

Literacy in the Italian census of 1911: disaggregating the data

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Abstract

We present a newly digitised dataset of age- and gender-specific population and literacy figures from the 1911 census, for 276 sub-provincial administrative units (*circondari*). We illustrate and discuss geographic patterns in literacy and sex ratios, and use the data to investigate migration patterns. We find suggestive evidence of negative selection among migrants.

Acknowledgment

We thank Peter Groote for creating the *circondario* shapefiles on which our maps are based. The shapefiles are based on the maps reported in the population census of 1881 (Ministero di agricoltura industria e commercio, 1885). We thank Michelangelo Vasta for comments and suggestions.

1. Introduction

The aim of this article is to present a newly digitised dataset with age- and gender-specific literacy rates for the year 1911. Empirical studies of socioeconomic development at the regional and provincial level in Italy are by now numerous, some published in this journal. The novelty of the dataset presented here is its fine geographic disaggregation, with data referring to Italy's *circondari*. As we explain further below, the *circondari* were smaller than *compartimenti* (regions) and *province* (provinces), but much larger than the *comuni* (municipalities). High resolution data allow us to identify anomalies, to distinguish cities from their hinterlands, and generally to identify spatial patterns that do not respect administrative boundaries.

The present contribution, focussed on 1911, represents a first step in a larger research agenda – both the *circondario*-level dataset and related analyses will be extended to cover the years 1861-1921 – that will complement the existing literature (among others, A'Hearn and Vecchi 2017; Ciccarelli and Weisdorf 2019; Cappelli and Vasta 2020, and the literature cited therein).¹ The data are available for download from the Mendeley website.²

Italy's *circondari* are more familiar to historians of education than her economic historians. The reason may be that a major reform of the school system in 1911 (the Daneo-Credaro Law of 4 June, no. 487) permitted continuing autonomy for *circondario* and province capitals in managing local schools, while bringing those of all other municipalities under central government control.³ De Fort (1995), in particular, offers an analysis similar to ours, examining literacy rates at *circondario* level and distinguishing the capitals from other municipalities, but not exploring the gender gap (on which topic see Ciccarelli and Weisdorf (2019)

¹ 1921 is the final census for which *circondario* level data were reported, the administrative unit being abolished in 1927. A diachronic analysis of municipalities, covering all of Italy, is a sort of Holy Grail: virtually unattainable due to the steady churn of mergers, divisions, and border changes.

² <http://data.mendeley.com/datasets/>

³ Municipalities with a 1911 illiteracy rate below 25% were entitled to apply for an exception to the rule of centralisation. Conversely, *circondario* and province capitals could apply to be taken into central administration. On these points see (Cappelli and Vasta 2020).

for the period 1821-1911 and the more recent Cappelli and Vasta (2021) for the post-unification period).

The age and sex breakdown in the census data allows us to explore additional dimensions of gender disparities in Italy, such as the phenomenon of ‘missing girls’ documented by Beltrán Tapia and Gallego-Martinez (2017) for Spain. It also makes possible an analysis of labour migration, which we measure by male/female sex ratios in the prime working ages. Age- and gender-specific literacy rates further give us some insight into a long-running debate on migrant selectivity. In contrast to recent contributions such as Spitzer and Zimran (2018), our evidence suggests negative selection.

2. Sources and methods

The dataset is based on the information reported in the second volume of the population census of 10 June, 1911. Italian censuses distinguish two concepts of population: individuals physically present in a location on the day of the census, and individuals with legal residence in a location. Our source reports figures for the first of these definitions. The data are drawn from Ministero di agricoltura industria e commercio (MAIC 1914b, II:285–554), reporting the population by age, gender, and marital status at the level of *circondari*. Volume II consists entirely of a table, namely Table IV of the census. It reports data for: provincial capitals and other municipalities with more than fifteen thousand inhabitants (Part A); *circondari* (Part B); provinces (Part C); regions (Part D); and the entire Kingdom (Part E). Volume III (MAIC 1914a), consisting of Table V of the census, reports for every municipality the number of literate and illiterate individuals in the population aged six years and above. Unlike vol. II, this volume provides no breakdown by marital status or age.

Table 1 summarizes the dimensions of the various administrative units here considered in terms of population size and density. The 276 administrative units under study are termed *circondari* in Italian. The *circondari* were instituted with the Ratazzi decree of 1859, which defined the administrative and political geography of the emerging Kingdom of Italy, and persisted for nearly 70 years before being

eliminated in a 1927 administrative reorganization. The *circondario* had no institutions of self-government or representation. Rather, it was the territory overseen by a subprefect (*sottoprefetto*) with responsibility for the local implementation of central government policy, for monitoring and holding to account elected municipal governments, and for intermediating between them and higher levels of government – in the first instance the prefect in the provincial capital.⁴ The Lombard province of Mantua and the entire Veneto region are partial exceptions; here the Habsburg *distretti* of the preunification period were retained after annexation in 1866.⁵ As the last rows of panels A and B show, the *distretti* were smaller on average, and more densely populated, than *circondari*. Just as Lazio, Umbria and Basilicata are regions comprising only one province (respectively Rome, Perugia, and Potenza) so too there are provinces formed of a single *circondario*: Ancona, Arezzo, Lucca, and Sondrio.

⁴ The *circondario* also served to define the jurisdiction of an ordinary tribunal in Italy's court system, and was the geographic basis for organising direct tax collection, school inspections, and similar administrative tasks. *Circondari* were in turn subdivided into *mandamenti*, while the fundamental geographic unit was the municipality (*comune*). For more detail on the general framework of historical administrative units we refer the reader to ISTAT (2018); Mori (2016) examines the *circondari* specifically.

⁵ The province of Mantua was partitioned in 1859, its eastern *distretti* and the city itself remaining in the Austro-Hungarian Empire. After Italy's annexation of the Veneto in 1866, the province was reconstituted and the *distretti* retained. The *distretti* were administered by *commissari distrettuali* rather than sub-prefects. On the day of the census, in June 1911, there were 284 *circondari* and *distretti*. By 1914 several Northeastern *distretti* had been aggregated, leaving a total of 276; census volumes I-III published in that year updated the tables to reflect the new administrative boundaries.

Table 1. Descriptive statistics for various administrative units, Italy 1911

A. Population

unit	no.	population			
		mean	std	min	max
regions	16	2,159,439	1,292,028	469,528	4,785,161
provinces	69	500,739	304,321	129,741	1,725,947
<i>circondari</i>	276	125,185	123,785	12,564	866,688
<i>circ. proper</i>	208	149,163	132,522	13,335	866,688
<i>distretti</i>	68	51,841	37,268	12,564	194,358

B. Population density (inhabitants per km²)

unit	no.	population density			
		mean	std	min	max
regions	16	3.17	1.40	.93	5.95
provinces	69	4.07	4.58	.82	37.72
<i>circondari</i>	276	4.33	6.82	.56	102.01
<i>circ. proper</i>	208	4.31	7.76	.56	102.01
<i>distretti</i>	68	4.34	2.15	.81	15.43

Notes: population physically present on the day of the census; standard deviations in Panel A rounded to the nearest integer; *circ. proper* denotes true *circondari*, while *distretti* are the districts of Veneto and of Mantua province.

