

CHAPTER 5

Nominal wages in Norway 1726–1940 by occupation

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This chapter presents historical wage series organized by occupation for more than 100 different types of jobs in the Norwegian labor market from 1726 to 1940. The bulk of the data are collected from the Wedervang Archive, which is presented in Chapter 4, and supplemented with data from private archives and previous research into historical wages along with data from Statistics Norway.

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5.1 Introduction

On the basis of research connected to the project on Historical Monetary Statistics hosted by Norges Bank, the present chapter offers an overview of historical nominal wages for Norway covering the period between 1726–1940. For corresponding data for the years 1940 onwards, we refer to a very rich material published by Statistics Norway.^{2,3}

We have been able to follow the development of wages for several different categories of labor, industries and sub-industries. We have not been able to follow the same classification as Statistics Norway use for their modern wage data, but have, however, tried to follow a similar approach to that of Statistics Norway for their historical wage statistics.⁴ Thus, on the basis of available historical data and historical classifications by Statistics Norway, we are currently able to present wage series for different occupations in the following eight main industries:

1. Agriculture and Forestry
2. Construction
3. Manufacturing and Mining
4. Crafts
5. Communications
6. Maritime transport
7. Domestic services
8. Public services

Whereas the data for the first seven industries basically reflect *ex post* wages, the data for the last industry, public services, reflect *ex ante* wages. This implies that additional payments, e.g., inflation adjusted and family responsibility compensation are excluded from this latter industry.

We stress that the data presented here reflect wages as compensation for labor input, and not total income. Thus, capital income and subsidies are not included. The data used here are basically drawn from three different sources. The first and most important source is Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices kept at the Norwegian School of Economics and Business Administration in Bergen.⁵ The second source is Statistics Norway, from where the data are taken from different publications. The third major source is records from previous research into Norwegian historical wages.

²See e.g. www.ssb.no/emner/lonn, NOS 1978, 537–555, NOS 1994, 253–278 and NOS 1990, 1991, 1992, 1993, 1995, 1996, 1997, 1999, 2001, 2002, 2004 (Wage Statistics), 32–138.

³Data for the two sub-periods can of course be combined, and in Chapter 6 of this volume we present annual wage series which cover the entire period 1726–2006, classified by industry.

⁴NOS 1994, 253–278 and www.ssb.no/emner/06/05.

⁵See Chapter 4 for a detailed description of the Wedervang Archive.

By compiling relevant data from these sources we arrive at relevant and consistent wage series for labor in different occupations in eight industries, covering the bulk of the Norwegian labor market 1726–1940.

5.2 Historiography

Substantial effort has been put into research on the development of wages in Norway. Most of this work has been rather fragmental, however, and few aggregated series at a nation wide level have been published. Most studies concentrate on local industrial plants, communities or branches of industries. Most of these studies are results of rather inductive historical research taking advantage of available sources. Thus, the Wedervang Archive at the Norwegian School of Economics and Business Administration has been used widely as source in many of these studies.

5.2.1 Agriculture and domestic services

In 1974 Ole Gjølberg conducted his first research on wages in the agricultural sector of the 1800s.⁶ On the basis of data from the Wedervang Archive and Statistics Norway, he gave estimates of farm wages for the period 1830–1850 and, thereafter, more precise computations up to 1880. Torill Lønningdal continued this work with an analysis of domestic servants' wages on 17 major farms in Eastern Norway 1850–1910.⁷ These series included both domestic services and agriculture.

Håvard Teigen presented wage data from the Wedervang Archive in his analysis of the economic development, including wage development, in rural parts of Eastern Norway.⁸ For the period after 1910 wage data on manpower in agriculture has been assembled by Ola Honningdal Grytten and calculated into real wage series in order to map the development of living standards and examine causes of unemployment.⁹

5.2.2 Construction

Per Kristian Bekkelund and Agnar Tjeldnes also used the Wedervang Archive in order to map wage development for public road construction workers in Northern Norway during the last decades of the nineteenth century and the early 1900s.¹⁰ Later, Jan Ramstad mapped public road construction wages in Southern Norway. These were deflated by available international price indices and by working time units per barrel of crops in order to conclude on the development of real wages.¹¹ Given the rich data material on construction wages in the Wedervang Archive, surprisingly little has been done in order to examine wage developments and the standard of living for construction workers.

