Evolving gaps: occupational structure in southern and northern Italy, 1400-1861

Appendix A: technical appendix

To obtain the shares of agricultural workers in cities and country-side presented in table 3, we run the following pooled OLS regressions separately for the south and the centre-north:

$$ag_{it} = \alpha + \beta urb_{it} + u_{it} \qquad \text{(Equation A1)}$$

Where ag_{it} is the agricultural employment share and urb_{it} is the urbanization rate in province i in year t. In the OLS specification, the constant α is the expected value of the agricultural employment share in a province with no urbanization, or in the countryside. The sum of the constant α and the slope β is the expected value of the agricultural employment share in a province with 100% urbanization, or in a city.

To extrapolate provincial agricultural employment shares with urbanization rates we use the following equations:

$$\widehat{ag}_{it} = \widehat{ag}_{i,t-1} + \frac{e^{\hat{\alpha}+\hat{\beta}urb_{it}}}{(1+e^{\hat{\alpha}+\hat{\beta}urb_{it}})} - \frac{e^{\hat{\alpha}+\hat{\beta}urb_{i,t-1}}}{(1+e^{\hat{\alpha}+\hat{\beta}urb_{i,t-1}})} \qquad \text{(Equation A2a)}$$

$$\widehat{ind}_{it} = \widehat{ind}_{i,t-1} - 0.5\Delta\widehat{ag}_{it} \qquad \text{(Equation A2b)}$$

$$\widehat{ser}_{it} = \widehat{ser}_{i,t-1} - 0.5\Delta\widehat{ag}_{it} \qquad \text{(Equation A2c)}$$

Where the variables/parameters with a hat are estimated, ind and ser stand for industry and services, respectively, and otherwise the notation is the same as for equation 1. As explained in the text we use a 10,000 inhabitants threshold to identify cities and compute urbanization rates in Southern provinces and a 5.000 threshold in the Centre-North.

Since our panel of provincial employment shares is unbalanced, provincial shares are aggregated over macro-areas with fixed effects regressions weighted by the means of the provinces' populations (figure 2). Formally:

$$sec_{it} = \alpha_i + \sum_t D_t t + u_{it} \qquad \text{(Equation A3)}$$

Where sec_{it} is the employment share for each of the three sectors in province i in year t and D_t are dummies equal to one in year t.

Since here we are dealing with an unbalanced panel, to examine sigma-convergence, we look at an equivalent measure, the agricultural employment share relative to the cross-sectional average, which can be computed at the provincial level so that we can rely on fixed effects panel regressions to examine its trend. Formally:

$$abs\left[\ln\left(\frac{ag_{it}}{\overline{ag_t}}\right)\right] = \alpha_i + \beta t + u_{it} \qquad \text{(Equation A4)}$$

We look at beta-convergence by running the OLS cross-sectional regression:

$$\dot{ag}_{i,t1-t0} = \alpha + \beta \ln(ag_{i,t0}) + u_i \qquad \text{(Equation A5)}$$

Where, in both regressions, ag is the agricultural employment share, the subscript i refers to the province and t is the year (the initial and final ones in equation 5), $\overline{ag_t}$ refers to the cross-sectional average and $\dot{ag}_{i,t1-t0}$ to the average yearly rate of change.[1] In both cases

[1] The average yearly rate of change is computed, as standard, with the regression equation $ln(ag_{it}) = \alpha + \dot{ag}_{i,t1-t0}t + u_i$, where the notation is the same as in equations (4) and (5).

the coefficient of interest is β, with a negative (positive) value implying convergence (divergence). We weight the regressions with average provincial populations. The results of the tests of convergence are presented in table 4.