Source: Authors' elaborations on MAIC (1914a ; 1916).⁶

Figure 1 illustrates the population density of Italian districts in 1911. Low density characterises swathes of territory comprising the entire region of Sardinia, southern Tuscany (*circondari* in Grosseto, Pisa, and Siena provinces) and northern Lazio (*circondari* of Civitavecchia and Viterbo), an Alpine fringe (Aosta, Domodossola, Pieve di Cadore, Tolmezzo, Sondrio), and the southern Apennines (Matera, Lagonegro, Città Ducale). Most of Lombardy and Veneto, by contrast, show relatively high population density. Naples, with its 102.01 inhabitants per square kilometre is, by far, the district with highest score (the second, with a value of 29.12, is Milan; third is Livorno with a value of 27.98).

[Figure 1 ABOUT HERE]

⁴ Data on the geographic area of Italian *circondari* are from MAIC (1916, viii–xvii). For consistency with the provincial, regional and national figures, two miniscule corrections have been made to the information reported in the source: to the *circondario* of Altamura (province of Bari) we impute 165,333 hectares instead of 165,111 (as reported on p. viii); and to the *circondario* of Piove di Sacco (province of Padua) we impute 25,346 ha instead of 25,344 (p. xi).

3. Literacy

That literacy rates in Italy followed a steep North-South gradient is well known. Among the population aged six and older, literacy varied from 89% in Piedmont to just 30% in Calabria, and the increasingly pale hue as the eye moves south and east in the map of Figure 2 is unmistakable. (For a listing of the *circondari*, their populations, and literacy rates, see Appendix Table A.) What new patterns are revealed by the *circondario*-level disaggregation?

A feature of the map of interest to students of institutional persistence is something it does *not* show, namely any trace of pre-unification borders. Fifty years after Unification, the eye cannot readily distinguish Piedmont and Lombardy, for example. Nor do Tuscany, the former Duchies of Modena and Parma, and the regions of the former Papal State (Emilia-Romagna, Marche, Umbria, and Lazio) delineate themselves in any obvious way. Two general patterns that do show up clearly are a tendency for literacy to fall as one descends from the Alps and their foothills into the middle and lower Po, and the uniformity of low literacy in toe of the boot, where the 15 *circondari* of Calabria and Basilicata all cluster around 30%.

[Figure 2. ABOUT HERE]

An individual *circondario* that is hard to overlook is Rome, where literacy (78%) is 20 points higher than its surroundings (a Lazio average of 58%, and just 35% in Frosinone). Naples (62%) stands out from its surroundings in a similar way, 21 points ahead of the Campania average. This pattern of major cities having a literacy advantage relative to nearby *circondari* holds up generally, but the gaps are smaller than for Rome and Naples, ranging from 3 (Bari) to 13 points (Florence).⁷ Basile, Ciccarelli and Groote (2020) have proposed an indicator

⁷ In all cases the comparison is between literacy in the large-city *circondario* and a simple average of literacy across all *circondari* of its region. "Big cities" are municipalities with a population of at least 100,000 in 1911: Turin, Milan, Genoa, Bologna, Florence, Venice, Rome, Naples, Bari, Catania, Messina and Palermo. For Sicily, the only region with multiple large

(*SpreadLit*) of the diffusion of literacy from local capitals into their rural surroundings, which we implement here as the ratio of literacy in a province's non-capital *circondari* to that of the capital *circondario*. The results show that as of 1911 literacy had thoroughly spread into rural areas only in the Northwest (average ratio 98); elsewhere it hovered around 90.⁸

We now consider literacy separately for men and women. Figure 3 maps the gender gap, defined as male minus female literacy; positive values thus indicate an advantage favouring men. One can quickly discern a North-South gradient. Part of the reason that overall literacy was so high in the Northwest was that women were at approximately the same level as men (or even above it, in a cluster of *circondari* in eastern Lombardy). Conversely, part of the reason overall literacy was so low in the South was that women were almost everywhere 15 to 20 points behind men.

[Figure 3. ABOUT HERE]

Yet it is not the case that men's educational achievements were similar everywhere while, the further south one looks, the further women lagged behind and the more the overall literacy rate was dragged down. The gender gap was 10 points in both high-literacy Veneto and low-literacy Sicily. It varied between -4 and +22 points across the Northeast and Centre, often over short distances (e.g. in Tuscany between Rocca San Casciano at +2 points and neighbouring Arezzo at +14). The occasional southern *circondario* had impressive male literacy but an enormous gender gap, for example L'Aquila with 70% among men but just 51% among women. Big city *circondari*, as we have seen, often had much higher overall literacy than their surroundings; their gender gaps, by contrast, look quite similar (excepting Naples).

cities, Catania, Messina and Palermo are averaged together. Maps of *circondario* literacy rates excluding their capital cities can be found in De Fort (1995, 65, 95, 102).

⁸ Mean rural/capital *circondario* literacy ratios are: Northwest 98, Northeast 93, Centre 91; South 88; Islands 89. Compared with Basile et al. (2020) these figures differ in being simple averages of the *circondari*, and in not separating out the capitals from other municipalities within their *circondario*.

Seeking to explain gender gaps in primary school enrolments across Italy's provinces, Bertocchi and Bozzano (2015) distinguish economic, political, and cultural factors – more specifically, family structure. They find that only the last has explanatory power which is both consistent across specifications and persistent into recent times. The within-province variation in literacy gaps we document here (as much as 14-15 points within Salerno or Mantua provinces, for example) suggests that a *circondario* level analysis is a promising approach for further work in this area.

4. Sex ratios

Our data allow us to compute sex ratios – males per 100 females – by age group. We first consider children aged 0-4. In Italy today, the sex ratio in this age group is approximately 106.⁹ Boys being more vulnerable both *in utero* and early childhood, their excess mortality relative to girls lowered the sex ratio in historical, high-mortality environments: based on historical experience in Northern Europe, a child sex ratio of only 101 would be predicted, given Italy's infant mortality rate in 1911 (Beltrán Tapia and Gallego-Martínez 2017, 124). In fact, the ratio is higher in our data: 103.9. This phenomenon of extra boys – or missing girls – was not unique to Italy but appeared in the census data of Spain, Portugal, and Greece as well, as documented by Beltrán Tapia and Gallego-Martínez.

Table 2. Sex ratios, ages 0-4

area	sex ratios			city
	total	min	max	
northwest	102.0	99.0	114.4	101.6
northeast	102.9	94.9	109.0	102.7
centre	103.7	99.5	109.0	103.4
south	105.0	101.5	110.0	104.8
islands	107.0	100.9	114.1	109.3

⁹ The source for this figure is the World Bank Development Indicators, Health, Nutrition, and Population Statistics database, accessed 17.07.20.

Notes: sex ratio defined as males per 100 females; “total” and “city” are population-weighted means of *circondario* figures; city *circondari* are those with a *comune* whose present population exceeded 100,000 in 1911, listed in footnote 7.

The child sex ratio follows a pronounced North-South gradient in Italy, from 102 in the Northwest to 105 in the South and 107 in the Islands. Disaggregating further, to *circondario* level, reveals some outliers, but does not bring to light any systematic geographic patterns other than the North-South gradient itself.¹⁰ Yet that in itself is interesting. For example, the big city *circondari* have sex ratios very much like those of their surroundings, which limits the range of possible explanations.

We turn now to adults of prime working age. A significant gender imbalance in this group is indicative of temporary labour migration. We define the prime working years as 25-44. A lower limit of 25 is set because army and navy conscripts in 20-24 age group distort the sex ratios in *circondari* hosting military bases.¹¹ An upper limit of 44 is specified because beyond this age local gender imbalances – our focus in this analysis – are much smaller. Nationwide, the prime-age sex ratio is 89.8, implying 10% of male workers aged 25-44, or some 450,000 individuals, were “missing” and abroad, a colossal number. Elsewhere the census tells us that the numbers of men and women temporarily away from their families and living abroad, across all age groups, were 957,470 and 166,533, confirming that temporary migrants were predominantly male (MAIC 1914c, I:611).