⁶Gjølberg 1974.

⁷Lønningdal 1984, 78–109.

⁸Teigen 1976.

⁹Grytten 2000, 22–41, Grytten 1992, 163–164.

¹⁰Bekkelund 1977 and Tjeldnes 1977.

¹¹Ramstad 1984a, Ramstad 1984b, Ramstad 1985a, Ramstad 1985b.

5.2.3 Mining, manufacturing and crafts

A substantial part of historical studies on wages in Norway have been carried out on the manufacturing industry. An early work in this field was Erling Petersen's series of wages for employees in the engineering industry with main focus on 1900–1950. The series were taken from the national association of employers, NAF. These series were deflated into real wages by using available cost of living and consumer price indices reported by Statistics Norway.¹²

In 1979 Ingeborg Fløystad presented her pioneering work on the Baaseland and Næs Jernverk, an iron producing company located in southern Norway. She gave wages for different occupations connected to the company. Her work covers the period from 1726 till 1806. In the work by Fløystad nominal wages were deflated by prices on staple food products, basically grain and potatoes. She presents five-annual wages for mining, manufacturing and crafts.¹³ One problem with her series is that they fail to fully take into account the different values of the changing currencies at the time. Thus, they do not satisfactory reflect the development of real wages in the eighteenth century. Another problem is that some of her data are adjusted for exchange rate fluctuations. Thus, they are not fully nominal, as assumed by her.

Matti Goksøyr offers annual data of manufacturing and crafts wages 1820–1865, taken from the old industrial plant and village connected to the Alvøen paper mill, founded in 1797, on the outskirts of Bergen.¹⁴ His data reflect money wages, and thus boarding and lodging for the families of the employees have to be added, as is also the case with most wage series from this period. In order to find real wages, he offers estimates of necessary working time in order to buy units of grain.

Jan Ramstad solely uses the Wedervang Archive in his efforts to map female wages in the manufacturing industry in Christiania 1850–1910.¹⁵ The wages compiled by Ramstad were basically drawn from female labor force in the textile industry. Ramstad also constructed a new cost of living index for Christiania covering the period 1850–1910 to obtain his real wage estimates.

Kjell Bjørn Minde has paid attention to the standard of living for working families in one of Norway's first modern textile manufacturing companies, Arne Fabrikker, also located at the outskirts of Bergen.¹⁶ He has presented wages from the start up in 1846 to 1920.¹⁷ His data are not annually taken, but quite detailed. He also focuses on comparative analyzes with other occupations, companies and industries.

Christian Venneslan of the Norwegian School of Economics and Business Administration has examined the manufacturing industry's breakthrough in Norway 1896–1939 in a quantitative manner. As part of his study, Venneslan gives valid and reliable series of manufacturing wages for several sub-industries. His estimates are calculated on the basis of thousands of observations drawn from

¹²Petersen 1950, 666–673.

¹³Fløystad 1979, 595–596.

¹⁴Goksøyr 1982.

¹⁵Ramstad 1982, 335–457. Christiania was written Kristiania from 1877 and changed name back to its original name Oslo in 1925.

¹⁶Minde 1983, 47–51.

¹⁷Minde 1996, 69–88.

Statistics Norway's statistical records of the manufacturing industry of the period in question. Along with the wage series, he also reports product prices, which enables him to calculate product real wages, i.e. nominal wages deflated by prices at the factory gate.¹⁸

5.2.4 Maritime services

The Norwegian merchant marine became the world's third largest international fleet during the 1870s. Wages for all capacities of crew except ship captains were recorded in recruitment offices located in all major ports of the country. Thus, due to a very rich data source of maritime wages kept at the Wedervang Archive, substantial efforts have been carried out in order to analyze wages and living conditions for sailors.

