

Wages in Northern and Southern Italy 1700-1861

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Note: a more advanced series of GDP (1700-1913) is in progress (November 2008).

1. North (Milan): Price index (1861=1) (Figure 11). The basket I used to build the price index is composed of the following yearly quantities:

Wheat	120 kg
Maize	120 kg
Meat	20 kg
Wine	100 liters
Eggs	50 n°
Butter	3 kg
Soap	2 kg
Oil	5 kg
Textiles	13 lire in 1700-10
Firewood	365 kg
House rent	10 lire in 1700-10

My source for the prices is A. De Maddalena, *Prezzi e mercedi a Milano dal 1701 al 1860*, Milano, 1974. I have compared these figures with data published by A. De Maddalena, *I prezzi dei generi commestibili e dei prodotti agricoli sul mercato di Milano dal 1800 al 1890*, Roma (Archivio dell'Unificazione Italiana), 1957.

2. South (Naples): Price index (1861=1) (Figure 12). The basket I used to build the price index is composed of the following yearly quantities:

Wheat	120 kg
Beans	120 kg
Meat	20 kg
Wine	100 liters
Eggs	20 n°
Oil	8 kg
Firewood	365 kg
Charcoal	60 kg
Textiles	58 grana in 1730-40.

My main sources for these prices are: **1700-33:** M. Mantovani, "Potere d'acquisto della moneta (1647-1860) in lire attuali ed economia pubblica nel Regno di Napoli", in *Politeia*, n. 69, 2000; **1734-1806:** R. Romano, *Prezzi, salari e servizi a Napoli nel secolo XVIII (1734-1806)*, Milano, 1965. Some shortcomings of the latter study have been pointed out by M. Mirri, "Osservazioni in margine a serie statistiche di prezzi e salari", in *Critica storica*, 1966, pp. 539-88. Since the price of wine is missing in R. Romano's series, I used the prices in L. Cagnazzi, "Ragguaglio de' prezzi di varie derrate di prima necessità, ridotti a peso di puro argento, per lo spazio degli ultimi due secoli", in R. Romano, *Prezzi, salari e servizi*, App. I, and N.F. Faraglia, *Storia dei prezzi in Napoli dal 1131 al 1860*, Napoli, 1878; **1807-15:** Mantovani, "Potere d'acquisto", and ASBN (Historical Archives of the Banco di Napoli), *Prezzi e salari a Napoli dal 1806 al 1808*; **1816-40:** data from ASN (State Archives in Napoli), *Intendenza di Napoli, Monasteri soppressi*, 2938, 186, 4761, 4192, 2478 (years 1806-09). For the price of wheat in 1816-47, I also used data in M.R. Storchi, *Prezzi, crisi agrarie e mercato del grano nel Mezzogiorno d'Italia (1806-1854)*, Napoli, 1991; **1841-61:** M. Mantovani, "Potere d'acquisto della moneta". Since my price index is similar to Mantovani's, I used her price index for some years. Since in Mantovani's basket both the products and the quantities consumed are those of the

middle class, I adapted her data by regressing my series on hers for the years when both series coincide and then recalculating of the price index for the missing years.

3-4. North (Milan): Nominal and real industry wage rates. Data from De Maddalena, *Prezzi e mercedi a Milano*. For an in-depth discussion of the reliability of Milanese data on wages, see L. Mocarelli, "Wages and the Labour Market in the Building Trade in 18th Century Milan", in "Jahrbuch für Wirtschaftsgeschichte", 2004, 2, pp. 61-81. Wage rates per day are here expressed in Milan lire and hundreds of lire (the original nominal wages are in *lire, soldi, denari*; 1 *lira*=20 *soldi* and 1 *soldo*=12 *denari*). The wages indicated are those of a *mastro fabbricatore* (master mason). The Milan lira was of silver, and weighed 3.87 gr. in 1700. Its weight was reduced to 3.75 gr. in 1731, to 3.69 in 1741, to 3.58 in 1751, and to 3.50 in 1781. From 1781 to 1861 its weight remained stable. A'Hearn published a graph showing a quite similar series of real wage rates in Milan ("Il benessere dell'Italia settentrionale", p. 298).

5-6. South (Naples): Nominal and real wage rates. For the 1734-1806 period, nominal wage rates for a master mason are from Romano, *Prezzi, salari e servizi a Napoli*, pp. 44-45, but cross-checked against various archive sources: ASN, *Monasteri soppressi, San Domenico Maggiore*, 486, 487, 488, 490; ASN, *Monasteri soppressi, Donnalbina*, 3307; ASN, *Monasteri soppressi, San Francesco agli Scarioni*, 4323; ASN, *Monasteri soppressi, San Marcellino e Festo*, 2832, 2833, 2835; ASN, *Monasteri soppressi, S. Antonio a Posillipo*, 4290; ASN, *Monasteri soppressi, S. Sofia di Castella*, 1775; ASN, *Monasteri soppressi, S. Nicola alla Carità*, 4248, 4249, 4272; ASN, *Monasteri soppressi, S. Girolamo di Aversa*, 5736. For the period after 1806, data are from ASN, *Monasteri soppressi, Padri minimi*, 4518; ASN, *Monasteri soppressi, S. Lorenzo di Padula*, 5666; ASN, *Monasteri soppressi, S. Spirito di Benevento*, 219; ASN, *Monasteri soppressi, Passioniste S.S. Trinità di Aversa*, 5791; ASN, *Monasteri soppressi, S.S. Trinità della Cava*, 5838. Sometimes the wages are those of workers in the surroundings of Naples. Wages are expressed in *grana* and hundreds of *grana* (1 *grano* = 12 *cavalli*). In the Kingdom of Naples, 1 *ducat* was worth 10 *carlini* and 1 *carlino* 10 *grana*. The weight of the *grano* was 0.197 gr. of silver in 1700-83 and 0.192 in 1784-1861.