Appendix B: data construction and reliability

Agricultural employment shares are computed with Wrigley's (2004: 291-292) Primary-Secondary-Tertiary criteria, allocating mining to the secondary sector, however. 'Sailors and fishermen' and 'labourers' are ambiguous categories, cutting across the primary and urban sectors. 'Owners', too, included small landowners cultivating their plots: '[farmers include] the owners themselves, a good number of whom attend to the cultivation of the fields' (Ministero del Commercio e dei Lavori Pubblici 1857: 78; see also Malanima 2006: 6-7). 'Servants' in some of the provinces included also agricultural labourers: 'amongst servants have been written down in some provinces also agricultural daily labourers' (Ministero del Commercio e dei Lavori Pubblici 1857: 79). It is rather straightforward to identify these provinces, as those with particularly high shares of servants.[2] The ubiquity of 'owners' makes them the most problematic category.[3] Following Wallis *et al.* (2018: appendix 1), who allocate labourers to agriculture if the observation is from outside a city, we allocate individuals in ambiguous categories with urbanization rates. Agro-towns imply that this approach may introduce a negative bias in the estimated agricultural employment shares in the south. However, this bias militates against our finding that southern provinces were more agricultural than previously thought. Moreover, there is evidence that, in practice, our approach to dealing with ambiguous categories works well, even in the south. Provincial agricultural employment shares from Petroni's (1826) 1824 census, where only a tiny proportion of the labour force (0.47%) belonged to ambiguous categories, and the previous and next ones (from 1815 and 1834), where this share was much more significant (29.79% and 31.53% respectively, mostly because of 'owners'), are very close: the estimates are highly correlated, with Pearson's coefficients of 88% and 91% respectively; the levels tend to be only slightly lower in the 1824 census, with average differences of 1.73 and 0.23 percentage points respectively.[4] One census from Veneto and all censuses from Lombardy and the Litorale Illirico report only male occupations. In these cases, we extrapolate the agricultural employment share with the ratio between male and total agricultural employment share in Tuscany (1.09), where the gender breakdown is available and the ratio is remarkably stable across provinces. The Tuscan ratio also agrees with the expectation that women were less involved in agriculture than men (Shaw-Taylor and Wrigley 2014: 68-69; Broadberry *et al.* 2015: 362; Sarasua 2019).

We also compute tentative splits between industry and services. Several censuses allow to distinguish between industry and services only imperfectly, as they group together large categories of workers cutting across their boundaries, like 'artisans and domestic servants' in the Kingdom of the Two Sicilies or 'bourgeois, traders and artisans' in Lombardy. When such

[2] We exclude Rome and Naples, Italy's two largest cities at the time, where very few agricultural workers and many servants are expected. In the eight provinces where we allocate a share of servants to the primary sector (all located in the Papal States and the Duchy of Parma), the category accounts for an average of 25% of the workforce (with a standard deviation of 10%). In the remaining 32 provinces where servants are identified as a specific category of workers, the same figure is 4% (with a standard deviation of 4%).

[3] 'Sailors and fishermen' only accounted for small shares of the work-force, like 1.6% in the Kingdom of Naples in 1834 and 1.7% in Veneto in 1857. 'Labourers' or equivalent labels only represented a significant share of the work-force in three censuses: Litorale Illirico in 1857 (15%), Parma in 1857 (22%) and Veneto in 1857 (21%). Significant shares of 'owners' – often accounting for nearly 30% of the work-force - were a near universal feature of the Italian censuses, both before the unification and in 1861.

[4] These close matches are also reassuring in the light of the concern raised by Galasso (1965: 313) on possible double-counting of 'owners'.

ambiguous categories are used, for want of better alternatives, we simply distribute workers evenly between industry and services. The available data suggest that there were no systematic differences in the services' employment shares across males and females. In provinces where male only data are available, we therefore estimate the services' share for the whole province as the same as that for males only.

Our first test of data reliability is a comparison with aggregate populations from previous studies. In 1850, when our panel of provincial populations is balanced, our estimate is 24.45 million at republican borders (without, however, Alto Adige) and 23.86 at 1871 borders, as compared to 24.7 (Del Panta et al. 1996: table 4) and 24.16 (Travaglini 1933), respectively. Our populations by macro-area are also very close to those from Del Panta et al. (1996: table 4): at republican borders in the south and the centre-north we record 9.25 and 15.11 million respectively, while their estimates of the same figures are 9.5 and 15.2. Federico and Malanima's (2004) figures for 1861, 26.9 million for Italy and 15.95 for the centre-north, are consistent with our figures: using the same borders as them (excluding Latium from the centre-north) our figure for the centre-north in 1857 is 14.89 million.

