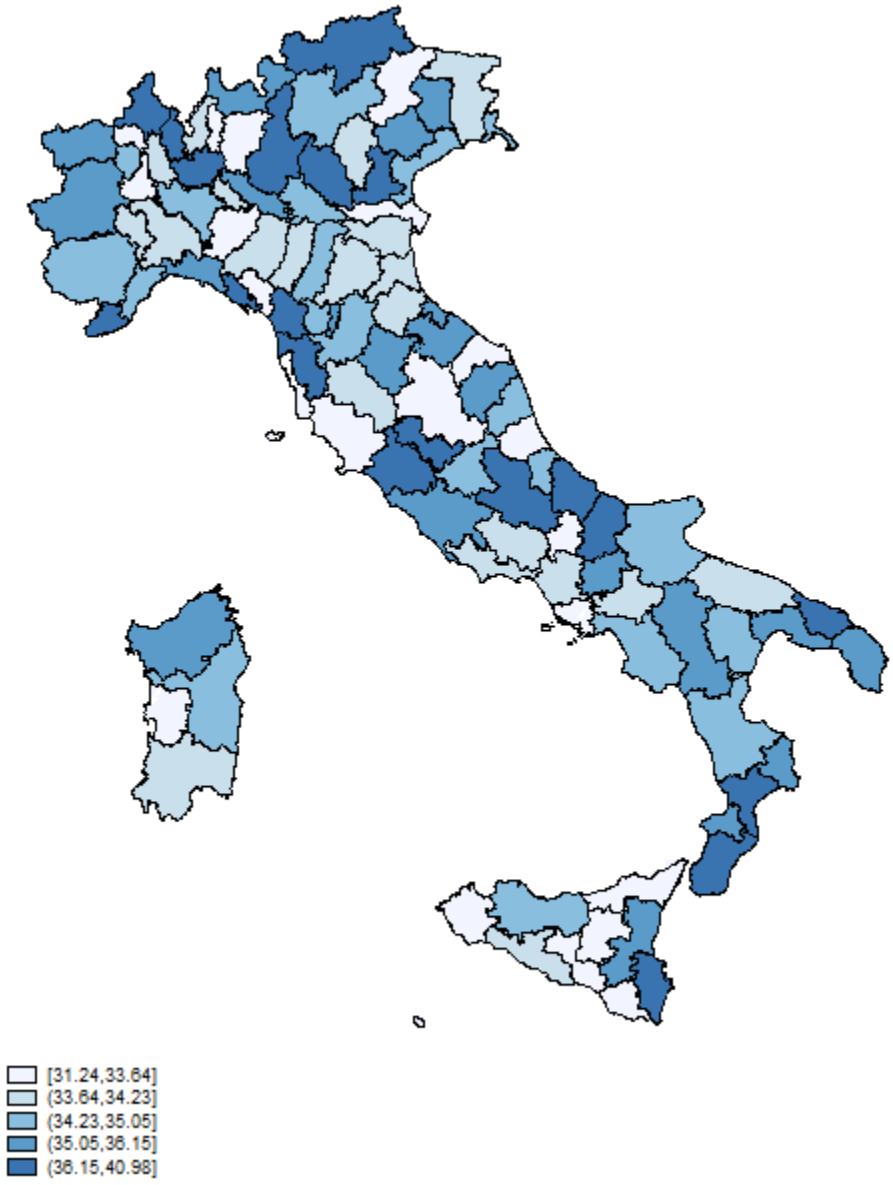
Note: The table reports regression coefficients and associated standard errors (in parentheses). The time-span of the regressions, the dependent variables and the estimation method are reported at the top of each column. In Panel A, we add the indicators of economic structure to the baseline regressions. In Panel B, we test the effect of banking development on the indicators of economic structure. The set of instruments includes the number of bank branches in the province in 1936 (per 100,000 inhabitants) and the number of savings banks in the province in 1936 (per 100,000 inhabitants). *** significant at 1%, ** significant at 5%, * significant at 10%. The table reports the value of the R2 and the value of the F-statistics for a test of the weakness of the instruments. The table also reports the p-values of a Sargan test, as a test of overidentifying restrictions.