Gender imbalances at *circondario* level will reflect not just overseas but also internal migration. And the census of 1911 was conducted on the 10th of June, just as internal mobility was approaching its harvest-driven seasonal peak (Gallo 2012, 36). Which of the two, internal or external, was more important? In the

¹⁰ Small numbers in both numerator and denominator mean that random variation can produce extreme values in the sex ratio in the *distretti* of Veneto and Lombardy’s Mantua province. The minimum value for the Northeast (94.9) is for Sanguinetti *circondario* (Verona province) where there were fewer than 2,000 each of boys and girls. Similarly the Northwest maximum (114.4) is for Ostiglia (province of Mantua), where boys and girls together totalled just 2,508.

¹¹ Thus Caprino Veronese, where a major fortification was under construction but the population was tiny (just 683 women aged 20-24), had a sex ratio of 242.3. Similarly La Spezia, home of a major navy base, had a sex ratio of 186.8 among 20-24 year olds.

220 *circondari* with sex ratios below 100, the total deficit of men is 482,396, which is 31,318 more than the nationwide total. This excess represents net *internal* migration, which we can immediately see must have been an order of magnitude smaller. This is confirmed by a comparison with the *circondario* emigration maps in Spitzer and Yannay (2019). It bears emphasis that using sex ratios as a proxy underestimates total mobility. The sex ratio is *net* measure, in two senses: first, the excess of departures over arrivals in the “sending” *circondari*, and second, the excess of male over female emigration.¹²

Table 3. Sex ratios, ages 25-44

area	sex ratios			city
	total	min	max	
northwest	93.7	59.0	111.9	99.1
northeast	92.7	39.7	109.3	96.7
centre	94.1	63.4	139.1	96.6
south	80.5	56.3	102.3	87.6
islands	94.8	69.1	121.5	95.2

Notes: as for Table 2.

As Table 3 and Figure 4 illustrate, the range in prime age sex ratios was enormous: from 40 (!) to 139. The lowest values are found in the Northeast, where six *distretti* have ratios below 55.¹³ The most visually striking feature of the map, however, is the huge zone of heavy emigration stretching from Marche in the North to the tip of Calabria in the South. For the continental South as a whole, the sex ratio was 80.5, more than ten points lower than any other macroarea.

Areas with high prime age sex ratios are found throughout the Po valley, and in the sparsely populated, grain growing zones of the Maremma, the Agro Romano, and Puglia – classic zones of seasonal in-migration.¹⁴ An interesting case are the rice-growing *circondari* in Novara and Pavia provinces, which in the spring and

¹² The measure misses within-*circondario* mobility, of course.

¹³ *Distretti* with prime age sex ratios below 55 are Gemona, Tolmezzo, Spilimbergo, Tarcento (all Udine province), Agordo, and Pieve di Cadore (Belluno province).

¹⁴ 61 *circondari* have prime age sex ratios of 100 or more. The seven highest values exceed 110: Grosseto, Volterra, Livorno (all Tuscany), Iglesias, Tempio Pausania (Sardinia), Asola (Lombardy), and Civitavecchia (Lazio).

early summer attracted large flows of primarily female workers (the *mondine*) for the backbreaking work of weeding the rice paddies. The low sex ratios here are the exception that proves the rule. Other attractors of male labour were the mining industry in southern Tuscany and Sardinia, as well as large cities, the *circondari* of which all had above-average sex ratios except for Bari.

[Figure 4. ABOUT HERE]

5. Selective migration

The data presented in Sections 3 and 4 allow us to investigate a central question in the literature on migration: whether migrants were positively or negatively selected. In a recent contribution, Spitzer and Zimran (2018) argue for positive selection among Italian immigrants arriving in New York in the years 1907-25. Adult male passengers were taller than conscripts of the same birth cohort in their province of origin. Interestingly, they do *not* seem to have been selected positively on literacy, as Cipolla (1969, 98) observed when comparing US immigrants with conscripts. Our data on prime-age men in 1911 show something similar. Yannay and Spitzer report 63.9 per cent literacy in a sample of men aged 22-65 (mean age 31.4) who were 82.8 per cent Southern (2018, 242). Duplicating that regional share, and adopting the authors' definition of South, our data imply a literacy rate for men aged 25-44 of 63.3 per cent, astonishingly close to the New York immigrants.¹⁵ Yannay and Spitzer report literacy separately for North and South for the subsample of first-time migrants at 83.6 and 57.6 per cent, respectively. Our corresponding literacy rates are 87.5 and 58.2, again very close and again failing to suggest any positive selection.¹⁶

In this section we test for selection on literacy among emigrants, building on the intuition that in *circondari* of intense emigration literacy should be higher or lower than expected. Low sex ratios can proxy for emigration in our data, but how can we operationalise the idea of unexpectedly low literacy? Our approach

¹⁵ Yannay and Spitzer follow their sources in defining the South as including the Centre region.

¹⁶ See also Gomellini, Ó Grada, and Vecchi (2017) for an assessment of several measures of selectivity including numeracy, proxied by "age-heaping".

is to predict the literacy of prime-age males based on the literacy of adjacent demographic groups. We calculate literacy for both men and women, for age groups 0-24, 25-44, and 45+, then regress prime-age male literacy on male and/or female literacy in the three age groups in the same *circondario*. As Table 4 illustrates, adjacent group literacy can explain most of the variation in prime age male literacy. Region fixed effects, when included, are themselves always jointly significant, but do not much affect estimated coefficients on the other variables. Thus, we are not merely picking up systematic differences in all literacy rates (affecting all ages and both sexes) in different parts of the country.¹⁷

Table 4. Determinants of prime-age male literacy

	(1)	(2)	(3)	(4)	(5)	(6)
sex ratio	-0.103	-0.096	-0.183	-0.153	-0.086	-0.064
lit old m	0.510	0.460			0.508	0.598
lit young m	0.745	0.626			0.921	0.668
lit young f			0.124 ^a	0.277	-0.626	-0.328
lit prime f			0.829	0.555	0.614	0.390
lit old f			-0.242	-0.149	-0.403	-0.352
constant	14.46	21.12	41.16	46.55	13.23	14.83
region FE	N	Y	N	Y	N	Y
observations	276	276	276	276	276	276
R-squared	0.956	0.981	0.929	0.956	0.980	0.989

Notes: the dependent variable is the literacy rate among men aged 25-44; explanatory variables are literacy rates for men and women in the 0-24, 25-44, and 45+ age groups, as indicated, and the age 25-44 male/female ratio; estimation by OLS; all estimates are statistically significant at the 1% level unless marked with “a”; when region fixed effects are included, Piedmont is the reference.

The prime-age sex ratio has, in every specification, a statistically significant, negative effect. Recall that a decrease in the sex ratio signals emigration. Thus, the estimates associate emigration with unexpectedly high literacy in the remaining population of prime working age males, indicating *negative* selection. A one standard deviation decrease in the sex ratio, approximately 15 points, is associated with between 0.96 (Col. 6) and 2.75 (Col. 3) points higher literacy. We will adopt as a representative value a coefficient of -0.10, an average of the

¹⁷ The main results reported here are robust to alternative fixed effects for 5 “macroareas” or for 69 provinces.

estimates from models 1 and 2; this means a one-standard-deviation effect of 1.5 points. How much selectivity does this imply?