7-8. North (Piedmont): Nominal and real agricultural wage rates (labourers). The data on Northern Italy were collected by S. Pugliese, *Due secoli di vita agricola. Produzione e valore dei terreni contratti agrari, salari e prezzi nel Vercellese nei secoli XVIII e XIX*, Milano-Torino-Roma, 1908, pp. 48-9. Since from 1802 onward these wages are expressed in Italian lire, I have also converted the wages of the previous period into Italian lire (1 Piedmont lira = 1.19 Italian lira). The weight of the Italian lira in silver was 4.50 gr. in 1861. I have interpolated some missing data, and used the Milan price index to deflate nominal wages.

9-10 South (Naples-Apulia): Nominal and real agricultural wage rates (labourers). Romano, *Prezzi, salari e servizi a Napoli*, pp. 31-2, col. A e B. The wages referred to are those of "*falciatori e mietitori*" (mowers and harvesters). For the 1700-34 period, I used the wage of a "*potatore*" (pruner) near Naples. After 1805, data on the wages of agricultural labourers in the ASN, *Monasteri soppressi* are scarce; I hence employed them only for comparisons, and used the wage of a pruner in Molfetta instead, which appear to have been the same or close to those of a pruner around Naples, whenever a comparison is possible in the 1788-1806 period. The Molfetta wages are from L. Palumbo, *Prezzi e salari in Terra di Bari (1530-1860)*, pp. 158-59.

	1	2	3	4	5	6	7	8	9	10
	North Milan	South Napoli	North Milan	North Milan	South Naples	South Naples	North Piedmont	North Piedmont	South Naples	South Naples
	price index	price index	industrv nominal wage mason	industrv real wage mason	Indus- nominal Wage Mason	industrv real wage mason	aaric. nominal wage labourer	aaric. real wage labourer	aaric. nominal wage labourer	aaric. real wage labourer
	1861=1	1861=1	Milan Lire per dav	1861=1	Naples Grana per dav	1861=1	Piedmont lire per dav	1861=1	Naples grana per dav	1861=1
1700	0.39	0.54	1.50	2.05	40	1.86	1.19	1.72	24	1.78
1701	0.40	0.46	1.75	2.32	40	2.19	1.19	1.79	24	2.11
1702	0.42	0.46	1.75	2.20	40	2.19	1.19	1.69	24	2.11
1703	0.40	0.55	1.75	2.31	40	1.82	1.19	1.78	24	1.74
1704	0.39	0.57	1.75	2.35	40	1.76	1.19	1.81	24	1.69
1705	0.39	0.58	1.75	2.37	40	1.72	1.19	1.83	24	1.66
1706	0.41	0.49	1.75	2.27	40	2.06	1.19	1.75	24	1.98
1707	0.42	0.57	1.75	2.21	40	1.76	1.19	1.70	24	1.69
1708	0.42	0.89	1.75	2.19	40	1.13	1.19	1.69	24	1.08
1709	0.53	0.72	1.63	1.62	40	1.40	1.19	1.30	24	1.34
1710	0.47	0.51	1.63	1.83	40	1.97	1.19	1.46	24	1.89
1711	0.39	0.51	1.63	2.19	35	1.70	1.19	1.76	24	1.86
1712	0.38	0.54	1.63	2.27	35	1.63	1.19	1.82	24	1.78
1713	0.38	0.59	1.63	2.27	35	1.49	1.19	1.82	24	1.64
1714	0.41	0.60	1.63	2.09	35	1.46	1.39	1.83	24	1.61
1715	0.43	0.51	1.63	2.01	35	1.72	1.34	1.73	24	1.89
1716	0.39	0.59	1.63	2.21	35	1.49	1.19	1.77	24	1.64
1717	0.38	0.62	1.63	2.27	35	1.41	1.19	1.82	24	1.55
1718	0.39	0.49	1.63	2.22	35	1.78	1.19	1.78	24	1.95
1719	0.35	0.87	1.63	2.43	35	1.01	1.19	1.95	24	1.10
1720	0.33	0.60	1.63	2.63	35	1.45	1.19	2.11	24	1.59
1721	0.34	0.63	1.63	2.53	35	1.40	1.19	2.02	24	1.53
1722	0.35	0.53	1.63	2.47	35	1.66	1.19	1.98	24	1.82
1723	0.31	0.48	1.63	2.75	35	1.83	1.19	2.21	24	2.00
1724	0.29	0.54	1.63	2.93	35	1.63	1.19	2.35	24	1.78
1725	0.33	0.52	1.63	2.62	35	1.68	1.16	2.07	24	1.84
1726	0.35	0.46	1.63	2.45	35	1.92	1.16	1.93	24	2.11
1727	0.34	0.44	1.63	2.56	35	2.00	1.19	2.05	24	2.19
1728	0.33	0.66	1.63	2.60	35	1.33	1.19	2.08	24	1.46
1729	0.33	0.57	1.63	2.63	35	1.54	1.19	2.11	24	1.69
1730	0.31	0.63	1.63	2.75	35	1.40	1.19	2.20	24	1.53
1731	0.35	0.47	1.63	2.40	35	1.87	1.19	1.96	24	2.05
1732	0.34	0.56	1.63	2.48	35	1.57	1.19	2.02	24	1.73
1733	0.42	0.54	1.63	1.98	35	1.63	1.19	1.62	24	1.78
1734	0.49	0.47	1.63	1.70	35	1.84	1.19	1.39	25	2.11
1735	0.46	0.51	1.63	1.80	35	1.73	1.19	1.47	25	1.98
1736	0.42	0.55	1.63	1.99	35	1.58	1.19	1.62	25	1.81
1737	0.37	0.56	1.63	2.24	35	1.57	1.19	1.83	25	1.80
1738	0.39	0.57	1.63	2.15	35	1.55	1.29	1.84	25	1.77
1739	0.38	0.55	1.63	2.16	35	1.59	1.29	1.85	25	1.82
1740	0.40	0.58	1.63	2.06	35	1.51	1.29	1.76	25	1.73
1741	0.43	0.55	1.63	1.91	35	1.59	1.29	1.65	25	1.81
1742	0.41	0.57	1.63	2.01	35	1.52	1.29	1.74	25	1.74
1743	0.42	0.53	1.63	1.96	35	1.64	1.29	1.69	25	1.88
1744	0.39	0.50	1.63	2.12	35	1.74	1.19	1.75	25	1.99
1745	0.39	0.53	1.63	2.08	35	1.65	1.19	1.71	25	1.88
1746	0.45	0.53	1.63	1.81	35	1.65	1.19	1.49	25	1.89
1747	0.49	0.59	1.63	1.68	35	1.48	1.19	1.38	25	1.69
1748	0.49	0.60	1.63	1.66	35	1.47	1.27	1.42	25	1.67
1749	0.45	0.57	1.63	1.84	35	1.52	1.27	1.57	25	1.74
1750	0.50	0.60	1.63	1.64	35	1.46	1.31	1.43	25	1.67
1751	0.50	0.59	1.63	1.58	35	1.48	1.31	1.40	25	1.70
1752	0.46	0.61	1.63	1.74	35	1.44	1.31	1.54	25	1.65
1753	0.38	0.61	1.63	2.06	35	1.44	1.31	1.83	25	1.64
1754	0.38	0.63	1.63	2.09	35	1.38	1.29	1.84	25	1.58
1755	0.41	0.63	1.63	1.92	35	1.39	1.29	1.69	25	1.59
1756	0.44	0.59	1.63	1.82	35	1.49	1.29	1.60	25	1.70
1757	0.45	0.59	1.63	1.76	35	1.49	1.29	1.55	25	1.70

