

## CHAPTER 7

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### Historical Monetary Statistics for Norway - some cross checks of the new data

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This chapter provides an overview over the new historical data in this volume. We discuss some of their macro implications for implied revisions of money and credit aggregates and the long run development of short term and long term real interest rates and aggregated real wages.

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## 7.1 Introduction

During the course of work with the Historical Monetary Statistics project the main focus has been on documenting the validity and reliability of the historical data which are collected and systematized. Most of the preceding chapters of the two volumes has focused solely on the construction of data of a particular type, like e.g. the *consumer price index* in Grytten (2004a, Chapter 3) or *bond yields* in Klovland (2004a, Chapter 4) of the first volume of Historical Monetary Statistics for Norway. Similarly, Klovland's work on the balance sheet of *savings banks* in Chapter 2 and *commercial banks* in Chapter 3 of the present volume, or Grytten's work on daily, monthly or annual *wages by occupation* in Chapter 5 or annual *wages by industry* in Chapter 6 are also examples where data of a particular type are discussed in isolation. Throughout the work we have resisted the temptation to start analyzing the data beyond what we believe has been necessary to provide documentation on how the data have been constructed. We will use this final chapter to provide some simple cross checks on the validity and reliability of the data presented. For this purpose we will combine historical information from different chapters of the two volumes of Historical Monetary Statistics and construct new variables which can be of help for the evaluation.

We offer cross checks in three areas. First, we combine the long term bond yields presented in Klovland (2004a, Chapter 4) with the short term interest rates presented in Chapter 1 of this volume. In addition we calculate *long term real bond yields* and *short term real interest rates* using a smoothed inflation rate as a proxy for inflation expectations, drawing on the historical consumer price data presented in Grytten (2004a, Chapter 3). The data for aggregate bank deposits and bank loans which can be derived from the historical data on the balance sheets of individual savings banks and commercial banks in Chapters 2 and 3 can be compared with previous estimates in Klovland (2004b, Chapter 5) and Eitheim et al (2004, Chapter 10). We investigate the absolute and relative size of the revisions of these estimates and compare them with the nominal GDP-series presented in Grytten (2004b, Chapter 6). Finally we present estimates of *real annual wages* by deflating the estimates of historical annual wages presented in Chapter 6 of this volume with the consumer price index presented in Grytten (2004a, Chapter 3), and we also compare the real wage data with the real GDP per capita series presented in Grytten (2004b, Chapter 6).

## 7.2 Long term and short term interest rates 1818–2007

Figure 7.1 plots the long term nominal yields on government bonds against the short term nominal interest rate on marginal Central Bank liquidity and nominal interest rates on bank deposits and bank loans from 1818 to 2007. The interest rate on marginal Central Bank liquidity is set equal to the Norges Bank discount rate before 1965, thereafter it is constructed from the rates on various liquidity instruments. See Chapter 1 for details.

Firstly, we note that the marginal liquidity rate is always higher than the reported rate on bank deposits which indicates that banks have to pay a positive premium on Central Bank liquidity above

the compensation offered to depositors.

Secondly, we find that the reported deposit rate seems to move quite closely with the marginal liquidity rate over this period although, as we see from inspecting the 1970s and 1980s, with considerable lag during some sub-periods.

Thirdly, the marginal liquidity rate seems to be considerable more volatile than the bond yield throughout the entire period and also more volatile than the bank interest rates from the mid 1960s. The marginal liquidity rate and the short term money market rates gradually converge during the latter half of 20th century. This may be due to the fact that the money market becomes more developed, but it may also reflect the fact that monetary policy becomes more market oriented.

FIGURE 7.1 Long term and short term nominal interest rates, 1818–2007. The nominal bond yield is plotted against the nominal interest rate on marginal CB-liquidity and nominal interest rates on bank deposits and bank loans.

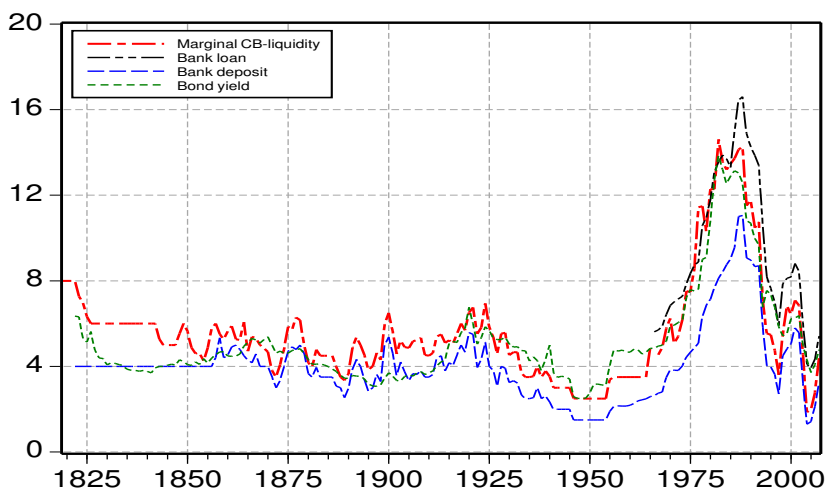
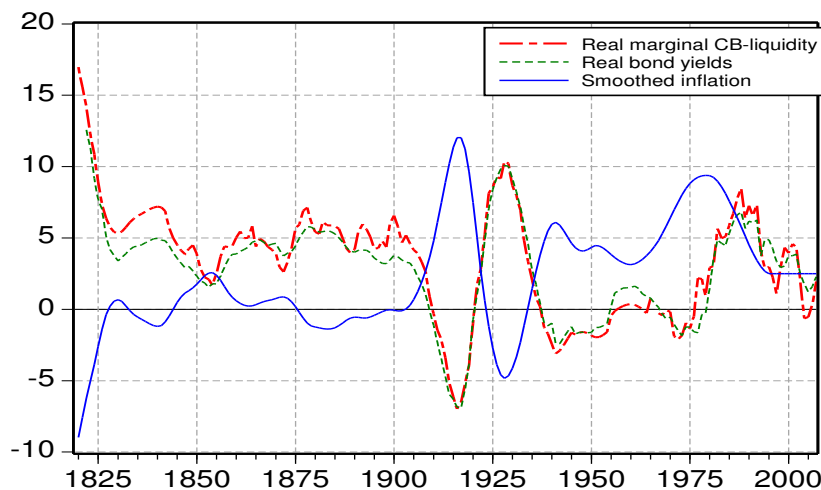


Figure 7.2 plots the real yield on long term government bonds, the real short term marginal liquidity rate and a smoothed measure of inflation as a proxy for low frequency changes in inflation expectations. Admittedly, this is a crude and mechanical approach to represent real interest rates. However, it may serve as a simple first attempt to cross check the historical interest rate data. From 1995 the calibrated measure of inflation expectations is set equal to the current inflation target 2.5 per cent.

FIGURE 7.2 Long term and short term real interest rates, 1818–2007. The real bond yield is plotted against the real interest rate on marginal CB-liquidity.



We observe that whereas the real interest rates fluctuated around a relatively high level during the 19th century, they remained at historically low levels during the post-World War II until the late 1970s when inflation had already gained momentum and were approaching its peak level close to 10 per cent around 1980. Interestingly, there has been more volatility in the short term real interest rate based on the marginal liquidity rate over the last 15 years of the sample than in the case of the real yield on government bonds.<sup>2</sup>

### 7.3 Revised data on bank deposits, bank loans and aggregate money holdings 1822–1918

The new estimates of bank deposits and bank loans in the savings banks and commercial banks presented in Chapters 2 and 3 above imply some revisions to the estimates of aggregate money holdings presented in Klovland (2004b, Chapter 5/Volumne I). Table 7.C.1 in the appendix contains the new time series of aggregate savings bank and commercial bank deposits for all years through 1918. More details on the construction of these data can be found in Chapter 2 in the case of savings banks and in Chapter 3 concerning commercial banks.

The currency component is not revised, but the new estimates of bank deposits differ somewhat

<sup>2</sup>We have used the same measure of inflation expectations in the calculations of the long term and short term real interest rates. Other assumptions based on a more volatile measure of short term inflation expectations might have yielded even more volatile short term real interest rates compared with the long term real interest rate.

from the previous ones, particularly in the case of commercial banks, which were partly based on the estimates in Matre(1992) before 1900. Some of the increase in the amount of deposits in the latter half of the 1870s and early 1880s found in the old data is shifted forward to the period 1870-1873 in the new series. In addition, there is a sharper decline in the years 1875 and 1877. In both cases the revised data reinforce the positive correlation between money and nominal income. The early 1870s were peak years of economic activity in Norway<sup>3</sup>, nominal GDP expanded at an annual rate of 11.5 per cent between 1870 and 1873. Conversely, both 1875 and 1877 registered a fall in the money stock and in nominal GDP.

FIGURE 7.3 New and old money aggregates, 1819–1918. End-of-month observations of broad money M2

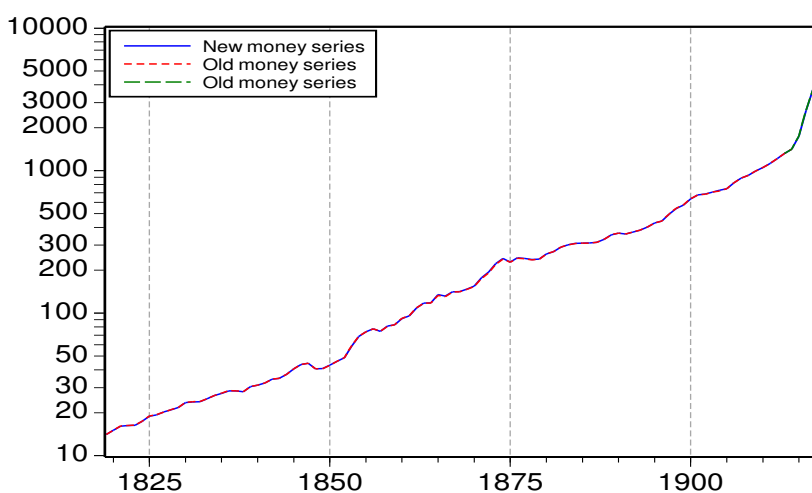
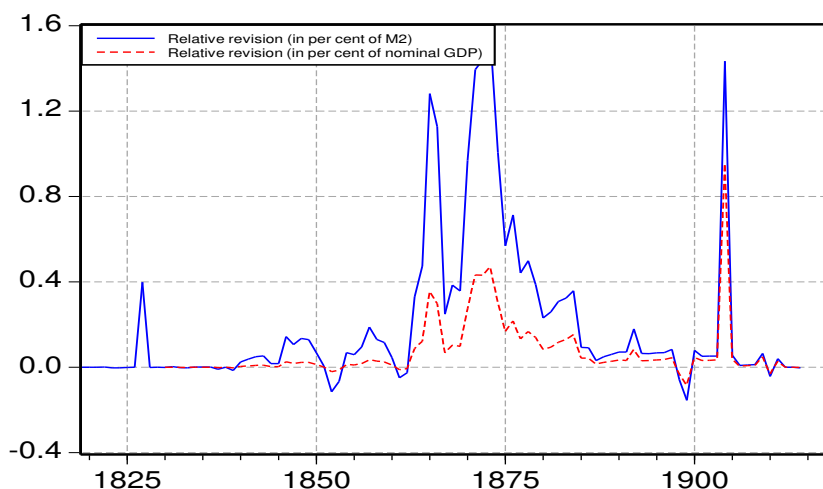


Figure 7.3 shows the old and new estimates of aggregate money holdings from 1819 to 1918. It is hard to distinguish the two series based on eye-balling the graph. We have calculated the relative size of the revisions measured in per cent of the old estimates as well as in per cent of nominal GDP. Figure 7.4 shows that the largest revisions are recorded in the early 1870s when the revisions amount to around 1.5 per cent of the previous money stock estimates and close to 0.5 per cent of nominal GDP. This is in accord with the explanation given above.

Time series of bank loans from commercial and savings banks were presented in Eitheim et al. (2004), but their data were incomplete prior to 1869, and were based on rather less satisfactory sources prior to 1900. Collecting the estimates of chapters 2 and 3 we are now able to present a revised and complete series of bank loans from 1822 to 1918, which are found in Table 7.C.2. This table also summarizes the revised estimates of the number of savings banks and commercial banks.

<sup>3</sup>See Klovland (1989) for an account of Norwegian business cycles in this period.

FIGURE 7.4 Revisions of money aggregates, 1819–1918. In per cent of old estimates and nominal GDP



The new estimates of commercial and savings banks' loans thus provide us with a complete annual record of bank loans in Norway beginning with the establishment of the first savings bank in 1822. These data can be linked to the time series of commercial and savings bank lending after 1918 in Table A2 of Eitheim et al. (2004) to form a continuous time series of bank loans extending over nearly two centuries.

Figure 7.5 shows the old and new estimates of bank loans from 1822 to 1918. Firstly, we note that the estimated amount of credit from 1840 to 1875 seems to be quite close to the previous estimates which were only available for every fifth year in this period. When we make a closer look at the size of revisions they turn out to be sizable relative to the amount of credit due to the rapid expansion of the banking sector in this period, cf. Figure 7.6. Bank credit revisions gradually increase to a level around 3 per cent during the period 1875-1880 when measured relative to nominal GDP. Revisions of bank credit also picks up temporarily around the turn of the century.

