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October 2008

Online at http://mpra.ub.uni-muenchen.de/10974/ MPRA Paper No. 10974, posted 08. October 2008 / 11:19

# SHIP BUILDING AND REPAIRING IN ITALY, 1861-1913: NATIONAL AND REGIONAL TIME SERIES 

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2008

The regional estimates were produced as part of the research project on "Unità d'Italia e sviluppo disuguale: la struttura creditizia e la crescita industriale per regioni dal 1861 al 1913" of the Ufficio Ricerche Storiche of the Bank of Italy. The authors alone are responsible for the material presented here.

# SHIP BUILDING AND REPAIRING IN ITALY, 1861-1913: <br> NATIONAL AND REGIONAL TIME SERIES 


#### Abstract

This paper presents the first comprehensive national and regional time-series estimates for ship building and repairing in post-Unification Italy. The path of the national aggregate differs markedly from the extant series, which cover merchant new-construction alone. The regional estimates point to considerable concentration: Liguria accounted for more than half the product, and Campania for almost another quarter. In Liguria, too, this sector represented up to a quarter of total industrial production; elsewhere, and nationally, it was barely significant.


## L'INDUSTRIA CANTIERISTICA IN ITALIA, 1861-1913: <br> SERIE NAZIONALI E REGIONALI

## Sommario

Questo saggio presenta le prime stime della produzione complessiva dell'industria cantieristica nell'Italia post-Unitaria, sia nazionali, sia regionali. L'andamento della produzione complessiva diverge notevolmente da quello delle serie esistenti, limitate alla costruzione di navi mercantili. Le serie regionali evidenziano una concentrazione notevole: la sola Liguria contribuiva più della metà del prodotto, la Campania quasi un'altro quarto. In Liguria, inoltre, la cantieristica rappresentava fino a un quarto del prodotto industriale complessivo; nelle altre regioni, e in Italia, contava ben poco.

The interpretation of Italy's development in the decades that followed Unification turns to no mean extent on the actual, and counterfactual, performance of the engineering industry. The facts themselves are poorly documented, however, and the industry's time path is typically measured indirectly, by the apparent consumption of iron and steel. ${ }^{\text {i }}$

Within "the vast and variegated area of engineering," as Alexander Gerschenkron put it, ship building stands out as something of a special case. ii On the one hand, it is poorly captured by the usual measures, for its production was partly, and in the early years overwhelmingly, wood-based rather than metal-based; on the other, it was subject to sector-specific technological and political shocks, and responded idiosyncratically to more general ones (e.g., war-related movements in shipping rates). Fortunately, however, it is extensively documented in its own right, as both the merchant marine and the navy were then, like the railroads, the object of systematic reports, parliamentary investigations, and an extensive secondary literature.

This paper presents national and regional time-series estimates for ship building and repairing, narrowly defined to exclude work on inshore and inland vessels ("boats"). The national estimates improve the extant merchant-ship-building series, but this sector represented, on average, just one quarter of the total; the new series are the first also to cover naval construction, and, if crudely, repair work on vessels both naval and merchant. The corresponding regional series are, once again, the first of their kind.

The text below provides a summary account of the underlying sources and methods, and a brief description of the patterns that emerge from the new estimates. At the national level, these confirm that ship building went very much its own way, with production movements driven first by the market for traditional merchant sailing-ships, then by naval construction, then by the subsidies for merchant steamers, and finally, in the run-up to the War, by the arms race. The new regional series document the concentration of production in Liguria and Campania. These two started close to even, but Liguria took greater advantage of the early sailing-ship boom, and then captured a clear lead in the production of metal ships of all kinds; it was the privileged beneficiary of the arms race, as it would be of the ensuing blood-bath.

## 1. National production

The new national estimates of 1911-price value added in ship building and repairing are summarized in Table 1. Cols. 1 and 2 refer to the new construction of merchant and naval vessels, respectively; both are simple sums of the physical series (in register or displacement tons) transcribed in Table 2, with the 1911-price value added weights transcribed in Table 3. iii

The two type-specific merchant-marine construction series in Table 2, cols. 1-2 are derived from the well-known data in the annual reports on the merchant marine. ${ }^{\text {iv }}$ The series in the (primary and secondary) sources refer to the register tonnage launched; the present series improve them by allowing for changes in Italy's borders and for changes in the unit of measurement, and shift the resulting figures six months backward to approximate construction. ${ }^{\text {v }}$ The 13 type-specific naval construction series in Table 2, cols. 3-15 are built up from shipspecific data in contemporary and retrospective sources; they cover the 490 naval vessels apparently built in Italy for the Italian navy or for export, and distribute the displacement tonnage of each ship over its construction period. ${ }^{\text {vi }}$ The corresponding value added weights are obtained as usual from market prices and technical coefficients; they refer to the ship-building sector alone, and accordingly exclude the cost of equipment purchased from other sectors of the engineering industry.

Table 1, cols. 3 and 4 refer to the maintenance of merchant and naval vessels,
respectively. The merchant-maintenance series is again the sum of separate series for sail- and steam-powered vessels. The former is indexed by the total tonnage of the fleet in service (again measured at constant borders, and in homogeneous units), with what turn out to be very minor corrections for imports and exports (maintenance abroad of Italian ships, and maintenance in Italy of foreign ships). The second is itself in two components, of comparable weight: one refers to the maintenance associated with the throughput of beaching slips and drydocks (which served foreign as well as Italian ships), the other to the residual maintenance of Italian ships alone, again indexed by the (corrected) tonnage of the fleet.

In the case of naval maintenance, the sources include a wealth of descriptive information on the maintenance (and improvement) of individual ships, which does not lend itself to quantification, and aggregate budget figures, which change repeatedly and abruptly in apparent response to unspecified accounting rules. The budget data were accordingly used only to derive the 1911-price total; the corresponding "real" index is instead obtained by tracking the service lives of each of the 559 ships that appear to have served in the Navy between 1861 and 1913, aggregating their displacements with type-specific weights (to exclude low-maintenance components like the armor, if any, and the cargo of bulk carriers), and trimming the resulting total to exclude the ships that were very new or very close to being retired.

Table 4 presents the estimates of the merchant fleets, of interest in their own right, of the equivalent naval fleet maintained, and of the three components of the aggregate merchantmaintenance series.

The four subaggregates presented in Table 1 are illustrated in Figure 1. The paths of the maintenance series are, not surprisingly, close to rising trends. Merchant maintenance displays some cyclical deviations in the later decades, which can be traced to the irregular decline of the sailing fleet, and the similarly irregular growth in dry-dock throughput. ${ }^{\text {vii }}$ The occasional periods of decline in naval maintenance correspond instead to the large-scale scrapping of obsolete ships, both in the wake of Unification and again after the turn of the century. Merchant maintenance always far outweighed naval maintenance: naval vessels were the more complex, but on a comparable basis the merchant fleet was much larger, and much more intensively used. On the present estimates the annual average 1911-price value added in merchant maintenance equaled 10.7 million lire, against just 4.2 million in naval maintenance.

The cyclical variations in new construction were altogether sharper, and its two components follow strikingly different paths. That of the naval-construction series is reminiscent of the overall cycle in investment and public spending, with a sharp upswing through the mid-1880s and another in the final years before the Great War; somewhat astonishingly, well over half the total at the pre-war peak was due to just five vessels, the Cavour- and Doria-class battleships then under construction. The main movements of merchant construction are instead the early (twin-peaked) boom and subsequent bust between 1861 and 1880, and a second sharp boom, followed by an irregular decline, after 1895. The first boom was entirely in sailing-ship construction, and driven by market forces (apparently the growth in the desired domestic fleet, itself tied to the growth of Italy's commodity imports); the second was instead in steam-ship construction, and clearly associated with the new subsidies to their builders and owners. ${ }^{\text {viii }}$ As is clear from Figure 1, merchant construction was the dominant component only in the early years; after that, and with only the brief exception of the steamer boom at the turn of the century, naval construction was much the larger. Overall, the 1911-price value added in merchant construction averaged 10.4 million lire per year, much like the corresponding maintenance, against 14.7 million lire per year in naval construction.

Figure 2 presents three time series as index numbers, with $1900=100$. One is the present total reported in Table 1. col. 5; another is the Istat "ship building" series, which refers in fact only to the new construction of merchant ships; and the third is the present component closest to the Istat series. ${ }^{\text {ix }}$ As an index of aggregate product, the Istat series seems entirely misleading: where the present total displays secular growth, with successively higher peaks in 1869, 1874, 1900, 1906, and 1913, the Istat series displays a secular decline from its peak in 1869. The Istat series is naturally altogether closer to the present index of merchant construction alone, but again not as close as one might wish. Its main distortion seems to stem from the fact that it directly aggregates sail and steam register tons, and (in 1861-1907) net tons at that; because a steamer is a more complex machine per gross ton, and naturally has a much higher ratio of gross tons to net tons, the Istat series much understates the (steam-ship) output of the later years relative to the (sailing-ship) output of the early ones. ${ }^{\text {x }}$

## 2. Regional production

The regional production estimates that correspond to the five national series in Table 1 are transcribed in Tables 5-9. The naval-construction estimates are again the much the best: the sources identify the yards that built the ships, and the regional estimates directly replicate their national counterparts.

The merchant-construction estimates are somewhat weaker, for in the sources the local output totals are not broken down, as the national totals are, by vessel type. The latter breakdown is approximated by distributing among the various regions the tonnages of the steamers that could be identified as such (in the periodic lists of steamers, which however report their current register tonnages rather than those they first obtained), calculating the corresponding 1911-price value added, and then allocating the residual value added (in the construction of unidentified steamers as well as sailing vessels) in proportion to the residual tonnage constructed.

The maintenance estimates are weaker still. In the absence of better indicators the present regional estimates of naval maintenance disaggregate the national series in simple proportion to the labor establishment of the various naval arsenals; these also employed an unknown number of temporary workers, which would appear, and are here assumed, to have shot up when the yard was also engaged in new construction. ${ }^{\mathrm{xi}}$

In the case of merchant vessels, finally, the national estimates for both the maintenance of sailing ships and the non-dry-dock maintenance of steamships are allocated in proportion to the tonnages registered in each region, on the assumption that such maintenance was performed primarily in the ships' home port, where the crew could be discharged. The national estimates of the steamers' dry-dock maintenance are instead allocated directly on the basis of the installations' relative throughputs, as reported from 1899, as estimated from partial data in 1879 and 1885-98, and as extrapolated or interpolated in other years.

Table 10 presents the shares of cumulative production claimed by the various regions. Geographically, production was highly concentrated, but with somewhat different patterns across its various components. Naval work was practically exhausted by just four regions: Liguria had some two fifths, and Campania a third, of both new construction and maintenance; Tuscany and Venetia each had another ninth of the total, with rather more new construction in Tuscany and much more maintenance in Venetia. The small residual (2\%) is taken up almost entirely by Apulia, which had a certain presence in maintenance (6\%). Merchant work was at once more concentrated in Liguria, which captured near two thirds of both new construction and
maintenance, and more widely shared by the other regions: Campania took another eighth, Sicily less than a tenth (most of it in maintenance), and Tuscany a twentieth, with another 6\% shared by Venetia, the Marches, and Apulia, and the residual $1 \%$ by the rest.

Figures 3-5 illustrates the paths of ship building and repairing in the two leading regions, Liguria and Campania. In naval work (Figure 3) the two regions appear quite evenly matched. In new construction, the lead moved back and forth between them; in maintenance, their paths were close to each other and largely parallel (save in the 1870s, when Liguria took over the lead). In merchant work (Figure 4) one finds a very different pattern, and a sharp constrast between the two: where Liguria followed (or led) the sharp fluctuations in the national aggregate (Figure 1), Campania was more nearly stagnant. Campania participated in the early boom-and-bust in sailing-ship construction, but far less vigorously than Liguria; the later (subsidy-fed) boom in steamer production it largely missed, and between 1895 and 1913 Campania was only fifth in tonnage built, behind Liguria, Sicily, the Marches and Tuscany. In maintenance, tied to the locally-registered fleet, Campania and Liguria appear very even at Unification; but Liguria then grew and grew, while Campania didn't move at all. The regional aggregates (illustrated in Figure 5) are dominated by the differences in merchant work: Liguria moved much as Italy did (or vice versa), Campania mainly plodded along.

At the very end of the period at hand, as noted, the Dreadnought race lifted naval and overall ship building to unprecedented levels. Campania built just one of the five battleships laid down after 1909; Liguria, drawing on the capacity it had built up with its unique strength in merchant work, built the other four.

Table 11 scales the aggregate regional estimates to gauge the local significance of the industry at the census-year benchmarks. In cols. 1-4 they are divided by preliminary estimates of total industrial production; in cols. 5-8 they are divided by the male population of working age, which proxies for the aggregate regional economy. ${ }^{\text {xii }}$ On both counts, in Italy as a whole ship building appears to be of little import. Above-average ratios are found only in the two regions one has come to expect. Campania's ratios run roughly double the national averages; Liguria's run ten to twenty times those averages, and, like these, reflect the idiosyncratic cycle in shipyard work.

Thes estimates suggest that ship building and repairing by themselves represented from a tenth to a quarter of Liguria's industrial value added; and even these remarkable proportions understate the industry's importance, for they include the installation, but not the construction, of the ships' engines and weapons. In the case of naval vessels, in particular, such equipment might cost as much again as the assembled hull itself; its origin is hard to pin down, as it moved easily across regional (and national) borders, but the secondary literature suggests that a large part was produced in Liguria itself.

## 3. The market for naval vessels

A significant strand of the contemporary debate on matters maritime concerned the pattern of naval procurement. Naval construction had traditionally been concentrated in the arsenals; the owners of shipyards naturally pressed, apparently with increasing success, for a share of the work.

Table 12 presents the private-yard component of naval construction in Italy and in the regions concerned; it is obtained by replicating Table 2, and the corresponding aggregates, with the data base restricted to the ships built in private yards, separating out exports. The arsenal-
built component is not reported, but it is simply the difference between the partial series in Table 12 and the corresponding estimates of aggregate naval construction (Table 1, col. 2; Table 6).

The national series are illustrated in Figure 6; exports were all from private yards, and appear as the vertical difference between private-yard production and private-yard production for the Italian Navy. Three phases can be identified. In 1861-73, the contribution of private yards was negligible or nearly so. From 1874--even before the Old Right lost its parliamentary majority--until 1893 private yards averaged some $30 \%$ of naval construction. Over the last two decades (1894-1913), finally, the constribution of the private yards was comparable to that of the arsenals.