1758	0.44	0.59	1.63	1.81	35	1.47	1.29	1.59	25	1.68
1759	0.44	0.60	1.63	1.80	35	1.45	1.29	1.58	25	1.66
1760	0.39	0.59	1.63	2.01	35	1.49	1.31	1.78	25	1.70
1761	0.38	0.55	1.63	2.07	35	1.58	1.31	1.83	25	1.81
1762	0.38	0.55	1.63	2.11	37.5	1.71	1.31	1.87	25	1.82
1763	0.40	0.65	1.63	1.98	30	1.16	1.31	1.75	25	1.54
1764	0.43	0.78	1.63	1.84	40	1.29	1.31	1.63	25	1.29
1765	0.46	0.67	1.63	1.74	37.5	1.40	1.29	1.53	25	1.49
1766	0.52	0.62	1.63	1.54	37.5	1.52	1.24	1.32	25	1.62
1767	0.51	0.64	1.63	1.55	37.5	1.48	1.34	1.39	25	1.57
1768	0.48	0.62	1.63	1.65	37.5	1.52	1.34	1.49	25	1.62
1769	0.46	0.62	1.63	1.73	30	1.22	1.34	1.56	25	1.62
1770	0.49	0.65	1.63	1.61	35	1.35	1.34	1.45	25	1.54
1771	0.51	0.68	1.63	1.56	35	1.28	1.34	1.40	25	1.46
1772	0.58	0.62	1.63	1.37	35	1.40	1.34	1.23	25	1.60
1773	0.56	0.66	1.63	1.41	40	1.51	1.34	1.27	25	1.51
1774	0.61	0.68	1.63	1.31	40	1.47	1.34	1.17	25	1.47
1775	0.64	0.64	1.63	1.24	40	1.56	1.34	1.12	25	1.56
1776	0.52	0.65	1.63	1.52	40	1.53	1.34	1.37	25	1.53
1777	0.60	0.67	1.63	1.33	40	1.48	1.34	1.20	25	1.48
1778	0.69	0.67	1.63	1.15	40	1.49	1.39	1.06	25	1.49
1779	0.57	0.70	1.46	1.26	40	1.42	1.39	1.24	25	1.42
1780	0.50	0.73	1.46	1.43	40	1.37	1.35	1.39	25	1.37
1781	0.55	0.70	1.46	1.26	40	1.43	1.35	1.24	25	1.43
1782	0.59	0.73	1.46	1.18	40	1.38	1.34	1.16	25	1.38
1783	0.62	0.68	1.46	1.13	40	1.47	1.34	1.10	25	1.47
1784	0.58	0.69	1.46	1.19	40	1.44	1.24	1.11	25	1.44
1785	0.56	0.76	1.46	1.25	40	1.32	1.24	1.16	25	1.32
1786	0.53	0.74	1.46	1.31	40	1.35	1.24	1.22	25	1.35
1787	0.60	0.79	1.46	1.16	40	1.26	1.24	1.08	25	1.26
1788	0.54	0.87	1.46	1.29	40	1.15	1.24	1.20	25	1.15
1789	0.55	0.78	1.46	1.27	40	1.28	1.24	1.18	25	1.28
1790	0.57	0.71	1.46	1.22	40	1.42	1.24	1.14	25	1.42
1791	0.52	0.79	1.46	1.33	40	1.27	1.24	1.24	30	1.53
1792	0.55	0.88	1.46	1.26	40	1.13	1.24	1.17	27.5	1.24
1793	0.65	0.95	1.46	1.07	40	1.06	1.24	1.00	27.5	1.16
1794	0.64	0.85	1.46	1.08	40	1.17	1.34	1.06	27.5	1.29
1795	0.66	0.89	1.46	1.05	40	1.12	1.59	1.15	27.5	1.23
1796	0.68	0.93	1.46	1.02	40	1.07	1.69	1.16	27.5	1.18
1797	0.72	0.99	1.46	0.97	40	1.01	1.88	1.19	27.5	1.11
1798	0.73	0.90	1.46	0.95	40	1.12	2.13	1.27	30	1.34
1799	0.84	0.85	1.46	0.83	40	1.17	2.13	1.12	27.5	1.29
1800	1.18	0.98	1.46	0.59	40	1.03	2.23	0.82	27.5	1.13
1801	1.14	1.03	1.56	0.65	40	0.97	1.98	0.79	27.5	1.07
1802	0.88	1.10	1.63	0.88	40	0.91	1.79	0.97	27.5	1.00
1803	0.77	1.08	1.63	1.00	40	0.93	1.50	0.98	27.5	1.02
1804	0.69	1.02	1.63	1.13	40	0.98	1.63	1.16	27.5	1.07
1805	0.71	1.11	1.63	1.09	40	0.90	1.44	1.04	27.5	0.99
1806	0.75	1.21	1.63	1.04	40	0.82	1.71	1.10	30	0.99
1807	0.72	1.17	1.63	1.08	40	0.85	1.50	1.06	30	1.02
1808	0.67	1.17	1.63	1.15	40	0.85	1.79	1.27	32.6	1.11
1809	0.66	1.09	1.63	1.17	40	0.92	1.79	1.29	22	0.81
1810	0.85	1.16	1.63	0.91	40	0.86	1.79	1.00	25	0.86
1811	1.00	0.99	1.63	0.78	40	1.01	1.81	0.86	30	1.21
1812	0.91	0.97	1.63	0.85	40	1.03	1.81	0.94	29	1.20
1813	0.81	0.82	1.63	0.96	40	1.22	1.83	1.07	33	1.60
1814	0.84	0.96	1.63	0.93	40	1.04	2.00	1.10	30	1.25
1815	1.02	1.20	1.63	0.76	40	0.83	2.00	0.90	30	1.00
1816	1.09	0.93	1.63	0.71	40	1.08	2.00	0.85	30	1.29
1817	1.05	1.42	1.63	0.74	40	0.70	2.00	0.88	35	0.98
1818	0.77	1.07	1.63	1.01	40	0.93	2.00	1.20	30	1.12
1819	0.66	0.81	1.63	1.18	40	1.23	1.62	1.21	30	1.48
1820	0.69	0.90	1.63	1.12	40	1.11	1.50	1.10	32.6	1.45
1821	0.74	0.85	1.63	1.04	40	1.17	1.50	1.02	30	1.41
1822	0.70	0.84	1.96	1.32	40	1.19	1.50	1.16	25	1.19
1823	0.70	0.75	2	1.36	40	1.33	1.50	1.18	27.6	1.46
1824	0.64	0.71	2	1.50	40	1.40	1.50	1.29	20	1.12
1825	0.67	0.70	2	1.42	40	1.43	1.50	1.23	25	1.43
1826	0.64	0.77	2	1.48	40	1.30	1.63	1.34	21	1.09
1827	0.68	0.79	2	1.39	40	1.26	1.63	1.26	28	1.41
1828	0.76	0.84	2	1.25	40	1.19	1.75	1.18	20	0.95
1829	0.78	0.78	2	1.23	40	1.28	1.75	1.16	25	1.28
1830	0.71	0.79	2	1.35	30	0.95	1.50	1.16	20	1.01