We consider two measures of selectivity. The first is the difference in migration propensities between literates and illiterates. It answers the question “who was most likely to emigrate?” If illiterates are much more likely to emigrate, migrants are negatively selected. The second is the difference in literacy rates between movers and stayers. It answers the question “how did the migrant group compare with the rest of the population?” If movers are on average much less literate than stayers, migrants are negatively selected.

Straightforward algebra ties together the literacy and migration rates needed to calculate our selectivity measures in different scenarios. We start from the median level of prime-age male literacy: 75%. Next we consider the thought experiment of 15% of prime-age men emigrating, corresponding to a one standard deviation decrease in the sex-ratio. For this to produce the 1.5 point rise in the literacy of the (remaining) prime-age male population that we find in the data, the algebra dictates a 20.1% emigration rate among illiterates and a 13.3% rate among literates. These figures in turn imply literacy rates of 66.5% among movers and 76.5% (by construction) among stayers. Both measures thus indicate a meaningful degree of negative selection.¹⁸

The contrast with Spitzer and Zimran’s findings may arise from imperfections in our data. Self-reported literacy from the 1911 census may be less accurate than the literacy assessment of the Ellis Island authorities, for example. And since our emigration proxy captures excess male migration relative to female, we may not accurately be identifying *circondari* with large gross migration flows. An intriguing possibility is that selection differed by destination, positive for New York, but neutral or negative for Latin America, Europe, or internal Italian

¹⁸ To see why it is useful to calculate both measures, consider a more extreme case, such as an initial literacy rate of 90%, which would correspond to roughly the 80th percentile of the distribution. In this case, for 15% overall emigration to raise the literacy rate in the remaining population by 1.5 points, an emigration rate of 27.8% among the scarce illiterates is required, vs. 13.6% for the abundant literates. The uneducated are fully twice as likely to emigrate. Meanwhile, the literacy rate among migrants is now 81.5%, vs. 91.5% among stayers (by construction), implying a 10 point gap that is the same as in the example discussed in the text.

destinations. Of course we cannot infer causation from the correlation revealed here, but the fact that where emigration was most intense literacy was surprisingly high among the men left behind is suggestive, and worth further study.

6. Conclusion

In this article we have presented census data on population and literacy in 1911, separately by age and gender, at the fine level of geographical disaggregation represented by Italy's *circondari*. Smaller than provinces and bigger than municipalities, these administrative units have not received much attention from Italy's economic historians. However, given that their borders were relatively constant over time, they represent a good compromise between granularity and tractability. This paper is a first step in a wider research project aiming to exploit *circondario*-level data throughout the 1861-1921 period.

A finer level of spatial disaggregation has several advantages. First, it reveals singularities in the data that call for explanation. What made L'Aquila, rather than Naples or Palermo, the South's leading *circondario* in terms of male literacy, for example? Second, when the variance of literacy rates within provinces is high, the usefulness of provincial data is limited, especially for studying issues such as spatial spillovers. The province of Rome, where male literacy rates vary from 46 to 83% and female from 27 to 73%, is perhaps the most emblematic example of within-province variation. Third, one can construct historical counterparts to today's administrative units and economic zones (industrial districts, for example) or those of previous historical periods (the administrative units of the Regno Italico or those of the Lombardo-Veneto, for example) most accurately when starting from the smallest building blocks.

Exploiting the age and gender dimensions of the census data, we document for Italy the phenomenon of "missing girls" present in other Mediterranean countries, illustrate how sex ratios in the prime working ages can proxy for

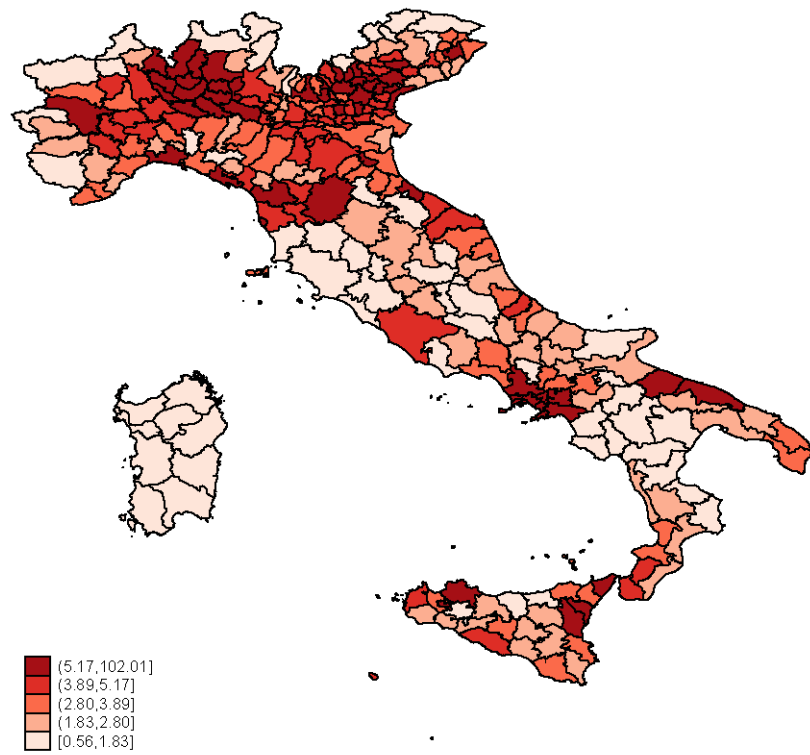
labour migration, and offer provisional evidence that migrants were negatively selected on literacy.

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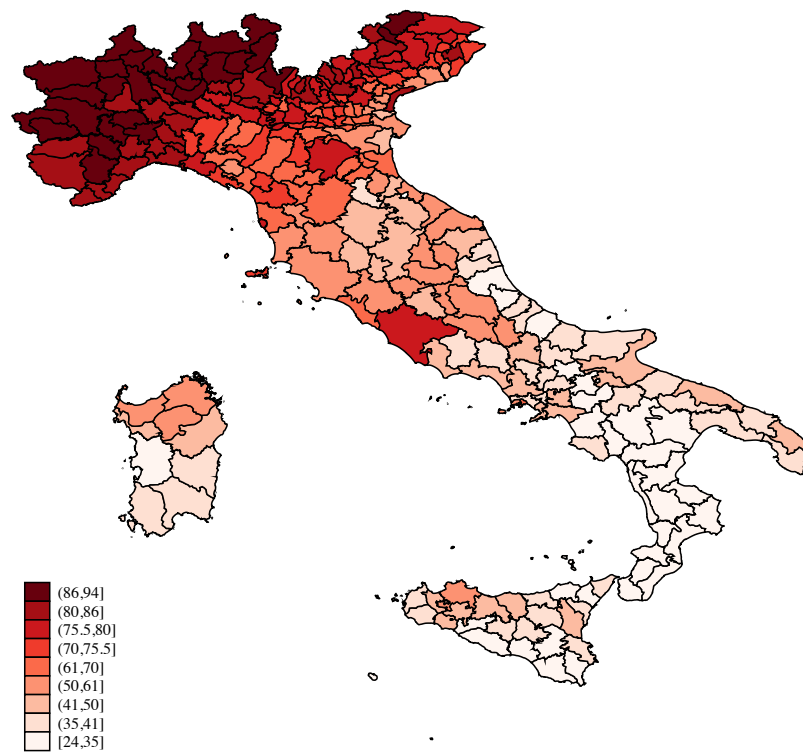
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Figure 1. Population density of Italian *circondari*, 1911