Table 8. Banking development and economic structure: human capital formation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Panel A												Panel B		
	Year 2001				Average 2001-2011				Panel 2001-2011				Year 2001		
VARIABLES	2SLS				2SLS				Arellano-Bond				2SLS		
	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Gini (log)	Secondary degree	Infrastr. for education	Cult. and recr. struct
Branch density (log)	-0.193**	-0.192***	-0.192**	-0.183***	-0.174***	-0.172***	-0.172**	-0.175***	-0.155**	-0.155***	-0.142**	-0.183**	0.144	-0.055	0.519
	(0.076)	(0.066)	(0.075)	(0.066)	(0.064)	(0.058)	(0.067)	(0.064)	(0.061)	(0.056)	(0.070)	(0.082)	(0.423)	(0.486)	(0.857)
Secondary degree 2001		-0.004*				-0.001				-0.000					
		(0.002)				(0.002)				(0.002)					
Infrastructure for education			-0.015				0.009				0.049*				
			(0.020)				(0.019)				(0.027)				
Cultural and recreation struct.				-0.015				0.003				0.073			
				(0.012)				(0.011)				(0.057)			
Per capita GDP (log)	0.131**	0.170**	0.137**	0.138**	0.254***	0.263***	0.248***	0.252***	0.245***	0.247***	0.217***	0.206*	0.996**	0.426	0.489
	(0.060)	(0.072)	(0.065)	(0.059)	(0.067)	(0.074)	(0.074)	(0.071)	(0.060)	(0.065)	(0.069)	(0.117)	(0.407)	(0.316)	(0.676)
Unemployment (log)	-0.023	-0.017	-0.021	-0.021	-0.043	-0.041	-0.045	-0.043	-0.013	-0.013	-0.018*	-0.017	0.185	0.112	0.117
	(0.018)	(0.015)	(0.017)	(0.017)	(0.030)	(0.028)	(0.028)	(0.030)	(0.010)	(0.010)	(0.010)	(0.013)	(0.127)	(0.159)	(0.200)
Agriculture (share)	0.175	0.106	0.111	0.097	-0.117	-0.148	-0.079	-0.098	-0.051	-0.055	0.154	0.344	-1.998*	-4.202***	-5.119***
	(0.144)	(0.125)	(0.123)	(0.125)	(0.143)	(0.148)	(0.140)	(0.140)	(0.135)	(0.131)	(0.137)	(0.262)	(1.060)	(0.957)	(1.425)
Manufacturing (share)	-0.220***	-0.291***	-0.232***	-0.260***	-0.220***	-0.242***	-0.214***	-0.210***	-0.193**	-0.196**	-0.151**	0.015	-1.926***	-0.834	-2.675***
	(0.071)	(0.084)	(0.071)	(0.074)	(0.075)	(0.083)	(0.071)	(0.073)	(0.075)	(0.079)	(0.074)	(0.136)	(0.523)	(0.515)	(0.635)
Construction (share)	0.357	0.227	0.162	0.234	-0.197	-0.238	-0.110	-0.177	-0.242	-0.249	0.164	0.170	-3.891*	-12.735***	-7.891*
	(0.411)	(0.353)	(0.312)	(0.353)	(0.310)	(0.303)	(0.292)	(0.306)	(0.266)	(0.255)	(0.243)	(0.298)	(2.209)	(3.172)	(4.160)
Trade openness (log)	-0.010	-0.009	-0.010	-0.008	-0.013	-0.013	-0.013	-0.013	-0.009	-0.009	-0.010	-0.016*	0.019	0.007	0.098
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.006)	(0.006)	(0.006)	(0.008)	(0.050)	(0.052)	(0.060)
Instruments															
Saving banks 36	0.123***	0.139***	0.118***	0.122***	0.134***	0.157***	0.132***	0.135***					0.123***	0.123***	0.123***
	(0.042)	(0.043)	(0.043)	(0.042)	(0.041)	(0.043)	(0.043)	(0.040)					(0.042)	(0.042)	(0.042)
N. branches 36	0.004**	0.004**	0.005**	0.005***	0.004**	0.004**	0.004**	0.004***					0.004**	0.004**	0.004**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)					(0.002)	(0.002)	(0.002)
Region fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	N	N	N	N	N	N	N	N	Y	Y	Y	Y	N	N	N
Observations	103	103	103	103	103	103	103	103	1,133	1,133	1,133	1,133	103	103	103
R-squared	0.552	0.576	0.558	0.578	0.177	0.185	0.186	0.173					0.445	0.483	0.605
F instruments	9.006	11.57	9.797	10.53	11.92	14.29	11.62	13.51					9.006	9.006	9.006
Overid p value	0.460	0.642	0.435	0.381	0.911	0.998	0.903	0.922	0.999	0.998	0.999	0.998	0.041	0.837	0.563