1832	0.68	0.84	2	1.39	30	0.89	1.75	1.32	20	0.95
1833	0.67	0.87	2	1.41	30	0.86	1.75	1.34	22	1.01
1834	0.65	0.63	2	1.46	30	1.18	1.75	1.38	24	1.51
1835	0.67	0.62	2	1.43	30	1.22	2.00	1.48	20	1.30
1836	0.75	0.59	2	1.26	30	1.27	1.67	1.16	25	1.70
1837	0.84	0.64	2	1.13	30	1.17	1.67	1.04	30	1.87
1838	0.78	0.74	2	1.21	30	1.01	1.67	1.12	26	1.40
1839	0.82	0.75	2	1.16	30	1.00	1.67	1.07	30	1.60
1840	0.83	0.74	2	1.15	30	1.01	2.08	1.22	20	1.08
1841	0.77	0.78	2	1.24	30	0.97	2.08	1.32	25	1.29
1842	0.76	0.78	2	1.25	30	0.97	2.08	1.33	25	1.29
1843	0.79	0.78	2	1.21	30	0.97	1.75	1.14	23	1.19
1844	0.79	0.76	2	1.21	30	0.98	1.75	1.15	22	1.15
1845	0.76	0.79	2	1.25	30	0.95	1.75	1.19	24	1.22
1846	0.79	0.78	2	1.21	30	0.97	1.75	1.14	18	0.93
1847	0.87	0.84	2	1.09	30	0.89	1.75	1.03	22	1.05
1848	0.79	0.79	2	1.21	30	0.95	1.75	1.15	20	1.02
1849	0.80	0.76	2	1.19	30	0.98	1.75	1.13	22	1.15
1850	0.76	0.83	2	1.26	30	0.91	1.75	1.19	21	1.01
1851	0.75	0.81	2	1.26	30	0.93	1.75	1.20	21	1.04
1852	0.80	0.81	2	1.19	30	0.93	1.75	1.13	20	0.99
1853	0.88	0.93	2	1.08	30	0.81	1.75	1.02	28	1.21
1854	0.95	0.89	2	1.00	33	0.92	1.75	0.95	25	1.12
1855	0.97	0.95	2	0.98	35	0.92	1.75	0.93	26	1.10
1856	0.99	1.00	2	0.96	35	0.88	1.75	0.91	20	0.80
1857	0.95	1.05	2	1.00	37	0.88	2.13	1.08	35	1.34
1858	0.85	0.95	2	1.13	35	0.92	2.13	1.21	25	1.05
1859	0.94	0.92	1.96	0.99	40	1.08	2.13	1.08	25	1.08
1860	0.96	0.97	2.09	1.04	40	1.03	2.13	1.08	25	1.03
1861	1.00	1.00	2.10	1.00	40	1.00	2.00	1.00	25	1.00