At the regional level, the mix was very different. In Venetia the arsenal accounted for all the naval work, save only a few small auxiliary vessels (6 bulk carriers and 9 tugs). In Campania, similarly, the arsenals in Naples and Castellammare accounted for some $90 \%$ of the total; the Pattison works accounted for almost all of the region's private-yard destroyers (14), torpedo boats (56), and auxiliary vessels (8). Tuscany was here almost a mirror-image of Venetia, with no arsenal work at all after the Leghorn (S. Rocco) works were taken over by Orlando. ${ }^{\text {xiii }}$ Liguria alone combined arsenals and private yards in almost equal proportions, with both the major arsenal in La Spezia and the major Ansaldo and Odero yards in Genoa/Sampierdarena capable of producing even the largest fighting ships. ${ }^{\text {xiv }}$

The Ligurian and Tuscan series are illustrated in Figure 7, like the national series in Figure 6. In both regions, from the mid-1890s, exports occasionally represented the bulk of private-yard work. Most of these were represented by the Garibaldi-class cruisers repeatedly laid down for the Italian navy and bought, while under construction, by foreign powers; only a minor share of Italy's naval exports were ships actually laid down to foreign order. ${ }^{\mathrm{xv}}$

## NOTES

i. A. Gerschenkron, "Notes on the Rate of Industrial Growth in Italy, 1881-1913," Journal of Economic History, 15, 1955, pp. 360-375; see also for example G. Toniolo, "Effective Protection and Industrial Growth: The Case of Italian Engineering," Journal of European Economic History, 6, 1977, pp. 659-673; 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, Turin, 1999, p. 235; S. Fenoaltea, "Notes on the Rate of Industrial Growth in Italy, 1861-1913," Journal of Economic History, 63, 2003, pp. 695-735.
ii. Gerschenkron, "Notes," p. 369.
iii. Displacement tons are measures of weight. Register tons are measures of internal volume; gross tonnage includes, and net tonnage excludes, that occupied by the vessel's machinery and the like. As a rule of thumb, in the case of steamships one net ton corresponds to one displacement ton, cargo excluded.
iv. For example, Ministero di Agricoltura, Industria e Commercio, Movimento della navigazione nei porti del Regno, 1884, p. 433; Ministero della Marina, Sulle condizioni della marina mercantile italiana al 31 dicembre del 1911, p. 73; E. Corbino, "Dati statistici sullo sviluppo della marina mercantile italiana," Giornale degli economisti e Rivista di statistica, 33, 1922, pp. 177-186.
v. The present tonnages are all reduced to Moorsom measures, actually used in Italy from 1874 to 1905.
vi. The main retrospective sources are Ufficio storico della Marina militare, Le navi d'Italia, e.g. vol. 5, I cacciatorpediniere italiani, 1900-1969, Roma, 1969, vol. 8, Almanacco storico delle navi militari d'Italia, 1861-1975, Roma, 1978; contemporary sources such as Jane's fighting ships (1898 ff.) serve to identify Italian-built ships in foreign navies.
vii. The visible upward step in the total in 1891 is itself attributable to the reopening of the large Orlando dry-dock in Leghorn.
viii. See below, Table 4, col. 1, and Istat (Istituto centrale di statistica), Sommario di statistiche storiche italiane, 1861-1955, Rome, 1958, pp. 159-160; also, for example, V. D. Flore, L'industria dei trasporti marittimi in Italia, Roma, 1970, part II, pp. 470 ff.
ix. Istat, Sommario, p. 130.
x. The Istat series is also more volatile than the present series, as the latter spreads tonnages launched over the plausible construction period, but that is by the bye.
xi. E.g., Atti Parlamentari, Camera, Legislatura XXIV, Sessione 1913, Documenti, Disegno di Legge n. 29, Allegato 37, pp. 90-91, n. 29-A, p. 52).
xii. See S. Fenoaltea, "Peeking Backward: Regional Aspects of Industrial Growth in Post-Unification Italy," Journal of Economic History LXIII (2003), pp. 1069, 1088-1091; th updated aggregates incorporate partly unpublished new estimates for mining and quarrying, textiles and (non-leather) apparel, metals and the
non-metallic mineral products, chemicals and the like, the utilities, and construction.
xiii. The arsenal was sold in 1866; the Conte Verde, then building, is here considered entirely arsenal-built.
xiv. Numerous other private yards were located in Liguria, including for example the FIAT-S. Giorgio and Muggiano submarine works near La Spezia.
xv. A. Fraccaroli, Italian Warships of World War I, London, 1970, p. 29. The main ships actually laid down to foreign order were an armored cruiser (the Georgios Averoff) built in Leghorn, and the protected cruiser Libia (laid down in Genoa as the Drama, and here excluded from the export total because it was taken over by the Italian navy); two foreign battleships (the Vasco da Gama and the Messoudieh) were rebuilt, in Leghorn and Genoa respectively. Among minor vessels, FIAT submarines in particular were both exported and built abroad to Italian design.

Table 1
Ship building and repairing in Italy, 1861-1913: value added at 1911 prices (million lire)

|  | $\begin{aligned} & (1) \\ & \text { Construction } \end{aligned}$ |  | (3) (4) <br> Maintenance |  | (5) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Merchant | Naval | Merchant | Naval | Total |
| 1861 | 5.87 | 6.03 | 3.82 | 1.82 | 17.55 |
| 1862 | 7.61 | 6.11 | 4.02 | 1.78 | 19.52 |
| 1863 | 9.08 | 7.53 | 4.33 | 1.75 | 22.69 |
| 1864 | 11.46 | 6.91 | 4.46 | 1.69 | 24.52 |
| 1865 | 13.81 | 6.91 | 4.75 | 1.66 | 27.13 |
| 1866 | 15.26 | 6.06 | 5.17 | 1.70 | 28.19 |
| 1867 | 18.33 | 5.40 | 5.46 | 1.89 | 31.07 |
| 1868 | 21.11 | 4.88 | 5.87 | 2.13 | 33.99 |
| 1869 | 21.77 | 4.05 | 6.33 | 2.51 | 34.67 |
| 1870 | 18.61 | 3.61 | 6.78 | 2.46 | 31.46 |
| 1871 | 15.30 | 2.72 | 7.14 | 2.35 | 27.50 |
| 1872 | 14.88 | 2.13 | 7.27 | 2.04 | 26.32 |
| 1873 | 17.66 | 4.80 | 7.41 | 2.12 | 31.99 |
| 1874 | 20.93 | 6.74 | 7.63 | 2.18 | 37.49 |
| 1875 | 19.37 | 5.85 | 7.90 | 2.16 | 35.28 |
| 1876 | 13.38 | 6.47 | 8.18 | 2.17 | 30.19 |
| 1877 | 8.41 | 7.68 | 8.26 | 2.14 | 26.49 |
| 1878 | 6.24 | 6.79 | 8.24 | 2.23 | 23.49 |
| 1879 | 4.46 | 7.01 | 8.24 | 2.33 | 22.04 |
| 1880 | 3.28 | 6.46 | 8.23 | 2.41 | 20.38 |
| 1881 | 3.83 | 7.44 | 8.33 | 2.51 | 22.11 |
| 1882 | 4.28 | 10.19 | 8.56 | 2.52 | 25.56 |
| 1883 | 4.08 | 10.70 | 8.77 | 2.64 | 26.19 |
| 1884 | 3.47 | 14.04 | 8.83 | 2.73 | 29.08 |
| 1885 | 2.72 | 16.59 | 8.94 | 2.90 | 31.15 |
| 1886 | 2.11 | 20.78 | 8.71 | 2.98 | 34.57 |
| 1887 | 1.60 | 20.86 | 8.65 | 3.25 | 34.36 |
| 1888 | 2.44 | 15.81 | 8.77 | 3.62 | 30.64 |
| 1889 | 4.83 | 14.56 | 8.78 | 4.00 | 32.17 |
| 1890 | 7.55 | 15.73 | 8.54 | 4.26 | 36.08 |
| 1891 | 6.64 | 15.03 | 9.79 | 4.54 | 36.00 |
| 1892 | 4.39 | 14.30 | 9.56 | 5.02 | 33.27 |
| 1893 | 3.16 | 14.52 | 10.08 | 5.58 | 33.34 |
| 1894 | 2.38 | 15.03 | 10.26 | 5.82 | 33.49 |
| 1895 | 2.74 | 15.20 | 10.62 | 5.93 | 34.50 |
| 1896 | 3.89 | 16.50 | 10.95 | 6.05 | 37.39 |
| 1897 | 6.61 | 17.13 | 11.53 | 6.19 | 41.46 |
| 1898 | 11.83 | 14.66 | 11.80 | 6.59 | 44.88 |
| 1899 | 19.14 | 18.11 | 12.41 | 6.81 | 56.47 |
| 1900 | 21.73 | 17.99 | 13.69 | 6.96 | 60.38 |
| 1901 | 16.78 | 15.17 | 15.24 | 6.90 | 54.10 |
| 1902 | 14.16 | 19.94 | 15.92 | 6.80 | 56.82 |
| 1903 | 11.91 | 21.67 | 15.92 | 6.68 | 56.19 |
| 1904 | 12.55 | 18.11 | 16.06 | 6.48 | 53.20 |
| 1905 | 13.84 | 24.85 | 15.54 | 6.43 | 60.66 |
| 1906 | 15.45 | 26.45 | 16.72 | 6.25 | 64.87 |
| 1907 | 15.20 | 24.69 | 17.72 | 6.15 | 63.76 |
| 1908 | 10.84 | 20.85 | 18.63 | 6.23 | 56.55 |
| 1909 | 9.87 | 16.57 | 20.04 | 6.42 | 52.90 |
| 1910 | 8.00 | 25.90 | 20.35 | 6.56 | 60.82 |
| 1911 | 8.19 | 39.31 | 20.59 | 6.99 | 75.08 |
| 1912 | 14.05 | 53.75 | 21.94 | 7.69 | 97.43 |
| 1913 | 16.41 | 51.12 | 24.39 | 8.44 | 100.35 |

Sources: see text.

Ship building in Italy, 1861-1913: physical production

|  | (1) (2) Merchant vessels (000 gross tons) |  | Naval vessels |  |  | $\begin{array}{cr} (6) & (7) \\ \text { (displacement tons) } \end{array}$ |  | (8) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Armored | Frigates, | Battle- | Armored | Protected | Other |
|  | sail | steam | frigates | corvettes | ships | cruisers | cruisers | cruisers |
| 1861 | 25.0 | . 0 | 2,136 | 2,887 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0 |
| 1862 | 32.4 | . 0 | 2,679 | 2,472 | $\bigcirc$ | $\bigcirc$ | 0 | 61 |
| 1863 | 38.4 | . 2 | 4,292 | 2,066 | $\bigcirc$ | 0 | 0 | 122 |
| 1864 | 48.5 | . 2 | 3,555 | 1,197 | 0 | 0 | 0 | 122 |
| 1865 | 58.2 | . 4 | 3,657 | 851 | 0 | $\bigcirc$ | 0 | 122 |
| 1866 | 63.9 | . 7 | 3,999 | 458 | 0 | 0 | 0 | 122 |
| 1867 | 77.5 | . 4 | 3,659 | 645 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 122 |
| 1868 | 88.8 | . 7 | 2,825 | 833 | 0 | 0 | 0 | 122 |
| 1869 | 89.9 | 2.0 | 2,243 | 833 | 0 | 0 | 0 | 35 |
| 1870 | 77.3 | 1.4 | 2,243 | 681 | 0 | 0 | 0 | 0 |
| 1871 | 64.8 | . 2 | 2,224 | 146 | $\bigcirc$ | $\bigcirc$ | 0 | $\bigcirc$ |
| 1872 | 63.0 | . 2 | 1,796 | 0 | 0 | 0 | 0 | 0 |
| 1873 | 71.6 | 2.6 | 1,367 | 0 | 1,844 | 0 | 507 | 204 |
| 1874 | 84.3 | 3.5 | 1,197 | 0 | 2,926 | $\bigcirc$ | 579 | 823 |
| 1875 | 80.7 | 1.2 | 276 | 0 | 2,926 | $\bigcirc$ | 579 | 908 |
| 1876 | 56.6 | . 2 | 0 | 0 | 3,878 | 0 | 508 | 1,027 |
| 1877 | 35.5 | . 2 | 0 | 0 | 5,712 | 0 | 0 | 1,100 |
| 1878 | 25.6 | . 7 | 0 | 0 | 5,712 | 0 | 0 | 598 |
| 1879 | 18.0 | . 7 | 0 | 0 | 5,712 | 0 | 410 | 480 |
| 1880 | 13.2 | . 5 | 0 | 0 | 4, 041 | $\bigcirc$ | 1,644 | 130 |
| 1881 | 13.9 | 1.7 | 0 | 0 | 4,804 | 0 | 1,940 | 0 |
| 1882 | 16.0 | 1.6 | 0 | 0 | 7,332 | $\bigcirc$ | 1,940 | 0 |
| 1883 | 15.1 | 1.6 | 0 | 0 | 7,018 | 0 | 2,266 | 0 |
| 1884 | 12.3 | 1.8 | 0 | 0 | 8,694 | 0 | 2,759 | 209 |
| 1885 | 10.9 | . 5 | $\bigcirc$ | 0 | 9,629 | $\bigcirc$ | 2,606 | 1, 029 |
| 1886 | 8.5 | . 3 | 0 | 0 | 9,685 | 0 | 3,360 | 2,263 |
| 1887 | 5.2 | 1.2 | 0 | 0 | 9,204 | $\bigcirc$ | 3,300 | 1,817 |
| 1888 | 8.2 | 1.6 | 0 | 0 | 8,274 | 0 | 1,525 | 1,464 |
| 1889 | 19.3 | . 9 | 0 | 0 | 5,799 | 0 | 2,320 | 1,890 |
| 1890 | 25.9 | 4.5 | 0 | 0 | 5,355 | 1,008 | 2,468 | 1,653 |
| 1891 | 20.0 | 6.0 | 0 | 0 | 4,761 | 1,008 | 2,909 | 1,235 |
| 1892 | 15.4 | 2.4 | 0 | 0 | 4,170 | 1,113 | 3,312 | 1,348 |
| 1893 | 10.9 | 1.9 | 0 | 0 | 3,801 | 3,505 | 3,191 | 830 |
| 1894 | 5.7 | 3.2 | $\bigcirc$ | 0 | 4,617 | 4,937 | 2,910 | 378 |
| 1895 | 4.4 | 5.2 | 0 | 0 | 3,320 | 8,893 | 1,728 | 356 |
| 1896 | 3.5 | 9.4 | 0 | 0 | 2,736 | 11,597 | 1,284 | 171 |
| 1897 | 4.3 | 17.2 | $\bigcirc$ | $\bigcirc$ | 2,736 | 11,690 | 827 | 775 |
| 1898 | 6.5 | 31.7 | 0 | 0 | 3, 045 | 9,167 | 333 | 933 |
| 1899 | 8.8 | 52.5 | 0 | 0 | 7,083 | 8,250 | 333 | 849 |
| 1900 | 8.8 | 60.5 | $\bigcirc$ | 0 | 7,255 | 7,804 | 333 | 572 |
| 1901 | 15.4 | 40.5 | 0 | 0 | 10,490 | 3,241 | 138 | 0 |
| 1902 | 26.4 | 24.5 | 0 | 0 | 11,294 | 7,147 | 0 | $\bigcirc$ |
| 1903 | 19.1 | 22.8 | 0 | 0 | 10,060 | 9,636 | 0 | 0 |
| 1904 | 8.2 | 32.6 | $\bigcirc$ | 0 | 11,629 | 1,568 | 0 | 0 |
| 1905 | 7.8 | 36.9 | 0 | 0 | 10,225 | 4,813 | 0 | 0 |
| 1906 | 8.9 | 41.1 | 0 | 0 | 8,866 | 6,582 | 0 | 0 |
| 1907 | 9.1 | 40.2 | 0 | 0 | 8,293 | 10,431 | 330 | 0 |
| 1908 | 7.8 | 27.7 | $\bigcirc$ | 0 | 5,168 | 11,660 | 661 | 0 |
| 1909 | 6.7 | 25.5 | 0 | 0 | 3,138 | 10,143 | 826 | 0 |
| 1910 | 6.0 | 20.2 | $\bigcirc$ | 0 | 12,991 | 6,096 | 1,973 | $\bigcirc$ |
| 1911 | 5.2 | 21.4 | 0 | 0 | 22,352 | 1,449 | 2,320 | 0 |
| 1912 | 6.9 | 38.3 | $\bigcirc$ | 0 | 32,592 | $\bigcirc$ | 3,927 | 0 |
| 1913 | 9.1 | 43.9 | 0 | 0 | 30,065 | $\bigcirc$ | 3,486 | 839 |