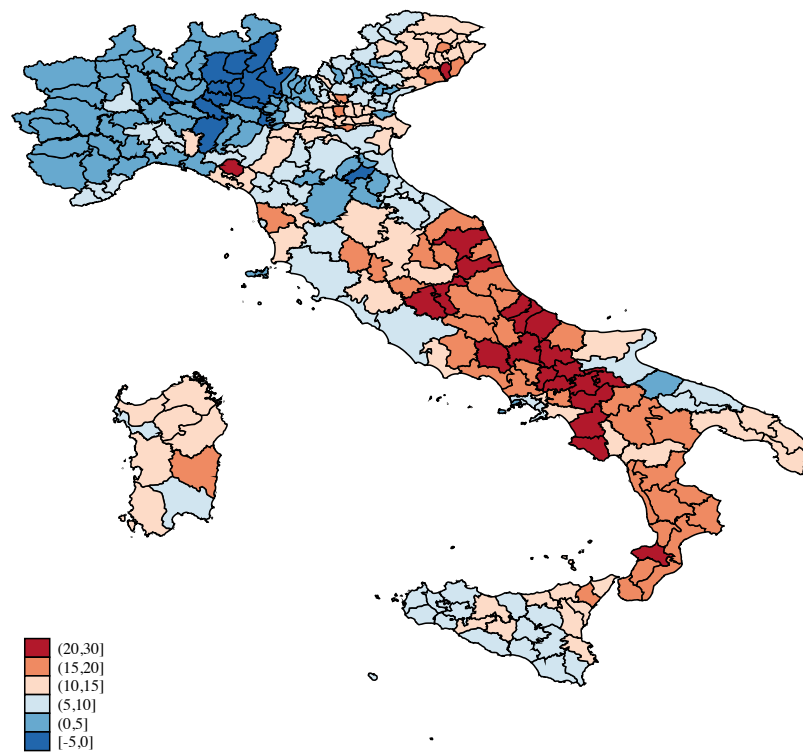
Source: Authors' elaborations on the data reported in the population census of 1911

Figure 2. Literacy in the population aged six and older



Source: Authors' elaborations on the data reported in the population census of 1911

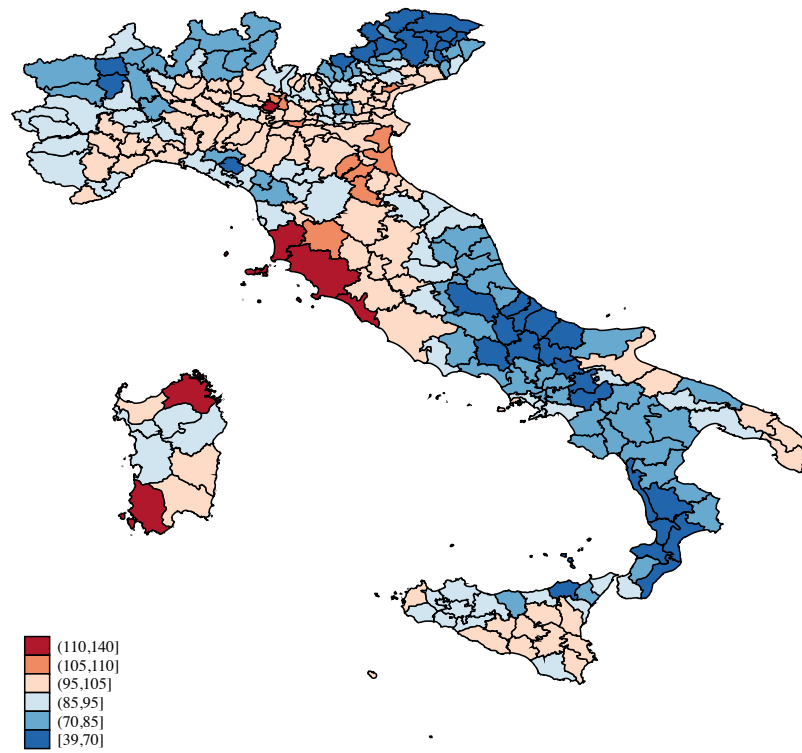
Figure 3. Gender gaps in literacy



Note: gender gap defined as male literacy rate minus female.

Source: Authors' elaborations on the data reported in the population census of 1911

Figure 4. Prime working age sex ratios



Notes: prime working ages 25-44; sex ratios defined as males per 100 females.

Appendix Table A Population of age 6 and above, human sex ratio and literacy in 1911

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	totpop	mpop	fpop	no men/ no women	literacy rate		
					totpop	mpop	fpop
A. PIEMONTE (21) :							
1. Alessandria							
1. Acqui	106,143	54,263	51,880	1.05	83	86	81
2. Alessandria	144,657	71,505	73,152	0.98	87	90	84
3. Asti	162,206	81,817	80,389	1.02	90	92	88
4. Casale Monferrato							
	136,752	68,114	68,638	0.99	90	92	88
5. Novi Ligure	72,717	36,343	36,374	1.00	81	84	78
6. Tortona	65,609	33,047	32,562	1.01	84	87	80
2. Cuneo							
1. Alba	128,015	66,075	61,940	1.07	88	89	87
2. Cuneo	158,294	80,229	78,065	1.03	85	86	83
3. Mondovì	135,753	69,153	66,600	1.04	87	90	85
4. Saluzzo	132,764	65,441	67,323	0.97	83	85	81
3. Novara							
1. Biella	142,714	63,330	79,384	0.80	92	94	90
2. Domodossola	35,858	16,974	18,884	0.90	92	93	90
3. Novara	233,148	109,458	123,690	0.88	88	90	86
4. Pallanza	72,735	31,323	41,412	0.76	90	93	88
5. Varallo	30,514	11,698	18,816	0.62	91	94	89
6. Vercelli	148,101	69,807	78,294	0.89	84	87	81
4. Turin							
1. Aosta	67,354	32,583	34,771	0.94	89	90	88
2. Ivrea	141,749	63,555	78,194	0.81	91	93	88
3. Pinerolo	111,730	55,525	56,205	0.99	89	90	88
4. Susa	81,305	40,975	40,330	1.02	90	92	89
5. Turin	676,543	330,349	346,194	0.95	93	95	92
B. LIGURIA (7) :							
1. Genoa							
1. Albenga	50,071	24,705	25,366	0.97	82	86	77
2. Chiavari	98,692	46,937	51,755	0.91	77	79	74
3. Genoa	509,068	254,543	254,525	1.00	86	87	84
4. Savona	112,555	56,558	55,997	1.01	83	85	81
5. Spezia	147,604	76,848	70,756	1.09	75	81	69
2. Porto Maurizio							
1. Porto Maurizio	50,632	25,438	25,194	1.01	85	89	82
2. San Remo	79,318	39,645	39,673	1.00	84	88	80