FIGURE 7.5 New and old data on aggregate bank loans, 1822–1918. End-of-month observations of total bank loans

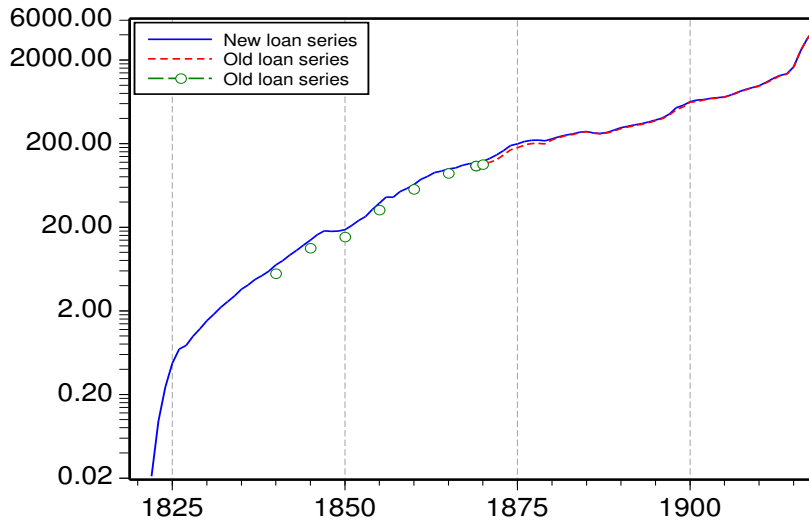
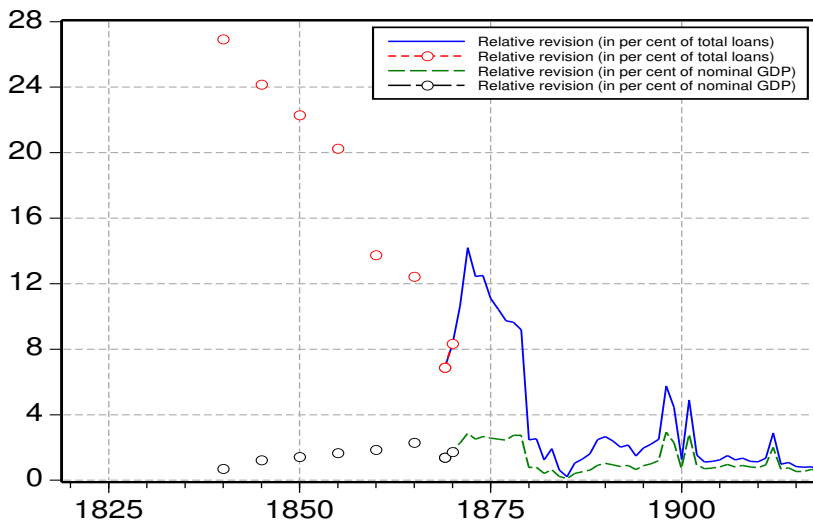


FIGURE 7.6 Revisions of data on aggregate bank loans, 1822–1918. In per cent of old estimates and nominal GDP



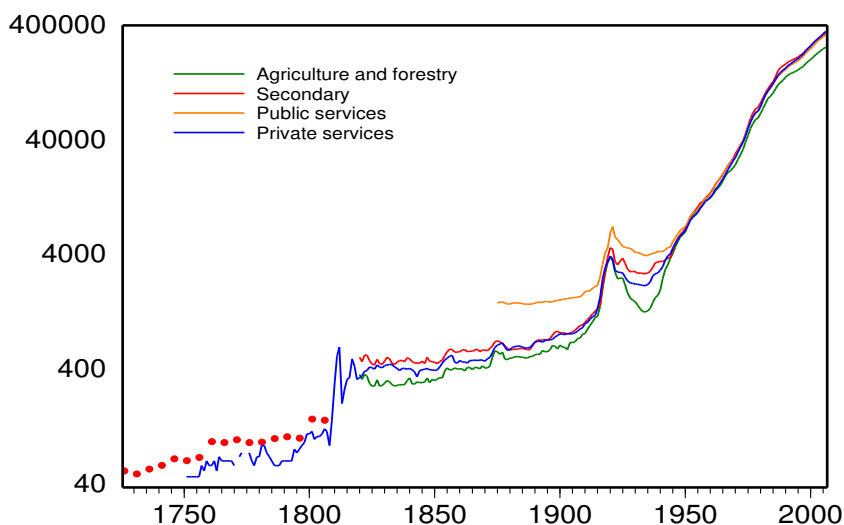
Total lending from private banks is an important indicator of credit market activity, but falls short of covering the whole loan market. A broader credit aggregate before 1900 would also have to comprise the loans provided by (1) Norges Bank, (2) Kongeriket Norges Hypotekbank, (3) the Loan and Discount Commissions and various Public Funds established by the central government, as well as (4) insurance companies.<sup>4</sup> From *Amtmannsberetninger 1861–1865 (C no. 2)*, p. XLVI, an estimate of first three items for 1865 is available. In millions of kroner these were: (1) Norges Bank 33.6 (2) Kongeriket Norges Hypotekbank 30.1 (3) central government sources 41.7, which can be contrasted with loans from savings banks of 68.2 millions NOK and, from commercial banks, 31.2 millions.

Although bank loans thus may have constituted somewhat less than fifty per cent of the total credit supply in this period, it is likely that this component would account for the greater part of the annual fluctuations in a wider credit aggregate.

## 7.4 Nominal wages 1726–2006

By weighting the nominal wages by industry with their share of total employment and linking this share to their corresponding wages we then arrive at different aggregates of wage series for the entire period 1726–2006. Some key series of annual wages are presented in Figure 7.7.

FIGURE 7.7 Annual nominal wages in key industries in NOK, 1726–2006. Semi-logarithmic scale



<sup>4</sup>Time series of the first two items are readily available, but finding annual figures for the various central government sources and for insurance companies would meet with problems. From 1899 the data in Skånland (1967) are useful for this purpose.



For the period 1946-2006 these are almost identical to the most recent series from Statistics Norway. For the period 1935-1939 they are also almost identical to other indices calculated at Statistics Norway. For the period 1911-1934 they satisfactorily match tax records from the Inland Revenue.<sup>5</sup> As for the years prior to 1911, we find a tendency towards somewhat lower nominal wages in the secondary sector than believed hitherto. This, is however due to the fact that our new series have better coverage than previous figures.

Figure 7.7 reveals significant wage differences between industries and sectors. In particular public services were comparatively well off until the World War II. Thereafter, we find a rapid convergence and simultaneous development until present days.

## 7.5 Deflator

In order to construct real wage series we have to adjust our new nominal wage series for price changes. This procedure is conducted by deflating the nominal wage series by the consumer price index documented in Grytten (2004a, 47–98).

The consumer price index stretches back to 1516. From 1666 it offers annual observations on the consumer price movements till present days. During the 18<sup>th</sup> century both its validity and reliability increase. From 1819 it includes 29 product items in eight consumption groups. The numbers increase to 47 commodities representing nine consumption groups from 1830 and 55 items representing ten consumption groups from 1850, when the cost of living index (CLI) by Ramstad has been adopted.<sup>6</sup> From 1901 the CLI index from the Kristiania Statistical Office was adopted and this index was spliced with the Social ministry's CLI during 1916–1919. Statistics Norway thereafter constructed their own CLI from 1919-1959. From then on it was replaced by Statistics Norway's official consumer price index (CPI).<sup>7</sup>

Like most historical CPIs and CLIs our deflator is constructed by a Laspeyres approach, meaning that we have fixed commodity weights during periods. The key sources of price data during the 18<sup>th</sup> century are accounts by merchants in one of the most important commercial cities in the Nordic countries at the time, i.e. Bergen. Though, some market prices are taken from other locations up and down the country, Bergen still serve as the most important source of price data until 1830. From then on price data collected almost all over the country by request from the central government serve as our most important source. In the 1930s these price data were assembled by the staff of the Wedervang Archive. The archive now serves as one of the richest sources of market prices on consumer goods in 19<sup>th</sup> century Europe. Both their validity and reliability seem very high. In the first place they do reflect market prices to consumers. Secondly, they were recorded by local civil servants monthly or at least quarterly on the basis of a strict regime set by the central authorities.

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<sup>5</sup>Grytten 2000, 22-41.

<sup>6</sup>Ramstad 1982, 158–238.

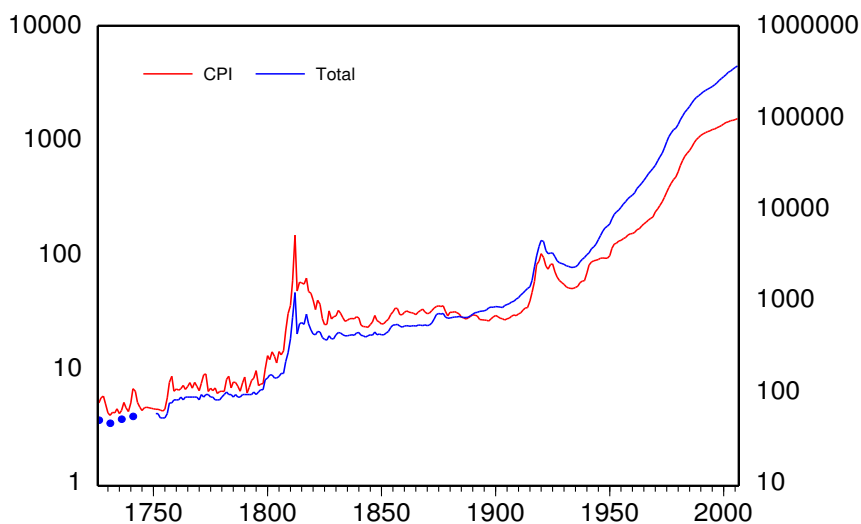
<sup>7</sup>Grytten 2005, 72.

Thirdly, the price quotations and the procedure of collecting the data were both controlled by civil servants in the central administration.<sup>8</sup>

The commodity weights in the consumer price index were decided on the basis of different consumption surveys conducted both for the 19<sup>th</sup> and the early 20<sup>th</sup> centuries.<sup>9</sup> From 1871 the CPI rely solely on the established CLI by Ramstad, from 1901 on the adopted CLI by Statistics Norway, from 1919 on the bureaus own CLI, and finally from 1959 on their own CPI. This implies that the deflator adopted here seems reasonably reliable for the period 1726–1819, fairly reliable for the years 1819–1830 and quite reliable 1830–1919. Thereafter our deflator is very reliable, comprising price observations of up to around 700 items till 1959 and thereafter about a thousand or more items. In sum the latter index comprises 40.000 to 45.000 observations per month.

The consumer price index is plotted along with the annual series of nominal wages for the period 1726–2006 in Figure 7.8.

FIGURE 7.8 Development of CPI and total nominal wages, 1726-2006. Semi-logarithmic scale



Left hand side scale = CPI, where 1950=100.  
Right hand side scale = nominal annual wages.

We observe from Figure 7.8 that nominal wages and prices move in the same direction both in the short and in the long run. However, prices seem to fluctuate more than wages. This implies the existence of rigid nominal wages, as they were often set in fixed terms. We can also see that wages started to increase significantly faster than the price level from the 1820s, indicating increasing standard of living and economic growth.

<sup>8</sup>Grytten 2004b, 61–80.

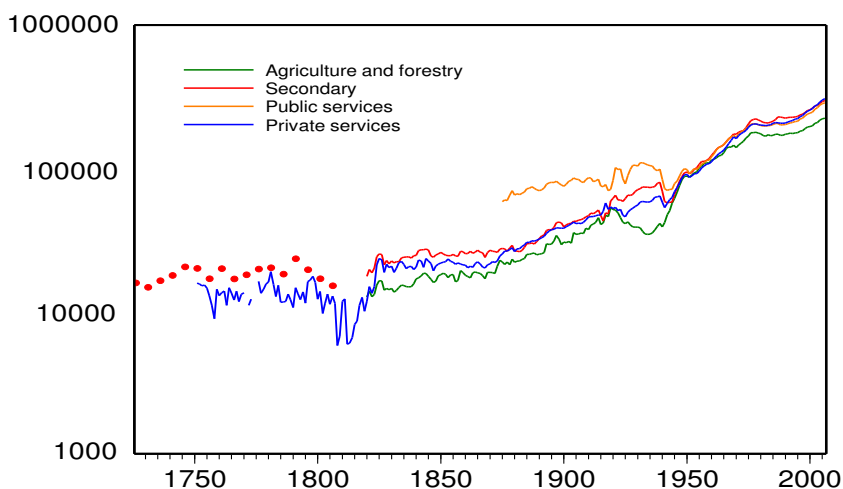
<sup>9</sup>Grytten 2004a, 63–66.

By assessing the different sub-indices we can conclude that the consumer price index reported in Grytten (2004a, 47–98) should serve as a suitable deflator in order to arrive at real wage series for Norway 1726-2006.