Table 2, cont.

|  | (9) | (10) | (11) <br> Naval | $\begin{aligned} & \text { (12) } \\ & \text { ssels (co } \\ & \hline \end{aligned}$ | $\begin{array}{r} (13) \\ \text { ued) } \\ \hline \end{array}$ | (14) | (15) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Destroyers | Submarines | Torpedo boats | Gunboats | Tugs | $\begin{gathered} \text { Bulk } \\ \text { transports } \end{gathered}$ | Other aux. vessels |
| 1861 | $\bigcirc$ | 0 | 0 | $\bigcirc$ | 0 | $\bigcirc$ | $\bigcirc$ |
| 1862 | $\bigcirc$ | 0 | $\bigcirc$ | 0 | 0 | $\bigcirc$ | 0 |
| 1863 | 0 | 0 | 0 | 0 | 0 | 0 | 582 |
| 1864 | 0 | 0 | 0 | 333 | 71 | $\bigcirc$ | 2,816 |
| 1865 | 0 | 0 | 0 | 666 | 132 | 0 | 3,010 |
| 1866 | $\bigcirc$ | 0 | 0 | 666 | 74 | $\bigcirc$ | 1,630 |
| 1867 | 0 | 0 | 0 | 752 | 58 | $\bigcirc$ | 253 |
| 1868 | 0 | 0 | 0 | 909 | 58 | $\bigcirc$ | 141 |
| 1869 | 0 | 0 | 0 | 833 | 54 | $\bigcirc$ | 21 |
| 1870 | $\bigcirc$ | 0 | $\bigcirc$ | 600 | 37 | $\bigcirc$ | $\bigcirc$ |
| 1871 | 0 | 0 | 0 | 257 | 169 | 0 | 0 |
| 1872 | $\bigcirc$ | 0 | $\bigcirc$ | 92 | 380 | $\bigcirc$ | $\bigcirc$ |
| 1873 | 0 | 0 | 0 | 149 | 697 | 0 | 0 |
| 1874 | 0 | 0 | 0 | 149 | 657 | $\bigcirc$ | 0 |
| 1875 | 0 | 0 | 0 | 107 | 547 | $\bigcirc$ | 0 |
| 1876 | 0 | 0 | 0 | 33 | 273 | 212 | 118 |
| 1877 | 0 | 0 | 0 | 0 | 0 | 346 | 439 |
| 1878 | 0 | 0 | 0 | 0 | 0 | 195 | 252 |
| 1879 | 0 | 0 | 0 | $\bigcirc$ | 0 | 27 | 0 |
| 1880 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1881 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| 1882 | 0 | 0 | 29 | 216 | 0 | 0 | 23 |
| 1883 | 40 | 0 | 83 | 432 | 0 | 0 | 30 |
| 1884 | 146 | 0 | 200 | 432 | 44 | 525 | 24 |
| 1885 | 212 | 0 | 288 | 348 | 96 | 1, 060 | 218 |
| 1886 | 212 | 0 | 710 | 434 | 106 | 548 | 327 |
| 1887 | 118 | 0 | 1,226 | 610 | 150 | 189 | 319 |
| 1888 | 12 | 0 | 826 | 610 | 158 | 562 | 492 |
| 1889 | $\bigcirc$ | 6 | 608 | 434 | 380 | 813 | 530 |
| 1890 | 0 | 38 | 944 | 130 | 620 | 421 | 177 |
| 1891 | 0 | 38 | 917 | 204 | 694 | 179 | 88 |
| 1892 | 0 | 13 | 618 | 407 | 362 | 691 | $\bigcirc$ |
| 1893 | 0 | 0 | 363 | 407 | 150 | 1,077 | 0 |
| 1894 | $\bigcirc$ | 0 | 236 | 204 | 30 | 698 | 0 |
| 1895 | 0 | 0 | 26 | 0 | 0 | 135 | 0 |
| 1896 | 0 | 0 | 23 | 20 | 0 | 443 | 0 |
| 1897 | 41 | 0 | 63 | 40 | 0 | 501 | 0 |
| 1898 | 91 | 0 | 86 | 153 | 0 | 80 | 0 |
| 1899 | 224 | 0 | 122 | 265 | 31 | 65 | 0 |
| 1900 | 460 | 0 | 131 | 152 | 267 | 85 | $\bigcirc$ |
| 1901 | 433 | 0 | 36 | 40 | 361 | 43 | 0 |
| 1902 | 481 | 0 | 82 | 40 | 403 | $\bigcirc$ | $\bigcirc$ |
| 1903 | 312 | 28 | 166 | 640 | 207 | 949 | 0 |
| 1904 | 188 | 153 | 548 | 1,620 | 40 | 6,277 | 0 |
| 1905 | 491 | 223 | 1,900 | 1,400 | 40 | 8,267 | 0 |
| 1906 | 1,340 | 188 | 2,320 | 390 | 106 | 3,839 | 0 |
| 1907 | 959 | 268 | 875 | 0 | 186 | 0 | 0 |
| 1908 | 545 | 293 | 261 | 132 | 139 | 32 | 0 |
| 1909 | 545 | 120 | 159 | 98 | 141 | 64 | 0 |
| 1910 | 545 | 379 | 462 | 0 | 274 | 674 | 0 |
| 1911 | 1,225 | 1,080 | 1,738 | 429 | 747 | 643 | 0 |
| 1912 | 2,790 | 1,305 | 1,531 | 448 | 1,019 | $\bigcirc$ | 0 |
| 1913 | 3,306 | 1,191 | 763 | 0 | 1,032 | 1,776 | 1,544 |

Sources: see text.

Table 3
Unit value added in merchant and naval shipbuilding (lire at 1911 prices)

| Type of vessel | Value added per unit |
| :---: | :---: |
| Merchant vessels (lire/gross register ton) |  |
| Sail-powered ships | 235 |
| Steam-powered ships | 325 |
| Naval vessels (lire/displacement ton) |  |
| Armored frigates | 1,000 |
| Frigates and corvettes | 1,350 |
| Battleships | 1, 000 |
| Armored cruisers | 1,000 |
| Protected cruisers | 1,350 |
| Other cruisers | 1,550 |
| Destroyers | 2,000 |
| Submarines | 3,800 |
| Torpedo boats | 2,800 |
| Gunboats | 700 |
| Tugs | 700 |
| Bulk transports | 200 |
| Other auxiliary vessels | 450 |

Sources: see text.

Table 4
Estimated fleets and maintenance in Italy, 1861-1913

|  | (1) <br> (2) <br> (3) <br> Estimated mid-year merchant fleet (thousand register tons) |  |  | (4) <br> Naval <br> fleet <br> main- <br> tained ${ }^{\text {a }}$ | (5) <br> (6) <br> (7) <br> Value added in merchant-fleet maintenance (million 1911 lire) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | sail-pow. | engine | powered |  | sail- | engin | wered |
|  | (net t.) | (net t.) | (gross t.) |  | powered | dry-dock | other |
| 1861 | 517 | 3 |  | 60.8 | 3.61 | . 17 | . 04 |
| 1862 | 531 | 8 |  | 59.4 | 3.68 | . 23 | . 11 |
| 1863 | 545 | 14 |  | 58.2 | 3.88 | . 26 | . 19 |
| 1864 | 559 | 19 |  | 56.2 | 3.92 | . 28 | . 26 |
| 1865 | 605 | 21 |  | 55.2 | 4.19 | . 27 | . 29 |
| 1866 | 660 | 22 |  | 56.8 | 4.57 | . 30 | . 30 |
| 1867 | 704 | 23 |  | 62.9 | 4.86 | . 29 | . 31 |
| 1868 | 759 | 23 |  | 71.7 | 5.26 | . 30 | . 31 |
| 1869 | 816 | 24 |  | 84.6 | 5.65 | . 35 | . 33 |
| 1870 | 867 | 29 |  | 82.1 | 6.01 | . 37 | . 40 |
| 1871 | 902 | 35 |  | 78.2 | 6.24 | . 42 | . 48 |
| 1872 | 913 | 38 |  | 68.1 | 6.27 | . 48 | . 52 |
| 1873 | 910 | 44 |  | 70.6 | 6.27 | . 54 | . 60 |
| 1874 | 913 | 51 |  | 72.7 | 6.30 | . 63 | . 70 |
| 1875 | 931 | 55 |  | 71.9 | 6.47 | . 68 | . 75 |
| 1876 | 963 | 58 |  | 72.3 | 6.69 | . 70 | . 79 |
| 1877 | 976 | 58 |  | 71.4 | 6.74 | . 73 | . 79 |
| 1878 | 967 | 59 |  | 74.2 | 6.72 | . 72 | . 80 |
| 1879 | 948 | 63 |  | 76.9 | 6.57 | . 81 | . 86 |
| 1880 | 928 | 68 |  | 80.3 | 6.39 | . 91 | . 93 |
| 1881 | 909 | 78 |  | 82.8 | 6.27 | 1.00 | 1.06 |
| 1882 | 890 | 91 |  | 84.1 | 6.16 | 1.16 | 1.24 |
| 1883 | 876 | 102 | 166 | 87.8 | 6.05 | 1.33 | 1.39 |
| 1884 | 858 | 115 | 187 | 91.0 | 5.94 | 1.32 | 1.57 |
| 1885 | 839 | 124 | 200 | 96.6 | 5.81 | 1.45 | 1.68 |
| 1886 | 815 | 135 | 216 | 99.4 | 5.63 | 1.27 | 1.81 |
| 1887 | 767 | 154 | 247 | 107.4 | 5.28 | 1.30 | 2.07 |
| 1888 | 715 | 169 | 271 | 120.6 | 4.94 | 1.56 | 2.27 |
| 1889 | 670 | 181 | 286 | 131.9 | 4.64 | 1.74 | 2.40 |
| 1890 | 638 | 187 | 295 | 141.9 | 4.38 | 1.69 | 2.47 |
| 1891 | 630 | 194 | 309 | 151.5 | 4.34 | 2.86 | 2.59 |
| 1892 | 618 | 201 | 320 | 168.9 | 4.22 | 2.66 | 2.68 |
| 1893 | 599 | 205 | 326 | 184.0 | 4.10 | 3.25 | 2.73 |
| 1894 | 580 | 208 | 330 | 194.1 | 3.94 | 3.56 | 2.76 |
| 1895 | 564 | 215 | 340 | 195.8 | 3.84 | 3.93 | 2.85 |
| 1896 | 542 | 230 | 365 | 199.8 | 3.69 | 4.20 | 3.06 |
| 1897 | 528 | 249 | 398 | 206.4 | 3.58 | 4.62 | 3.33 |
| 1898 | 533 | 269 | 430 | 219.6 | 3.62 | 4.58 | 3.60 |
| 1899 | 548 | 297 | 476 | 227.0 | 3.73 | 4.69 | 3.99 |
| 1900 | 563 | 346 | 552 | 229.7 | 3.84 | 5.23 | 4.62 |
| 1901 | 572 | 401 | 634 | 230.1 | 3.89 | 6.04 | 5.31 |
| 1902 | 573 | 437 | 690 | 226.6 | 3.90 | 6.24 | 5.78 |
| 1903 | 577 | 455 | 717 | 222.8 | 3.92 | 6.00 | 6.00 |
| 1904 | 577 | 462 | 727 | 216.1 | 3.92 | 6.05 | 6.09 |
| 1905 | 556 | 473 | 743 | 214.3 | 3.78 | 5.53 | 6.22 |
| 1906 | 532 | 499 | 802 | 208.3 | 3.61 | 6.39 | 6.72 |
| 1907 | 512 | 531 | 872 | 205.0 | 3.46 | 6.96 | 7.30 |
| 1908 | 496 | 569 | 935 | 207.5 | 3.34 | 7.46 | 7.83 |
| 1909 | 485 | 622 | 1,026 | 211.9 | 3.27 | 8.18 | 8.59 |
| 1910 | 477 | 676 | 1,114 | 218.7 | 3.21 | 7.81 | 9.33 |
| 1911 | 462 | 709 | 1,164 | 233.1 | 3.11 | 7.73 | 9.75 |
| 1912 | 433 | 754 | 1,236 | 256.4 | 2.89 | 8.70 | 10.35 |
| 1913 | 406 | 844 | 1,383 | 281.4 | 2.70 | 10.11 | 11.58 |

${ }^{\text {a }}$ thousand equivalent displacement tons.
Sources: see text.