Wages and GDP in Italy 1700-1913

1. **Price index (1911=1).** For the 1700-1861 period, the consumer price index is an arithmetic mean of the price indices in the North (Milan) and South (Naples) already presented in App. I, cols. 1-2. For the period after 1861, I used Fenoaltea's "new cost of living index" ("Production and Consumption in post-Unification Italy", pp. 282-3, col. 9), which is a revision of the Istat index.

2. **Real Wage Index (1911=1).** For the 1700-1861 period, the index is the average of the two indices for the North and South (in previous App. I), each based on a weighted mean of industrial and agricultural wage rates, respectively deflated by the price indices of the North and South. These two series have then been combined in a single Italian weighted mean based on the relative size of the population (0.6 for the North and 0.4 for the South). After 1861, the series is based on those constructed by Fenoaltea, "Production and Consumption in post-Unification Italy", pp. 273-4. While Fenoaltea presented a simple arithmetic mean, the one I present in col. 2 is a weighted average (0.6 for agriculture and 0.4 for industry). The results, however, do not differ significantly.

3. **Per hour real wages (1911 prices).** Fenoaltea's series in "Production and Consumption in post-Unification Italy", pp. 273-4, assumes a working time of 10 hours per day. In the following series, per hour wage rate has been calculated for the period after 1861 simply by dividing by 10 the previous series (col. 2). The subsequent step was to calculate the estimates for the 1700-1861 period by means of the real wage index in col. 2. Whenever possible, I have compared my data with the series in Zamagni, "An International Comparison of Real Industrial Wages, 1890-1913", pp. 107-39.

4. **Per capita GDP (1911 prices).** I explained in the text the criteria I used to construct the GDP per capita series from 1700 until 1861. The index of per c.

GDP has been then linked to the GDP 1861-1913 series. As I will explain in the following, this series is still in progress.