## 7.6 Real wages 1726–2006

Having arrived at new series of Norwegian annual salaries 1726-2006 and presented the new CPI, also constructed as part of the historical monetary statistics project, we are now in a position to conclude with real wage series. This is done by deflating the new nominal series by the mentioned CPI according to equation (4) and (5). In other words we deflate the constructed Paasche and Laspeyres wage series with a Laspeyres deflator. Again we present four series graphically, i.e. real wages for agriculture and forestry, the secondary sector, private services and public services. These are shown in Figure 7.9. For the other 14 series by industry and sub-industry, along with a series for total aggregates, see in the appendixes.

FIGURE 7.9 Real annual wages, 1726-2006, in fixed 2000-NOK. Semi-logarithmic scale



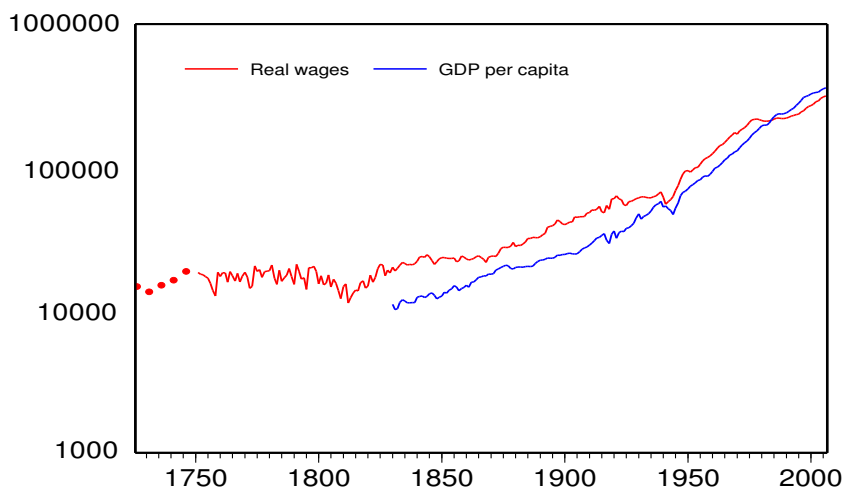
According to Figure 7.9 long-term real wages stayed fairly stable until the 1820s. However, in the short run there were huge fluctuations, mostly due to volatile prices. From the late nineteenth century we see firm evidence of increasing rates of real wage growth. During the 1870s, 1880s and the first half of the 1890s this was very much due to deflation. The growth of real wages between 1905 and 1916 can easily be seen as a consequence of rapid industrialization and economic growth. In the interwar period we see divergence between sectors and industries, with agriculture and forestry as the two dominant losers, due to excess production and severe deflation in product prices of primary

products. After World War II we find rapid and steady real wage growth in all sectors until the mid 1970s. Thereafter the rates of growth dive significantly and differences between sectors start to increase again, with agriculture as the loser. Finally, in the 1990s and till now we find a dramatic increase in real wages for most industries and sectors again.

In Figure 7.10 we compare the development of annual real wages per man-year and GDP per capita. The GDP figures 1830-1865 are taken from the current project and spliced with Statistics Norway's historical national accounts 1865 onwards.<sup>10</sup> As the figure reveals, GDP per capita has grown significantly faster than real wages, revealing that private consumption has become a continuously smaller part of the expenditure side of the GDP. When real wages multiplied with a factor of 16.08 from 1830 till 2006, the per capita GDP volume multiplied with more than twice as much, 32.77. At the same time the private consumption level per capita according to the historical national accounts increased 17.33 times, in line with our measure of real wages.<sup>11</sup> The differences between the two can be explained by increasing tax and saving levels.

During the last years, however, real wages have grown faster than the GDP per capita in volume terms. At the same time the implicit GDP deflator has increased significantly faster than the consumer prices. This is also mirrored in a positive shock in Norway's terms of trade during the last years.

FIGURE 7.10 Real annual wages and GDP per capita, 1830-2006, in fixed 2000-NOK. Semi-logarithmic scale

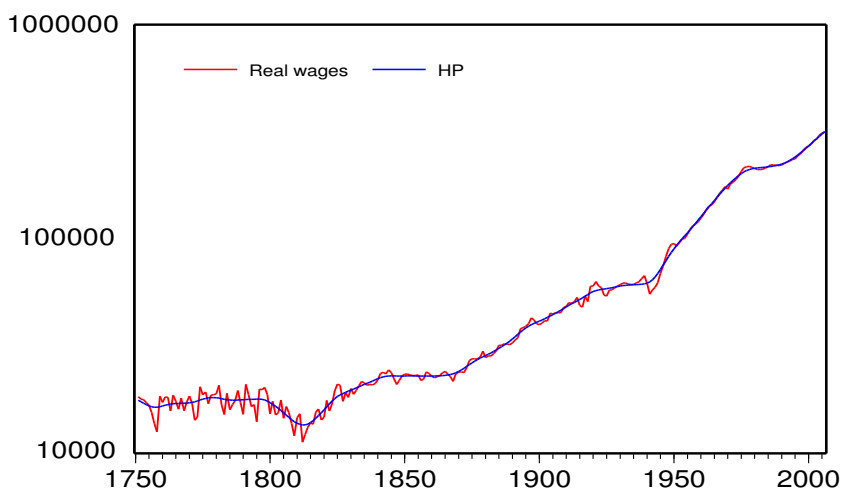


In summary, all our new real wage series in the long run seem to correspond well with volume figures from the historical national accounts. In the short run we do not expect the same degree of uniformity, which is also mirrored in the series.

<sup>10</sup>Grytten 2004c, 241-288, NOS 1965, 348-351 and

<sup>11</sup>Grytten 2004c, 277-280.

FIGURE 7.11 Real wages and HP-trends, 1751-2006, in fixed 2000-NOK. Semi-logarithmic scale



We apply the HP-filter (with  $\lambda=100$  on annual data) to separate the long-term trends of the series from the short-term cycles. This enables us to see the trend patterns in our series more easily, cf. Figure 7.11. Interestingly, the aggregated real wage level seems to have remained fairly stable during the 18<sup>th</sup> century. Thereafter the real wage showed a rapid downturn during the high inflation period from about 1800 to the end of the Napoleonic wars. This was followed by a period of increasing real wages during the long deflation period up till 1842. A deflationary monetary policy was pursued through the 1820s and 1830s in order to bring the new speciedaler back to its par silver value. Redemption to silver parity was reinstated in April 1842.<sup>12</sup>

Thereafter the long-term trend shows fairly stable real wages. However, there were still significant short-term fluctuations during the first industrial wave from the early 1840s until the mid 1870s. Real wages increased substantially during the second wave of industrialization and the international deflation in the 1870s and 1880s. This trend continued until the 1930s, when real wage growth almost ceased until the post World War II period. After this real wages increased considerably until the end of the 1970s, and again gained momentum during the years of lower inflation in the 1990s and early 2000s.

Finally, the annual growth rates of real wages in different industries are reported in Table 7.1. Average growth rates of real wages are calculated for different subperiods applying a first-to-last-year approach. Note that for the years 1945–2006 *total* wages show the highest growth rates. This is again due to the fact that the classification *total* is not the same as average, but also includes employees not reflected in the other industries mentioned here as well as independents. The restructuring of the

<sup>12</sup>Eitrheim and Qvigstad 2005, 1–17.

economy from old to new industries also influences this outcome.

As reported in Table 7.1 the annual growth of total real wages 1726-2006 is calculated to 1.11 per cent. In the long run transport and communication along with private services seem to have been the winners. Public services almost constantly lost ground to all other sectors. However, one has to bear in mind that public services started at a considerable higher level than all other sectors and industries. The decomposition of the public sector has changed substantially between 1870–2007. The employment share of e.g. senior public servants, who originally had relatively high wages, has declined, and at the same time their wages have also declined relative to the wages of other groups of employees in the public services sector.

It is also worth to notice that real wages were at the same level in 1820 as almost a hundred years earlier. This may indicate that the general wealth may have been about the same around 1820 as around 1720. This implies that any economic growth that may have taken place in the eighteenth century was fully reversed during the turbulent two first decades of the eighteenth century. According to Figure 7.11 real wages were reduced between 1751 and 1820. Certainly, they reached a peak in 1751 and were stabilized thereafter. However, the very peak of the eighteenth century was in 1791. The huge fall in real wages seems to have occurred from 1799.

From 1820 to 1940 real wages show a steady rate of growth. In particular, as we have seen, during 1820-1850 due to the recovery from the war-years in the early nineteenth century. Finally, the period after 1945 saw the most rapid growth rates of real wages. In addition, the rates were quite similar, however, with a wage converging tendency between industries.

TABLE 7.1  
Growth rates of real wages by industry

	1	2	3	4	5	6
	Agriculture and forestry	Secondary industries	Transport and communication	Private services	Public services	Total
1726-1751		0.95				0.90
1726-1820		0.11				0.00
1751-1820		-0.19	-0.66	-0.66		-0.32
1820-1850	1.23	1.29	2.89	2.65		1.56
1850-1900	1.05	0.83	1.15	1.13	1.01*	1.08
1900-1940	0.62	1.46	1.15	1.06	0.28	1.11
1945-2006	2.15	2.52	2.54	2.51	2.17	2.55
1726-2006		1.06				1.11
1751-2006		1.07	1.18	1.18		1.13
1820-2006	1.57	1.54	1.87	1.87		1.67
1850-2006	1.64	1.59	1.68	1.72		1.70
1875-2006	1.80	1.85	1.90	1.94	1.23	1.89
1900-2006	1.92	1.95	1.93	2.00	1.28	1.99

\* 1875-1900





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## 7.A Nominal interest rates 1819–2006

TABLE 7.A.1  
Nominal interest rates for Norway 1819–2006

Year	Marginal liquidity rate	Average deposit rate	Average loan rate	Average bond yield
1819	8.00			
1820	8.00			
1821	8.00			
1822	8.00	4.00		6.35
1823	7.28	4.00		6.31
1824	7.00	4.00		5.32
1825	6.33	4.00		5.14
1826	6.00	4.00		5.63
1827	6.00	4.00		4.77
1828	6.00	4.00		4.40
1829	6.00	4.00		4.37
1830	6.00	4.00		4.08
1831	6.00	4.00		4.17
1832	6.00	4.00		4.14
1833	6.00	4.00		4.09
1834	6.00	4.00		4.03
1835	6.00	4.00		3.87
1836	6.00	4.00		3.83
1837	6.00	4.00		3.81
1838	6.00	4.00		3.77
1839	6.00	4.00		3.82
1840	6.00	4.00		3.77
1841	6.00	4.00		3.70
1842	6.00	4.00		3.94
1843	5.28	4.00		4.00
1844	5.00	4.00		4.00
1845	5.00	4.00		4.06
1846	5.00	4.00		4.10
1847	5.00	4.00		4.06
1848	5.54	4.00		4.31
1849	6.00	4.00		4.20
1850	5.65	4.00		4.08
1851	4.87	4.00		4.05
1852	4.61	4.00		4.21
1853	4.64	4.00		4.10
1854	4.27	4.00		4.36
1855	4.87	4.00		4.16
1856	5.74	4.00		4.39
1857	6.00	4.42		4.54
1858	5.51	5.33		4.68
1859	5.27	4.42		4.69
1860	5.63	4.50		4.49
1861	5.89	4.92		4.47
1862	5.27	5.00		4.48
1863	5.24	4.79		4.59
1864	6.07	4.50		4.94
1865	4.72	4.29		5.13

TABLE 7.A.1  
Nominal interest rates for Norway 1819–2006

Year	Marginal liquidity rate	Average deposit rate	Average loan rate	Average bond yield
1866	5.38	4.17		5.31
1867	5.32	4.58		5.23
1868	5.01	4.00		5.09
1869	4.86	4.00		5.25
1870	4.68	4.00		5.39
1871	3.81	3.50		4.99
1872	3.50	3.00		4.63
1873	4.08	3.33		4.71
1874	4.81	4.00		4.59
1875	5.85	4.71		4.62
1876	5.71	4.92		4.74
1877	6.28	4.79		4.78
1878	6.16	5.00		4.83
1879	4.96	4.58		4.60
1880	4.17	3.67		4.32
1881	3.98	3.50		4.10
1882	4.78	3.96		4.10
1883	4.50	3.50		4.11
1884	4.50	3.50		4.07
1885	4.50	3.50		3.99
1886	4.50	3.50		3.87
1887	3.98	3.08		3.77
1888	3.50	3.00		3.58
1889	3.35	2.54		3.45
1890	3.65	2.96		3.45
1891	4.89	3.88		3.58
1892	5.37	4.33		3.55
1893	5.00	4.00		3.53
1894	4.53	3.38		3.41
1895	3.83	2.83		3.17
1896	4.01	3.00		3.08
1897	4.64	3.63		3.07
1898	4.31	3.29		3.14
1899	5.96	5.00		3.44
1900	6.50	5.38		3.70
1901	5.66	4.63		3.56
1902	4.58	3.58		3.34
1903	5.21	4.21		3.31
1904	4.90	3.75		3.53
1905	4.87	3.33		3.60
1906	5.18	3.67		3.55
1907	5.23	3.63		3.69
1908	5.33	3.79		3.76
1909	4.54	3.50		3.63
1910	4.50	3.50		3.69
1911	4.63	3.63		3.80
1912	5.39	4.38		4.02
1913	5.50	4.50		4.21
1914	5.10	3.79		4.29
1915	5.23	4.17		5.06