Table 5
Merchant ship building in Italy's regions, 1861-1913: value added at 1911 prices (million lire)

|  | (1) <br> Piedmont | (2) <br> Liguria | (3) <br> Lombardy | (4) <br> Venetia | $\begin{gathered} (5) \\ \text { Emilia } \end{gathered}$ | (6) Tuscany | (7) <br> Marches | (8) <br> Umbria |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1861 | . 00 | 3.16 | . 00 | . 19 | . 05 | . 37 | . 08 | . 00 |
| 1862 | . 00 | 4.62 | . 00 | . 19 | . 06 | . 54 | . 11 | . 00 |
| 1863 | . 00 | 6.13 | . 00 | . 12 | . 05 | . 57 | . 11 | . 00 |
| 1864 | . 00 | 8.13 | . 00 | . 26 | . 03 | . 45 | . 09 | . 00 |
| 1865 | . 00 | 10.26 | . 00 | . 31 | . 02 | . 50 | . 08 | . 00 |
| 1866 | . 00 | 11.50 | . 00 | . 45 | . 01 | . 49 | . 05 | . 00 |
| 1867 | . 00 | 13.93 | . 00 | . 50 | . 02 | . 44 | . 02 | . 00 |
| 1868 | . 00 | 16.92 | . 00 | . 54 | . 01 | . 40 | . 01 | . 00 |
| 1869 | . 00 | 17.71 | . 00 | . 60 | . 01 | . 31 | . 02 | . 00 |
| 1870 | . 00 | 14.85 | . 00 | . 48 | . 02 | . 22 | . 03 | . 00 |
| 1871 | . 00 | 11.68 | . 00 | . 64 | . 05 | . 21 | . 04 | . 00 |
| 1872 | . 00 | 11.11 | . 00 | . 50 | . 12 | . 28 | . 05 | . 00 |
| 1873 | . 00 | 13.36 | . 00 | . 43 | . 12 | . 64 | . 05 | . 00 |
| 1874 | . 00 | 15.48 | . 00 | . 46 | . 07 | . 97 | . 04 | . 00 |
| 1875 | . 00 | 13.67 | . 00 | . 35 | . 05 | . 61 | . 02 | . 00 |
| 1876 | . 00 | 9.19 | . 00 | . 38 | . 02 | . 17 | . 04 | . 00 |
| 1877 | . 00 | 5.55 | . 00 | . 29 | . 01 | . 12 | . 12 | . 00 |
| 1878 | . 00 | 3.40 | . 00 | . 24 | . 02 | . 26 | . 10 | . 00 |
| 1879 | . 00 | 2.27 | . 00 | . 23 | . 02 | . 31 | . 03 | . 00 |
| 1880 | . 00 | 1.87 | . 00 | . 17 | . 02 | . 22 | . 04 | . 00 |
| 1881 | . 00 | 2.15 | . 00 | . 18 | . 01 | . 61 | . 05 | . 00 |
| 1882 | . 00 | 2.72 | . 00 | . 18 | . 01 | . 59 | . 05 | . 00 |
| 1883 | . 00 | 2.88 | . 00 | . 18 | . 01 | . 22 | . 03 | . 00 |
| 1884 | . 00 | 2.01 | . 00 | . 22 | . 01 | . 31 | . 03 | . 00 |
| 1885 | . 00 | . 92 | . 00 | . 23 | . 01 | . 37 | . 05 | . 00 |
| 1886 | . 00 | . 52 | . 00 | . 20 | . 01 | . 33 | . 05 | . 00 |
| 1887 | . 00 | . 54 | . 00 | . 17 | . 00 | . 31 | . 04 | . 00 |
| 1888 | . 00 | 1.33 | . 00 | . 18 | . 02 | . 30 | . 02 | . 00 |
| 1889 | . 00 | 3.33 | . 00 | . 19 | . 02 | . 28 | . 03 | . 00 |
| 1890 | . 00 | 5.67 | . 00 | . 22 | . 01 | . 31 | . 05 | . 00 |
| 1891 | . 00 | 4.74 | . 00 | . 30 | . 02 | . 30 | . 05 | . 00 |
| 1892 | . 00 | 2.49 | . 00 | . 40 | . 03 | . 25 | . 06 | . 00 |
| 1893 | . 00 | 1.76 | . 00 | . 31 | . 03 | . 15 | . 06 | . 00 |
| 1894 | . 00 | 1.32 | . 00 | . 14 | . 03 | . 25 | . 06 | . 00 |
| 1895 | . 00 | 1.39 | . 00 | . 12 | . 03 | . 55 | . 07 | . 00 |
| 1896 | . 00 | 2.85 | . 00 | . 09 | . 03 | . 37 | . 08 | . 00 |
| 1897 | . 00 | 5.25 | . 00 | . 08 | . 01 | . 69 | . 06 | . 00 |
| 1898 | . 00 | 10.14 | . 00 | . 08 | . 01 | . 79 | . 05 | . 00 |
| 1899 | . 00 | 15.43 | . 00 | . 10 | . 03 | 2.42 | . 08 | . 00 |
| 1900 | . 00 | 16.40 | . 00 | . 13 | . 04 | 3.32 | . 74 | . 00 |
| 1901 | . 00 | 13.06 | . 00 | . 17 | . 03 | 1.37 | . 89 | . 00 |
| 1902 | . 00 | 9.26 | . 00 | . 33 | . 04 | 1.31 | 1.41 | . 00 |
| 1903 | . 00 | 5.65 | . 00 | . 32 | . 05 | 1.13 | 1.34 | . 00 |
| 1904 | . 00 | 8.03 | . 00 | . 19 | . 04 | . 35 | 1.02 | . 00 |
| 1905 | . 00 | 9.41 | . 00 | . 18 | . 05 | . 41 | 1.71 | . 00 |
| 1906 | . 00 | 9.05 | . 00 | . 23 | . 07 | . 43 | 2.19 | . 00 |
| 1907 | . 00 | 9.50 | . 00 | . 40 | . 05 | . 41 | 1.41 | . 00 |
| 1908 | . 00 | 5.03 | . 00 | . 52 | . 07 | . 44 | . 09 | . 00 |
| 1909 | . 00 | 3.92 | . 00 | . 36 | . 10 | . 73 | . 58 | . 00 |
| 1910 | . 00 | 4.19 | . 00 | . 21 | . 09 | . 61 | 1.51 | . 00 |
| 1911 | . 00 | 4.37 | . 00 | . 19 | . 09 | . 53 | 1.39 | . 00 |
| 1912 | . 00 | 8.15 | . 00 | . 21 | . 12 | 1.14 | 1.66 | . 00 |
| 1913 | . 00 | 10.69 | . 00 | . 25 | . 10 | 1.10 | 2.22 | . 00 |

Table 5, cont.

|  | (9) <br> Latium | (10) <br> Abruzzi | $\stackrel{(11)}{\text { campania }}$ | (12) <br> Apulia | $\begin{gathered} (13) \\ \text { Basilicata } \end{gathered}$ | $\begin{gathered} (14) \\ \text { Calabria } \end{gathered}$ | $\begin{aligned} & (15) \\ & \text { Sicily } \end{aligned}$ | (16) <br> Sardinia |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1861 | . 00 | . 04 | 1.64 | . 10 | . 00 | . 03 | . 20 | . 00 |
| 1862 | . 00 | . 03 | 1.68 | . 14 | . 00 | . 04 | . 20 | . 01 |
| 1863 | . 00 | . 02 | 1.78 | . 12 | . 00 | . 03 | . 15 | . 01 |
| 1864 | . 00 | . 01 | 2.20 | . 09 | . 00 | . 03 | . 17 | . 01 |
| 1865 | . 00 | . 00 | 2.24 | . 11 | . 00 | . 04 | . 23 | . 02 |
| 1866 | . 00 | . 01 | 2.39 | . 11 | . 00 | . 03 | . 20 | . 01 |
| 1867 | . 00 | . 00 | 3.10 | . 08 | . 00 | . 03 | . 19 | . 01 |
| 1868 | . 00 | . 01 | 2.83 | . 10 | . 00 | . 04 | . 22 | . 02 |
| 1869 | . 00 | . 01 | 2.71 | . 10 | . 00 | . 04 | . 23 | . 02 |
| 1870 | . 00 | . 00 | 2.68 | . 08 | . 00 | . 03 | . 20 | . 01 |
| 1871 | . 00 | . 01 | 2.34 | . 07 | . 00 | . 04 | . 21 | . 01 |
| 1872 | . 00 | . 01 | 2.45 | . 05 | . 00 | . 03 | . 28 | . 02 |
| 1873 | . 00 | . 02 | 2.73 | . 04 | . 00 | . 03 | . 24 | . 01 |
| 1874 | . 00 | . 01 | 3.68 | . 03 | . 00 | . 03 | . 17 | . 00 |
| 1875 | . 00 | . 00 | 4.37 | . 05 | . 00 | . 02 | . 23 | . 00 |
| 1876 | . 00 | . 00 | 3.22 | . 07 | . 00 | . 02 | . 19 | . 08 |
| 1877 | . 00 | . 00 | 2.06 | . 06 | . 00 | . 02 | . 10 | . 08 |
| 1878 | . 00 | . 00 | 2.03 | . 07 | . 00 | . 03 | . 08 | . 00 |
| 1879 | . 01 | . 00 | 1.34 | . 07 | . 00 | . 01 | . 17 | . 01 |
| 1880 | . 02 | . 00 | . 67 | . 06 | . 00 | . 01 | . 20 | . 01 |
| 1881 | . 01 | . 00 | . 61 | . 06 | . 00 | . 01 | . 12 | . 00 |
| 1882 | . 00 | . 00 | . 56 | . 05 | . 00 | . 02 | . 08 | . 01 |
| 1883 | . 00 | . 00 | . 62 | . 03 | . 00 | . 02 | . 09 | . 01 |
| 1884 | . 00 | . 00 | . 72 | . 03 | . 00 | . 03 | . 10 | . 00 |
| 1885 | . 00 | . 00 | . 95 | . 03 | . 00 | . 03 | . 12 | . 00 |
| 1886 | . 00 | . 00 | . 80 | . 03 | . 00 | . 02 | . 15 | . 00 |
| 1887 | . 00 | . 00 | . 32 | . 03 | . 00 | . 02 | . 16 | . 00 |
| 1888 | . 00 | . 00 | . 36 | . 05 | . 00 | . 01 | . 17 | . 00 |
| 1889 | . 00 | . 00 | . 81 | . 06 | . 00 | . 01 | . 08 | . 01 |
| 1890 | . 00 | . 00 | 1.09 | . 07 | . 00 | . 03 | . 08 | . 01 |
| 1891 | . 00 | . 00 | . 93 | . 09 | . 00 | . 03 | . 17 | . 01 |
| 1892 | . 00 | . 00 | . 93 | . 08 | . 00 | . 01 | . 13 | . 01 |
| 1893 | . 00 | . 00 | . 65 | . 08 | . 00 | . 01 | . 11 | . 01 |
| 1894 | . 00 | . 00 | . 34 | . 10 | . 00 | . 01 | . 11 | . 01 |
| 1895 | . 00 | . 00 | . 39 | . 10 | . 00 | . 01 | . 07 | . 01 |
| 1896 | . 00 | . 00 | . 34 | . 06 | . 00 | . 01 | . 06 | . 01 |
| 1897 | . 00 | . 00 | . 41 | . 04 | . 00 | . 00 | . 04 | . 01 |
| 1898 | . 00 | . 00 | . 67 | . 04 | . 00 | . 00 | . 03 | . 01 |
| 1899 | . 00 | . 00 | . 97 | . 04 | . 00 | . 01 | . 06 | . 01 |
| 1900 | . 00 | . 00 | 1.01 | . 04 | . 00 | . 01 | . 06 | . 00 |
| 1901 | . 00 | . 00 | 1.19 | . 03 | . 00 | . 00 | . 04 | . 00 |
| 1902 | . 00 | . 00 | 1.68 | . 04 | . 00 | . 02 | . 05 | . 01 |
| 1903 | . 00 | . 00 | 1.25 | . 05 | . 00 | . 01 | 2.09 | . 00 |
| 1904 | . 00 | . 00 | . 73 | . 05 | . 00 | . 00 | 2.13 | . 00 |
| 1905 | . 00 | . 00 | . 81 | . 12 | . 00 | . 00 | 1.15 | . 00 |
| 1906 | . 00 | . 00 | . 91 | . 16 | . 00 | . 00 | 2.39 | . 02 |
| 1907 | . 00 | . 00 | 1.06 | . 12 | . 00 | . 00 | 2.20 | . 04 |
| 1908 | . 00 | . 00 | 1.09 | . 08 | . 00 | . 00 | 3.49 | . 03 |
| 1909 | . 00 | . 00 | . 89 | . 07 | . 00 | . 00 | 3.20 | . 02 |
| 1910 | . 00 | . 00 | . 69 | . 10 | . 00 | . 00 | . 60 | . 02 |
| 1911 | . 00 | . 00 | . 63 | . 10 | . 00 | . 00 | . 89 | . 00 |
| 1912 | . 00 | . 00 | . 81 | . 11 | . 00 | . 00 | 1.85 | . 00 |
| 1913 | . 00 | . 00 | . 98 | . 10 | . 00 | . 00 | . 98 | . 00 |

Sources: see text.