Next, we do an internal consistency check by looking at whether the occupational structure across provinces shows the persistency that one would expect. Repeated occupational measurements in pre-unification censuses are available in Lombardy, Veneto and the Two Sicilies (mainland). Table A1 reports the average correlation coefficients of the sectorial employment shares across provinces in subsequent periods (like the Lombard censuses in 1850 and 1853).

Table A1: Comparison between pre-unification censuses: average correlation coefficients of the provincial sectorial employment shares in subsequent periods

State	Provinces	Correlations	Agriculture	Industry	Services
Lombardy	10	23	0.98***	0.98***	0.97***
Naples	14	6	0.96***	0.90***	0.94***
Veneto	8	1	0.89***	0.59	0.91***

Notes: ***=significant at 1% level, **=significant at 5% level, *=significant at 10% level; statistical significance for Veneto refers to the correlation coefficient rather than the average correlation coefficient because there is only one observation; "Naples" = Kingdom of Naples.
Sources: see the text and online appendix C.

Occupational data are remarkably consistent across the pre-unification censuses: the correlation coefficients are consistently very high, across states and sectors. The only and partial exceptions are industry in Veneto, where we detect a marked increase in the industrial share (figure 4), and to a lesser extent in the Neapolitan state.

Our subsequent test is a comparison with the 1861 census. The new administrative map in 1861 introduced hardly any changes to provinces in the south, but sweeping ones in the centre-north (Ministero d'Agricoltura, Industria e Commercio 1866: 213-236). We are therefore able to compare the occupational structure in our censuses and the first Italian census in all southern provinces (with the only exception of Corsica), but only in 10 provinces from the centre-north, which are nevertheless spread across several regions: Emilia (1), Liguria (1), Lombardy (2), Marche (1), Piedmont (4) and Tuscany (1). Table A2 reports correlation coefficients and mean differences between our final years (like 1843 in the Kingdom of the Two Sicilies) and the 1861 census.

Table A2: Comparison between pre-unification (last year) and 1861 censuses: correlation coefficients and mean differences of the provincial sectorial employment shares

		Correlation coefficient			Mean difference		
	N	Agriculture	Industry	Services	Agriculture	Industry	Services
Italy	33	0.60***	-0.29	0.71***	0.105***	-0.123***	0.017
Centre-north	10	0.76**	0.28	0.94***	-0.008	0.022	-0.017**
South	23	0.74***	-0.03	0.73***	0.154***	-0.186***	0.032*

Notes: ***=significant at 1% level, **=significant at 5% level, *=significant at 10% level; N=number of provinces.
Sources: see the text and online appendix C.

The correlation coefficients are relatively high for agriculture and services. However, they are not as high as those between pre-unification censuses (table A1) and are very low for industry, which again emerges as the noisiest sector. Noise is not the only issue, though. The correlation coefficients are higher within macro-areas than in Italy as a whole, consistent with an uneven bias in the 1861 census between central-northern and southern provinces. The mean differences are consistent with a particularly high positive bias in 1861 in the industrial employment shares of southern provinces, which translates in a negative bias for agricultural employment shares in the same provinces. While the absolute sizes of the implied biases are very close, the relative size of the bias is much higher for industry, whose employment share is significantly smaller than that of agriculture, leading to particularly low correlation coefficients in industry.

Appendix C: sources

Urban population

Since 1800: Bairoch et al. (1988), Beloch (1961), Bellettini (1987), Bussini (1982), Malanima (2006: 15, 2015), Marmocchi (1854, 1858a, 1858b, 1862), Marzolla (1832), Ministero d'Agricoltura, Industria e Commercio (1862a, 1864a), Pardi (1921), Petraccone (1974), Schiavoni (1982), Sonnino (1982), Tittarelli (1982), Zangheri (1963). In cases of inconsistencies across sources the following two criteria are used: first, census data is considered to be comparatively reliable; second, several sources are considered to be more reliable than a single one. Before 1800: Alfani and Percoco (2019), Bairoch et al. (1988), de Vries (2006), Malanima (2015). Here we considered later sources to be more reliable than earlier ones. We construct estimates at several benchmarks (1300, 1400, 1500, 1550, 1600, 1650, 1700, 1750) at times relying on linear interpolation between the beginning and the end of a century (eg. for Cammarata in Sicily we have data in 1600 and 1700, but not 1650, and thus for the latter year we interpolate).