TABLE 7.A.1  
Nominal interest rates for Norway 1819–2006

Year	Marginal liquidity rate	Average deposit rate	Average loan rate	Average bond yield
1916	5.06	4.04		5.17
1917	5.53	4.54		5.12
1918	6.00	5.00		5.58
1919	5.70	4.67		5.78
1920	6.53	5.58		6.77
1921	6.75	5.50		6.02
1922	5.52	3.96		5.05
1923	5.82	4.33		5.35
1924	6.95	5.13		5.85
1925	5.84	4.00		5.68
1926	5.38	3.83		5.34
1927	4.59	3.08		5.25
1928	5.54	4.00		5.26
1929	5.57	3.92		5.36
1930	4.53	3.25		5.05
1931	4.67	3.33		4.90
1932	4.66	3.21		4.92
1933	3.69	2.67		4.74
1934	3.50	2.50		4.73
1935	3.50	2.50		4.26
1936	3.54	2.54		4.44
1937	4.00	3.00		4.26
1938	3.50	2.50		3.81
1939	3.78	2.63		4.34
1940	3.53	2.33		5.00
1941	3.00	2.00		3.68
1942	3.00	2.00		3.49
1943	3.00	2.00		3.54
1944	3.00	2.00		3.51
1945	3.00	2.00		3.41
1946	2.51	1.50		2.58
1947	2.50	1.50		2.51
1948	2.50	1.50		2.48
1949	2.50	1.50		2.52
1950	2.50	1.50		2.74
1951	2.50	1.50		3.17
1952	2.50	1.50		3.17
1953	2.50	1.50		3.14
1954	2.50	1.50		3.10
1955	3.39	2.05		4.04
1956	3.50	2.14		4.78
1957	3.50	2.16		4.72
1958	3.50	2.15		4.76
1959	3.50	2.15		4.67
1960	3.50	2.19		4.67
1961	3.50	2.27		4.81
1962	3.50	2.39		4.77
1963	3.50	2.44		4.58
1964	3.50	2.49		4.66
1965	4.82	2.59		4.84

TABLE 7.A.1  
Nominal interest rates for Norway 1819–2006

Year	Marginal liquidity rate	Average deposit rate	Average loan rate	Average bond yield
1966		2.63	5.61	4.84
1967	4.55	2.75	5.70	4.96
1968	4.88	2.81	5.85	4.98
1969	5.77	3.48	6.42	5.18
1970	6.24	3.84	6.85	5.86
1971	5.08	3.82	7.02	5.93
1972	5.40	3.81	7.15	6.05
1973	6.20	4.03	7.28	6.19
1974	7.52	4.44	7.83	7.22
1975	7.48	4.67	8.36	7.58
1976	8.58	4.86	8.73	7.51
1977	11.44	5.09	8.88	7.62
1978	11.48	6.33	10.58	9.00
1979	10.32	6.87	10.96	9.10
1980	12.29	7.13	11.78	10.80
1981	12.28	7.66	13.05	12.72
1982	14.61	8.13	13.58	13.84
1983	13.57	8.40	13.88	13.20
1984	13.20	8.76	13.70	12.55
1985	13.47	9.01	13.30	12.90
1986	13.73	9.57	14.98	13.14
1987	14.14	11.01	16.45	13.02
1988	14.26	11.06	16.60	12.61
1989	11.52	9.07	14.88	10.81
1990	11.76	8.97	14.26	10.69
1991	10.48	8.66	13.86	9.98
1992	10.75	8.70	13.39	9.69
1993	7.02	5.84	10.61	6.76
1994	5.55	4.03	8.18	7.55
1995	5.48	3.99	7.65	7.37
1996	4.75	3.63	7.01	6.77
1997	3.61	2.71	5.91	5.85
1998	5.45	4.50	7.86	5.43
1999	6.83	4.83	8.12	5.53
2000	6.45	5.06	8.19	6.23
2001	7.09	5.80	8.81	6.26
2002	6.85	5.57	8.45	6.37
2003	4.56	3.22	6.04	4.98
2004	1.87	1.31	4.10	4.30
2005	1.97	1.43	3.93	3.72
2006	2.78	2.14	4.35	4.09

Sources: Norges Bank and Statistics Norway, *Marginal liquidity rate* is from Chapter 1 of this volume, *Average bond yield* is from Klovland (2004a, Chapter 4), *Average deposit rate* 1955 onwards is from Statistics Norway, Historical tables, <http://www.ssb.no/vis/emner/11/01/orbofrent/art-2007-11-30-01.html>, Table 4a. Banks: Average, weighted interest rates on NOK deposits from non-financial enterprises, households and local government, *Average loan rate* 1966 onwards is from Table 4a. Banks: Average, weighted interest rates incl. commissions on utilised NOK loans excl. non-accrual loans to non-financial enterprises, households and local government.

## 7.B Real interest rates 1820–2006

TABLE 7.B.1  
Real interest rates for Norway 1820–2006

Real interest rates are based on a smoothed inflation measure combining a HP(100)-filter between 1820–1995 with the current inflation target 2.5 per cent between 1995–2006.

Year	Real marginal rate	Real deposit rate	Real loans rate	Real bond yield	Inflation rate	Smoothed inflation rate
1820	16.98				-12.22	-8.98
1821	15.58				-17.76	-7.58
1822	14.21	10.21		12.57	20.89	-6.21
1823	12.29	9.02		11.33	-7.86	-5.02
1824	10.85	7.85		9.17	-25.36	-3.85
1825	8.93	6.60		7.74	-11.15	-2.60
1826	7.38	5.38		7.01	0.50	-1.38
1827	6.38	4.38		5.15	31.58	-0.38
1828	5.78	3.78		4.18	-15.15	0.22
1829	5.42	3.42		3.79	4.43	0.58
1830	5.32	3.32		3.40	1.63	0.68
1831	5.44	3.44		3.62	11.99	0.56
1832	5.75	3.75		3.89	-5.25	0.25
1833	6.09	4.09		4.18	-8.84	-0.09
1834	6.36	4.36		4.38	-6.92	-0.36
1835	6.54	4.54		4.41	1.80	-0.54
1836	6.70	4.70		4.53	3.03	-0.70
1837	6.86	4.86		4.67	0.62	-0.86
1838	7.01	5.01		4.78	-0.68	-1.01
1839	7.13	5.13		4.95	4.15	-1.13
1840	7.20	5.20		4.97	-2.33	-1.20
1841	7.14	5.14		4.83	-13.18	-1.14
1842	6.88	4.88		4.82	-2.96	-0.88
1843	5.75	4.47		4.47	-0.10	-0.47
1844	5.00	4.00		4.00	-1.44	0.00
1845	4.52	3.52		3.58	5.48	0.48
1846	4.13	3.13		3.23	5.57	0.87
1847	3.86	2.86		2.92	14.32	1.14
1848	4.23	2.70		3.01	-10.10	1.30
1849	4.50	2.50		2.70	-3.05	1.50
1850	3.89	2.24		2.32	-3.66	1.76
1851	2.80	1.93		1.98	0.58	2.07
1852	2.24	1.64		1.84	5.39	2.36
1853	2.09	1.45		1.55	3.98	2.55
1854	1.70	1.43		1.79	10.02	2.57
1855	2.49	1.61		1.77	5.30	2.39
1856	3.69	1.96		2.34	7.83	2.04
1857	4.41	2.82		2.95	-0.69	1.59
1858	4.35	4.17		3.52	-11.73	1.16
1859	4.43	3.58		3.84	0.10	0.84
1860	5.03	3.89		3.88	4.78	0.61
1861	5.46	4.50		4.05	2.68	0.42
1862	4.99	4.71		4.20	-2.39	0.29
1863	5.01	4.57		4.36	-0.81	0.23

TABLE 7.B.1  
Real interest rates for Norway 1820–2006

Real interest rates are based on a smoothed inflation measure combining a HP(100)-filter between 1820–1995 with the current inflation target 2.5 per cent between 1995–2006.

Year	Real marginal rate	Real deposit rate	Real loans rate	Real bond yield	Inflation rate	Smoothed inflation rate
1864	5.83	4.26		4.70	-1.29	0.24
1865	4.39	3.97		4.81	-2.86	0.32
1866	4.94	3.72		4.87	5.11	0.44
1867	4.78	4.04		4.68	3.18	0.55
1868	4.39	3.38		4.47	3.12	0.62
1869	4.18	3.33		4.58	-5.24	0.67
1870	3.92	3.24		4.63	-3.90	0.76
1871	2.97	2.66		4.15	1.00	0.84
1872	2.63	2.13		3.76	5.61	0.87
1873	3.31	2.56		3.94	5.31	0.77
1874	4.28	3.47		4.06	3.19	0.53
1875	5.67	4.53		4.44	1.38	0.18
1876	5.94	5.14		4.97	-1.77	-0.22
1877	6.91	5.41		5.40	1.55	-0.62
1878	7.12	5.96		5.79	-9.98	-0.96
1879	6.12	5.74		5.76	-9.12	-1.16
1880	5.41	4.91		5.56	7.48	-1.24
1881	5.29	4.80		5.40	-0.37	-1.30
1882	6.13	5.31		5.45	1.65	-1.35
1883	5.88	4.88		5.49	-2.08	-1.38
1884	5.87	4.87		5.44	-2.59	-1.37
1885	5.80	4.80		5.29	-6.07	-1.30
1886	5.64	4.64		5.01	-1.82	-1.14
1887	4.93	4.03		4.72	-1.95	-0.95
1888	4.25	3.75		4.33	1.78	-0.75
1889	3.97	3.15		4.06	3.60	-0.61
1890	4.20	3.51		4.00	2.68	-0.56
1891	5.45	4.44		4.14	-0.10	-0.57
1892	5.96	4.93		4.15	-1.84	-0.60
1893	5.60	4.60		4.13	-6.81	-0.60
1894	5.07	3.91		3.95	-0.42	-0.54
1895	4.26	3.26		3.59	-0.85	-0.42
1896	4.30	3.29		3.37	-0.54	-0.29
1897	4.79	3.78		3.22	-1.19	-0.16
1898	4.37	3.35		3.20	4.59	-0.06
1899	5.99	5.03		3.47	3.86	-0.03
1900	6.56	5.44		3.76	3.12	-0.06
1901	5.77	4.74		3.67	-2.63	-0.11
1902	4.68	3.69		3.44	-3.00	-0.10
1903	5.19	4.19		3.29	-1.37	0.02
1904	4.62	3.47		3.25	-2.44	0.28
1905	4.17	2.64		2.91	2.50	0.69
1906	3.94	2.43		2.31	1.05	1.24
1907	3.32	1.72		1.78	4.66	1.91
1908	2.63	1.08		1.05	2.14	2.71
1909	0.87	-0.17		-0.04	-1.13	3.67



TABLE 7.B.1  
Real interest rates for Norway 1820–2006

Real interest rates are based on a smoothed inflation measure combining a HP(100)-filter between 1820–1995 with the current inflation target 2.5 per cent between 1995–2006.

Year	Real marginal rate	Real deposit rate	Real loans rate	Real bond yield	Inflation rate	Smoothed inflation rate
1910	-0.30	-1.30		-1.11	3.26	4.80
1911	-1.45	-2.46		-2.29	2.05	6.09
1912	-2.09	-3.10		-3.46	6.19	7.48
1913	-3.39	-4.39		-4.68	3.79	8.89
1914	-5.14	-6.45		-5.94	1.12	10.24
1915	-6.14	-7.20		-6.30	14.44	11.36
1916	-6.97	-7.99		-6.87	19.17	12.03
1917	-6.51	-7.49		-6.92	24.24	12.04
1918	-5.24	-6.24		-5.66	40.49	11.24
1919	-3.93	-4.96		-3.85	6.94	9.63
1920	-0.96	-1.90		-0.72	16.53	7.49
1921	1.70	0.44		0.96	-7.30	5.06
1922	2.84	1.27		2.36	-16.16	2.69
1923	5.23	3.74		4.75	-6.02	0.60
1924	8.14	6.31		7.04	9.62	-1.19
1925	8.54	6.70		8.39	1.75	-2.70
1926	9.25	7.71		9.21	-14.94	-3.87
1927	9.17	7.66		9.84	-10.14	-4.58
1928	10.36	8.83		10.08	-6.77	-4.83
1929	10.22	8.57		10.02	-4.03	-4.65
1930	8.66	7.38		9.18	-3.36	-4.13
1931	8.00	6.66		8.23	-5.22	-3.33
1932	6.96	5.51		7.22	-1.83	-2.30
1933	4.80	3.78		5.85	-0.93	-1.11
1934	3.34	2.34		4.57	0.00	0.16
1935	2.05	1.05		2.80	1.89	1.45
1936	0.85	-0.15		1.75	2.78	2.69
1937	0.19	-0.81		0.45	7.21	3.81
1938	-1.25	-2.25		-0.94	3.36	4.75
1939	-1.70	-2.86		-1.15	0.81	5.48
1940	-2.43	-3.63		-0.96	16.94	5.96
1941	-3.09	-4.09		-2.41	17.24	6.09
1942	-2.90	-3.90		-2.40	5.88	5.90
1943	-2.50	-3.50		-1.97	2.78	5.50
1944	-2.05	-3.05		-1.54	1.08	5.05
1945	-1.63	-2.63		-1.22	1.60	4.63
1946	-1.80	-2.81		-1.72	2.63	4.31
1947	-1.62	-2.62		-1.61	0.51	4.12
1948	-1.59	-2.59		-1.60	-0.51	4.09
1949	-1.68	-2.68		-1.66	0.00	4.18
1950	-1.84	-2.84		-1.61	5.13	4.34
1951	-1.96	-2.96		-1.29	16.10	4.46
1952	-1.94	-2.94		-1.27	8.82	4.44
1953	-1.79	-2.79		-1.16	1.93	4.29
1954	-1.58	-2.58		-0.98	4.55	4.08
1955	-0.45	-1.79		0.20	1.09	3.84

TABLE 7.B.1  
Real interest rates for Norway 1820–2006

Real interest rates are based on a smoothed inflation measure combining a HP(100)-filter between 1820–1995 with the current inflation target 2.5 per cent between 1995–2006.