Table 6
Naval ship building in Italy's regions, 1861-1913:
value added at 1911 prices (million lire)

|  | (1) <br> Piedmont | (2) <br> Liguria | (3) <br> Lombardy | (4) <br> Venetia | $\begin{gathered} (5) \\ \text { Emilia } \end{gathered}$ | (6) <br> Tuscany | (7) <br> Marches | (8) <br> Umbria |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1861 | . 00 | 2.42 | . 00 | . 00 | . 00 | . 85 | . 00 | . 00 |
| 1862 | . 00 | 2.67 | . 00 | . 00 | . 00 | . 85 | . 00 | . 00 |
| 1863 | . 00 | 4.12 | . 00 | . 00 | . 00 | 1.23 | . 00 | . 00 |
| 1864 | . 00 | 3.92 | . 00 | . 00 | . 00 | . 45 | . 05 | . 00 |
| 1865 | . 00 | 3.89 | . 00 | . 00 | . 00 | . 45 | . 09 | . 00 |
| 1866 | . 00 | 3.12 | . 00 | . 00 | . 00 | . 45 | . 05 | . 00 |
| 1867 | . 00 | 2.64 | . 00 | . 42 | . 00 | . 51 | . 04 | . 00 |
| 1868 | . 00 | 2.15 | . 00 | . 68 | . 00 | . 57 | . 04 | . 00 |
| 1869 | . 00 | 1.33 | . 00 | . 69 | . 00 | . 75 | . 02 | . 00 |
| 1870 | . 00 | 1.17 | . 00 | . 70 | . 00 | . 69 | . 00 | . 00 |
| 1871 | . 00 | 1.17 | . 00 | . 31 | . 00 | . 43 | . 00 | . 00 |
| 1872 | . 00 | 1.23 | . 00 | . 12 | . 00 | . 00 | . 00 | . 00 |
| 1873 | . 00 | 1.75 | . 00 | . 79 | . 00 | . 14 | . 00 | . 00 |
| 1874 | . 00 | 2.56 | . 00 | . 86 | . 00 | . 67 | . 00 | . 00 |
| 1875 | . 00 | 2.21 | . 00 | . 91 | . 00 | . 67 | . 00 | . 00 |
| 1876 | . 00 | 1.89 | . 00 | 1.05 | . 00 | . 98 | . 00 | . 00 |
| 1877 | . 00 | 1.81 | . 00 | 1.12 | . 00 | 1.57 | . 00 | . 00 |
| 1878 | . 00 | 1.25 | . 00 | 1.04 | . 00 | 1.32 | . 00 | . 00 |
| 1879 | . 00 | 1.25 | . 00 | . 78 | . 00 | 1.29 | . 00 | . 00 |
| 1880 | . 00 | 1.25 | . 00 | . 98 | . 00 | 1.28 | . 00 | . 00 |
| 1881 | . 00 | 1.25 | . 00 | . 90 | . 00 | 1.30 | . 00 | . 00 |
| 1882 | . 00 | 1.53 | . 00 | 2.30 | . 00 | 1.49 | . 00 | . 00 |
| 1883 | . 00 | 1.22 | . 00 | 2.30 | . 00 | 2.14 | . 00 | . 00 |
| 1884 | . 00 | 1.78 | . 00 | 3.47 | . 00 | 2.74 | . 00 | . 00 |
| 1885 | . 00 | 2.53 | . 00 | 4.56 | . 00 | 2.59 | . 00 | . 00 |
| 1886 | . 00 | 4.96 | . 00 | 5.48 | . 00 | 3.66 | . 00 | . 00 |
| 1887 | . 00 | 6.61 | . 00 | 5.63 | . 00 | 3.13 | . 00 | . 00 |
| 1888 | . 00 | 6.01 | . 00 | 3.98 | . 00 | 1.72 | . 00 | . 00 |
| 1889 | . 00 | 5.72 | . 00 | 2.12 | . 00 | 2.32 | . 00 | . 00 |
| 1890 | . 00 | 6.32 | . 00 | 1.80 | . 00 | 1.54 | . 00 | . 00 |
| 1891 | . 00 | 6.07 | . 00 | 2.21 | . 00 | 1.67 | . 01 | . 00 |
| 1892 | . 00 | 5.12 | . 00 | 2.35 | . 00 | 1.84 | . 02 | . 00 |
| 1893 | . 00 | 5.06 | . 00 | 2.35 | . 00 | 2.03 | . 03 | . 00 |
| 1894 | . 00 | 6.32 | . 00 | 2.72 | . 00 | 1.61 | . 02 | . 00 |
| 1895 | . 00 | 7.24 | . 00 | 1.95 | . 00 | 2.44 | . 00 | . 00 |
| 1896 | . 00 | 7.25 | . 00 | 1.51 | . 00 | 4.70 | . 00 | . 00 |
| 1897 | . 00 | 6.16 | . 00 | 1.50 | . 00 | 5.49 | . 00 | . 00 |
| 1898 | . 00 | 4.27 | . 00 | 1.50 | . 00 | 5.69 | . 00 | . 00 |
| 1899 | . 00 | 7.27 | . 00 | 1.98 | . 00 | 3.86 | . 00 | . 00 |
| 1900 | . 00 | 7.18 | . 00 | 2.78 | . 00 | 2.51 | . 00 | . 00 |
| 1901 | . 00 | 7.74 | . 00 | 1.42 | . 00 | . 65 | . 00 | . 00 |
| 1902 | . 00 | 12.88 | . 00 | 1.31 | . 00 | . 77 | . 00 | . 00 |
| 1903 | . 00 | 14.04 | . 00 | 1.37 | . 00 | 1.38 | . 00 | . 00 |
| 1904 | . 00 | 6.79 | . 00 | 1.83 | . 00 | 2.08 | . 00 | . 00 |
| 1905 | . 00 | 9.79 | . 00 | 1.69 | . 00 | 3.93 | . 00 | . 00 |
| 1906 | . 00 | 13.74 | . 00 | . 71 | . 00 | 2.93 | . 00 | . 00 |
| 1907 | . 00 | 11.35 | . 00 | . 43 | . 00 | 3.39 | . 00 | . 00 |
| 1908 | . 00 | 7.63 | . 00 | . 35 | . 00 | 4.62 | . 00 | . 00 |
| 1909 | . 00 | 3.96 | . 00 | . 43 | . 00 | 3.90 | . 00 | . 00 |
| 1910 | . 00 | 10.40 | . 00 | 1.78 | . 00 | 2.66 | . 00 | . 00 |
| 1911 | . 00 | 24.75 | . 00 | 2.18 | . 00 | 2.14 | . 00 | . 00 |
| 1912 | . 00 | 29.24 | . 00 | 1.68 | . 00 | 3.24 | . 00 | . 00 |
| 1913 | . 00 | 31.37 | . 00 | . 90 | . 00 | 3.10 | . 00 | . 00 |

Table 6, cont.

|  | (9) Latium | (10) <br> Abruzzi | $\begin{gathered} (11) \\ \text { Campania } \end{gathered}$ | (12) <br> Apulia | $\begin{gathered} (13) \\ \text { Basilicata } \end{gathered}$ | $\begin{gathered} (14) \\ \text { Calabria } \end{gathered}$ | $\begin{gathered} (15) \\ \text { Sicily } \end{gathered}$ | (16) <br> Sardinia |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1861 | . 00 | . 00 | 2.76 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1862 | . 00 | . 00 | 2.59 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1863 | . 00 | . 00 | 2.18 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1864 | . 00 | . 00 | 2.49 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1865 | . 00 | . 00 | 2.48 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1866 | . 00 | . 00 | 2.44 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1867 | . 00 | . 00 | 1.79 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1868 | . 00 | . 00 | 1.45 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1869 | . 00 | . 00 | 1.26 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1870 | . 00 | . 00 | 1.05 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1871 | . 00 | . 00 | . 81 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1872 | . 00 | . 00 | . 77 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1873 | . 00 | . 00 | 2.12 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1874 | . 00 | . 00 | 2.66 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1875 | . 00 | . 00 | 2.05 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1876 | . 00 | . 00 | 2.55 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1877 | . 00 | . 00 | 3.17 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1878 | . 00 | . 00 | 3.17 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1879 | . 00 | . 00 | 3.69 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1880 | . 00 | . 00 | 2.95 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1881 | . 00 | . 00 | 3.98 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1882 | . 00 | . 00 | 4.88 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1883 | . 00 | . 00 | 5.05 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1884 | . 00 | . 00 | 6.05 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1885 | . 00 | . 00 | 6.91 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1886 | . 00 | . 00 | 6.68 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1887 | . 00 | . 00 | 5.49 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1888 | . 00 | . 00 | 4.10 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1889 | . 00 | . 00 | 4.39 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1890 | . 00 | . 00 | 6.08 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1891 | . 00 | . 00 | 5.07 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1892 | . 00 | . 00 | 4.97 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1893 | . 00 | . 00 | 4.96 | . 09 | . 00 | . 00 | . 00 | . 00 |
| 1894 | . 00 | . 00 | 3.91 | . 45 | . 00 | . 00 | . 00 | . 00 |
| 1895 | . 00 | . 00 | 3.12 | . 45 | . 00 | . 00 | . 00 | . 00 |
| 1896 | . 00 | . 00 | 2.59 | . 45 | . 00 | . 00 | . 00 | . 00 |
| 1897 | . 00 | . 00 | 3.53 | . 45 | . 00 | . 00 | . 00 | . 00 |
| 1898 | . 00 | . 00 | 2.74 | . 45 | . 00 | . 00 | . 00 | . 00 |
| 1899 | . 00 | . 00 | 4.55 | . 45 | . 00 | . 00 | . 00 | . 00 |
| 1900 | . 00 | . 00 | 5.08 | . 45 | . 00 | . 00 | . 00 | . 00 |
| 1901 | . 00 | . 00 | 5.18 | . 19 | . 00 | . 00 | . 00 | . 00 |
| 1902 | . 00 | . 00 | 4.98 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1903 | . 00 | . 00 | 4.89 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1904 | . 00 | . 00 | 7.41 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1905 | . 00 | . 00 | 9.44 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1906 | . 00 | . 00 | 9.06 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1907 | . 00 | . 00 | 9.52 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1908 | . 00 | . 00 | 8.23 | . 02 | . 00 | . 00 | . 00 | . 00 |
| 1909 | . 00 | . 00 | 8.24 | . 03 | . 00 | . 00 | . 00 | . 00 |
| 1910 | . 00 | . 00 | 11.02 | . 03 | . 00 | . 00 | . 00 | . 00 |
| 1911 | . 00 | . 00 | 9.91 | . 02 | . 00 | . 00 | . 30 | . 00 |
| 1912 | . 00 | . 00 | 19.28 | . 00 | . 00 | . 00 | . 31 | . 00 |
| 1913 | . 00 | . 00 | 15.75 | . 00 | . 00 | . 00 | . 00 | . 00 |

Sources: see text.

Table 7
Merchant ship maintenance in Italy's regions, 1861-1913: value added at 1911 prices (million lire)

|  | (1) <br> Piedmont | (2) <br> Liguria | (3) <br> Lombardy | (4) <br> Venetia | $\begin{gathered} (5) \\ \text { Emilia } \end{gathered}$ | (6) Tuscany | (7) <br> Marches | (8) Umbria |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1861 | . 00 | 1.49 | . 00 | . 21 | . 02 | . 28 | . 08 | . 00 |
| 1862 | . 00 | 1.59 | . 00 | . 22 | . 02 | . 29 | . 09 | . 00 |
| 1863 | . 00 | 1.73 | . 00 | . 23 | . 03 | . 31 | . 10 | . 00 |
| 1864 | . 00 | 1.92 | . 00 | . 23 | . 03 | . 30 | . 10 | . 00 |
| 1865 | . 00 | 2.17 | . 00 | . 25 | . 03 | . 31 | . 11 | . 00 |
| 1866 | . 00 | 2.51 | . 00 | . 27 | . 03 | . 33 | . 12 | . 00 |
| 1867 | . 00 | 2.80 | . 00 | . 29 | . 03 | . 34 | . 13 | . 00 |
| 1868 | . 00 | 3.15 | . 00 | . 30 | . 03 | . 35 | . 12 | . 00 |
| 1869 | . 00 | 3.56 | . 00 | . 30 | . 03 | . 36 | . 11 | . 00 |
| 1870 | . 00 | 3.99 | . 00 | . 31 | . 03 | . 36 | . 10 | . 00 |
| 1871 | . 00 | 4.38 | . 00 | . 31 | . 03 | . 35 | . 08 | . 00 |
| 1872 | . 00 | 4.48 | . 00 | . 30 | . 03 | . 36 | . 08 | . 00 |
| 1873 | . 00 | 4.59 | . 00 | . 29 | . 03 | . 36 | . 07 | . 00 |
| 1874 | . 00 | 4.74 | . 00 | . 28 | . 03 | . 37 | . 07 | . 00 |
| 1875 | . 00 | 4.93 | . 00 | . 27 | . 03 | . 38 | . 07 | . 00 |
| 1876 | . 00 | 5.10 | . 00 | . 27 | . 03 | . 39 | . 06 | . 00 |
| 1877 | . 00 | 5.14 | . 00 | . 26 | . 03 | . 40 | . 06 | . 00 |
| 1878 | . 00 | 5.13 | . 00 | . 25 | . 03 | . 39 | . 05 | . 00 |
| 1879 | . 00 | 5.11 | . 00 | . 24 | . 03 | . 39 | . 05 | . 00 |
| 1880 | . 00 | 5.09 | . 00 | . 25 | . 03 | . 39 | . 05 | . 00 |
| 1881 | . 00 | 5.15 | . 00 | . 26 | . 03 | . 40 | . 04 | . 00 |
| 1882 | . 00 | 5.29 | . 00 | . 29 | . 02 | . 41 | . 04 | . 00 |
| 1883 | . 00 | 5.42 | . 00 | . 32 | . 03 | . 41 | . 04 | . 00 |
| 1884 | . 00 | 5.36 | . 00 | . 35 | . 03 | . 42 | . 04 | . 00 |
| 1885 | . 00 | 5.32 | . 00 | . 39 | . 03 | . 43 | . 03 | . 00 |
| 1886 | . 00 | 5.05 | . 00 | . 40 | . 02 | . 42 | . 03 | . 00 |
| 1887 | . 00 | 5.00 | . 00 | . 40 | . 02 | . 38 | . 03 | . 00 |
| 1888 | . 00 | 4.99 | . 00 | . 40 | . 02 | . 39 | . 03 | . 00 |
| 1889 | . 00 | 5.04 | . 00 | . 41 | . 02 | . 34 | . 03 | . 00 |
| 1890 | . 00 | 4.84 | . 00 | . 43 | . 02 | . 32 | . 03 | . 00 |
| 1891 | . 00 | 4.98 | . 00 | . 45 | . 02 | 1.34 | . 03 | . 00 |
| 1892 | . 00 | 5.56 | . 00 | . 45 | . 03 | . 61 | . 03 | . 00 |
| 1893 | . 00 | 6.32 | . 00 | . 44 | . 03 | . 36 | . 03 | . 00 |
| 1894 | . 00 | 6.55 | . 00 | . 43 | . 03 | . 38 | . 03 | . 00 |
| 1895 | . 00 | 6.90 | . 00 | . 42 | . 03 | . 42 | . 03 |  |
| 1896 | . 00 | 7.28 | . 00 | . 42 | . 03 | . 34 | . 03 | . 00 |
| 1897 | . 00 | 7.86 | . 00 | . 42 | . 03 | . 38 | . 03 | . 00 |
| 1898 | . 00 | 8.06 | . 00 | . 42 | . 03 | . 44 | . 03 | . 00 |
| 1899 | . 00 | 8.34 | . 00 | . 43 | . 03 | . 47 | . 03 | . 00 |
| 1900 | . 00 | 9.33 | . 00 | . 48 | . 03 | . 57 | . 03 | . 00 |
| 1901 | . 00 | 10.48 | . 00 | . 54 | . 03 | . 48 | . 04 | . 00 |
| 1902 | . 00 | 10.90 | . 00 | . 56 | . 03 | . 45 | . 04 | . 00 |
| 1903 | . 00 | 10.86 | . 00 | . 39 | . 03 | . 62 | . 04 | . 00 |
| 1904 | . 00 | 11.01 | . 00 | . 57 | . 04 | . 45 | . 05 | . 00 |
| 1905 | . 00 | 10.57 | . 00 | . 61 | . 04 | . 46 | . 05 | . 00 |
| 1906 | . 00 | 11.60 | . 00 | . 68 | . 04 | . 73 | . 05 | . 00 |
| 1907 | . 00 | 12.01 | . 00 | . 74 | . 05 | . 72 | . 05 | . 00 |
| 1908 | . 00 | 12.90 | . 00 | . 68 | . 05 | . 67 | . 05 | . 00 |
| 1909 | . 00 | 14.22 | . 00 | . 70 | . 05 | . 66 | . 06 | . 00 |
| 1910 | . 00 | 14.60 | . 00 | . 49 | . 05 | . 70 | . 06 | . 00 |
| 1911 | . 00 | 14.84 | . 00 | . 48 | . 05 | . 61 | . 07 | . 00 |
| 1912 | . 00 | 14.71 | . 00 | . 50 | . 05 | . 62 | . 07 | . 00 |
| 1913 | . 00 | 16.87 | . 00 | . 54 | . 05 | . 67 | . 07 | . 00 |