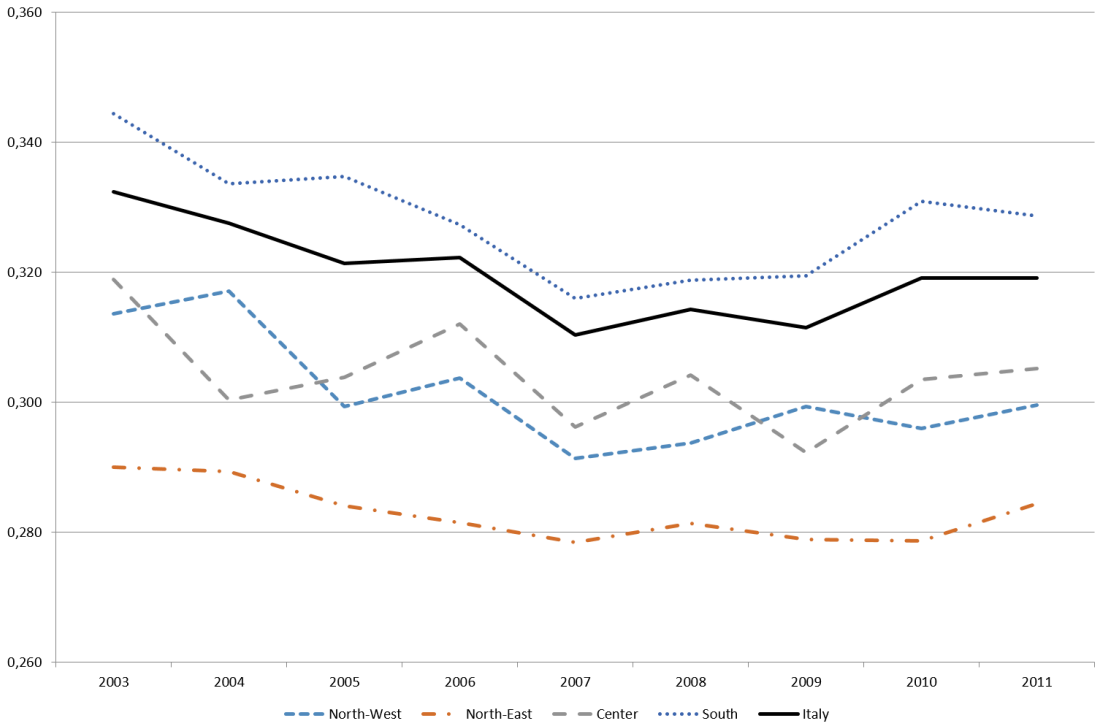
Note: The table reports regression coefficients and associated standard errors (in parentheses). The time-span of the regressions, the dependent variables and the estimation method are reported at the top of each column. In Panel A, we add the indicators of economic structure to the baseline regressions. In Panel B, we test the effect of banking development on the indicators of economic structure. The set of instruments includes the number of bank branches in the province in 1936 (per 100,000 inhabitants) and the number of savings banks in the province in 1936 (per 100,000 inhabitants). *** significant at 1%, ** significant at 5%, * significant at 10%. The table reports the value of the R2 and the value of the F-statistics for a test of the weakness of the instruments. The table also reports the p-values of a Sargan test, as a test of overidentifying restrictions.