Year	Real marginal rate	Real deposit rate	Real loans rate	Real bond yield	Inflation rate	Smoothed inflation rate
1956	-0.12	-1.48		1.16	3.58	3.62
1957	0.08	-1.26		1.30	2.77	3.42
1958	0.23	-1.12		1.49	4.71	3.27
1959	0.33	-1.02		1.50	2.57	3.17
1960	0.37	-0.94		1.53	0.44	3.13
1961	0.31	-0.92		1.62	2.59	3.19
1962	0.18	-0.93		1.45	5.04	3.32
1963	-0.01	-1.07		1.07	2.40	3.51
1964	-0.26	-1.27		0.90	5.47	3.76
1965	0.76	-1.47		0.79	4.44	4.06
1966		-1.78	1.21	0.44	3.55	4.41
1967	-0.27	-2.07	0.88	0.14	4.11	4.82
1968	-0.42	-2.49	0.55	-0.31	3.95	5.30
1969	-0.06	-2.36	0.58	-0.66	2.53	5.84
1970	-0.17	-2.57	0.43	-0.56	10.49	6.41
1971	-1.90	-3.16	0.04	-1.05	6.70	6.98
1972	-2.12	-3.71	-0.37	-1.47	6.81	7.52
1973	-1.82	-3.99	-0.74	-1.84	7.84	8.02
1974	-0.95	-4.03	-0.63	-1.24	9.09	8.47
1975	-1.34	-4.16	-0.47	-1.24	11.67	8.83
1976	-0.51	-4.23	-0.36	-1.57	9.33	9.09
1977	2.18	-4.17	-0.37	-1.64	9.22	9.26
1978	2.13	-3.02	1.23	-0.36	8.13	9.35
1979	0.93	-2.52	1.57	-0.29	4.62	9.39
1980	2.92	-2.23	2.41	1.43	11.05	9.37
1981	3.05	-1.58	3.81	3.48	13.43	9.24
1982	5.64	-0.84	4.61	4.87	11.40	8.97
1983	4.99	-0.18	5.30	4.62	8.46	8.58
1984	5.09	0.66	5.60	4.45	6.35	8.10
1985	5.90	1.44	5.73	5.33	5.63	7.57
1986	6.72	2.56	7.97	6.13	7.11	7.01
1987	7.73	4.60	10.03	6.61	8.75	6.41
1988	8.48	5.28	10.82	6.83	6.66	5.78
1989	6.38	3.94	9.74	5.68	4.55	5.13
1990	7.25	4.45	9.75	6.18	4.10	4.51
1991	6.55	4.73	9.92	6.05	3.46	3.93
1992	7.33	5.28	9.97	6.27	2.31	3.42
1993	4.03	2.85	7.62	3.77	2.26	2.99
1994	2.89	1.37	5.53	4.89	1.43	2.66
1995	2.98	1.49	5.15	4.87	2.50	2.50
1996	2.25	1.13	4.51	4.27	1.17	2.50
1997	1.11	0.21	3.41	3.35	2.62	2.50
1998	2.95	2.00	5.36	2.93	2.25	2.50
1999	4.33	2.33	5.62	3.03	2.30	2.50
2000	3.95	2.56	5.69	3.73	3.13	2.50
2001	4.59	3.30	6.31	3.76	3.03	2.50

TABLE 7.B.1  
Real interest rates for Norway 1820–2006

Real interest rates are based on a smoothed inflation measure combining a HP(100)-filter between 1820–1995 with the current inflation target 2.5 per cent between 1995–2006.

Year	Real marginal rate	Real deposit rate	Real loans rate	Real bond yield	Inflation rate	Smoothed inflation rate
<b>2002</b>	4.35	3.07	5.95	3.87	1.29	2.50
<b>2003</b>	2.06	0.72	3.54	2.48	2.45	2.50
<b>2004</b>	-0.63	-1.20	1.60	1.80	0.44	2.50
<b>2005</b>	-0.53	-1.08	1.43	1.22	1.59	2.50
<b>2006</b>	0.28	-0.36	1.85	1.59	2.26	2.50

## 7.C Revised estimates of money holdings and bank loans 1819–1918

TABLE 7.C.1  
Revised estimates of money stock components 1819–1918

End-of-year figures in 1000 kroner

Year	Currency held by the public	Savings banks deposits	Commercial banks deposits	M2 stock of money
1819	14090	0	0	14090
1820	15107	0	0	15107
1821	16154	0	0	16154
1822	16244	17	0	16261
1823	16262	123	0	16385
1824	17162	269	0	17430
1825	18507	455	0	18962
1826	18648	701	0	19349
1827	19465	801	0	20266
1828	20036	993	0	21029
1829	20551	1243	0	21794
1830	22140	1531	0	23671
1831	22154	1743	0	23898
1832	21836	2116	0	23952
1833	22587	2481	0	25067
1834	23448	2941	0	26389
1835	23880	3491	0	27371
1836	24643	3882	0	28525
1837	23902	4555	0	28457
1838	22981	5075	0	28056
1839	24791	5727	0	30518
1840	24563	6688	0	31251
1841	24776	7573	0	32349
1842	25620	8784	0	34404
1843	24681	10216	0	34898
1844	25537	11730	0	37267
1845	27176	13547	0	40723
1846	27998	15650	0	43648
1847	27487	17001	0	44488
1848	24550	16043	105	40698
1849	24619	15881	284	40784
1850	25978	16763	354	43095
1851	26650	18774	495	45920
1852	26933	21122	576	48631
1853	33039	25009	587	58635
1854	36481	31265	812	68557
1855	37061	35432	1506	73999
1856	35686	38362	3590	77638
1857	33348	36561	4577	74485
1858	32298	38018	10722	81038
1859	29809	41381	11806	82996
1860	30735	44359	16637	91731
1861	29945	47323	18597	95865
1862	31626	52387	24877	108890

TABLE 7.C.1  
Revised estimates of money stock components 1819–1918

End-of-year figures in 1000 kroner

Year	Currency held by the public	Savings banks deposits	Commercial banks deposits	M2 stock of money
1863	30672	59157	27685	117514
1864	29869	64170	24187	118226
1865	32667	69058	33143	134868
1866	31530	72005	28172	131706
1867	32330	75584	33066	140980
1868	29772	77907	33823	141502
1869	30509	78975	38073	147556
1870	31496	82775	40464	154735
1871	36456	88237	52064	176756
1872	40945	95108	58100	194153
1873	48737	110355	63946	223038
1874	47020	126327	68907	242254
1875	38570	129236	60505	228312
1876	40274	135446	69147	244867
1877	36550	138542	66489	241580
1878	32175	137683	67838	237696
1879	32993	134845	71765	239603
1880	37214	139815	83484	260513
1881	37695	144462	88141	270298
1882	38357	152684	99650	290691
1883	40827	159628	101156	301611
1884	38255	167285	102976	308516
1885	36388	169587	103916	309891
1886	38331	170659	101351	310341
1887	37657	170902	105741	314300
1888	43090	176818	109249	329157
1889	46967	188078	119159	354204
1890	46831	195788	121144	363763
1891	44303	198449	116476	359228
1892	42184	202996	125491	370671
1893	43288	209516	129194	381998
1894	43914	219653	138443	402010
1895	48987	227956	152678	429621
1896	49906	237479	155822	443207
1897	57053	254752	182771	494576
1898	60720	274989	207200	542909
1899	59950	291849	221610	573409
1900	62681	310535	259295	632511
1901	61987	326614	286272	674873
1902	61217	339381	283371	683969
1903	60563	354491	292357	707411
1904	59402	370979	299013	729394
1905	64534	380368	302712	747614
1906	67928	413168	340983	822079
1907	71958	440422	373732	886112
1908	72732	463111	392278	928121
1909	76521	488482	428405	993408
1910	83480	518169	449504	1051153
1911	91185	551302	481117	1123604

TABLE 7.C.1  
Revised estimates of money stock components 1819–1918

End-of-year figures in 1000 kroner

Year	Currency held by the public	Savings banks deposits	Commercial banks deposits	M2 stock of money
1912	97853	580153	536290	1214296
1913	105906	620051	592212	1318169
1914	130377	651396	630831	1412604
1915	152300	738393	855749	1746442
1916	224300	971842	1442278	2638420
1917	287300	1267866	2203790	3758956
1918	407800	1594746	2720750	4723296

TABLE 7.C.2  
New estimates of the number of banks and bank loans 1822–1918

Loans are end-of-year figures in 1000 kroner

Year	Savings banks number	Commercial banks number	Savings banks loans	Commercial banks loans	Total loans
1822	1	0	21	0	21
1823	4	0	134	0	134
1824	4	0	286	0	286
1825	6	0	482	0	482
1826	8	0	727	0	727
1827	8	0	812	0	812
1828	8	0	1046	0	1046
1829	8	0	1296	0	1296
1830	7	0	1575	0	1575
1831	7	0	1831	0	1831
1832	6	0	2238	0	2238
1833	7	0	2602	0	2602
1834	8	0	3056	0	3056
1835	13	0	3642	0	3642
1836	13	0	4077	0	4077
1837	15	0	4765	0	4765
1838	16	0	5303	0	5303
1839	19	0	6020	0	6020
1840	22	0	7108	0	7108
1841	27	0	8026	0	8026
1842	36	0	9293	0	9293
1843	48	0	10560	0	10560
1844	53	0	12199	0	12199
1845	57	0	14031	0	14031
1846	61	0	16384	0	16384
1847	69	0	18110	0	18110
1848	80	1	17355	560	17915
1849	82	2	17250	761	18011
1850	89	2	17827	971	18798
1851	98	2	19870	1240	21110
1852	102	2	22669	1473	24142
1853	108	2	25608	1234	26842
1854	116	2	31207	1497	32704
1855	120	2	36223	2507	38730
1856	126	3	39938	6112	46050
1857	140	4	38626	7019	45645
1858	149	5	40199	13136	53335
1859	163	6	43638	14570	58208
1860	174	6	45934	18838	64771
1861	185	6	49450	25085	74535
1862	195	7	53968	27191	81159
1863	218	7	60169	30423	90592
1864	227	7	65802	28031	93833
1865	241	9	68191	31269	99460
1866	251	9	72794	29780	102574
1867	258	9	75428	34618	110046
1868	263	11	78140	36711	114851
1869	263	12	77146	38957	116103
1870	265	14	80846	41527	122373

TABLE 7.C.2  
New estimates of the number of banks and bank loans 1822–1918

Loans are end-of-year figures in 1000 kroner

Year	Savings banks number	Commercial banks number	Savings banks loans	Commercial banks loans	Total loans
1871	270	14	80415	52391	132806
1872	270	14	86376	60152	146528
1873	276	14	100162	65124	165287
1874	281	15	115764	74034	189799
1875	284	18	126046	72352	198398
1876	292	19	133241	79016	212257
1877	299	23	139042	80442	219484
1878	305	23	138831	81911	220742
1879	311	24	134392	81755	216147
1880	313	24	135305	92827	228132
1881	318	25	141544	99426	240970
1882	318	30	145799	107345	253144
1883	326	32	152246	109172	261418
1884	329	33	158822	114198	273020
1885	330	35	162515	116061	278576
1886	337	35	163251	105907	269158
1887	341	42	159285	106406	265691
1888	343	44	158434	113859	272293
1889	347	45	162103	128478	290581
1890	352	47	174627	136401	311028
1891	355	49	185454	138072	323526
1892	363	50	189811	144682	334493
1893	366	51	197027	150173	347200
1894	369	51	204580	157342	361922
1895	375	51	211214	171597	382811
1896	382	55	222404	183901	406305
1897	396	65	233399	218659	452058
1898	404	72	250846	286973	537819
1899	413	83	270009	303802	573811
1900	414	84	282768	352911	635679
1901	423	84	295684	368208	663892
1902	429	83	306672	365959	672631
1903	436	89	323384	373898	697282
1904	441	90	336917	371608	708525
1905	448	90	345537	379361	724898
1906	461	92	363626	405828	769454
1907	478	96	385028	443641	828669
1908	487	99	409547	477268	886815
1909	491	101	433609	503085	936694
1910	502	104	459605	524502	984107
1911	511	108	499239	580029	1079268
1912	523	112	540217	658807	1199024
1913	534	117	578955	727337	1306292
1914	540	120	610880	753029	1363909
1915	542	124	669631	985430	1655061
1916	552	140	806966	1756433	2563399
1917	556	165	980603	2648055	3628658
1918	564	193	1268527	3346218	4614745