Table 7, cont.

|  | $\begin{gathered} (9) \\ \text { Latium } \end{gathered}$ | (10) <br> Abruzzi | $(11)$ Campania | (12) <br> Apulia | $\begin{gathered} (13) \\ \text { Basilicata } \end{gathered}$ | $\begin{gathered} (14) \\ \text { Calabria } \end{gathered}$ | $\begin{gathered} (15) \\ \text { Sicily } \end{gathered}$ | (16) <br> Sardinia |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1861 | . 01 | . 04 | 1.19 | . 12 | . 00 | . 02 | . 34 | . 01 |
| 1862 | . 01 | . 04 | 1.22 | . 12 | . 00 | . 02 | . 38 | . 01 |
| 1863 | . 01 | . 05 | 1.30 | . 13 | . 00 | . 03 | . 42 | . 02 |
| 1864 | . 01 | . 05 | 1.20 | . 12 | . 00 | . 03 | . 45 | . 02 |
| 1865 | . 01 | . 05 | 1.16 | . 13 | . 00 | . 04 | . 47 | . 02 |
| 1866 | . 01 | . 06 | 1.13 | . 14 | . 00 | . 04 | . 51 | . 02 |
| 1867 | . 01 | . 06 | 1.05 | . 14 | . 00 | . 05 | . 54 | . 02 |
| 1868 | . 01 | . 05 | 1.08 | . 14 | . 00 | . 05 | . 55 | . 02 |
| 1869 | . 01 | . 05 | 1.10 | . 14 | . 00 | . 05 | . 59 | . 02 |
| 1870 | . 01 | . 04 | 1.11 | . 14 | . 00 | . 05 | . 62 | . 02 |
| 1871 | . 02 | . 03 | 1.09 | . 13 | . 00 | . 05 | . 65 | . 02 |
| 1872 | . 02 | . 03 | 1.08 | . 13 | . 00 | . 05 | . 70 | . 02 |
| 1873 | . 02 | . 03 | 1.07 | . 12 | . 00 | . 05 | . 76 | . 02 |
| 1874 | . 02 | . 03 | 1.06 | . 12 | . 00 | . 05 | . 85 | . 02 |
| 1875 | . 02 | . 03 | 1.07 | . 12 | . 00 | . 05 | . 92 | . 03 |
| 1876 | . 02 | . 03 | 1.13 | . 11 | . 00 | . 05 | . 95 | . 03 |
| 1877 | . 02 | . 02 | 1.17 | . 11 | . 00 | . 05 | . 97 | . 03 |
| 1878 | . 02 | . 02 | 1.20 | . 10 | . 00 | . 05 | . 97 | . 03 |
| 1879 | . 02 | . 02 | 1.20 | . 10 | . 00 | . 04 | 1.02 | . 03 |
| 1880 | . 02 | . 02 | 1.18 | . 10 | . 00 | . 04 | 1.04 | . 02 |
| 1881 | . 02 | . 02 | 1.17 | . 10 | . 00 | . 04 | 1.08 | . 02 |
| 1882 | . 03 | . 01 | 1.16 | . 10 | . 00 | . 04 | 1.14 | . 02 |
| 1883 | . 03 | . 01 | 1.16 | . 10 | . 00 | . 04 | 1.19 | . 02 |
| 1884 | . 04 | . 01 | 1.16 | . 11 | . 00 | . 04 | 1.25 | . 02 |
| 1885 | . 04 | . 01 | 1.17 | . 12 | . 00 | . 04 | 1.33 | . 02 |
| 1886 | . 05 | . 01 | 1.16 | . 13 | . 00 | . 04 | 1.39 | . 02 |
| 1887 | . 05 | . 01 | 1.11 | . 14 | . 00 | . 04 | 1.45 | . 02 |
| 1888 | . 04 | . 01 | 1.10 | . 15 | . 00 | . 04 | 1.58 | . 02 |
| 1889 | . 04 | . 01 | 1.10 | . 16 | . 00 | . 03 | 1.59 | . 02 |
| 1890 | . 03 | . 01 | 1.10 | . 17 | . 00 | . 03 | 1.56 | . 01 |
| 1891 | . 03 | . 01 | 1.14 | . 18 | . 00 | . 03 | 1.57 | . 01 |
| 1892 | . 02 | . 01 | 1.12 | . 19 | . 00 | . 03 | 1.52 | . 01 |
| 1893 | . 02 | . 01 | 1.08 | . 19 | . 00 | . 02 | 1.57 | . 01 |
| 1894 | . 01 | . 01 | 1.04 | . 19 | . 00 | . 02 | 1.55 | . 01 |
| 1895 | . 01 | . 01 | 1.01 | . 20 | . 00 | . 02 | 1.56 | . 01 |
| 1896 | . 01 | . 01 | . 98 | . 20 | . 00 | . 02 | 1.62 | . 02 |
| 1897 | . 01 | . 01 | . 97 | . 20 | . 00 | . 02 | 1.60 | . 02 |
| 1898 | . 01 | . 01 | . 99 | . 20 | . 00 | . 01 | 1.58 | . 02 |
| 1899 | . 01 | . 01 | 1.03 | . 21 | . 00 | . 01 | 1.81 | . 03 |
| 1900 | . 01 | . 01 | 1.10 | . 22 | . 00 | . 01 | 1.86 | . 03 |
| 1901 | . 01 | . 01 | 1.17 | . 24 | . 00 | . 02 | 2.20 | . 03 |
| 1902 | . 01 | . 01 | 1.23 | . 25 | . 00 | . 02 | 2.39 | . 03 |
| 1903 | . 02 | . 01 | 1.28 | . 25 | . 00 | . 02 | 2.37 | . 03 |
| 1904 | . 02 | . 01 | 1.29 | . 25 | . 00 | . 02 | 2.32 | . 03 |
| 1905 | . 02 | . 01 | 1.26 | . 25 | . 00 | . 02 | 2.20 | . 03 |
| 1906 | . 02 | . 01 | 1.26 | . 26 | . 00 | . 02 | 2.02 | . 03 |
| 1907 | . 02 | . 01 | 1.27 | . 27 | . 00 | . 02 | 2.53 | . 03 |
| 1908 | . 03 | . 01 | 1.19 | . 28 | . 00 | . 02 | 2.70 | . 03 |
| 1909 | . 04 | . 01 | 1.29 | . 30 | . 00 | . 02 | 2.68 | . 04 |
| 1910 | . 04 | . 02 | 1.33 | . 31 | . 00 | . 01 | 2.70 | . 04 |
| 1911 | . 05 | . 02 | 1.45 | . 31 | . 00 | . 01 | 2.65 | . 04 |
| 1912 | . 05 | . 03 | 2.67 | . 32 | . 00 | . 01 | 2.88 | . 04 |
| 1913 | . 06 | . 03 | 2.60 | . 35 | . 00 | . 01 | 3.10 | . 04 |

Sources: see text.

Table 8
Naval ship maintenance in Italy's regions, 1861-1913: value added at 1911 prices (million lire)

|  | (1) <br> Piedmont | (2) <br> Liguria | (3) <br> Lombardy | (4) <br> Venetia | $\begin{gathered} (5) \\ \text { Emilia } \end{gathered}$ | (6) Tuscany | (7) <br> Marches | (8) Umbria |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1861 | . 00 | . 73 | . 00 | . 00 | . 00 | . 15 | . 02 | . 00 |
| 1862 | . 00 | . 71 | . 00 | . 00 | . 00 | . 14 | . 02 | . 00 |
| 1863 | . 00 | . 70 | . 00 | . 00 | . 00 | . 14 | . 02 | . 00 |
| 1864 | . 00 | . 67 | . 00 | . 00 | . 00 | . 14 | . 02 | . 00 |
| 1865 | . 00 | . 66 | . 00 | . 00 | . 00 | . 13 | . 02 | . 00 |
| 1866 | . 00 | . 72 | . 00 | . 00 | . 00 | . 07 | . 02 | . 00 |
| 1867 | . 00 | . 66 | . 00 | . 38 | . 00 | . 00 | . 02 | . 00 |
| 1868 | . 00 | . 75 | . 00 | . 43 | . 00 | . 00 | . 00 | . 00 |
| 1869 | . 00 | . 89 | . 00 | . 51 | . 00 | . 00 | . 00 | . 00 |
| 1870 | . 00 | . 89 | . 00 | . 49 | . 00 | . 00 | . 00 | . 00 |
| 1871 | . 00 | . 85 | . 00 | . 47 | . 00 | . 00 | . 00 | . 00 |
| 1872 | . 00 | . 80 | . 00 | . 37 | . 00 | . 00 | . 00 | . 00 |
| 1873 | . 00 | . 89 | . 00 | . 36 | . 00 | . 00 | . 00 | . 00 |
| 1874 | . 00 | 1.00 | . 00 | . 35 | . 00 | . 00 | . 00 | . 00 |
| 1875 | . 00 | 1.06 | . 00 | . 32 | . 00 | . 00 | . 00 | . 00 |
| 1876 | . 00 | 1.15 | . 00 | . 30 | . 00 | . 00 | . 00 | . 00 |
| 1877 | . 00 | 1.20 | . 00 | . 28 | . 00 | . 00 | . 00 | . 00 |
| 1878 | . 00 | 1.22 | . 00 | . 38 | . 00 | . 00 | . 00 | . 00 |
| 1879 | . 00 | 1.25 | . 00 | . 41 | . 00 | . 00 | . 00 | . 00 |
| 1880 | . 00 | 1.28 | . 00 | . 43 | . 00 | . 00 | . 00 | . 00 |
| 1881 | . 00 | 1.29 | . 00 | . 47 | . 00 | . 00 | . 00 | . 00 |
| 1882 | . 00 | 1.29 | . 00 | . 48 | . 00 | . 00 | . 00 | . 00 |
| 1883 | . 00 | 1.29 | . 00 | . 53 | . 00 | . 00 | . 00 | . 00 |
| 1884 | . 00 | 1.31 | . 00 | . 55 | . 00 | . 00 | . 00 | . 00 |
| 1885 | . 00 | 1.36 | . 00 | . 61 | . 00 | . 00 | . 00 | . 00 |
| 1886 | . 00 | 1.37 | . 00 | . 63 | . 00 | . 00 | . 00 | . 00 |
| 1887 | . 00 | 1.45 | . 00 | . 71 | . 00 | . 00 | . 00 | . 00 |
| 1888 | . 00 | 1.59 | . 00 | . 80 | . 00 | . 00 | . 00 | . 00 |
| 1889 | . 00 | 1.70 | . 00 | . 91 | . 00 | . 00 | . 00 | . 00 |
| 1890 | . 00 | 1.75 | . 00 | . 98 | . 00 | . 00 | . 00 | . 00 |
| 1891 | . 00 | 1.86 | . 00 | 1.04 | . 00 | . 00 | . 00 | . 00 |
| 1892 | . 00 | 2.03 | . 00 | 1.12 | . 00 | . 00 | . 00 | . 00 |
| 1893 | . 00 | 2.21 | . 00 | 1.21 | . 00 | . 00 | . 00 | . 00 |
| 1894 | . 00 | 2.27 | . 00 | 1.22 | . 00 | . 00 | . 00 | . 00 |
| 1895 | . 00 | 2.29 | . 00 | 1.23 | . 00 | . 00 | . 00 | . 00 |
| 1896 | . 00 | 2.28 | . 00 | 1.20 | . 00 | . 00 | . 00 | . 00 |
| 1897 | . 00 | 2.35 | . 00 | 1.24 | . 00 | . 00 | . 00 | . 00 |
| 1898 | . 00 | 2.50 | . 00 | 1.32 | . 00 | . 00 | . 00 | . 00 |
| 1899 | . 00 | 2.59 | . 00 | 1.29 | . 00 | . 00 | . 00 | . 00 |
| 1900 | . 00 | 2.62 | . 00 | 1.38 | . 00 | . 00 | . 00 | . 00 |
| 1901 | . 00 | 2.62 | . 00 | 1.31 | . 00 | . 00 | . 00 | . 00 |
| 1902 | . 00 | 2.58 | . 00 | 1.29 | . 00 | . 00 | . 00 | . 00 |
| 1903 | . 00 | 2.47 | . 00 | 1.27 | . 00 | . 00 | . 00 | . 00 |
| 1904 | . 00 | 2.40 | . 00 | 1.23 | . 00 | . 00 | . 00 | . 00 |
| 1905 | . 00 | 2.38 | . 00 | 1.22 | . 00 | . 00 | . 00 | . 00 |
| 1906 | . 00 | 2.31 | . 00 | 1.19 | . 00 | . 00 | . 00 | . 00 |
| 1907 | . 00 | 2.28 | . 00 | 1.11 | . 00 | . 00 | . 00 | . 00 |
| 1908 | . 00 | 2.30 | . 00 | 1.12 | . 00 | . 00 | . 00 | . 00 |
| 1909 | . 00 | 2.35 | . 00 | 1.14 | . 00 | . 00 | . 00 | . 00 |
| 1910 | . 00 | 2.43 | . 00 | 1.12 | . 00 | . 00 | . 00 | . 00 |
| 1911 | . 00 | 2.59 | . 00 | 1.19 | . 00 | . 00 | . 00 | . 00 |
| 1912 | . 00 | 2.92 | . 00 | 1.23 | . 00 | . 00 | . 00 | . 00 |
| 1913 | . 00 | 3.12 | . 00 | 1.35 | . 00 | . 00 | . 00 | . 00 |