Provincial population

Bandettini (1961), De Sanctis (1843: 3-4), Lampato (1845), Malanima (2006: 15), Ministero d'Agricoltura, Industria e Commercio (1862a, 1862b, 1866: 213ff). For Tuscany, Bandettini (1961) reports provincial populations at 1950 borders. We convert them at 1841 borders by multiplying them with the average ratios when we have populations with both borders (1834-1839, 1844 and 1846 for the provinces of the Grand-duchy, 1839 and 1842 for Lucca and 1847 and 1850 for Lunigiana and Massa).

Provincial urbanization

See "urban population" and "provincial population". For the Kingdom of Sardinia, our source (Ministero d'Agricoltura, Industria e Commercio 1862b) reports occupation at 1859 borders. For the extrapolation, we therefore convert provincial urbanization at pre-1859 borders into

provincial urbanization at 1859 borders as follows. In the Sardinian Isle, where in 1859 the province of Nuoro was split between those of Sassari and Cagliari, we aggregate all the urban and provincial populations to construct urbanization rates (and employment shares) for the whole island. We also aggregate urban and provincial populations in the old provinces of Torino and Ivrea, which were united in 1859. We compute total urban population in the 1858 province of Alessandria taking into account that the new province included Casale Monferrato and Acqui Terme and assume that the difference in urbanization rates between the Alessandria province at 1859 and pre-1859 borders (0.02%) remained constant. We compute total urban population in the 1858 province of Genova taking into account that the new province included cities in the old province of Savona but had lost Acqui Terme to the province of Alessandria and assume that the difference in urbanization rates between the Genova province at 1859 and pre-1859 borders (-1.88%) remained constant. We compute total urban population in the 1858 province of Novara taking into account that the new province had lost Casale Monferrato to the province of Alessandria and assume that the difference in urbanization rates between the Novara province at 1859 borders and the provinces of Novara and Vercelli at 1859 borders (1.65%) remained constant. For these last three provinces the same equal trends assumption is made to compute the provincial populations used as weights in figure 4 and table 6.

Urbanization in the macro-areas

Our provincial populations allow to reconstruct populations in the centre-north between 1848 and 1853 and in the south between 1838 and 1861. Italian populations at republican borders across macro-areas since 1300 are available from del Panta et al. (1996) and Federico and Malanima (2004). Their estimates for Italy as a whole hardly differ between the two sources, but Federico and Malanima (2004) have the advantage of having more frequent benchmarks. We therefore rely on them for the total Italian populations in 1300, 1350, 1400, 1450, 1500, 1550, 1600, 1650, 1700, 1750, 1800 and 1861. However, differently from us and Del Panta et al. (1996), Federico and Malanima (2004) define the centre-north as excluding Latium. We thus rely on weights constructed with the figures from Del Panta et al. (1996) to estimate populations in the centre-north and south, linearly interpolating in the benchmark years not covered by that source (1350, 1400 and 1500). For urban populations see "urban population". We linearly interpolate for years without data.

As in Malanima (2005, 2020), by the 19th century urbanization rates were much higher in the south than in the centre-north, as the south but not the north saw rising urbanization rates in the long-run, while during the Risorgimento little changed in both macro-areas. Table A3 systematically compares our figures with those of Malanima. To assist the comparison, we re-compute our urbanization rates allocating Latium to the south.