Figure 1. Gini coefficient: 2010



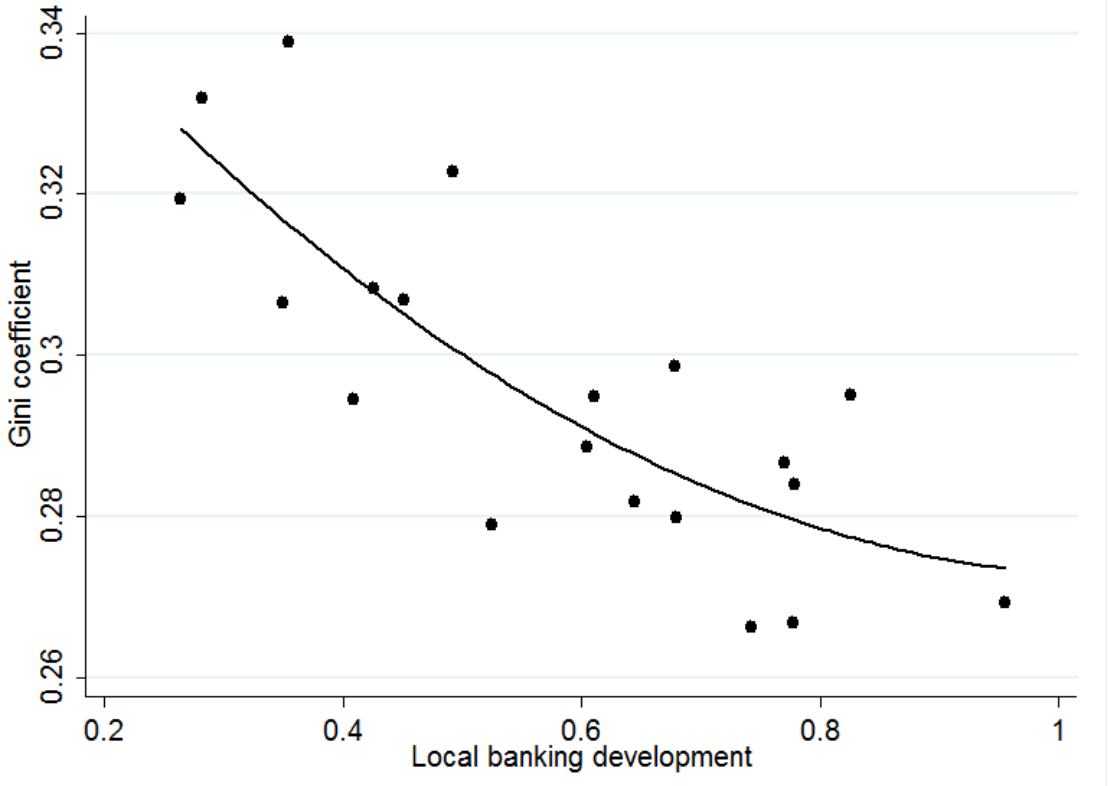
Note: Our calculations on Italian Department of Finance and Istat data. The map shows the level of the Gini coefficient, in 2010 in the 103 Italian provinces, classified in quintiles.

Figure 2. Gini coefficient evolution: 2003 - 2011



Note: Our calculations on Istat data.

Figure 3. Local banking development and income inequality



Note: Our calculations on Bank of Italy and Istat data for Italian regions.

Appendix Table (Not for Publication)