The main source for the 1861-1913 period is Federico and Fenoaltea's series (both not yet definitive) for agriculture and industry, constructed as part of a project for the revision of GDP historical series sponsored by the Banca d'Italia. Both series have been adjusted to present borders, since the agricultural series is calculated within coeval borders, and the industrial series within 1911 borders (G. Federico, "Le nuove stime della produzione agricola italiana, 1860-1910" and G. Federico, "L'agricoltura italiana: successo o fallimento?", in P. Ciocca, G. Toniolo (eds), *Storia economica d'Italia*, 3, Roma-Bari, 2003, pp. 99-136; S. Fenoaltea, "Lo sviluppo dell'industria dall'Unità alla Grande Guerra: una sintesi provvisoria", in P. Ciocca, G. Toniolo (eds), *Storia economica d'Italia*, 3.1, Roma-Bari, 2003; S. Fenoaltea, "La crescita industriale delle regioni d'Italia dall'Unità alla Grande Guerra: una prima stima per gli anni censuari", in *Quaderni dell'Ufficio Ricerche Storiche*, 2001, 1; S. Fenoaltea, "La formazione dell'Italia industriale: consensi, dissensi, ipotesi", in *Rivista di Storia Economica*, n.s., 2003, XIX, pp. 341-58). A. Carreras, "Un ritratto quantitativo dell'industria italiana", in F. Amatori, D. Bigazzi, R. Giannetti, L. Segreto (eds), *Storia d'Italia. Annali 15, L'industria*, Torino, 1999, pp. 179-272, provides a very useful overview of debates on the GDP in Italy, especially those concerning the industrial sector. I have based my calculation of the product of the tertiary sector on the relative weight of services in 1891 and 1911, taking account of the Banca d'Italia team's revision of ISTAT data for those benchmark years (V. Zamagni), and on the percentage of 27 in 1861 from Maddison's revision (*I conti economici dell'Italia*, 1, 1991; 2, 1992; 3, 2002-, 1, G. Rey and O. Vitali (eds.); 2, G. Federico, S. Fenoaltea, M. Marolla, M. Roccas, O. Vitali, V. Zamagni, P. Battilani, G. Rey (eds.); 3, G. Federico, S. Fenoaltea, C. Bordini, V. Zamagni, P. Battilani, G. Rey (eds.), Roma-Bari; A. Maddison, "A Revised Estimate of Italian Economic Growth, 1861-1989", in *Banca Nazionale del Lavoro Quarterly Review*, 1991, pp. 225-41). Intermediate data for services have been linearly interpolated. The estimate of GDP is at factor costs. The resulting series is quite similar to that presented by S. Fenoaltea, "La crescita economica dell'Italia postunitaria: le nuove serie storiche", in *Rivista di Storia Economica*, XXI, 2005, n. 2; these two preliminary series differ only initially (mine is lower than Fenoaltea's, because of the lower estimate of the service sector).

5. Population. No annual series of the Italian populations exist before 1861. The series constructed here –within current borders– is based on one in L. Del Panta, *Dalla metà del Settecento ai nostri giorni*, in L. Del Panta-M. Livi Bacci-G. Pinto-E. Sonnino, *La popolazione italiana*, Roma-Bari, 1996, p. 134. Del Panta presents, however, a decadal series from 1771 on. For the previous period we only have a decadal series for the Centre-North and benchmarks for 1700 and 1750 (Malanima, *L'economia italiana*, App. 1). The intermediate data were obtained by means of linear interpolation.

6. GDP (1911 prices). This is the result of the multiplication of the per capita GDP (in col. 4) by the population (in col. 5).

	1 Price index	2 Real Wage Index	3 Per hour Real Wages 1911 prices	4 Per c. GDP 1911 prices	5 Population (000)	6 GDP (000.000) 1911 prices
	1911=1	1911=1				
1700	0.43	1.12	0.28	455	13.600	6.194
1701	0.40	1.23	0.31	499	13.640	6.811
1702	0.41	1.19	0.30	485	13.680	6.637

1703	0.44	1.13	0.28	460	13.720	6.307
1704	0.45	1.13	0.28	459	13.761	6.316
1705	0.45	1.12	0.28	458	13.801	6.320
1706	0.42	1.18	0.30	480	13.842	6.641
1707	0.46	1.08	0.27	442	13.883	6.134
1708	0.60	0.92	0.23	376	13.924	5.233
1709	0.58	0.84	0.21	342	13.965	4.781
1710	0.46	1.05	0.26	400	14.006	5.601
1711	0.42	1.12	0.28	428	14.047	6.012
1712	0.43	1.12	0.28	430	14.088	6.056
1713	0.45	1.09	0.27	417	14.130	5.889
1714	0.47	1.09	0.27	416	14.171	5.889
1715	0.44	1.11	0.28	426	14.213	6.054
1716	0.45	1.07	0.27	409	14.255	5.833
1717	0.46	1.07	0.27	408	14.297	5.830
1718	0.41	1.15	0.29	440	14.339	6.306
1719	0.55	1.01	0.25	386	14.381	5.549
1720	0.43	1.19	0.30	441	14.424	6.364
1721	0.44	1.14	0.29	424	14.466	6.132
1722	0.40	1.19	0.30	443	14.509	6.432
1723	0.37	1.32	0.33	492	14.551	7.163
1724	0.38	1.32	0.33	492	14.594	7.187
1725	0.39	1.23	0.31	458	14.637	6.708
1726	0.38	1.24	0.31	462	14.680	6.786
1727	0.36	1.31	0.33	487	14.724	7.175
1728	0.45	1.15	0.29	426	14.767	6.286
1729	0.41	1.21	0.30	450	14.810	6.667
1730	0.43	1.21	0.30	487	14.854	7.238
1731	0.38	1.24	0.31	501	14.898	7.457
1732	0.41	1.19	0.30	478	14.942	7.141
1733	0.45	1.05	0.26	422	14.986	6.320
1734	0.46	1.03	0.26	414	15.030	6.222
1735	0.45	1.03	0.26	414	15.074	6.247
1736	0.45	1.05	0.26	421	15.118	6.371
1737	0.43	1.12	0.28	452	15.163	6.859
1738	0.44	1.12	0.28	451	15.208	6.861
1739	0.43	1.13	0.28	457	15.252	6.975
1740	0.46	1.08	0.27	434	15.297	6.641
1741	0.46	1.06	0.27	426	15.342	6.531
1742	0.46	1.07	0.27	432	15.387	6.646
1743	0.44	1.09	0.27	438	15.433	6.762
1744	0.41	1.14	0.28	457	15.478	7.077
1745	0.43	1.10	0.28	442	15.524	6.865
1746	0.46	1.01	0.25	408	15.569	6.356
1747	0.50	0.93	0.23	373	15.615	5.828
1748	0.51	0.94	0.24	377	15.661	5.910
1749	0.48	1.01	0.25	407	15.707	6.388
1750	0.51	0.94	0.24	372	15.754	5.863
1751	0.51	0.94	0.23	371	15.800	5.863
1752	0.49	0.98	0.25	388	15.829	6.137
1753	0.46	1.08	0.27	430	15.859	6.820
1754	0.47	1.07	0.27	426	15.889	6.762
1755	0.48	1.02	0.26	404	15.918	6.434
1756	0.48	1.01	0.25	401	15.948	6.402
1757	0.48	0.99	0.25	394	15.978	6.288
1758	0.48	1.00	0.25	398	16.007	6.375
1759	0.49	0.99	0.25	394	16.037	6.316
1760	0.46	1.08	0.27	496	16.067	7.963
1761	0.43	1.13	0.28	517	16.097	8.321
1762	0.43	1.16	0.29	531	16.127	8.570
1763	0.48	1.01	0.25	462	16.157	7.469
1764	0.55	0.95	0.24	435	16.187	7.041
1765	0.52	0.95	0.24	434	16.218	7.037
1766	0.53	0.90	0.23	413	16.248	6.703
1767	0.54	0.92	0.23	420	16.278	6.836
1768	0.51	0.96	0.24	442	16.309	7.205
1769	0.50	0.95	0.24	435	16.339	7.114
1770	0.53	0.92	0.23	477	16.369	7.804
1771	0.55	0.88	0.22	458	16.400	7.507
1772	0.57	0.85	0.21	441	16.497	7.274
1773	0.57	0.87	0.22	450	16.595	7.465
1774	0.60	0.82	0.21	426	16.694	7.111
1775	0.60	0.82	0.21	427	16.793	7.166