Table A3: Comparison between our and Malanima's urbanization rates (%)

Macro-area	Threshold	Estimate	1300	1400	1500	1600	1700	1800	1861
Centre-north	5,000	This paper	21.4	17.6	21.8	18.9	17.5	19.7	16.3
(without Latium)		Malanima	21.4	17.6	21.0	18.4	16.9	17.5	16.2
		Difference	0.0	0.0	0.8	0.5	0.6	2.2	0.1
	10,000	This paper	17.9	12.4	16.8	14.7	13.5	14.1	13.5
		Malanima	18.0	12.4	16.4	14.4	13.0	14.2	13.3
		Difference	-0.1	0.0	0.4	0.3	0.5	-0.1	0.2
South	5,000	This paper	18.5	8.7	21.8	29.7	28.7	47.7	42.7
(with Latium)		Malanima	23.8	9.3	25.7	31.1	28.2	36.5	42.6
		Difference	-5.3	-0.6	-3.9	-1.4	0.5	11.2	0.1
	10,000	This paper	9.5	3.3	12.7	19.1	16.0	22.6	25.8
		Malanima	9.4	3.3	12.3	18.7	16.1	21.0	25.5
		Difference	0.1	0.0	0.4	0.4	-0.1	1.6	0.3

Sources: this paper: see the text of this appendix; Malanima: centre-north (5,000): Malanima (2005: table 1, 2020: table 2), centre-north (10,000): Malanima (2005: table 1), south (5,000): Malanima (2020: table 2), south (10,000): our computation using urban populations from Malanima (2015) and southern population implied by Federico and Malanima (2004: table 4).

The match with Malanima's rates is mostly very close, with one notable exception: the south in 1800 according to the 5,000 inhabitants threshold, as our augmented data-set includes several centres not present in the Malanima's (2015) dataset. For instance, Atessa in Abruzzo Citra is consistently reported as having more than 5,000 inhabitants in the first half of the 19th century by three different sources (Marzolla 1832; Marmocchi 1854; Bairoch et al. 1988). On the one hand, that the difference between the 1800 and 1861 figures is slightly lower for our estimates than those of Malanima suggests that our 1800 urbanization rates are plausible. On the other hand, it is likely that some of these agro-towns were missed also by our sources in previous years, with the result that the sharp rise in urbanization rates in the second half of the 18th century that we detect in the south using a 5,000 inhabitants threshold is in part an artefact. Yet to extrapolate agricultural employment shares in the south we only use urbanization rates with a 10,000 threshold. Hence, any potential issue with the southern series before 1800 using a 5,000 threshold has no bearing on the results of our analysis.

Occupations

Italy. Corsica, 1856: Ministero agricoltura, industria e commercio (1862a: 354-355). Parma, 1857: Ministero d'Agricoltura, Industria e Commercio (1864b: 452-453). Litorale Illirico, 1857 (males only): Ministero agricoltura, industria e commercio (1862: 344-345). Lombardy, 1821, 1830, 1832, 1835-1850, 1853-1857 (males only): Ministero agricoltura, industria e commercio (1862a: 210-221). Lucca, 1843: *Bollettino di Notizie Statistiche ed Economiche d'Invenzioni e Scoperte*, Marzo 1845, p. 98. Papacy, 1853: Ministero del Commercio e dei Lavori Pubblici (1857: 317). Sardinia, 1858: Ministero d'Agricoltura, Industria e Commercio (1862b: 604-623). Tuscany, 1841: Bandettini (1956: 114-116). Two Sicilies, 1815, 1817-1822, 1831, 1836-1842, 1850-1852, 1855, 1858-1859 (only province of Naples): Ministero d'Agricoltura, Industria e Commercio 1862a: 127, 130-132); 1812, 1813, 1814 (only mainland): Martuscelli (1979). In the city of Naples these statistics show an unexpectedly high number of farmers which is inconsistent with the information provided by later censuses. We therefore decided to neglect this information. 1824 (only mainland): Petroni (1826). This source includes nearly 500 different occupational categories. These have been allocated to the primary, secondary and tertiary sectors with the help of a range of period and secondary sources, like Del Re (1835: 139), Mastriani (1843: 88-91) and Ago (1998: 11). It has not been

possible to allocate a few occupations ("casolj", "cilentaj", "collarari", "creajuoli e faenzaj" and "empiriei"), but their numbers are very small: altogether they account for only 0.03% of the work-force. 1834 (only mainland): Serristori (1842: 260); 1843: De Sanctis (1843). Veneto, 1823: Quadri (1827: 55); 1857 (males only): Ministero agricoltura, industria e commercio (1862a: 330-331).