Table A.1 Summary statistics

	Gini coefficient		Theil coefficient		Branches per 1,000 inhab		GDP per capita		Unemployment rate	
	Mean	*Std. Dev.*	Mean	*Std. Dev.*	Mean	*Std. Dev.*	Mean	*Std. Dev.*	Mean	*Std. Dev.*
Torino	35.60	*0.30*	0.266	*0.009*	0.501	*0.006*	28228	*985*	6.436	*2.323*
Vercelli	31.90	*0.20*	0.216	*0.002*	0.755	*0.008*	28803	*1003*	4.658	*0.806*
Novara	34.30	*0.30*	0.251	*0.009*	0.587	*0.014*	27960	*806*	6.115	*1.407*
Cuneo	34.70	*0.20*	0.252	*0.001*	0.888	*0.005*	30036	*1007*	2.922	*0.506*
Asti	34.30	*0.30*	0.245	*0.008*	0.731	*0.009*	25032	*1106*	4.729	*1.26*
Alessandria	33.60	*0.10*	0.233	*0.003*	0.695	*0.005*	27524	*1168*	4.979	*0.51*
Aosta	35.00	*1.00*	0.249	*0.028*	0.77	*0.014*	34227	*903*	3.655	*0.703*
Imperia	36.10	*0.30*	0.262	*0.003*	0.553	*0.007*	25231	*1360*	6.276	*2.19*
Savona	35.40	*0.20*	0.255	*0.003*	0.659	*0.011*	27698	*897*	4.773	*0.492*
Genova	37.20	*0.30*	0.282	*0.002*	0.596	*0.009*	27654	*1123*	5.366	*0.787*
La Spezia	33.60	*0.30*	0.225	*0.004*	0.616	*0.01*	25400	*811*	5.735	*1.282*
Varese	35.40	*0.30*	0.265	*0.006*	0.553	*0.015*	29460	*1149*	4.351	*1.424*
Como	36.40	*0.20*	0.283	*0.004*	0.631	*0.01*	27646	*1513*	4.541	*0.826*
Sondrio	33.30	*0.10*	0.234	*0.004*	0.7	*0.017*	29498	*1776*	4.638	*1.101*
Milano	40.90	*0.50*	0.36	*0.013*	0.652	*0.014*	37498	*637*	4.603	*1.063*
Bergamo	34.90	*0.30*	0.264	*0.007*	0.703	*0.017*	31447	*985*	3.205	*0.502*
Brescia	35.70	*0.30*	0.275	*0.009*	0.776	*0.023*	31171	*965*	4.228	*1.24*
Pavia	34.90	*0.20*	0.252	*0.005*	0.63	*0.011*	26906	*1220*	4.817	*0.841*
Cremona	33.60	*0.10*	0.237	*0.002*	0.809	*0.015*	28546	*1205*	4.724	*1.35*
Mantova	34.10	*0.20*	0.247	*0.005*	0.82	*0.009*	32110	*813*	4.369	*1.432*
Bolzano	38.10	*1.00*	0.296	*0.017*	0.841	*0.01*	35191	*1055*	2.621	*0.184*
Trento	34.60	*0.40*	0.245	*0.008*	1.064	*0.006*	30256	*728*	3.409	*0.544*
Verona	36.50	*0.10*	0.279	*0.004*	0.812	*0.014*	30181	*485*	4.108	*0.578*
Vicenza	34.00	*0.20*	0.251	*0.006*	0.774	*0.013*	30281	*873*	4.302	*1.011*
Belluno	32.20	*0.10*	0.222	*0.004*	0.909	*0.024*	29885	*863*	3.17	*1.231*
Treviso	35.50	*0.30*	0.27	*0.008*	0.76	*0.018*	28938	*859*	4.409	*1.281*
Venezia	34.40	*0.20*	0.243	*0.006*	0.615	*0.009*	29843	*754*	4.73	*1.439*
Padova	36.50	*0.30*	0.279	*0.008*	0.708	*0.011*	30052	*624*	4.227	*1.035*
Rovigo	31.20	*0.20*	0.202	*0.003*	0.744	*0.012*	26745	*1064*	4.206	*1.046*
Udine	34.10	*0.20*	0.241	*0.005*	0.879	*0.005*	28548	*1071*	4.49	*1.232*
Gorizia	31.80	*0.30*	0.205	*0.007*	0.772	*0.012*	26396	*630*	4.756	*1.242*
Trieste	34.20	*0.20*	0.24	*0.003*	0.604	*0.012*	31154	*522*	4.219	*0.54*
Piacenza	35.70	*0.20*	0.263	*0.007*	0.781	*0.022*	29838	*1082*	2.363	*0.401*
Parma	36.70	*0.20*	0.278	*0.005*	0.845	*0.022*	32126	*553*	3.012	*0.816*
Reggio Emilia	34.50	*0.40*	0.248	*0.008*	0.8	*0.017*	30684	*1120*	3.434	*1.647*
Modena	35.60	*0.30*	0.266	*0.007*	0.74	*0.02*	33412	*1520*	4.321	*1.652*
Bologna	36.50	*0.30*	0.276	*0.007*	0.866	*0.012*	34609	*800*	3.19	*1.087*
Ferrara	32.70	*0.20*	0.22	*0.002*	0.631	*0.009*	27182	*1768*	5.387	*1.767*