## 7.D Annual real wages 1726-2006 in fixed 2000-NOK

TABLE 7.D.1  
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1726			15666		14561			17510
1727								
1728								
1729								
1730								
1731			14583		12942			16953
1732								
1733								
1734								
1735								
1736			16219		13823			19906
1737								
1738								
1739								
1740								
1741			17706		15097			21620
1742								
1743								
1744								
1745								
1746			20358		16399			26154
1747								
1748								
1749								
1750								
1751			19829		15253			26503
1752								
1753								
1754								
1755								
1756			16776		12516			22620
1757								
1758								
1759								
1760								
1761			19763		14512			27664
1762								
1763								
1764								
1765								
1766			16699		13365			21746
1767								
1768								
1769								
1770								
1771			17914		13679			24583

TABLE 7.D.1  
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1772								
1773								
1774								
1775								
1776			19592		15362			25865
1777								
1778								
1779								
1780								
1781			20071		15397			27455
1782								
1783								
1784								
1785								
1786			18098		14061			24363
1787								
1788								
1789								
1790								
1791			23187		19237			29027
1792								
1793								
1794								
1795								
1796			19395		15842			24429
1797								
1798								
1799								
1800								
1801			16766		13752			21287
1802								
1803								
1804								
1805								
1806			14971		13199			17628
1807								
1808								
1809								
1810								
1811								
1812								
1813								
1814								
1815								
1816								
1817								
1818								
1819								
1820		12414	17404		15348			22200

TABLE 7.D.1  
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1821		13700	19446		16945			25283
1822		12487	18384		16550			22664
1823		12971	19906		17974			24417
1824		15100	23856		20787			31017
1825		16185	25030		21614			33000
1826		16104	24691		21317			32564
1827		13871	20893		18579			26294
1828		14299	22439		19503			29289
1829		13981	21312		18475			27931
1830		14268	22291		19576			28627
1831		13449	21585		19267			26993
1832		13820	22088		19714			27626
1833		14516	22005		19591			27637
1834		15092	23425		20865			29396
1835		14950	23735		21242			29551
1836		14691	23820		20734			31022
1837		14659	23874		20836			30962
1838		14700	23341		20874			29098
1839		15418	24331		21766			30314
1840		16647	24385		21810			30394
1841		16958	26348		23413			33197
1842		17512	26777		23790			33746
1843		18270	26737		23719			33779
1844		18216	26999		24016			33959
1845		17370	26622		23289			34399
1846		16548	24114		21776			29568
1847		15707	23692		21967			27716
1848		16069	24536		22544			29182
1849		17510	25019		23024			29674
1850		17908	25592	21869	23227	11937	26410	30345
1851		18245	24982	19096	23342	11868	27579	30451
1852		17940	24439	19196	22546	11617	27579	29732
1853		17018	24319	19841	22115	11199	27879	29412
1854		17791	24258	20868	22451	10658	26711	28249
1855		17897	24790	22200	22879	10531	31480	28356
1856		15890	24178	20649	22452	11728	28228	28180
1857		16275	24047	21720	23097	12871	27696	26504
1858		19046	26112	22328	26291	13379	30275	28426
1859		18490	25947	22088	25169	12211	30657	29244
1860		17673	25052	21426	24002	12090	28602	28461
1861		17329	25214	21470	23970	11529	29900	28887
1862		16973	26088	22054	25471	11514	31811	29342
1863		18426	25264	22366	23488	11308	29300	28899
1864		18680	25745	22380	24530	12157	30618	29142
1865		18409	26558	22812	25254	12394	31519	30291
1866		18186	25712	21421	23635	12478	29462	30558
1867		17573	25432	21161	23399	11539	29443	30221
1868		16688	23599	20818	21382	9792	25957	27587
1869		18545	25520	22187	23218	10219	28817	29955

TABLE 7.D.1  
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1870		18523	26596	22979	24238	11225	29417	31272
1871		18463	26106	22640	23766	11348	28899	30663
1872		18234	25958	23875	23236	12518	26510	29979
1873		20467	25662	24503	22710	13780	27407	29300
1874		22519	27082	28264	23266	14169	28231	30018
1875		21873	27359	27285	24079	12930	29107	30602
1876		21097	27101	26335	24728	13091	29334	29916
1877		21878	26102	26070	23844	12840	28496	28321
1878		20988	27513	26364	25963	14600	31333	29777
1879		22917	28746	26300	27951	16128	34122	31130
1880		21839	26145	24929	25416	15063	31305	27655
1881		22215	26195	25671	25681	15061	31198	27041
1882		22298	25896	26317	25556	14759	30581	25949
1883		22892	26491	27355	26323	15188	31007	26087
1884		23197	27812	29518	27225	15532	31715	27261
1885		24786	29550	30913	29216	17640	33520	28977
1886		24827	29533	31588	29410	17748	34388	28300
1887		25163	29907	31083	30126	17839	36213	28919
1888		25401	29380	31472	30268	17423	36947	27140
1889		24667	30535	32058	30121	17103	36022	29937
1890		24899	32119	33937	30105	17020	35665	32884
1891		25057	33481	36657	31669	17364	38041	33156
1892		25527	34019	38347	31657	17455	38754	33473
1893		29473	36592	41523	32767	18399	38388	37071
1894		29116	37106	42489	32256	18544	39194	38287
1895		29338	36898	40238	32677	19052	39530	38811
1896		30829	38438	44429	32760	19506	39743	40026
1897		33765	41419	45479	35606	19535	44177	44409
1898		31756	41961	45592	35591	20828	42870	45774
1899	30665	29067	41253	47111	34120	21073	41276	44345
1900	31915	30251	38735	44601	31624	19704	38263	41800
1901	31621	29977	39990	45841	33232	19848	39297	42720
1902	31796	30595	40828	46008	34152	20598	40512	43922
1903	31012	29768	40952	46565	34726	21317	41709	43321
1904	36593	35330	42464	48993	35932	21957	42752	44528
1905	36281	34285	42354	49976	35838	22365	41709	43685
1906	37903	34547	43277	50191	36799	22911	44405	45034
1907	37199	35073	43602	50284	36834	23589	45418	45795
1908	37205	34771	44347	49652	37759	26607	45635	47272
1909	39308	37940	45686	50566	38664	27360	46156	49314
1910	39207	37163	46433	49428	41750	27317	48251	49024
1911	42038	39846	48418	50531	41837	28494	48066	53436
1912	42758	40535	48041	49806	41964	28621	47802	52798
1913	43425	41785	49141	53276	43466	29631	48807	51946
1914	46876	44996	50994	55159	46504	31396	49978	52627
1915	41671	40233	46619	50283	43156	28156	40765	47581
1916	43768	41360	42700	46974	39411	25369	34944	43090
1917	51401	46850	48654	52087	45393	30480	46027	49571
1918	48612	45834	47788	48386	45118	28985	38518	49993

TABLE 7.D.1  
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1919	56782	53067	58947	60409	55017	37641	57786	61812
1920	53123	51275	61654	62890	61812	42980	67522	60686
1921	51757	51011	64661	64099	66346	45303	67419	63392
1922	50211	48515	59810	62396	59230	40270	58520	58674
1923	47117	44982	60024	61098	58958	40381	58922	60356
1924	42752	41809	58671	57633	57805	39604	57063	60197
1925	41060	40895	61364	57868	62179	43321	64085	62870
1926	42322	42074	64954	61518	65801	45207	63823	66391
1927	40398	39940	64385	61057	62117	42165	56948	68783
1928	39492	38812	65735	62885	64149	44159	60964	69155
1929	39327	38643	68718	64904	66827	46083	63038	73070
1930	39189	38654	71116	66555	69277	48039	65735	75906
1931	38775	38193	72029	68943	69152	47847	64229	76861
1932	36750	36053	74114	67896	71097	49251	66311	81142
1933	35535	34626	73913	68066	71336	49443	66663	80269
1934	35420	34366	73962	69776	71206	49435	66936	79398
1935	35940	34489	73310	70312	69897	48581	65965	78605
1936	37530	35181	73939	70530	69640	48272	65098	80367
1937	38818	36874	74759	72320	70131	48849	66696	80870
1938	41099	39163	78802	74489	74333	51758	70602	85991
1939	43554	41047	79962	77178	74791	52221	71729	86829
1940	46603	38782	69259	69507	63964	45906	63793	73736
1941	43227	41560	58451	56774	56134	39805	55727	61528
1942	49100	47353	57314	60565	53890	39665	57772	58278
1943	51716	50388	57679	60325	53986	42311	57748	59256
1944	58500	56953	57994	59064	54369	43778	58652	60498
1945	63277	61651	65696	66055	62087	48117	65154	68628
1946	68084	68189	73482	81385	64215	50851	73039	76652
1947	77829	75846	81183	90605	71351	57472	80151	83896
1948	85132	83325	87446	97991	76301	59713	86201	90607
1949	88682	88041	93103	101812	79620	62102	88701	99458
1950	88827	88352	94240	100816	80811	63207	89268	101880
1951	90665	86787	91891	99863	80255	64080	90346	97091
1952	92312	89830	93773	103512	82745	66009	91406	97335
1953	93280	93170	98592	106528	86617	69422	95952	104109
1954	95202	94716	101464	109335	87905	69989	97929	108410
1955	102090	101268	106803	113135	92091	74983	100170	115719
1956	106146	103239	112047	115773	96817	79338	106761	123046
1957	112170	108535	111934	118062	99390	80675	108041	119081
1958	111405	109743	114122	121654	100042	79663	109162	121735
1959	113064	108724	117501	122162	104067	83800	113448	126343
1960	120003	114574	123445	124550	109003	87525	119507	135392
1961	126687	116131	129270	129666	113906	92912	121736	142466
1962	127601	119003	136126	137021	118414	96147	125744	151064
1963	121993	122908	141326	144514	122809	100091	130042	155537
1964	128160	123597	143241	145105	124941	102113	132299	158089
1965	133995	129272	146726	151156	128477	107251	138070	159926
1966	141441	138503	154792	160285	135368	114351	147742	168354
1967	141972	141709	161900	167507	141206	120161	154399	176504

TABLE 7.D.1  
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1968	140541	141018	167099	172103	145217	123228	157893	183116
1969	140224	146035	175130	177757	152396	127156	166930	193382
1970	133506	140413	174123	173745	151163	126818	163616	194449
1971	140132	146330	180002	179927	157816	131567	170510	199463
1972	144847	150568	182922	183791	161353	135501	174491	201251
1973	148012	155255	184500	185933	165477	138337	178628	200249
1974	155758	164234	193922	195663	175654	147732	188467	208817
1975	162221	169431	205656	205884	187819	157566	200338	221121
1976	167966	178375	217360	217130	194814	163579	207249	237231
1977	167328	178841	221333	221474	196927	164006	208739	242600
1978	167908	180122	223623	223881	197610	164271	209849	246223
1979	167388	177326	219496	225113	195865	164547	207594	236664
1980	166258	175171	215882	221566	192955	163584	203201	232391
1981	162838	170333	210948	216228	188647	158922	198664	227162
1982	161371	168951	209346	213504	187286	157348	196875	226051
1983	164697	173057	209109	211605	190628	159720	199117	223720
1984	161519	169880	211908	211103	194836	162646	201828	227349
1985	165753	171438	215287	209642	200312	164753	207691	231919
1986	169764	174466	220819	213932	204037	165817	211165	239808
1987	170313	174389	231005	217771	206386	168031	213790	260819
1988	169742	171188	229910	217450	205500	171091	212673	259057
1989	169821	170940	228110	214639	207168	174280	212976	254852
1990	172098	174053	225639	213599	210742	180299	216240	246198
1991	178144	175290	228088	217182	216109	182626	220493	245386
1992	182307	177329	229421	220133	219680	186001	225430	243749
1993	180600	176190	229231	219795	222135	187534	228831	241338
1994	186770	177866	231098	221019	225781	190612	233264	242050
1995	192231	178382	232566	221876	228639	190235	235761	242683
1996	196662	183199	238303	228745	235492	196125	242827	246736
1997	202175	184407	240848	234489	239569	200094	247741	245943
1998	215325	191352	248096	243090	248591	208803	257071	250793
1999	218693	195841	255773	251407	256853	215743	264107	257556
2000	218421	197117	259157	253776	258775	217148	267364	262855
2001	224923	199349	265159	259606	263966	223401	273506	269674
2002	231167	207836	275661	271427	274683	229603	284069	279165
2003	232547	210773	277406	268904	276687	234192	287252	283350
2004	241477	218866	286417	281638	290617	249014	299425	285730
2005	246394	223197	296115	288879	298089	255169	305647	298911
2006	249911	226345	300437	292949	303745	258017	313243	302223