Table 8, cont.

|  | (9) Latium | (10) <br> Abruzzi | $\begin{gathered} (11) \\ \text { Campania } \end{gathered}$ | (12) <br> Apulia | $\begin{gathered} (13) \\ \text { Basilicata } \end{gathered}$ | $\begin{gathered} (14) \\ \text { Calabria } \end{gathered}$ | $\begin{gathered} (15) \\ \text { Sicily } \end{gathered}$ | (16) Sardinia |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1861 | . 00 | . 00 | . 93 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1862 | . 00 | . 00 | . 91 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1863 | . 00 | . 00 | . 89 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1864 | . 00 | . 00 | . 86 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1865 | . 00 | . 00 | . 85 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1866 | . 00 | . 00 | . 90 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1867 | . 00 | . 00 | . 83 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1868 | . 00 | . 00 | . 95 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1869 | . 00 | . 00 | 1.12 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1870 | . 00 | . 00 | 1.08 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1871 | . 00 | . 00 | 1.03 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1872 | . 00 | . 00 | . 88 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1873 | . 00 | . 00 | . 87 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1874 | . 00 | . 00 | . 83 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1875 | . 00 | . 00 | . 78 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1876 | . 00 | . 00 | . 72 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1877 | . 00 | . 00 | . 66 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1878 | . 00 | . 00 | . 62 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1879 | . 00 | . 00 | . 67 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1880 | . 00 | . 00 | . 70 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1881 | . 00 | . 00 | . 75 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1882 | . 00 | . 00 | . 76 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1883 | . 00 | . 00 | . 82 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1884 | . 00 | . 00 | . 87 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1885 | . 00 | . 00 | . 93 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1886 | . 00 | . 00 | . 98 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1887 | . 00 | . 00 | 1.10 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1888 | . 00 | . 00 | 1.23 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1889 | . 00 | . 00 | 1.39 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1890 | . 00 | . 00 | 1.49 | . 04 | . 00 | . 00 | . 00 | . 00 |
| 1891 | . 00 | . 00 | 1.59 | . 05 | . 00 | . 00 | . 00 | . 00 |
| 1892 | . 00 | . 00 | 1.72 | . 15 | . 00 | . 00 | . 00 | . 00 |
| 1893 | . 00 | . 00 | 1.82 | . 28 | . 00 | . 00 | . 00 | . 05 |
| 1894 | . 00 | . 00 | 1.86 | . 41 | . 00 | . 00 | . 00 | . 06 |
| 1895 | . 00 | . 00 | 1.88 | . 47 | . 00 | . 00 | . 00 | . 06 |
| 1896 | . 00 | . 00 | 1.92 | . 60 | . 00 | . 00 | . 00 | . 06 |
| 1897 | . 00 | . 00 | 1.92 | . 62 | . 00 | . 00 | . 00 | . 06 |
| 1898 | . 00 | . 00 | 2.04 | . 66 | . 00 | . 00 | . 00 | . 07 |
| 1899 | . 00 | . 00 | 2.18 | . 68 | . 00 | . 00 | . 00 | . 07 |
| 1900 | . 00 | . 00 | 2.20 | . 69 | . 00 | . 00 | . 00 | . 07 |
| 1901 | . 00 | . 00 | 2.21 | . 69 | . 00 | . 00 | . 00 | . 07 |
| 1902 | . 00 | . 00 | 2.17 | . 68 | . 00 | . 00 | . 00 | . 07 |
| 1903 | . 00 | . 00 | 2.14 | . 74 | . 00 | . 00 | . 00 | . 07 |
| 1904 | . 00 | . 00 | 2.08 | . 71 | . 00 | . 00 | . 00 | . 06 |
| 1905 | . 00 | . 00 | 2.06 | . 71 | . 00 | . 00 | . 00 | . 06 |
| 1906 | . 00 | . 00 | 2.06 | . 63 | . 00 | . 00 | . 00 | . 06 |
| 1907 | . 00 | . 00 | 2.03 | . 68 | . 00 | . 00 | . 00 | . 06 |
| 1908 | . 00 | . 00 | 2.05 | . 69 | . 00 | . 00 | . 00 | . 06 |
| 1909 | . 00 | . 00 | 2.16 | . 70 | . 00 | . 00 | . 00 | . 06 |
| 1910 | . 00 | . 00 | 2.23 | . 72 | . 00 | . 00 | . 00 | . 07 |
| 1911 | . 00 | . 00 | 2.38 | . 77 | . 00 | . 00 | . 00 | . 07 |
| 1912 | . 00 | . 00 | 2.62 | . 85 | . 00 | . 00 | . 00 | . 08 |
| 1913 | . 00 | . 00 | 2.87 | 1.01 | . 00 | . 00 | . 00 | . 08 |

Sources: see text.

Table 9
Ship building and repairing in Italy's regions, 1861-1913: value added at 1911 prices (million lire)

|  | (1) <br> Piedmont | (2) <br> Liguria | (3) <br> Lombardy | (4) <br> Venetia | $\begin{gathered} (5) \\ \text { Emilia } \end{gathered}$ | (6) Tuscany | (7) <br> Marches | (8) <br> Umbria |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1861 | . 00 | 7.80 | . 00 | . 41 | . 07 | 1.64 | . 19 | . 00 |
| 1862 | . 00 | 9.59 | . 00 | . 41 | . 09 | 1.82 | . 22 | . 00 |
| 1863 | . 00 | 12.68 | . 00 | . 35 | . 08 | 2.24 | . 22 | . 00 |
| 1864 | . 00 | 14.64 | . 00 | . 49 | . 06 | 1.33 | . 26 | . 00 |
| 1865 | . 00 | 16.99 | . 00 | . 56 | . 04 | 1.39 | . 30 | . 00 |
| 1866 | . 00 | 17.85 | . 00 | . 72 | . 04 | 1.34 | . 23 | . 00 |
| 1867 | . 00 | 20.02 | . 00 | 1.59 | . 05 | 1.28 | . 21 | . 00 |
| 1868 | . 00 | 22.97 | . 00 | 1.94 | . 05 | 1.32 | . 17 | . 00 |
| 1869 | . 00 | 23.49 | . 00 | 2.11 | . 05 | 1.41 | . 15 | . 00 |
| 1870 | . 00 | 20.90 | . 00 | 1.99 | . 06 | 1.26 | . 13 | . 00 |
| 1871 | . 00 | 18.07 | . 00 | 1.74 | . 08 | . 99 | . 11 | . 00 |
| 1872 | . 00 | 17.62 | . 00 | 1.28 | . 15 | . 63 | . 12 | . 00 |
| 1873 | . 00 | 20.60 | . 00 | 1.86 | . 15 | 1.14 | . 12 | . 00 |
| 1874 | . 00 | 23.78 | . 00 | 1.95 | . 10 | 2.01 | . 10 | . 00 |
| 1875 | . 00 | 21.87 | . 00 | 1.86 | . 08 | 1.66 | . 09 | . 00 |
| 1876 | . 00 | 17.33 | . 00 | 2.01 | . 05 | 1.54 | . 10 | . 00 |
| 1877 | . 00 | 13.70 | . 00 | 1.95 | . 04 | 2.09 | . 17 | 00 |
| 1878 | . 00 | 11.01 | . 00 | 1.91 | . 05 | 1.98 | . 16 | . 00 |
| 1879 | . 00 | 9.88 | . 00 | 1.65 | . 04 | 1.99 | . 08 | . 00 |
| 1880 | . 00 | 9.49 | . 00 | 1.83 | . 04 | 1.90 | . 09 | . 00 |
| 1881 | . 00 | 9.85 | . 00 | 1.82 | . 04 | 2.30 | . 09 | . 00 |
| 1882 | . 00 | 10.82 | . 00 | 3.25 | . 04 | 2.48 | . 09 | . 00 |
| 1883 | . 00 | 10.81 | . 00 | 3.32 | . 04 | 2.77 | . 07 | . 00 |
| 1884 | . 00 | 10.46 | . 00 | 4.59 | . 03 | 3.47 | . 06 | . 00 |
| 1885 | . 00 | 10.14 | . 00 | 5.79 | . 04 | 3.39 | . 08 | . 00 |
| 1886 | . 00 | 11.90 | . 00 | 6.70 | . 03 | 4.41 | . 08 | . 00 |
| 1887 | . 00 | 13.59 | . 00 | 6.91 | . 03 | 3.82 | . 06 | . 00 |
| 1888 | . 00 | 13.92 | . 00 | 5.36 | . 04 | 2.41 | . 05 | . 00 |
| 1889 | . 00 | 15.80 | . 00 | 3.63 | . 05 | 2.94 | . 06 | . 00 |
| 1890 | . 00 | 18.58 | . 00 | 3.43 | . 04 | 2.18 | . 08 | . 00 |
| 1891 | . 00 | 17.66 | . 00 | 4.01 | . 05 | 3.31 | . 09 | . 00 |
| 1892 | . 00 | 15.20 | . 00 | 4.31 | . 05 | 2.70 | . 10 | . 00 |
| 1893 | . 00 | 15.35 | . 00 | 4.31 | . 06 | 2.53 | . 12 | . 00 |
| 1894 | . 00 | 16.46 | . 00 | 4.52 | . 06 | 2.24 | . 11 | . 00 |
| 1895 | . 00 | 17.82 | . 00 | 3.73 | . 06 | 3.40 | . 10 | . 00 |
| 1896 | . 00 | 19.65 | . 00 | 3.22 | . 05 | 5.41 | . 10 | . 00 |
| 1897 | . 00 | 21.63 | . 00 | 3.23 | . 04 | 6.57 | . 09 | . 00 |
| 1898 | . 00 | 24.98 | . 00 | 3.31 | . 04 | 6.92 | . 08 | . 00 |
| 1899 | . 00 | 33.63 | . 00 | 3.81 | . 06 | 6.75 | . 11 | . 00 |
| 1900 | . 00 | 35.52 | . 00 | 4.76 | . 07 | 6.40 | . 77 | . 00 |
| 1901 | . 00 | 33.89 | . 00 | 3.43 | . 06 | 2.50 | . 93 | . 00 |
| 1902 | . 00 | 35.62 | . 00 | 3.49 | . 07 | 2.53 | 1.45 | . 00 |
| 1903 | . 00 | 33.03 | . 00 | 3.35 | . 09 | 3.13 | 1.39 | . 00 |
| 1904 | . 00 | 28.23 | . 00 | 3.82 | . 08 | 2.88 | 1.07 | . 00 |
| 1905 | . 00 | 32.15 | . 00 | 3.71 | . 10 | 4.81 | 1.76 | . 00 |
| 1906 | . 00 | 36.71 | . 00 | 2.81 | . 12 | 4.09 | 2.23 | . 00 |
| 1907 | . 00 | 35.13 | . 00 | 2.67 | . 10 | 4.52 | 1.46 | . 00 |
| 1908 | . 00 | 27.87 | . 00 | 2.68 | . 12 | 5.74 | . 14 | . 00 |
| 1909 | . 00 | 24.45 | . 00 | 2.63 | . 15 | 5.28 | . 64 | . 00 |
| 1910 | . 00 | 31.62 | . 00 | 3.59 | . 14 | 3.97 | 1.57 | . 00 |
| 1911 | . 00 | 46.54 | . 00 | 4.05 | . 14 | 3.28 | 1.46 | . 00 |
| 1912 | . 00 | 55.02 | . 00 | 3.62 | . 17 | 5.00 | 1.73 | . 00 |
| 1913 | . 00 | 62.06 | . 00 | 3.03 | . 14 | 4.87 | 2.29 | . 00 |

Table 9, cont.