Appendix Table A, cont

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	totpop	mpop	fpop	no men/ no women	literacy rate		
					totpop	mpop	fpop
C. LOMBARDY (35)							
1. Bergamo							
1. Bergamo	247,646	116,177	131,469	0.88	91	91	91
2. Clusone	63,350	28,680	34,670	0.83	94	94	94
3. Treviglio	109,146	54,591	54,555	1.00	85	85	85
2. Brescia							
1. Breno	57,042	26,503	30,539	0.87	94	94	95
2. Brescia	249,582	125,233	124,349	1.01	84	84	84
3. Chiari	79,986	40,104	39,882	1.01	84	83	85
4. Salò	59,655	29,844	29,811	1.00	87	87	87
5. Verolanuova	54,275	27,001	2,7274	0.99	84	84	84
3. Como							
1. Como	245,695	114,908	130,787	0.88	91	92	90
2. Lecco	134,100	65,486	68,614	0.95	91	92	91
3. Varese	144,173	63,118	81,055	0.78	92	93	91
4. Cremona							
1. Casalmaggiore	38,993	19,318	19,675	0.98	80	79	81
2. Crema	86,786	44,302	42,484	1.04	79	79	79
3. Cremona	171,259	84,161	87,098	0.97	80	81	80
5. Mantua							
1. Asola	18,480	9,569	8,911	1.07	75	76	74
2. Bozzolo	25,324	12,750	12,574	1.01	77	78	76
3. Canneto sull'Oglio	11,569	5,722	5,847	0.98	77	77	77
4. Castiglione delle Stiviere	14,870	7,593	7,277	1.04	79	79	78
5. Gonzaga	43,545	22,128	21,417	1.03	74	81	66
6. Mantua	84,665	43,156	41,509	1.04	77	81	74
7. Ostiglia	15,577	7,723	7,854	0.98	71	77	66
8. Revere	23,251	11,673	11,578	1.01	73	80	66
9. Sermide	18,983	9,472	9,511	1.00	73	80	65
10. Viadana	26,806	13,416	13,390	1.00	77	78	76
11. Volta Mantovana	13,442	6,906	6,536	1.06	65	66	64
6. Milan							
1. Abbiategrasso	110,742	54,906	55,836	0.98	83	83	83
2. Gallarate	208,815	101,308	107,507	0.94	90	91	90
3. Lodi	143,226	72,068	71,158	1.01	78	77	80
4. Milan	763,853	382,314	381,539	1.00	91	92	89
5. Monza	252,343	127,193	125,150	1.02	89	89	89
7. Pavia							
1. Bobbio	30,739	15,779	14,960	1.05	72	77	66
2. Mortara	157,756	71,701	86,055	0.83	82	84	81
3. Pavia	138,652	69,260	69,392	1.00	84	84	84
4. Voghera	116,315	59,953	56,362	1.06	85	86	83
8. Sondrio							
1. Sondrio	109,639	51,337	58,302	0.88	90	90	89

Appendix Table A, cont

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
	totpop	mpop	fpop	no men/ no women	literacy rate			
					totpop	mpop	fpop	
D. VENETO (68)								
1. Belluno								
1.	Agordo	18,917	7,664	11,253	0.68	86	90	83
2.	Belluno	44,290	20,379	23,911	0.85	81	87	76
*3.	Feltre	52,539	22,901	29,638	0.77	79	83	75
4.	Longarone	10,493	4,943	5,550	0.89	88	93	83
*5.	Pieve di Cadore	30,215	12,692	17,523	0.72	90	94	86
2. Padua								
1.	Camposampiero	49,032	24,535	24,497	1.00	66	70	63
2.	Cittadella	39,906	19,535	20,371	0.96	78	81	76
3.	Conselve	27,868	13,672	14,196	0.96	60	65	55
4.	Este	43,900	20,968	22,932	0.91	67	75	61
5.	Monselice	35,401	17,424	17,977	0.97	66	72	61
6.	Montagnana	32,765	15,246	17,519	0.87	74	85	65
7.	Padova	163,779	81,808	81,971	1.00	76	79	73
8.	Piove di Sacco	39,209	19,492	19,717	0.99	61	65	56
3. Rovigo								
*1.	Adria	71,382	35,753	35,629	1.00	54	61	48
2.	Badia Polesine	21,553	10,507	11,046	0.95	72	79	65
3.	Lendinara	21,562	10,569	10,993	0.96	66	73	59
4.	Massa Superiore	19,904	9,785	10,119	0.97	73	78	68
5.	Occhiobello	22,913	11,508	11,405	1.01	66	74	58
6.	Polesella	16,742	8,403	8,339	1.01	69	76	62
7.	Rovigo	38,962	19,179	19,783	0.97	70	77	63
4. Treviso								
1.	Asolo	33,000	15,856	17,144	0.92	80	81	79
2.	Castelfranco Veneto	35,408	17,127	18,281	0.94	74	77	72
3.	Conegliano	52,500	25,591	26,909	0.95	77	81	73
4.	Montebelluna	41,011	19,050	21,961	0.87	79	83	75
5.	Oderzo	51,491	25,614	25,877	0.99	70	76	65
6.	Treviso	119,959	60,481	59,478	1.02	75	79	71
7.	Valdobbiadene	24,712	11,682	13,030	0.90	83	86	80
8.	Vittorio	43,593	20,569	23,024	0.89	79	83	76
5. Udine								
*1.	Cividale del Friuli	51,140	24,606	26,534	0.93	73	80	67
2.	Codroipo	23,525	10,441	13,084	0.80	74	82	68
3.	Gemona	25,210	9,462	15,748	0.60	80	87	75
4.	Latisana	19,055	8,834	10,221	0.86	60	71	50
5.	Palmanova	26,032	12,927	13,105	0.99	73	82	65
*6.	Pordenone	110,440	49,533	60,907	0.81	76	83	69
7.	San D aniele del Friuli	30,321	12,938	17,383	0.74	75	84	68
8.	San Vito al Tagliamento	31,869	14,671	17,198	0.85	71	79	65
9.	Spilimbergo	30,743	11,935	18,808	0.63	76	85	70
10.	Tarcento	26,784	10,884	15,900	0.68	75	82	69
*11.	Tolmezzo	51,734	19,806	31,928	0.62	80	88	74
12.	Udine	83,785	39,320	44,465	0.88	83	89	77

Appendix Table A, cont

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	totpop	mpop	fpop	no men/ no women	literacy rate		
					totpop	mpop	fpop
6. Venice							
*1. Chioggia	53,635	26,864	26,771	1.00	45	48	43
2. Dolo	40,118	20,248	19,870	1.02	61	64	58
3. Mestre	31,646	16,205	15,441	1.05	65	67	63
4. Mirano	32,637	16,456	16,181	1.02	69	71	67
5. Portogruaro	41,605	20,151	21,454	0.94	58	66	50
6. San Donà di Piave	37,572	18,830	18,742	1.00	55	60	49
7. Venice	155,451	76,562	78,889	0.97	82	85	80
7. Verona							
1. Bardolino	19,288	9,752	9,536	1.02	77	77	76
2. Caprino Veronese	14,815	8,051	6,764	1.19	77	79	74
3. Cologna Veneta	22,629	10,714	11,915	0.90	74	81	68
4. Isola della Scala	37,611	18,213	19,398	0.94	71	78	65
5. Legnago	41,071	20,033	21,038	0.95	75	80	69
6. San Bonifacio	34,826	16,972	17,854	0.95	79	83	75
7. Sanguinetto	21,723	10,508	11,215	0.94	68	74	62
8. San Pietro in Cariano	25,865	13,025	12,840	1.01	82	84	80
9. Tregnago	21,428	10,855	10,573	1.03	77	81	74
10. Verona	139,799	71,315	68,484	1.04	84	86	82
11. Villafranca di Verona	24,754	12,072	12,682	0.95	76	78	74
8. Vicenza							
1. Arzignano	25,924	12,475	13,449	0.93	80	84	76
*2. Asiago	21,526	9,682	11,844	0.82	78	83	73
3. Barbarano	18,260	8,994	9,266	0.97	73	81	65
4. Bassano	48,407	22,979	25,428	0.90	84	86	81
5. Lonigo	35,536	17,003	18,533	0.92	78	84	72
6. Marostica	34,863	16,330	18,533	0.88	79	84	75
7. Schio	56,024	26,716	29,308	0.91	86	90	83
8. Thiene	31,361	14,899	16,462	0.91	85	88	83
9. Valdagno	29,964	14,770	15,194	0.97	78	85	72
10. Vicenza	109,517	54,046	55,471	0.97	80	85	76
E. EMILIA-ROMAGNA (22)							
1. Bologna							
1. Bologna	370,476	184,580	185,896	0.99	76	80	73
2. Imola	73,235	37,628	35,607	1.06	67	69	66
3. Vergato	51,388	25,042	26,346	0.95	67	69	66
2. Ferrara							
1. cento	32,213	15,873	16,340	0.97	68	75	62
2. comacchio	42,653	21,686	20,967	1.03	49	56	41
3. ferrara	180,623	91,113	89,510	1.02	61	66	56
3. Forlì							
1. Cesena	85,548	42,222	43,326	0.97	50	55	45
2. Forlì	73,331	37,097	36,234	1.02	52	54	50
3. Rimini	95,119	47,233	47,886	0.99	58	61	55