1777	0.60	0.83	0.21	432	16.993	7.349
1778	0.64	0.78	0.20	405	17.094	6.923
1779	0.59	0.83	0.21	432	17.195	7.428
1780	0.57	0.87	0.22	445	17.297	7.690
1781	0.58	0.83	0.21	424	17.400	7.375
1782	0.61	0.79	0.20	401	17.449	7.002
1783	0.61	0.79	0.20	402	17.499	7.043
1784	0.60	0.79	0.20	401	17.549	7.029
1785	0.61	0.78	0.19	394	17.598	6.935
1786	0.59	0.81	0.20	411	17.648	7.254
1787	0.65	0.73	0.18	372	17.698	6.585
1788	0.65	0.75	0.19	380	17.749	6.747
1789	0.62	0.77	0.19	394	17.799	7.010
1790	0.60	0.79	0.20	384	17.849	6.857
1791	0.60	0.83	0.21	401	17.900	7.180
1792	0.66	0.75	0.19	362	17.940	6.498
1793	0.74	0.66	0.17	320	17.979	5.761
1794	0.70	0.71	0.18	346	18.019	6.243
1795	0.72	0.74	0.18	358	18.059	6.457
1796	0.75	0.73	0.18	353	18.099	6.388
1797	0.80	0.72	0.18	350	18.139	6.344
1798	0.76	0.80	0.20	386	18.179	7.020
1799	0.80	0.74	0.18	358	18.219	6.516
1800	1.03	0.58	0.15	321	18.260	5.853
1801	1.03	0.56	0.14	307	18.300	5.614
1802	0.92	0.61	0.15	336	18.340	6.154
1803	0.86	0.62	0.16	341	18.379	6.262
1804	0.79	0.70	0.18	385	18.419	7.085
1805	0.84	0.64	0.16	349	18.459	6.437
1806	0.90	0.65	0.16	357	18.499	6.597
1807	0.87	0.64	0.16	351	18.539	6.503
1808	0.85	0.73	0.18	401	18.579	7.455
1809	0.81	0.71	0.18	390	18.619	7.262
1810	0.93	0.60	0.15	288	18.660	5.374
1811	0.94	0.61	0.15	365	18.700	6.831
1812	0.89	0.64	0.16	385	18.779	7.235
1813	0.77	0.76	0.19	459	18.857	8.651
1814	0.84	0.71	0.18	427	18.936	8.082
1815	1.04	0.58	0.14	346	19.016	6.585
1816	0.96	0.62	0.16	374	19.096	7.137
1817	1.15	0.55	0.14	329	19.176	6.301
1818	0.86	0.71	0.18	429	19.256	8.268
1819	0.69	0.80	0.20	483	19.337	9.349
1820	0.74	0.74	0.19	417	19.418	8.093
1821	0.75	0.71	0.18	402	19.500	7.841
1822	0.72	0.74	0.19	417	19.700	8.224
1823	0.68	0.80	0.20	450	19.903	8.965
1824	0.63	0.81	0.20	457	20.108	9.196
1825	0.64	0.83	0.21	467	20.314	9.480
1826	0.66	0.81	0.20	458	20.523	9.401
1827	0.69	0.82	0.21	460	20.734	9.542
1828	0.75	0.72	0.18	406	20.947	8.512
1829	0.73	0.77	0.19	432	21.163	9.150
1830	0.70	0.69	0.17	347	21.380	7.414
1831	0.70	0.75	0.19	376	21.600	8.124
1832	0.71	0.74	0.18	370	21.727	8.029
1833	0.72	0.75	0.19	375	21.854	8.201
1834	0.61	0.87	0.22	435	21.982	9.570
1835	0.61	0.88	0.22	442	22.111	9.782
1836	0.64	0.82	0.20	410	22.241	9.124
1837	0.71	0.78	0.19	390	22.371	8.735
1838	0.72	0.73	0.18	367	22.502	8.249
1839	0.74	0.73	0.18	369	22.634	8.355
1840	0.74	0.73	0.18	348	22.767	7.921
1841	0.73	0.79	0.20	375	22.900	8.598
1842	0.72	0.79	0.20	377	23.083	8.708
1843	0.74	0.71	0.18	337	23.268	7.847
1844	0.73	0.71	0.18	337	23.454	7.907
1845	0.73	0.73	0.18	347	23.642	8.194
1846	0.74	0.68	0.17	322	23.831	7.685
1847	0.81	0.64	0.16	305	24.022	7.322
1848	0.74	0.69	0.17	327	24.214	7.929
1849	0.74	0.70	0.18	334	24.408	8.144