|  | $\begin{gathered} (9) \\ \text { Latium } \end{gathered}$ | (10) <br> Abruzzi | $(11)$ Campania | (12) <br> Apulia | $\begin{gathered} (13) \\ \text { Basilicata } \end{gathered}$ | $\begin{gathered} (14) \\ \text { Calabria } \end{gathered}$ | $\begin{gathered} (15) \\ \text { Sicily } \end{gathered}$ | (16) <br> Sardinia |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1861 | . 01 | . 08 | 6.52 | . 21 | . 00 | . 05 | . 54 | . 02 |
| 1862 | . 01 | . 07 | 6.40 | . 26 | . 00 | . 06 | . 58 | . 02 |
| 1863 | . 01 | . 06 | 6.15 | . 25 | . 00 | . 05 | . 57 | . 02 |
| 1864 | . 01 | . 06 | 6.75 | . 21 | . 00 | . 06 | . 62 | . 03 |
| 1865 | . 01 | . 06 | 6.72 | . 24 | . 00 | . 07 | . 70 | . 04 |
| 1866 | . 01 | . 06 | 6.86 | . 24 | . 00 | . 07 | . 72 | . 03 |
| 1867 | . 01 | . 06 | 6.77 | . 22 | . 00 | . 08 | . 73 | . 03 |
| 1868 | . 01 | . 06 | 6.30 | . 24 | . 00 | . 09 | . 77 | . 04 |
| 1869 | . 01 | . 06 | 6.19 | . 24 | . 00 | . 10 | . 82 | . 04 |
| 1870 | . 01 | . 05 | 5.92 | . 21 | . 00 | . 09 | . 82 | . 03 |
| 1871 | . 02 | . 04 | 5.27 | . 20 | . 00 | . 09 | . 86 | . 03 |
| 1872 | . 02 | . 05 | 5.18 | . 17 | . 00 | . 08 | . 98 | . 04 |
| 1873 | . 02 | . 05 | 6.79 | . 16 | . 00 | . 08 | 1.00 | . 03 |
| 1874 | . 02 | . 04 | 8.22 | . 14 | . 00 | . 08 | 1.01 | . 03 |
| 1875 | . 02 | . 03 | 8.27 | . 16 | . 00 | . 07 | 1.14 | . 03 |
| 1876 | . 02 | . 03 | 7.62 | . 18 | . 00 | . 07 | 1.15 | . 10 |
| 1877 | . 02 | . 02 | 7.07 | . 17 | . 00 | . 07 | 1.07 | . 11 |
| 1878 | . 02 | . 03 | 7.02 | . 17 | . 00 | . 07 | 1.05 | . 03 |
| 1879 | . 03 | . 02 | 6.90 | . 17 | . 00 | . 06 | 1.19 | . 03 |
| 1880 | . 04 | . 02 | 5.49 | . 16 | . 00 | . 05 | 1.25 | . 03 |
| 1881 | . 03 | . 02 | 6.51 | . 16 | . 00 | . 06 | 1.20 | . 03 |
| 1882 | . 03 | . 01 | 7.37 | . 15 | . 00 | . 06 | 1.23 | . 03 |
| 1883 | . 03 | . 01 | 7.64 | . 13 | . 00 | . 06 | 1.27 | . 03 |
| 1884 | . 04 | . 01 | 8.81 | . 14 | . 00 | . 07 | 1.36 | . 02 |
| 1885 | . 04 | . 01 | 9.96 | . 15 | . 00 | . 08 | 1.45 | . 02 |
| 1886 | . 05 | . 01 | 9.62 | . 15 | . 00 | . 06 | 1.54 | . 02 |
| 1887 | . 05 | . 01 | 8.02 | . 17 | . 00 | . 06 | 1.62 | . 02 |
| 1888 | . 05 | . 01 | 6.79 | . 19 | . 00 | . 05 | 1.75 | . 02 |
| 1889 | . 04 | . 01 | 7.69 | . 21 | . 00 | . 05 | 1.67 | . 02 |
| 1890 | . 03 | . 01 | 9.75 | . 28 | . 00 | . 06 | 1.64 | . 02 |
| 1891 | . 03 | . 01 | 8.74 | . 31 | . 00 | . 06 | 1.74 | . 02 |
| 1892 | . 02 | . 01 | 8.74 | . 42 | . 00 | . 04 | 1.66 | . 03 |
| 1893 | . 02 | . 01 | 8.52 | . 64 | . 00 | . 03 | 1.68 | . 08 |
| 1894 | . 01 | . 01 | 7.15 | 1.15 | . 00 | . 04 | 1.66 | . 08 |
| 1895 | . 01 | . 01 | 6.41 | 1.22 | . 00 | . 03 | 1.63 | . 09 |
| 1896 | . 01 | . 01 | 5.83 | 1.31 | . 00 | . 03 | 1.68 | . 09 |
| 1897 | . 01 | . 01 | 6.83 | 1.31 | . 00 | . 02 | 1.63 | . 09 |
| 1898 | . 01 | . 01 | 6.45 | 1.35 | . 00 | . 02 | 1.61 | . 10 |
| 1899 | . 01 | . 01 | 8.73 | 1.38 | . 00 | . 02 | 1.86 | . 10 |
| 1900 | . 01 | . 01 | 9.39 | 1.40 | . 00 | . 02 | 1.92 | . 09 |
| 1901 | . 01 | . 01 | 9.76 | 1.15 | . 00 | . 02 | 2.24 | . 10 |
| 1902 | . 02 | . 01 | 10.06 | . 97 | . 00 | . 04 | 2.44 | . 10 |
| 1903 | . 02 | . 02 | 9.55 | 1.03 | . 00 | . 04 | 4.45 | . 10 |
| 1904 | . 02 | . 01 | 11.50 | 1.02 | . 00 | . 02 | 4.45 | . 10 |
| 1905 | . 02 | . 01 | 13.56 | 1.08 | . 00 | . 02 | 3.35 | . 10 |
| 1906 | . 02 | . 01 | 13.29 | 1.04 | . 00 | . 02 | 4.41 | . 11 |
| 1907 | . 02 | . 01 | 13.88 | 1.07 | . 00 | . 02 | 4.73 | . 14 |
| 1908 | . 03 | . 01 | 12.56 | 1.06 | . 00 | . 02 | 6.20 | . 13 |
| 1909 | . 04 | . 01 | 12.58 | 1.10 | . 00 | . 02 | 5.88 | . 12 |
| 1910 | . 04 | . 02 | 15.27 | 1.16 | . 00 | . 01 | 3.29 | . 12 |
| 1911 | . 05 | . 02 | 14.36 | 1.20 | . 00 | . 01 | 3.84 | . 11 |
| 1912 | . 05 | . 03 | 25.37 | 1.27 | . 00 | . 01 | 5.05 | . 12 |
| 1913 | . 06 | . 03 | 22.20 | 1.46 | . 00 | . 01 | 4.08 | . 13 |

Sources: see text.

Table 10
Ship building and repairing in Italy's regions: shares of cumulative production (percent)

| Region | (1) (2) New construction |  | (3) (4) <br> Maintenance |  | (5) | (6) | (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Naval | Merchant | Naval | Merchant | Naval | Merchant | Total |
| Piedmont | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 |
| Liguria | 42.3 | 68.5 | 40.0 | 63.9 | 41.6 | 66.2 | 54.6 |
| Lombardy | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 |
| Venetia | 10.3 | 2.6 | 18.2 | 3.7 | 12.0 | 3.2 | 7.3 |
| Emilia | . 0 | . 4 | . 0 | . 3 | . 0 | . 3 | . 2 |
| Tuscany | 13.4 | 5.6 | . 3 | 4.3 | 10.5 | 4.9 | 7.6 |
| Marches | . 0 | 3.7 | . 1 | . 5 | . 0 | 2.1 | 1.1 |
| Umbria | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 |
| Latium | . 0 | . 0 | . 0 | . 2 | . 0 | . 1 | . 1 |
| Abruzzi | . 0 | . 0 | . 0 | . 2 | . 0 | . 1 | . 1 |
| Campania | 33.6 | 13.4 | 34.3 | 11.3 | 33.8 | 12.3 | 22.4 |
| Apulia | . 5 | . 7 | 6.4 | 1.7 | 1.8 | 1.2 | 1.5 |
| Basilicata | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 |
| Calabria | . 0 | . 2 | . 0 | . 3 | . 0 | . 2 | . 1 |
| Sicily | . 1 | 4.9 | . 0 | 13.5 | . 1 | 9.2 | 4.9 |
| Sardinia | . 0 | . 1 | . 6 | . 2 | . 1 | . 2 | . 2 |

Sources: see text.

Table 11
Ship building and repairing in Italy's regions: local significance, census years

|  | (1)$\qquad$ (2) (3) (4) industrial production (percent) |  |  |  | (5) (6) (7) (8)Shipbuilding product per maleof working age (1911 lire) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1871 | 1881 | 1901 | 1911 | 1871 | 1881 | 1901 | 1911 |
| Piedmont | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 |
| Liguria | 24.7 | 11.2 | 22.7 | 15.8 | 64.1 | 32.8 | 91.6 | 110.6 |
| Lombardy | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 |
| Venetia | 1.1 | 1.0 | 1.3 | . 9 | 2.0 | 2.0 | 3.5 | 4.0 |
| Emilia | . 1 | . 0 | . 0 | . 0 | . 1 | . 1 | . 1 | . 2 |
| Tuscany | . 7 | 1.3 | . 9 | . 8 | 1.3 | 3.0 | 2.9 | 3.7 |
| Marches | . 3 | . 2 | 1.3 | 1.4 | . 4 | . 3 | 2.8 | 4.4 |
| Umbria | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 |
| Latium | . 0 | . 0 | . 0 | . 0 | . 1 | . 1 | . 0 | . 1 |
| Abruzzi | . 1 | . 0 | . 0 | . 0 | . 1 | . 0 | . 0 | . 1 |
| Campania | 3.1 | 3.0 | 3.5 | 3.6 | 5.6 | 6.7 | 9.9 | 14.0 |
| Apulia | . 3 | . 2 | 1.0 | . 6 | . 4 | . 3 | 1.8 | 1.8 |
| Basilicata | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 | . 0 |
| Calabria | . 2 | . 1 | . 0 | . 0 | . 2 | . 1 | . 1 | . 0 |
| Sicily | . 5 | . 6 | . 9 | 1.1 | 1.0 | 1.3 | 2.0 | 3.2 |
| Sardinia | . 1 | . 1 | . 2 | . 1 | . 1 | . 1 | . 4 | . 4 |
| Italy | 1.6 | 1.1 | 1.8 | 1.5 | 3.0 | 2.3 | 5.2 | 6.8 |

Source: see text.

Table 12
Naval ship building in Italy's regions, 1861-1913: private-yard value added at 1911 prices (million lire)

|  | (1) | (2) | (3) (4) <br> for the Regia marina |  |  | (6) | (7) (8) <br> for export |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Liguria | Venetia | Tuscany | Marches | Campania | Sicily | Liguria | Tuscany |
| 1861 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1862 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1863 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1864 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | 00 |
| 1865 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1866 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1867 | . 00 | . 00 | . 06 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1868 | . 00 | . 00 | . 12 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1869 | . 00 | . 00 | . 30 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1870 | . 00 | . 00 | . 24 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1871 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1872 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | . 00 | 00 |
| 1873 | . 18 | . 00 | . 14 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1874 | . 61 | . 00 | . 67 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1875 | . 61 | . 00 | . 67 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1876 | . 61 | . 00 | . 97 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1877 | . 56 | . 00 | 1.57 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1878 | . 00 | . 00 | 1.32 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1879 | . 00 | . 00 | 1.29 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1880 | . 00 | . 00 | 1.28 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1881 | . 00 | . 00 | 1.30 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1882 | . 03 | . 00 | 1.49 | . 00 | . 00 | . 00 | . 00 | . 00 |
| 1883 | . 04 | . 00 | 2.14 | . 00 | . 10 | . 00 | . 00 | . 00 |
| 1884 | . 60 | . 00 | 2.74 | . 00 | . 26 | . 00 | . 00 | . 00 |
| 1885 | . 89 | . 00 | 2.59 | . 00 | . 34 | . 00 | . 00 | . 00 |
| 1886 | 1.56 | . 00 | 3.66 | . 00 | . 75 | . 00 | . 00 | . 00 |
| 1887 | 3.08 | . 02 | 3.13 | . 00 | . 66 | . 00 | . 00 | . 00 |
| 1888 | 2.15 | . 09 | 1.72 | . 00 | . 62 | . 00 | . 00 | . 00 |
| 1889 | 2.33 | . 11 | 2.32 | . 00 | . 74 | . 00 | . 00 | . 00 |
| 1890 | 3.36 | . 04 | 1.54 | . 00 | 1.01 | . 00 | . 00 | . 00 |
| 1891 | 3.85 | . 00 | 1.67 | . 01 | . 45 | . 00 | . 00 | . 00 |
| 1892 | 3.03 | . 00 | 1.84 | . 02 | . 11 | . 00 | . 00 | . 00 |
| 1893 | 1.71 | . 00 | 1.57 | . 03 | . 27 | . 00 | . 00 | . 46 |
| 1894 | 1.08 | . 00 | . 68 | . 02 | . 19 | . 00 | 1.84 | . 93 |
| 1895 | . 02 | . 00 | . 29 | . 00 | . 03 | . 00 | 5.12 | 2.15 |
| 1896 | . 05 | . 00 | . 00 | . 00 | . 09 | . 00 | 5.29 | 4.70 |
| 1897 | . 26 | . 00 | . 00 | . 00 | . 10 | . 00 | 4.27 | 5.49 |
| 1898 | 1.94 | . 00 | 1.76 | . 00 | . 01 | . 00 | 1.59 | 3.93 |
| 1899 | 3.02 | . 03 | 2.35 | . 00 | . 27 | . 00 | 1.77 | 1.50 |
| 1900 | 2.91 | . 06 | 2.35 | . 00 | . 91 | . 00 | 1.79 | . 16 |
| 1901 | . 65 | . 08 | . 62 | . 00 | 1.05 | . 00 | 3.13 | . 03 |
| 1902 | . 00 | . 09 | . 00 | . 00 | 1.15 | . 00 | 8.44 | . 77 |
| 1903 | . 00 | . 04 | . 19 | . 00 | . 70 | . 00 | 8.88 | 1.19 |
| 1904 | . 00 | . 03 | 1.22 | . 00 | . 88 | . 00 | 1.66 | . 85 |
| 1905 | 3.20 | . 03 | 3.51 | . 00 | 2.57 | . 00 | 2.19 | . 42 |
| 1906 | 8.03 | . 00 | 2.93 | . 00 | 2.54 | . 00 | 1.08 | . 00 |
| 1907 | 6.97 | . 00 | 2.17 | . 00 | . 37 | . 00 | . 33 | 1.23 |
| 1908 | 4.79 | . 00 | 2.17 | . 00 | . 73 | . 00 | . 49 | 2.46 |
| 1909 | 3.67 | . 00 | 1.44 | . 00 | . 45 | . 00 | . 28 | 2.46 |
| 1910 | 8.22 | . 00 | . 17 | . 00 | 2.00 | . 00 | . 31 | 2.49 |
| 1911 | 19.35 | . 09 | . 84 | . 00 | 3.84 | . 30 | . 41 | 1.30 |
| 1912 | 18.22 | . 25 | 3.20 | . 00 | 4.27 | . 31 | . 84 | . 04 |
| 1913 | 17.51 | . 27 | 3.10 | . 00 | 3.97 | . 00 | 1.69 | . 00 |

Sources: see text.

Figure 1
Ship building and repairing in Italy: value added at 1911 prices (million lire)


Sources: Table 1.

Figure 2
Ship building and repairing in Italy: index numbers (1900 = 100)


Sources: see text.

Figure 3
Ship building and repairing in Liguria and Campania: naval work (million lire at 1911 prices)

## A. Construction


B. Maintenance


Sources: Tables 6 and 8.

Figure 4
Ship building and repairing in Liguria and Campania: merchant work (million lire at 1911 prices)
A. Construction

B. Maintenance


Sources: Tables 5 and 7.

Figure 5
Ship building and repairing in Liguria and Campania: total work (million lire at 1911 prices)


Sources: Table 9.

Figure 6
Naval ship building in Italy: arsenal and private-
yard value added at 1911 prices (million lire)


Sources: see text.

Figure 7
Naval ship building in Liguria and Tuscany: arsenal and privateyard value added at 1911 prices (million lire)
A. Liguria

B. Tuscany