Ravenna	34.30	*0.30*	0.245	*0.004*	0.883	*0.013*	29681	*667*	4.218	*1.386*
Forli'-Cesena	34.10	*0.30*	0.246	*0.006*	0.916	*0.019*	31537	*1400*	5.281	*0.916*
Pesaro Urbino	34.20	*0.10*	0.244	*0.001*	0.855	*0.01*	25685	*1075*	4.448	*1.05*
Ancona	34.10	*0.20*	0.238	*0.005*	0.794	*0.013*	29114	*746*	4.387	*0.944*
Macerata	34.20	*0.20*	0.242	*0.005*	0.754	*0.015*	24933	*716*	4.763	*0.732*
Ascoli Piceno	33.70	*0.20*	0.231	*0.004*	0.704	*0.015*	23609	*1171*	7.351	*1.861*
Massa-Carrara	34.00	*0.10*	0.239	*0.004*	0.547	*0.009*	22808	*727*	9.535	*1.494*
Lucca	35.80	*0.20*	0.266	*0.003*	0.686	*0.012*	28213	*1439*	5.138	*1.953*
Pistoia	33.10	*0.10*	0.224	*0.003*	0.673	*0.01*	25658	*635*	5.505	*1.112*
Firenze	36.80	*0.20*	0.28	*0.006*	0.703	*0.014*	31060	*420*	4.433	*0.596*
Livorno	34.20	*0.20*	0.235	*0.003*	0.613	*0.015*	26831	*546*	5.54	*0.902*
Pisa	35.00	*0.10*	0.249	*0.004*	0.685	*0.012*	28005	*889*	4.714	*0.779*
Arezzo	32.90	*0.20*	0.227	*0.005*	0.694	*0.02*	26704	*576*	5.155	*0.543*
Siena	36.30	*0.10*	0.267	*0.003*	0.827	*0.024*	28153	*899*	4.241	*0.737*
Grosseto	35.40	*0.40*	0.249	*0.004*	0.698	*0.036*	25726	*851*	4.698	*0.56*
Perugia	34.00	*0.20*	0.239	*0.004*	0.669	*0.005*	24638	*668*	5.562	*1.126*
Terni	33.10	*0.20*	0.222	*0.003*	0.574	*0.016*	23387	*776*	5.559	*1.078*
Viterbo	35.40	*0.40*	0.241	*0.002*	0.658	*0.008*	22073	*861*	9.762	*1.837*
Rieti	32.60	*0.30*	0.203	*0.004*	0.538	*0.015*	21905	*1097*	6.867	*1.222*
Roma	40.90	*0.10*	0.336	*0.004*	0.508	*0.005*	32359	*633*	7.456	*1.227*
Latina	35.20	*0.60*	0.24	*0.005*	0.347	*0.01*	23721	*655*	9.442	*1.293*
Frosinone	31.60	*0.30*	0.199	*0.004*	0.406	*0.019*	22982	*618*	8.763	*0.864*
Caserta	35.00	*0.50*	0.235	*0.007*	0.233	*0.004*	15873	*248*	9.592	*0.794*
Benevento	34.70	*0.30*	0.229	*0.002*	0.321	*0.015*	16794	*810*	10.598	*0.807*
Napoli	37.30	*0.50*	0.275	*0.01*	0.269	*0.005*	16485	*252*	14.319	*1.22*
Avellino	34.10	*0.40*	0.226	*0.006*	0.31	*0.007*	17795	*563*	9.843	*1.33*
Salerno	35.90	*0.40*	0.25	*0.005*	0.339	*0.006*	17960	*732*	12.695	*1.345*
L'aquila	33.70	*0.40*	0.217	*0.007*	0.504	*0.002*	21038	*1024*	7.787	*1.532*
Teramo	33.50	*0.20*	0.229	*0.004*	0.61	*0.011*	21570	*577*	6.397	*1.296*
Pescara	36.10	*0.10*	0.262	*0.004*	0.548	*0.014*	21521	*810*	7.508	*1.345*
Chieti	33.20	*0.40*	0.221	*0.002*	0.458	*0.005*	21701	*612*	7.273	*1.931*
Campobasso	34.10	*0.40*	0.226	*0.003*	0.475	*0.007*	20433	*1209*	9.191	*0.89*
Foggia	36.30	*0.70*	0.259	*0.006*	0.361	*0.006*	15349	*663*	11.914	*1.72*
Bari	37.00	*0.30*	0.272	*0.002*	0.385	*0.008*	18232	*404*	11.101	*1.359*
Taranto	33.00	*0.50*	0.217	*0.004*	0.303	*0.009*	17814	*242*	10.443	*1.241*
Brindisi	33.80	*0.50*	0.223	*0.003*	0.305	*0.004*	16406	*262*	13.518	*1.068*
Lecce	35.60	*0.20*	0.249	*0.005*	0.327	*0.005*	16656	*808*	15.674	*1.267*
Potenza	33.50	*0.30*	0.222	*0.005*	0.428	*0.006*	18478	*203*	10.746	*0.734*
Matera	34.20	*0.30*	0.227	*0.005*	0.42	*0.01*	17507	*294*	11.671	*2.413*
Cosenza	35.10	*0.80*	0.233	*0.011*	0.28	*0.006*	16887	*440*	11.447	*0.877*
Catanzaro	35.00	*0.50*	0.238	*0.01*	0.287	*0.005*	18681	*325*	12.43	*1.55*
Reggio Calabria	33.90	*0.70*	0.221	*0.01*	0.248	*0.005*	16006	*258*	11.463	*0.826*
Trapani	36.10	*0.50*	0.248	*0.005*	0.398	*0.006*	16053	*543*	11.228	*1.042*
Palermo	37.80	*0.30*	0.275	*0.007*	0.338	*0.006*	17500	*742*	17.561	*1.308*