1851	0.74	0.70	0.18	356	24.800	8.818
1852	0.76	0.67	0.17	339	24.894	8.439
1853	0.85	0.64	0.16	325	24.988	8.119
1854	1.01	0.62	0.16	313	25.083	7.860
1855	1.00	0.61	0.15	308	25.178	7.764
1856	1.01	0.56	0.14	283	25.273	7.152
1857	0.95	0.69	0.17	349	25.369	8.857
1858	0.84	0.71	0.18	359	25.465	9.153
1859	0.88	0.68	0.17	346	25.562	8.855
1860	0.91	0.67	0.17	364	25.659	9.331
1861	0.94	0.63	0.16	336	25.756	8.664
1862	0.92	0.64	0.16	345	25.933	8.938
1863	0.89	0.67	0.17	353	26.110	9.214
1864	0.85	0.69	0.17	346	26.289	9.084
1865	0.87	0.72	0.18	364	26.470	9.638
1866	0.93	0.72	0.18	339	26.652	9.043
1867	1.00	0.72	0.18	341	26.835	9.154
1868	0.98	0.70	0.17	343	27.019	9.275
1869	0.95	0.70	0.17	352	27.203	9.564
1870	0.99	0.70	0.17	369	27.390	10.099
1871	1.13	0.70	0.17	366	27.578	10.090
1872	1.20	0.63	0.15	360	27.748	9.997
1873	1.26	0.60	0.15	359	27.886	10.019
1874	1.17	0.57	0.14	385	27.982	10.783
1875	1.12	0.67	0.16	376	28.258	10.618
1876	1.06	0.63	0.16	362	28.428	10.293
1877	1.12	0.61	0.15	367	28.598	10.481
1878	1.16	0.64	0.16	386	28.768	11.111
1879	1.16	0.66	0.16	385	28.938	11.147
1880	1.12	0.65	0.16	395	29.108	11.488
1881	1.10	0.70	0.17	405	29.278	11.861
1882	1.05	0.73	0.18	414	29.493	12.221
1883	1.01	0.75	0.18	419	29.707	12.462
1884	0.94	0.78	0.19	404	29.921	12.095
1885	0.90	0.77	0.19	416	30.135	12.529
1886	0.88	0.78	0.19	435	30.350	13.201
1887	0.88	0.80	0.19	441	30.564	13.483
1888	0.90	0.79	0.19	435	30.779	13.398
1889	0.93	0.78	0.19	418	30.993	12.963
1890	0.95	0.75	0.18	429	31.207	13.393
1891	0.95	0.74	0.18	443	31.421	13.907
1892	0.93	0.73	0.18	439	31.637	13.900
1893	0.88	0.74	0.18	449	31.851	14.294
1894	0.86	0.74	0.18	450	32.065	14.442
1895	0.86	0.75	0.18	455	32.279	14.684
1896	0.89	0.76	0.19	458	32.493	14.893
1897	0.89	0.77	0.19	460	32.707	15.029
1898	0.89	0.78	0.19	461	32.921	15.180
1899	0.89	0.79	0.20	465	33.134	15.402
1900	0.88	0.80	0.20	475	33.343	15.838
1901	0.89	0.83	0.21	483	33.513	16.178
1902	0.89	0.85	0.21	492	33.695	16.566
1903	0.88	0.84	0.21	504	33.813	17.030
1904	0.90	0.83	0.21	518	34.071	17.658
1905	0.90	0.85	0.21	533	34.192	18.226
1906	0.90	0.87	0.22	551	34.355	18.938
1907	0.91	0.87	0.22	573	34.594	19.832
1908	0.94	0.94	0.23	580	34.930	20.243
1909	0.97	0.99	0.25	586	35.202	20.625
1910	0.98	1.00	0.25	582	35.560	20.706
1911	1.00	1.00	0.25	585	35.905	21.005
1912	1.01	1.02	0.25	604	36.181	21.862
1913	1.02	1.04	0.26	629	36.275	22.818