TABLE 7.D.2  
Annual real wages, 1726-2006, in fixed 2000-NOK

	3.0 Transport and communications	3.1 Merchant fleet	3.2 Domestic transport	3.3 Communications services	4.0 Private services	4.1 Domestic	4.1.1 Housekeeping
1726							
1727							
1728							
1729							
1730							
1731							
1732							
1733							
1734							
1735							
1736							
1737							
1738							
1739							
1740							
1741							
1742							
1743							
1744							
1745							
1746							
1747							
1748							
1749							
1750							
1751	15577	14491			15577		
1752	15372	14300			15372		
1753	14929	13888			14929		
1754	15072	14021			15072		
1755	14348	13347			14348		
1756	12645	11762			12645		
1757	10895	10135			10895		
1758	8743	8133			8743		
1759	14067	13085			14067		
1760	12720	11833			12720		
1761	13300	12372			13300		
1762	13686	12731			13686		
1763	10857	10100			10857		
1764	14442	13434			14442		
1765	13241	12317			13241		
1766	11848	11021			11848		
1767	13656	12703			13656		
1768	11555	10749			11555		
1769	12970	12065			12970		
1770	13290	12363			13290		
1771							
1772	10852	10095			10852		
1773	12022	11183			12022		
1774							

TABLE 7.D.2  
Annual real wages, 1726-2006, in fixed 2000-NOK

	3.0 Transport and communications	3.1 Merchant fleet	3.2 Domestic transport	3.3 Communications services	4.0 Private services	4.1 Domestic	4.1.1 Housekeeping
1775							
1776	16035	14917			16035		
1777	13224	12302			13224		
1778	14147	13160			14147		
1779	15328	14258			15328		
1780	15843	14738			15843		
1781	18707	17401			18707		
1782	15222	14160			15222		
1783	12516	11643			12516		
1784	15002	13956			15002		
1785	11397	10602			11397		
1786	11465	10665			11465		
1787	11591	10783			11591		
1788	13030	12121			13030		
1789	11889	11059			11889		
1790	10499	9766			10499		
1791	14441	13433			14441		
1792	13093	12180			13093		
1793	11925	11093			11925		
1794	13493	12551			13493		
1795	11246	10462			11246		
1796	15931	14819			15931		
1797	16386	15243			16386		
1798	17363	16152			17363		
1799	15729	14632			15729		
1800	12013	11175			12013		
1801	13577	12630			13577		
1802	9520	8856			9520		
1803	11267	10481			11267		
1804	13022	12114			13022		
1805	11069	10297			11069		
1806	12593	11714			12593		
1807	11204	10423			11204		
1808	5662	5236			5662		
1809	6585	6055			6585		
1810	11576	10582			11576		
1811	12035	10938			12035		
1812	5787	5230			5787		
1813	5885	5288			5885		
1814	6430	5744			6430		
1815	7962	7073			7962		
1816	8409	7429			8409		
1817	10875	9554			10875		
1818	12353	10793			12353		
1819	9856	8517			9856		
1820	11687	10044			11628		
1821	14791	12644			14717		
1822	13340	11342			13206		
1823	14837	12480			14688		



TABLE 7.D.2  
Annual real wages, 1726-2006, in fixed 2000-NOK

	3.0 Transport and communications	3.1 Merchant fleet	3.2 Domestic transport	3.3 Communications services	4.0 Private services	4.1 Domestic	4.1.1 Housekeeping
1824	21269	17702			20950		
1825	23552	19399			23199		
1826	23172	18888			22708		
1827	19012	15339			18536		
1828	21817	17425			21162		
1829	20650	16328			20030		
1830	21471	16973			20487	11283	8483
1831	19862	15701			18508	9206	6921
1832	20916	16535			19829	10633	7994
1833	23055	18225			21668	11197	8418
1834	24020	18988			22178	10563	7942
1835	22878	18085			21073	9922	7459
1836	21206	16764			19690	9630	7240
1837	21528	17018			20336	10741	8076
1838	21925	17332			20400	10078	7577
1839	20704	16367			19386	9853	7408
1840	21646	17111			20217	10161	7639
1841	23839	18845			22660	12288	9238
1842	23392	18492			22345	12362	9294
1843	20658	16330			20087	11900	8947
1844	24794	19600			23189	11725	8816
1845	23939	18924			22345	11199	8420
1846	22871	18080			21358	10726	8065
1847	20406	16131			19000	9417	7080
1848	21963	17362			20559	10437	7847
1849	22680	17929			21181	10639	7999
1850	23159	18453	21991	24789	21626	10859	8164
1851	23416	19078	22964	23934	21832	10885	8184
1852	23706	18058	22964	25718	22050	10874	8176
1853	24692	18727	23214	27567	23047	11549	8683
1854	23637	20744	20758	25153	22155	11313	8506
1855	23334	20097	20363	25325	21806	10986	8260
1856	22581	19279	19085	25287	21122	10686	8035
1857	23002	19372	20229	25228	21580	11066	8320
1858	22233	17159	19480	25954	21220	11701	8797
1859	21878	17169	18888	25548	20930	11650	8759
1860	21855	16717	19664	25144	20842	11453	8611
1861	20770	16375	17556	24559	20000	11419	8585
1862	21189	16702	17986	24980	20457	11797	8870
1863	20629	17340	17584	23213	20120	12052	9061
1864	22345	18370	20039	24551	21383	11912	8956
1865	23032	19313	20629	24969	22010	12196	9170
1866	22027	18785	19626	23682	21224	12147	9133
1867	20869	18244	16908	23690	20206	11782	8858
1868	20766	17446	17934	23144	19872	11072	8325
1869	21995	17896	18709	25357	20934	11409	8578
1870	22178	17575	18793	26088	21328	12116	9109
1871	22946	18608	20056	25977	22048	12484	9386
1872	22630	18189	18991	26561	21743	12306	9253

TABLE 7.D.2  
Annual real wages, 1726-2006, in fixed 2000-NOK

	<b>3.0</b> <b>Transport and</b> <b>communications</b>	<b>3.1</b> <b>Merchant fleet</b>	<b>3.2</b> <b>Domestic</b> <b>transport</b>	<b>3.3</b> <b>Communications</b> <b>services</b>	<b>4.0</b> <b>Private</b> <b>services</b>	<b>4.1</b> <b>Domestic</b>	<b>4.1.1</b> <b>Housekeeping</b>
<b>1873</b>	23412	19727	20037	26220	22341	12308	9254
<b>1874</b>	25709	21287	21650	29503	24246	12719	9562
<b>1875</b>	26532	19850	24610	30214	24985	13024	9792
<b>1876</b>	27990	20688	26320	31761	26143	13139	9879
<b>1877</b>	27937	20661	26206	31753	26150	13273	9979
<b>1878</b>	28541	21557	24847	33929	26816	13838	10404
<b>1879</b>	29568	19523	27811	35777	27668	14024	10544
<b>1880</b>	27611	18417	25875	33323	25968	13460	10120
<b>1881</b>	29104	18799	28162	34828	27175	13640	10222
<b>1882</b>	29157	19874	27704	34405	27224	13663	10240
<b>1883</b>	30242	22032	28292	34770	28213	14105	10537
<b>1884</b>	31047	22544	29043	35768	28951	14444	10790
<b>1885</b>	32375	22702	30918	37438	30165	14994	11165
<b>1886</b>	32252	22131	31490	37073	30103	15085	11233
<b>1887</b>	33221	22737	32117	38558	30934	15334	11381
<b>1888</b>	32915	23653	31555	37394	30704	15344	11389
<b>1889</b>	33510	25414	32354	36565	31163	15356	11361
<b>1890</b>	34388	25598	33816	37373	31854	15409	11400
<b>1891</b>	35146	25884	34658	38368	32537	15694	11574
<b>1892</b>	35860	25671	35661	39557	33244	16142	11904
<b>1893</b>	37825	26254	38267	41861	34959	16731	12298
<b>1894</b>	39278	26773	40206	43471	36221	17148	12604
<b>1895</b>	40415	27238	41830	44566	37119	17226	12620
<b>1896</b>	40346	26508	42056	44850	37243	17716	12979
<b>1897</b>	41304	27749	42561	45820	38176	18273	13343
<b>1898</b>	41473	27617	43184	45796	38103	17711	12933
<b>1899</b>	41205	29126	41578	45207	37989	17965	13076
<b>1900</b>	40974	29336	40670	45269	37981	18432	13415
<b>1901</b>	42052	29876	41770	46651	38870	18614	13503
<b>1902</b>	42959	29957	43061	47808	39736	19091	13849
<b>1903</b>	43824	30758	43661	48847	40702	19935	14414
<b>1904</b>	45042	31661	44753	50280	41845	20522	14838
<b>1905</b>	43933	31421	43661	48515	40909	20280	14614
<b>1906</b>	44191	32565	43210	48588	41235	20637	14822
<b>1907</b>	43762	33982	41288	47954	40849	20476	14707
<b>1908</b>	44638	34992	42154	48560	41752	21121	15119
<b>1909</b>	46296	34429	43220	52645	43371	22096	15817
<b>1910</b>	49034	33880	49773	54250	45509	22216	15849
<b>1911</b>	49245	34289	48771	55441	45781	22525	16070
<b>1912</b>	49484	35851	49059	54496	45803	22076	15697
<b>1913</b>	50191	37117	49279	55211	46418	22284	15844
<b>1914</b>	50559	38564	48731	55589	46981	23064	16339
<b>1915</b>	50367	39202	46057	57300	46943	23366	16193
<b>1916</b>	54551	44731	49073	60940	49982	22916	15965
<b>1917</b>	64178	59053	53997	69683	57175	22442	16373
<b>1918</b>	57814	50189	53140	61088	51561	20371	15948
<b>1919</b>	58908	50360	54690	62423	53676	23920	18311
<b>1920</b>	55483	51178	51391	55435	52013	26578	18967
<b>1921</b>	56408	47460	53053	59803	53155	27784	19848

TABLE 7.D.2  
Annual real wages, 1726-2006, in fixed 2000-NOK

	<b>3.0</b> <b>Transport and</b> <b>communications</b>	<b>3.1</b> <b>Merchant fleet</b>	<b>3.2</b> <b>Domestic</b> <b>transport</b>	<b>3.3</b> <b>Communications</b> <b>services</b>	<b>4.0</b> <b>Private</b> <b>services</b>	<b>4.1</b> <b>Domestic</b>	<b>4.1.1</b> <b>Housekeeping</b>
<b>1922</b>	52207	42858	49606	55837	50518	29388	20571
<b>1923</b>	53708	43584	52786	56165	51577	29141	20021
<b>1924</b>	50507	41289	48867	53308	46809	27394	18985
<b>1925</b>	49258	41174	48683	50125	45636	26845	18655
<b>1926</b>	52416	45704	51623	51763	49137	28147	19306
<b>1927</b>	53585	47785	53838	50874	51107	28182	19126
<b>1928</b>	54531	48516	53877	52783	52523	28127	19011
<b>1929</b>	55053	50666	54155	51961	54056	28328	18966
<b>1930</b>	58042	53242	58093	53948	55240	28419	19007
<b>1931</b>	60132	55913	60240	55138	57977	28783	19196
<b>1932</b>	58896	54398	59091	54255	58596	28186	18817
<b>1933</b>	60308	55227	60797	55709	58184	27443	18421
<b>1934</b>	60393	55301	60797	55877	57976	27336	18349
<b>1935</b>	59660	53046	60798	55932	58130	27441	18391
<b>1936</b>	61290	53119	63412	57788	59719	27765	18571
<b>1937</b>	65683	53904	70221	62483	62667	27981	18792
<b>1938</b>	64989	54473	67937	62301	63167	28949	19503
<b>1939</b>	65486	54724	68313	63076	64105	29712	20167
<b>1940</b>	64658	86974	59259	57469	57869	26782	18705
<b>1941</b>	62051	105281	51032	50707	52925	25995	16334
<b>1942</b>	60073	98972	49164	49332	56846	32223	17435
<b>1943</b>	59260	96028	48417	48746	60254	38220	19346
<b>1944</b>	60230	103449	48520	47560	62349	41519	20291
<b>1945</b>	67263	111643	53641	55851	68511	45195	21141
<b>1946</b>	75015	117168	57436	68019	73223	50919	22397
<b>1947</b>	80688	122165	62905	74777	78920	57954	25487
<b>1948</b>	88273	133229	69308	81249	85872	64310	28282
<b>1949</b>	92680	141089	72161	85311	89992	66689	29328
<b>1950</b>	93523	142088	73034	85937	90626	66608	29293
<b>1951</b>	89269	134665	69827	82756	86605	65118	28637
<b>1952</b>	93962	137961	74304	89278	88517	62949	27684
<b>1953</b>	95910	139586	76614	90828	91842	65771	28925
<b>1954</b>	96375	138790	76874	92961	91947	66561	29272
<b>1955</b>	101884	140506	82892	101249	95788	69335	30492
<b>1956</b>	108519	147456	89306	108009	101092	70952	31203
<b>1957</b>	116265	157601	95504	116450	103803	71250	31334
<b>1958</b>	119548	158402	99230	121328	107401	74438	32736
<b>1959</b>	122299	160828	101966	124436	108250	72862	32043
<b>1960</b>	126910	161276	107208	131949	111460	73996	32542
<b>1961</b>	130478	163571	111194	135954	116711	76459	33625
<b>1962</b>	138383	173680	119194	141465	122648	79340	34892
<b>1963</b>	144036	184797	122454	146438	127459	84608	37209
<b>1964</b>	145269	185119	123419	149120	130175	90971	40007
<b>1965</b>	151722	195936	128093	154767	134769	97116	42710
<b>1966</b>	158744	201986	135335	162321	141684	107390	47228
<b>1967</b>	168432	215618	140262	177586	149998	119242	52440
<b>1968</b>	176024	231481	144651	183314	157745	131692	57915
<b>1969</b>	185641	252636	149403	191124	166967	141670	62303
<b>1970</b>	179034	240304	145896	184042	162058	138216	60784