Appendix D: supplementary material

Table A4: Non-agricultural employment shares in the country-side in Italy and Europe (%)

Place	Year(s)	Share	Rank	Source
Tuscany	1427	6	18	Herlihy and Klapisch-Zuber (1978: chapter 10)
Lombardy	1821	19	14	This article
Veneto	1823	9	17	This article
Italy (south)	1800-1860	10	16	This article (table 3)
Italy (centre-north)	1800-1860	27	9	This article (table 3)
Italy	1850-1870	26	10	Allen (2000: table 1)
Austria	c. 1850	38	4	Allen (2000: table 1)
Belgium	1800	38	5	Allen (2000: table 1)
Belgium	1850	23	12	Allen (2000: table 1)
Eng. & Wales (males)	1530s	25	11	Wallis et al. (2018: 888)
Eng. & Wales (males)	1720s	40	3	Wallis et al. (2018: 888)
Eng. & Wales	1800	49	1	Allen (2000: table 1)
France	1800	32	7	Allen (2000: table 1)
Germany	1800	32	8	Allen (2000: table 1)
Netherlands	1514	15	15	Federico (2016: 127)
Netherlands	1800	38	6	Allen (2000: table 1)
Poland	1897	41	2	Allen (2000: table 1)
Spain	1800	21	13	Allen (2000: table 1)

Sources: see the last column.

Notes: the rank refers to the position within the sample and it ranges from 1 to 18. Differently from this article, other authors neglect to consider that a proportion of inhabitants of pre-industrial cities was likely employed in agriculture but this neglect will only bias the results against finding that rural industry in Italy was comparatively under-developed.

Table A5: Estimates of fiscal revenues per capita in Italy and Europe (grams of silver)

	England/UK	France	Spain	CN Italy	S Italy
1500-09	5	7	13	20	9
1550-59	9	11	19	23	19
1600-09	15	18	63	35	28
1650-59	39	57	57	47	40
1700-09	92	44	29	46	27
1750-59	109	49	46	44	28
1780-89	172	78	59	47	24
1800-09	334	114	22	116	58
1830-39	216	166	18	43	47
1850-59	234	245	26	76	64

Sources: Dincecco (2009) has data on revenues in UK, France and Spain since 1800; Giovanni Federico kindly provided data on population in the same places and times; Karaman and Pamuk (2010) have data on per capita taxation in England, France and Spain before 1800; Chilosi (2014) has data on per capita taxation in the main Italian regional states before 1800 (but not the Sardinia isle); Federico and Dincecco (2021) have data on total revenues in all the Italian regional states since the French period; populations of the centre-north and the south are from this article.
Notes: CN=central-northern; S=southern.

References

Ago, R. (1998). *Economia Barocca: Mercato e Istituzioni nell'Economia del Seicento*. Roma: Donzelli Editore.

Alfani, G., & Percoco, M. (2019). Plague and long-term development: the lasting effects of the 1629–30 epidemic on the Italian cities. *Economic History Review*, *72*(4), 1175-1201.

Allen, R. C. (2000), Economic Structure and Agricultural Productivity in Europe, 1300–1800, *European Review of Economic History*, *4*(1), 1-25.

Bairoch, P., Batou, J., & Pierre, C. (1988). *Population des Villes Européennes de 800 à 1850: Banque de Données et Analyse Sommaire des Résultats*. Genéve: Librairie Droz.

Bandettini, P. (1956). *La Popolazione della Toscana alla Metà dell'Ottocento*. Torino: ILTE.

Bandettini, P. (1961). *La Popolazione in Toscana dal 1810 al 1959*. Firenze: Camera di Commercio, Industria e Agricoltura.

Beloch, K. J. (1961) *Bevölkerunggeschichte Italiens*. Berlin: De Gruyter.

Bellettini, A. (1987). *La Popolazione Italiana: un Profilo Storico*. Torino: Einaudi.