Appendix Table A, cont

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	totpop	mpop	fpop	no men/ no women	literacy rate		
					totpop	mpop	fpop
4. Modena							
1. Mirandola	58,873	30,074	28,799	1.04	66	73	58
2. Modena	175,610	88,554	87,056	1.02	71	74	67
3. Pavullo nel Frignano	61,723	30,581	31,142	0.98	67	70	64
5. Parma							
1. Borgo San Donnino	86,471	44,451	42,020	1.06	68	69	66
2. Borgotaro	30,991	14,982	16,009	0.94	65	70	61
3. Parma	159,076	80,787	78,289	1.03	72	75	68
6. Piacenza							
1. Fiorenzuola d'Arda	61,799	31,402	30,397	1.03	68	69	68
2. Piacenza	153,975	79,489	74,486	1.07	73	72	74
7. Ravenna							
1. Faenza	65,840	33,977	31,863	1.07	61	59	63
2. Lugo	64,092	32,315	31,777	1.02	65	67	62
3. Ravenna	87,527	45,636	41,891	1.09	63	66	60
8. Reggio nell'Emilia							
1. Guastalla	61,493	31,026	30,467	1.02	70	77	63
2. Reggio nell'Emilia	197,090	100,269	96,821	1.04	70	76	65
F. TUSCANY (16)							
1. Arezzo							
1. Arezzo	240,801	122,742	118,059	1.04	48	55	41
2. Florence							
1. Florence	586,824	289,652	297,172	0.97	68	71	66
2. Pistoia	113,690	55,888	57,802	0.97	67	72	62
3. Rocca San Casciano	48,067	24,755	23,312	1.06	39	40	38
4. San Miniato	119,005	60,259	58,746	1.03	59	67	51
3. Grosseto							
1. Grosseto	124,570	64,920	59,650	1.09	58	61	54
4. Leghorn							
1. Leghorn	93,067	45,174	47,893	0.94	80	85	76
2. Portoferraio	26,105	14,128	11,977	1.18	71	71	70
5. Lucca							
1. Lucca	284,786	131,134	153,652	0.85	72	77	67
6. Massa							
1. Castelnuovo di Garfagnana	35,907	16,910	18,997	0.89	70	76	66
2. Massa e Carrara	110,193	54,311	55,882	0.97	64	72	56
3. Pontremoli	30,658	13,455	17,203	0.78	57	70	48

Appendix Table A, cont

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	totpop	mpop	fpop	no men/ no women	literacy rate		
					totpop	mpop	fpop
7. Pisa							
1. pisa	216,333	108,050	108,283	1.00	63	71	55
2. volterra	77,656	41,565	36,091	1.15	60	66	52
8. Siena							
1. Montepulciano	67,520	34,662	32,858	1.05	44	54	34
2. Siena	141,452	73,522	67,930	1.08	51	55	47
G. MARCHE (7)							
1. Ancona							
1. ancona	271,293	130,282	141,011	0.92	58	67	51
2. Ascoli Piceno							
1. Ascoli Piceno	106,888	50,474	56,414	0.89	41	52	31
2. Fermo	107,560	49,858	57,702	0.86	40	49	31
3. Macerata							
1. Camerino	42,859	20,182	22,677	0.89	59	69	50
2. Macerata	176,011	81,799	94,212	0.87	44	55	35
4. Pesaro e Urbino							
1. Pesaro	109,045	52,879	56,166	0.94	54	59	50
2. Urbino	112,831	55,362	57,469	0.96	44	49	39
H. UMBRIA (6)							
1. Perugia							
1. Foligno	68,067	33,404	34,663	0.96	54	62	46
2. Orvieto	49,389	25,093	24,296	1.03	47	55	39
3. Perugia	227,033	114,131	112,902	1.01	50	57	43
4. Rieti	82,360	40,982	41,378	0.99	49	60	38
5. Spoleto	68,578	34,198	34,380	0.99	53	60	47
6. Terni	86,786	44,267	42,519	1.04	56	64	47
I. LAZIO (5)							
1. Rome							
1. Civitavecchia	32,977	18,451	14,526	1.27	70	73	67
2. Frosinone	159,463	72,810	86,653	0.84	35	46	27
3. Rome	690,972	353,213	337,759	1.05	78	83	73
4. Velletri	78,065	38,224	39,841	0.96	50	58	43
5. Viterbo	159,405	79,841	79,564	1.00	55	61	49

Appendix Table A, cont

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	totpop	mpop	fpop	no men/ no women	literacy rate		
					totpop	mpop	fpop
J. ABRUZZI (12)							
1. Aquila degli Abruzzi							
1. Aquila							
degli Abruzzi	110,779	49,990	60,789	0.82	60	70	51
2. Avezzano	104,538	48,762	55,776	0.87	52	62	43
3. Cittaducale	49,310	22,885	26,425	0.87	51	63	41
4. Sulmona	78,141	34,734	43,407	0.80	55	66	47
2. Campobasso							
1. Campobasso	99,435	44,313	55,122	0.80	40	54	29
2. Isernia	105,927	47,501	58,426	0.81	43	57	31
3. Larino	89,890	40,055	49,835	0.80	39	50	30
3. Chieti							
1. Chieti	113,385	52,445	60,940	0.86	40	52	29
2. Lanciano	102,332	45,630	56,702	0.80	37	49	28
3. Vasto	94,476	42,280	52,196	0.81	33	45	22
4. Teramo							
1. Penne	104,370	48,797	55,573	0.88	34	45	25
2. Teramo	155,827	72,311	83,516	0.87	34	44	25
K. CAMPANIA (19)							
1. Avellino							
1. Ariano di Puglia	80,143	36,466	43,677	0.83	32	44	21
2. Avellino	151,214	71,530	79,684	0.90	42	53	33
3. Sant'Angelo de' Lombardi	101,931	47,044	54,887	0.86	34	47	24
2. Benevento							
1. Benevento	96,897	45,442	51,455	0.88	40	53	28
2. Cerreto Sannita	65,598	30,337	35,261	0.86	38	50	28
3. San Bartolomeo in Galdo	51,550	23,023	28,527	0.81	33	44	23
3. Caserta							
1. Caserta	271,168	130,169	140,999	0.92	45	53	37
2. Gaeta	135,212	63,024	72,188	0.87	42	51	34
3. Nola	86,955	41,651	45,304	0.92	39	47	32
4. Piedimonte d'Alife	40,177	18,458	21,719	0.85	41	52	33
5. Sora	136,806	62,489	74,317	0.84	40	54	29
4. Naples							
1. Casoria	151,186	74,272	76,914	0.97	38	43	33
2. Castellamare Di Stabia	167,842	81,881	85,961	0.95	48	52	44
3. Napoli	724,783	353,449	371,334	0.95	62	66	58
4. Pozzuoli	80,140	40,299	39,841	1.01	51	52	51
5. Salerno							
1. Campagna	81,916	38,216	43,700	0.87	33	44	23