TABLE 7.D.2  
Annual real wages, 1726-2006, in fixed 2000-NOK

	<b>3.0</b> <b>Transport and</b> <b>communications</b>	<b>3.1</b> <b>Merchant fleet</b>	<b>3.2</b> <b>Domestic</b> <b>transport</b>	<b>3.3</b> <b>Communications</b> <b>services</b>	<b>4.0</b> <b>Private</b> <b>services</b>	<b>4.1</b> <b>Domestic</b>	<b>4.1.1</b> <b>Housekeeping</b>
<b>1971</b>	192345	274977	151906	190590	170262	145205	63858
<b>1972</b>	201660	297353	157302	194683	175901	149819	65887
<b>1973</b>	207470	309600	161032	198216	180115	153232	67388
<b>1974</b>	215491	317000	169459	206045	186091	158723	69803
<b>1975</b>	226486	331075	179677	215517	195135	166304	73137
<b>1976</b>	235507	345092	185711	225515	202087	172041	75660
<b>1977</b>	240469	362775	186706	225690	205004	173120	76134
<b>1978</b>	240036	360208	186835	226264	206107	173400	76258
<b>1979</b>	239552	370906	184113	219075	203824	172366	75803
<b>1980</b>	233388	351612	181876	218188	201836	170736	75086
<b>1981</b>	236100	370711	178456	216778	201341	169031	74336
<b>1982</b>	227248	335055	178290	217355	200091	169026	74334
<b>1983</b>	228842	342904	178020	216424	201576	171263	75318
<b>1984</b>	231397	349782	179439	216929	202793	172145	75706
<b>1985</b>	243018	385260	182613	221587	208024	175027	76973
<b>1986</b>	241415	364452	187543	226122	210567	177465	78045
<b>1987</b>	234571	332019	186598	215625	209619	177876	78226
<b>1988</b>	224743	301022	185623	212477	208542	177614	78111
<b>1989</b>	219209	284463	184999	209934	208145	178206	78371
<b>1990</b>	213261	257126	186768	212748	208909	180252	79271
<b>1991</b>	215896	258953	190081	215082	212317	183276	80600
<b>1992</b>	217698	253867	194894	218846	215315	186483	82011
<b>1993</b>	223065	268621	196309	221292	218306	188202	82767
<b>1994</b>	225964	270912	199532	224270	222433	191292	84126
<b>1995</b>	227063	270376	199332	227327	224403	192966	84862
<b>1996</b>	232761	270195	206489	236612	231494	199322	87657
<b>1997</b>	239159	281718	210064	242323	236177	201996	88833
<b>1998</b>	251799	300868	220645	251685	246432	209405	92092
<b>1999</b>	259356	312338	227547	256360	253599	214113	94162
<b>2000</b>	269452	327699	229912	268470	258170	214886	94502
<b>2001</b>	276265	329502	234970	281673	264401	220447	96948
<b>2002</b>	287648	323686	242654	299504	275406	228744	100597
<b>2003</b>	291667	319729	244898	300521	281106	234879	103294
<b>2004</b>	298764	336781	253570	311461	292784	245768	108083
<b>2005</b>	303128	338141	257341	324066	302493	250391	110116
<b>2006</b>	311045	336296	263486	333070	310404	254166	111776

TABLE 7.D.3  
Annual real wages, 1726-2006, in fixed 2000-NOK

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1726				14533
1727				
1728				
1729				
1730				
1731				13334
1732				
1733				
1734				
1735				
1736				14883
1737				
1738				
1739				
1740				
1741				16113
1742				
1743				
1744				
1745				
1746				18624
1747				
1748				
1749				
1750				
1751				18190
1752				17717
1753				17568
1754				17032
1755				16578
1756				15309
1757				13644
1758				12441
1759				18267
1760				17094
1761				18143
1762				18065
1763				15588
1764				18502
1765				17279
1766				15864
1767				17929
1768				15620
1769				17155
1770				18286
1771				16926
1772				14100
1773				14561
1774				20237

TABLE 7.D.3  
Annual real wages, 1726-2006, in fixed 2000-NOK

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1775				18552
1776				19102
1777				16866
1778				18489
1779				18579
1780				18760
1781				20569
1782				16588
1783				15002
1784				18851
1785				15814
1786				16706
1787				17454
1788				19428
1789				17051
1790				15017
1791				20782
1792				18614
1793				16344
1794				16696
1795				13865
1796				19692
1797				19593
1798				20087
1799				18553
1800				15115
1801				17271
1802				14916
1803				15280
1804				17526
1805				14391
1806				16331
1807				15282
1808				13604
1809				11909
1810				14513
1811				15111
1812				11110
1813				12073
1814				13070
1815				13706
1816				13506
1817				15390
1818				15904
1819				14129
1820				14584
1821				17455
1822				15562
1823				16818

TABLE 7.D.3  
Annual real wages, 1726-2006, in fixed 2000-NOK

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1824				19346
1825				20802
1826				20580
1827				17272
1828				18950
1829				18058
1830				19862
1831				18649
1832				19482
1833				20446
1834				21421
1835				21102
1836				20569
1837				20779
1838				20647
1839				20962
1840				21799
1841				23353
1842				23638
1843				23241
1844				24296
1845				23524
1846				22033
1847				20763
1848				21697
1849				22699
1850				23205
1851				23227
1852				22985
1853				22852
1854				22894
1855				23000
1856				21682
1857				21960
1858				23753
1859				23357
1860				22674
1861				22301
1862				22568
1863				22849
1864				23523
1865				23863
1866				23239
1867				22547
1868				21454
1869				23246
1870				23708
1871				23755
1872				23616

TABLE 7.D.3  
Annual real wages, 1726-2006, in fixed 2000-NOK

	<b>5.0 Public services</b>	<b>5.1 Public administration</b>	<b>5.2 Education</b>	<b>6.0 Total</b>
<b>1873</b>				24837
<b>1874</b>				26845
<b>1875</b>	58361			27412
<b>1876</b>	59975			27322
<b>1877</b>	59428			27369
<b>1878</b>	64950	64785		27912
<b>1879</b>	69695	69507		29710
<b>1880</b>	64845	64670		27761
<b>1881</b>	66267	66096		28296
<b>1882</b>	65422	65254		28193
<b>1883</b>	66859	66688		28943
<b>1884</b>	68291	68115		29860
<b>1885</b>	72129	71939		31644
<b>1886</b>	72510	72313		31678
<b>1887</b>	74333	74133		32248
<b>1888</b>	72553	72355		32026
<b>1889</b>	70644	70455		31937
<b>1890</b>	69796	69615		32556
<b>1891</b>	70862	70685		33541
<b>1892</b>	72700	72522		34372
<b>1893</b>	77413	77220		37862
<b>1894</b>	79278	79090		38439
<b>1895</b>	79958	79768		38898
<b>1896</b>	79448	80924	102194	40049
<b>1897</b>	81260	82800	104455	42668
<b>1898</b>	78449	79926	100865	41655
<b>1899</b>	76455	78098	97828	39999
<b>1900</b>	75016	76847	95473	39651
<b>1901</b>	77465	79546	98148	40287
<b>1902</b>	81261	84141	101330	41316
<b>1903</b>	82599	85531	102990	41269
<b>1904</b>	85646	89167	105666	44798
<b>1905</b>	83997	87533	103436	44533
<b>1906</b>	83572	87324	102366	44975
<b>1907</b>	80684	84362	98703	44976
<b>1908</b>	79535	83445	96633	45148
<b>1909</b>	83474	86172	104698	47661
<b>1910</b>	86048	89241	106963	48197
<b>1911</b>	85479	88648	106264	50174
<b>1912</b>	80697	83796	100068	49893
<b>1913</b>	81799	84489	102487	50842
<b>1914</b>	83949	87219	103995	53181
<b>1915</b>	75035	78850	90870	48724
<b>1916</b>	74394	78050	88316	47917
<b>1917</b>	77087	80822	88610	53964
<b>1918</b>	69759	72031	80556	50795
<b>1919</b>	71152	74316	87224	60000
<b>1920</b>	82399	86060	101022	60212
<b>1921</b>	101527	106039	124470	63096



TABLE 7.D.3  
Annual real wages, 1726-2006, in fixed 2000-NOK

	<b>5.0 Public services</b>	<b>5.1 Public administration</b>	<b>5.2 Education</b>	<b>6.0 Total</b>
<b>1922</b>	98247	102446	120838	59988
<b>1923</b>	99122	103635	121271	59147
<b>1924</b>	84645	88675	103147	54554
<b>1925</b>	77840	81556	94829	53877
<b>1926</b>	89430	93847	108604	57470
<b>1927</b>	98405	103147	119784	57834
<b>1928</b>	104995	110257	127330	58894
<b>1929</b>	105366	111025	126895	60181
<b>1930</b>	103926	109429	125347	61026
<b>1931</b>	109611	115396	132247	62093
<b>1932</b>	109495	115317	132007	62243
<b>1933</b>	108096	113737	130568	61520
<b>1934</b>	105884	111392	127938	61233
<b>1935</b>	104811	110192	126807	61101
<b>1936</b>	104116	109594	125661	62127
<b>1937</b>	98570	102539	121803	62886
<b>1938</b>	96325	99811	119947	65192
<b>1939</b>	98757	99632	129270	67243
<b>1940</b>	83927	85300	110088	61693
<b>1941</b>	72007	75776	91438	55087
<b>1942</b>	69955	76078	88169	57573
<b>1943</b>	71170	80486	87772	59339
<b>1944</b>	71303	78222	91397	62394
<b>1945</b>	78194	85273	100740	68822
<b>1946</b>	81494	85680	108196	74516
<b>1947</b>	88595	92830	117547	82884
<b>1948</b>	95472	99650	126302	90057
<b>1949</b>	99604	103038	131607	94470
<b>1950</b>	98085	103893	130445	95074
<b>1951</b>	91642	95394	121346	92701
<b>1952</b>	95703	101509	122658	96088
<b>1953</b>	99513	102375	127676	99736
<b>1954</b>	98543	102037	124445	100456
<b>1955</b>	101972	105482	128524	105537
<b>1956</b>	107855	115070	145790	111157
<b>1957</b>	109351	117457	148814	115301
<b>1958</b>	114164	120919	151495	117599
<b>1959</b>	114162	124960	153308	120726
<b>1960</b>	121115	128896	155542	125250
<b>1961</b>	126394	128034	159353	130150
<b>1962</b>	135975	137612	170667	137037
<b>1963</b>	140691	142450	175334	142524
<b>1964</b>	143266	145328	176383	144998
<b>1965</b>	147532	148745	181375	149796
<b>1966</b>	154440	157154	189001	156962
<b>1967</b>	162307	167253	198061	164184
<b>1968</b>	166643	170717	200829	169322
<b>1969</b>	171238	174993	205468	176041
<b>1970</b>	165605	168510	195995	171589

TABLE 7.D.3  
Annual real wages, 1726-2006, in fixed 2000-NOK

	<b>5.0 Public services</b>	<b>5.1 Public administration</b>	<b>5.2 Education</b>	<b>6.0 Total</b>
<b>1971</b>	174885	177505	206458	180910
<b>1972</b>	180357	180652	211858	185642
<b>1973</b>	184789	184768	215703	190216
<b>1974</b>	190227	188848	224025	197903
<b>1975</b>	198323	196853	232719	208064
<b>1976</b>	205577	206525	238193	216194
<b>1977</b>	206730	206308	239905	218342
<b>1978</b>	205984	204734	238074	219503
<b>1979</b>	202942	202142	233695	216934
<b>1980</b>	200714	200413	228540	214493
<b>1981</b>	198503	199119	222430	211594
<b>1982</b>	199649	199470	221624	211588
<b>1983</b>	200125	198432	220062	212632
<b>1984</b>	201104	200573	220989	215127
<b>1985</b>	203727	203172	223643	218933
<b>1986</b>	207490	206950	227175	223004
<b>1987</b>	207450	209523	224777	222905
<b>1988</b>	202584	204695	222970	221531
<b>1989</b>	202890	202245	226059	221211
<b>1990</b>	203953	202431	227135	222689
<b>1991</b>	206526	205239	226993	226208
<b>1992</b>	209221	209433	230522	229725
<b>1993</b>	210934	212592	231745	232292
<b>1994</b>	214011	218178	234179	236105
<b>1995</b>	215292	219875	234858	237942
<b>1996</b>	222396	226683	241665	245779
<b>1997</b>	226248	232816	244201	250992
<b>1998</b>	235064	243405	252680	261426
<b>1999</b>	241830	252684	258361	269348
<b>2000</b>	245121	258251	263552	273192
<b>2001</b>	249179	261928	270885	279203
<b>2002</b>	261271	275147	283754	290538
<b>2003</b>	268267	280110	293303	294076
<b>2004</b>	278907	292538	303981	306539
<b>2005</b>	285558	300348	310599	313814
<b>2006</b>	289858	306341	314064	319465