Bussini, O. (1982). L'evoluzione demografica della città di Camerino nei secoli XVIII e XIX. In *La Demografia Storica delle Città Italiane*. Bologna: CLUEB, 263-282.

Chilosi, D. (2014). Risky institutions: political regimes and the cost of public borrowing in early modern Italy, *Journal of Economic History*, *74*(3), 887-915.

Del Panta, L., Livi Bacci, M., Pinto, G. & Sonnino, E. (1996). *La Popolazione Italiana dal Medioevo a Oggi*. Bari: Laterza.

Del Re, G. (1835). *Descrizione Topografica Fisica Economica Politica de Reali Dominj al di Qua dal Faro nel Regno delle Due Sicilie con Cenni Storici Fin da' Tempi Avanti al Dominio de' Romani*. Tomo II. Napoli: Tipografia dentro la Pietà de' Turchini.

Dincecco, M. (2009). Fiscal centralization, limited government, and public revenues in Europe, 1650–1913. *Journal of Economic History*, *69*(1), 48-103.

Federico, G. and Dincecco, M. (2021). Napoleon in Italy: a legacy of institutional reform? In P. K. O'Brien (ed.) *The Crucible of Revolutionary and Napoleonic Warfare and European Transitions to Modern Economic Growth*. Leiden and Boston: Brill, 141-170.

De Sanctis, G. (1843). *Stato della Popolazione del Regno delle Due Sicilie Messo in Confronto tra gli Anni 1828 e 1843: Dedicato alla Società Economica della Provincia di Abruzzo Citeriore*. Napoli: Presso l'Autore.

De Vries, J. (2006). *European Urbanization, 1500-1800*. London and New York: Routledge.

Federico, G. (2016). The holy grail of economic history: long-run economic growth and the Industrial Revolution in Britain. *Rivista di storia economica*, *32*(1), 119-133.

Federico, G., & Malanima, P. (2004). Progress, decline, growth: product and productivity in Italian agriculture, 1000–2000. *Economic History Review*, *57*(3), 437-464.

Galasso, G. (1965). *Mezzogiorno Medievale e Moderno*. Torino: Einaudi.

Herlihy, D. and Klapisch-Zuber, C. (1978) *Les Toscans et Leurs Familles: une Étude du Catasto Florentin de 1427*. Paris: Presses Universitaires de la Fondation Nationale des Sciences Politiques.

Karaman, K. K. and Pamuk, Ş. (2010). Ottoman state finances in European perspective, 1500-1914. *Journal of Economic History*, *70*(3), pp. 593-629.

Lampato, F. (1845). *Annali Universali di Statistica, Economia Pubblica, Storia, Geografia, Viaggi e Commercio*. Luglio, Agosto e Settembre.

Malanima, P. (2005). Urbanisation and the Italian economy during the last millennium. *European Review of Economic History*, *9*(1), 97-122.

Malanima, P. (2006). Pre-Modern Equality Income Distribution in the Kingdom of Naples (1811). Paper presented at the International Congress of Economic History, Helsinki.

Malanima, P. (2015). Italian Urban Population 1300-1861 *(The Database) (revisione 2015)*. Available at http://www.paolomalanima.it/default_file/Page646.htm (consulted on 26 March 2020).

Malanima, P. (2020). The Italian economy before unification, 1300–1861. *Oxford Research Encyclopedia of Economics and Finance*. April, 1-31.

Marmocchi, F. C. (1854). *Dizionario di Geografia Universale*. *Volume Primo. Parte Prima.* Torino: Società Editrice Italiana.

Marmocchi, F. C. (1858a). *Dizionario di Geografia Universale*. *Volume Primo. Parte Seconda.* Torino: Sebastiano Franco e Figli e Comp.

Marmocchi, F. C. (1858b). *Dizionario di Geografia Universale*. *Volume Secondo. Parte Prima.* Torino: Sebastiano Franco e Figli e Comp.

Marmocchi, F. C. (1862). *Dizionario di Geografia Universale*. *Volume Secondo. Parte Prima.* Torino: Tipografia Scol. di Sebastiano Franco e Figli.