Messina	35.30	*0.30*	0.239	*0.007*	0.359	*0.005*	17894	*247*	12.463	*1.766*
Agrigento	35.50	*0.30*	0.24	*0.007*	0.369	*0.006*	14642	*662*	16.735	*2.157*
Caltanissetta	35.20	*0.20*	0.236	*0.005*	0.368	*0.011*	16785	*535*	15.728	*0.877*
Enna	35.10	*0.20*	0.235	*0.005*	0.389	*0.008*	15649	*393*	16.161	*0.636*
Catania	37.20	*0.30*	0.272	*0.008*	0.341	*0.008*	16697	*310*	11.852	*0.381*
Ragusa	37.60	*0.50*	0.272	*0.004*	0.396	*0.011*	17849	*418*	8.269	*0.947*
Siracusa	35.60	*0.30*	0.24	*0.004*	0.317	*0.006*	18394	*818*	10.721	*1.326*
Sassari	35.30	*0.50*	0.247	*0.008*	0.438	*0.01*	19024	*396*	14.53	*4.075*
Nuoro	31.90	*0.50*	0.194	*0.009*	0.445	*0.045*	18970	*1150*	10.683	*1.401*
Cagliari	34.70	*0.60*	0.237	*0.01*	0.364	*0.008*	22244	*586*	11.017	*1.07*
Pordenone	33.70	*0.40*	0.238	*0.01*	0.734	*0.011*	29032	*1134*	4.354	*1.282*
Isernia	34.30	*0.30*	0.235	*0.007*	0.388	*0.013*	19833	*267*	8.263	*0.417*
Oristano	31.80	*0.50*	0.195	*0.007*	0.494	*0.025*	17571	*638*	12.85	*1.958*
Biella	32.60	*0.40*	0.236	*0.011*	0.708	*0.016*	27504	*1146*	5.77	*1.606*
Lecco	35.40	*0.20*	0.266	*0.005*	0.697	*0.019*	29052	*1289*	3.756	*1.107*
Lodi	33.20	*0.30*	0.228	*0.005*	0.722	*0.039*	26162	*828*	4.438	*1.09*
Rimini	36.50	*0.20*	0.272	*0.003*	0.983	*0.017*	30361	*1696*	5.931	*1.725*
Prato	34.80	*0.30*	0.251	*0.006*	0.573	*0.011*	27687	*331*	6.499	*0.924*
Crotone	34.70	*0.90*	0.233	*0.014*	0.217	*0.004*	14428	*407*	12.498	*1.187*
Vibo Valentia	33.80	*0.60*	0.216	*0.009*	0.246	*0.007*	15260	*392*	13.636	*0.886*
Verbania	33.20	*0.10*	0.232	*0.005*	0.548	*0.013*	23316	*1060*	4.848	*1.286*