Appendix Table A, cont

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	totpop	mpop	fpop	no men/ no women	literacy rate		
					totpop	mpop	fpop
2. Sala Consilina	59,468	26,915	32,553	0.83	35	43	28
3. Salerno	248,595	120,243	128,352	0.94	42	49	36
4. Vallo della Lucania	82,497	37,470	45,027	0.83	36	50	23
L. PUGLIA (10)							
1. Bari delle Puglie							
1. Altamura	106,928	52,184	54,744	0.95	37	42	32
2. Bari delle Puglie	345,767	162,439	183,328	0.89	43	48	39
3. Barletta	302,174	150,195	151,979	0.99	37	39	36
2. Foggia							
1. bovino	46,900	22,150	24,750	0.89	42	53	31
2. foggia	205,690	102,966	102,724	1.00	46	51	42
3. sansevero	139,352	64,842	74,510	0.87	40	47	33
3. Lecce							
1. Brindisi	141,295	71,507	69,788	1.02	35	43	28
2. Gallipoli	156,595	77,048	79,547	0.97	38	45	31
3. Lecce	165,994	82,497	83,497	0.99	43	49	37
4. Taranto	183,503	90,458	93,045	0.97	38	46	31
M. BASILICATA (4)							
1. Potenza							
1. Lagonegro	87,904	39,474	48,430	0.82	33	40	27
2. Matera	92,488	43,100	49,388	0.87	35	43	28
3. Melfi	88,542	42,287	46,255	0.91	37	47	27
4. Potenza	125,672	59,228	66,444	0.89	34	43	26
N. CALABRIA (11)							
1. Catanzaro							
1. Catanzaro	128,392	58,308	70,084	0.83	32	42	24
2. Cotrone	64,832	30,494	34,338	0.89	33	42	26
3. Monteleone di Calabria	121,014	53,712	67,302	0.80	28	40	18
4. Nicastro	91,183	40,217	50,966	0.79	29	41	20
2. Cosenza							
1. Castrovillari	92,313	41,492	50,821	0.82	30	39	22
2. Cosenza	159,745	71,241	88,504	0.80	34	45	25
3. Paola	85,229	36,409	48,820	0.75	28	39	20
4. Rossano	55,232	26,167	29,065	0.90	29	38	21
3. Reggio di Calabria							
1. Gerace Marina	115,245	52,020	63,225	0.82	24	34	16
2. Palmi	131,445	61,662	69,783	0.88	29	39	21
3. Reggio di Calabria	126,683	62,076	64,607	0.96	34	42	26

Appendix Table A, cont

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	totpop	mpop	fpop	no men/ no women	literacy rate		
					totpop	mpop	fpop
O. SICILY (24)							
1. Caltanissetta							
1. Caltanissetta	115,715	58,407	57,308	1.02	39	46	33
2. Piazza Armerina	107,426	56,220	51,206	1.10	36	40	33
3. Terranova di Sicilia	62,964	31,630	31,334	1.01	31	34	28
2. Catania							
1. Acireale	125,395	61,658	63,737	0.97	38	44	32
2. Caltagirone	122,793	61,844	60,949	1.01	33	37	30
3. Catania	328,296	167,457	160,839	1.04	49	55	43
4. Nicosia	94,785	48,403	46,382	1.04	36	40	32
3. Girgenti							
1. Bivona	62,527	31,162	31,365	0.99	35	41	28
2. Girgenti	216,387	109,759	106,628	1.03	34	39	30
3. Sciacca	49,960	24,927	25,033	1.00	42	46	38
4. Messina							
1. Castoreale	97,014	45,212	51,802	0.87	33	42	25
2. Messina	198,749	97,837	100,912	0.97	40	47	33
3. Mistretta	50,000	24,420	25,580	0.95	40	46	34
4. Patti	93,063	42,534	50,529	0.84	29	37	22
5. Palermo							
1. Cefalù	82,237	40,419	41,818	0.97	41	44	37
2. Corleone	46,715	22,968	23,747	0.97	42	46	37
3. Palermo	481,186	243,658	237,528	1.03	58	62	55
4. Termini Imerese	79,249	38,941	40,308	0.97	46	53	40
6. Siracusa							
1. Modica	187,130	92,277	94,853	0.97	32	37	27
2. Noto	86,741	43,561	43,180	1.01	33	38	28
3. Siracusa	126,910	64,451	62,459	1.03	41	46	35
7. Trapani							
1. Alcamo	70,672	34,887	35,785	0.97	46	49	42
2. Mazara del Vallo	78,482	38,696	39,786	0.97	36	41	32
3. Trapani	151,770	74,035	77,735	0.95	41	45	36

Appendix Table A, cont

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	totpop	mpop	fpop	no men/ no women	literacy rate		
					totpop	mpop	fpop
P. SARDINIA (9)							
1. Cagliari							
1. Cagliari	173,807	87,035	86,772	1.00	40	45	34
2. Iglesias	89,022	46,701	42,321	1.10	36	42	28
3. Lanusei	66,729	33,405	33,324	1.00	38	46	29
4. Oristano	111,154	54,177	56,977	0.95	35	42	29
2. Sassari							
1. Alghero	41,240	19,996	21,244	0.94	49	52	46
2. Nuoro	63,863	31,898	31,965	1.00	43	50	37
3. Ozieri	42,375	20,767	21,608	0.96	51	58	44
4. Sassari	91,302	45,805	45,497	1.01	51	57	45
5. Tempio Pausania	41,263	22,448	18,815	1.19	53	59	46

Notes: The table follows the hierarchical order regions, provinces, districts. Each regional block starts with a letter (letters go from A to P). The letter is followed by the name of the region and, in parenthesis, the number of *circondari* or *distretti* in the region. Within each regional block data are by province, and within each province by *circondario*. The * symbol denotes new *circondari* that replaced previous *distretti* and that were established by law after the day of the census (10th June 1911) and before the 20th March 1914. They are Pieve di Cadore and Feltre in the province of Belluno; Adria in the province of Rovigo; Cividale del Friuli, Pordenone and Tolmezzo in the province of Udine. These six new *circondari* are in the region of Venetia, they were created by aggregation of existing *distretti* (which were then abolished). For instance, the new *circondario* of Pieve di Cadore included the former *distretti* of Pieve di Cadore and Auronzo (MAIC 1914b, I:649–56).

New <i>circondari</i>	Abolished <i>distretti</i>
Pieve di Cadore	Pieve di Cadore + Auronzo
Feltre	Feltre + Fonzaso
Adria	Adria + Ariano nel Polesine
Cividale del Friuli	Cividale del Friuli + San Pietro al Natisone
Pordenone	Pordenone + Maniago + Sacile
Tolmezzo	Tolmezzo + Ampezzo + Moggio Udinese

Source: Authors' elaboration on (MAIC 1914a).