Mastriani, R. (1843). *Dizionarío Geografico-Storico-Civile del Regno delle due Sicilie*. Napoli: Tipografia all'Insegna del Diogene.

Martuscelli, S. (1979). *La Popolazione del Mezzogiorno nella Statistica di Re Murat*. Napoli: Guida.

Marzolla, B. (1832). *Atlante Corografico, Storico e Statistico del Regno delle Due Sicilie*. Napoli: Reale Litografia Militare.

Mazzarosa, A. (1843). *Guida di Lucca e dei Luoghi più Importanti del Ducato*. Lucca: Tipografia di Giuseppe Giusti.

Ministero d'Agricoltura, Industria e Commercio. (1862a). *Statistica del Regno d'Italia. Popolazione. Censimento degli Antichi Stati Sardi e Censimenti di Lombardia, di Parma e di Modena*. Torino: Stamperia Reale.

Ministero d'Agricoltura, Industria e Commercio. (1862b). *Statistica del Regno d'Italia. Popolazione. Censimento degli Antichi Stati Sardi e Censimenti di Lombardia, di Parma e di Modena*. Volume III. Torino: Stamperia Reale.

Ministero d'Agricoltura, Industria e Commercio. (1864a). *Statistica del Regno d'Italia. Popolazione. Censimento Generale*. Volume I. Torino: Tipografia Letteraria.

Ministero d'Agricoltura, Industria e Commercio. (1864b). *Statistica del Regno d'Italia. Popolazione. Censimento degli Antichi Stati Sardi e Censimenti di Lombardia, di Parma e di Modena*. Volume I. Fascicolo 2. Torino: Stamperia Reale.

Ministero d'Agricoltura, Industria e Commercio. (1866). *Statistica del Regno d'Italia. Popolazione. Censimento Generale*. Volume III. Firenze: Tipografia Letteraria e degli Ingegneri.

Ministero del Commercio e dei Lavori Pubblici. (1857). *Statistica della Popolazione dello Stato Pontificio dell'Anno 1853*. Roma: della Tipografia della Rev. Cam. Apostolica.

Pardi, G. (1921). Storia demografica di Messina. *Nuova Rivista Storica*, volume V, fascicolo I, 28-53.

Petraccone, C. (1974). *Napoli dal '500 all'800. Problemi di Storia Demografica e Sociale*. Napoli: Guida.

Petroni, R. (1826). *Censimento Ossia Statistica de' Reali Dominii di qua dal Faro del Regno delle Due Sicilie dell'Abate D. Riccardo Petroni Direttore Interino del Medesimo*. Napoli: Presso i Soci De Bonis e Morelli.

Quadri, A. (1827). Atlante di LXXXII Tavole Sinottiche Relative al Prospetto Statistico delle Province Venete. Venezia: Per Francesco Andreola.

Serristori, L. (1842). *Statistica dell'Italia*. 2nd ed. Firenze: Stamperia Granducale.

Schiavoni, C. (1982). Brevi cenni sullo sviluppo della popolazione romana dal 1700 al 1824. In *La Demografia Storica delle Città Italiane*. Bologna: CLUEB, 401-431.

Sonnino, E. (1982). Bilanci demografici di città italiane: problemi di ricerca e risultati. In *La Demografia Storica delle Città Italiane*. Bologna: CLUEB, 47-108.

Tittarelli, L. (1982). Evoluzione della popolazione urbana e rurale nel- la diocesi perugina tra il 1656 e il 1853. Alcune caratteristiche differenziali. In *La Demografia Storica delle Città Italiane*. Bologna: CLUEB, 453-466.

Wallis, P., Colson, J., & Chilosi, D. (2018). Structural change and economic growth in the British economy before the Industrial Revolution, 1500–1800. *Journal of Economic History, 78*(3), 862-903.

Wrigley, E.A. (2004), *Poverty, Progress, and Population*, Cambridge, UK and New York: Cambridge University Press.

Zangheri, R. (1963). *La Popolazione Italiana in Età Napoleonica. Studi sulla Struttura Demografica del Regno Italico e dei Dipartimenti Francesi*. Bologna: Museo del Risorgimento.