The first scholar to widely utilize the records of sailors' wages was the American economic historian Lee Soltow, who compiled and examined annual sailors' wages from ports around the Oslo fiord in the 1960s.¹⁹ A decade later Lasse Reinholdt utilized the Wedervang Archive to examine seamen's wages in the important maritime port Tønsberg, also located by the Oslofjord.²⁰

Later Ole Gjølberg used the data from the archive both to examine wage development and the transformation from sail to steam in the Norwegian merchant fleet. Thus, he examined sailors' wages from sailing and steam vessels.²¹ Then, in the 1980s another American took up the challenge left by Soltow. Together with Helge W. Nordvik of the Norwegian School of Economics and Business Administration, Lewis R. Fischer, from Memorial University of Newfoundland, Canada, used the records from the Wedervang Archive to examine sailors' wages both as cost component and as indicator of the standard of living.²²

5.2.5 Public services

Wage series for public services have been scarce. However, in 1993 Kjell Bjørn Minde published his PhD-dissertation on the profitability of higher education in Norway in the late nineteenth and the twentieth century. In his work he came up with estimated career-long wages in public services. Wages are also given on an annual basis in his work.²³

In order to establish numbers of the size of the Norwegian public sector 1830–1865 Elisabeth Bjørsvik used data on public wages in order to calculate the sector's contribution to GDP.²⁴ Implicitly, real wages for the public sector can be drawn from both Minde and Bjørsvik. However, they are not continuous and not directly comparable to most other wage series at hand.

¹⁸Venneslan 2007.

¹⁹Soltow 1965.

²⁰Reinholdt 1975.

²¹Gjølberg 1975, 1976, 1977a, 1977b, 1978a, 1978b and 1979.

²²Nordvik 1981, 79–86, 1985, Fischer and Nordvik 1987a, 41–64, 1987b, 99–116, 1988a, 17–142, 1988b, 1–21, 1988c, 14–35, 1988d, 159–186 and 1991, 77–96.

²³Minde 1993, A25–A123.

²⁴Bjørsvik 2003, 288–310.

5.2.6 Aggregated series

Some scholars have tried to map more general trends of Norwegian wage development. In the 1980s Kjell Bjørn Minde and Jan Ramstad were hired into a project, aiming at initializing research on the basis of the Wedervang Archive. As a result, a significant amount of work was undertaken mapping the macro development of nominal and real wages. Their most cited work was published in the *Scandinavian Economic History Review* in 1986 under the title “The development of real wages in Norway 1730–1910”.²⁵ In this work they assembled available wage series representing some key industries of Norway at the time. However, the most important part of this paper was a presentation of Jan Ramstad’s new cost of living index for Oslo starting in 1850 ending in 1910. This price index made it possible to offer reliable annual real wage series as far back as 1850.

Minde and Ramstad’s wage series were quite fragmented before 1850 with considerable lacunas. However, they served as the first step of analyzing wage developments for Norway during the eighteenth and the nineteenth centuries. Minde also published widely on wage developments of different industries basically in the nineteenth and early twentieth century.²⁶

Along with the work of Minde and Ramstad, John Eivind Myhre gave an overview of Norwegian wage developments and research into this field from the mid eighteenth century till the outbreak of World War I, also published in the *Scandinavian Economic History Review*.²⁷ Axel Kiel and Lars Mjøset, compiled existing wage series for different industries wage formation in Norway 1840–1985 in the same journal.²⁸

In the 1990s another group of scholars from the Norwegian School of Economics and Business Administration published new aggregated series of wages for Norway 1850–1950, covering six different industries, i.e. road construction, manufacturing, agriculture, the merchant fleet and domestic services (housekeeping).²⁹ Again the research was carried out chiefly on the basis of the Wedervang Archive and the Ramstad cost of living index. The work was part of a European project on the standard of living in the nineteenth and twentieth centuries. Minde and Grytten continued the work on aggregated real wage series for key occupations, industries and sectors of the Norwegian economy 1850–1940.³⁰

Finally, Grytten, as part of the Historical Monetary Statistics project in Norges Bank, tried to tie up the loose ends by combining the previous work with un- and under-utilized sources to construct aggregated and economy-wide wage series for able seamen and manufacturing workers in Norway from the early 1700s till present days.³¹ The nominal wage series were deflated by the consumer price index published in the first volume from the Historical Monetary Statistics project³² to arrive at real wage series.

²⁵Minde and Ramstad 1986, 90–121

²⁶Minde 1987, 46–66.

²⁷Myhre 1986, 159–161.

²⁸Kiel and Mjøset 1990, 19–49.

²⁹Hodne, Grytten and Alme 1994, 59–72, Hodne, Grytten and Alme 1995, 61–75 and 238–248 and Alme 1993, 25–85.

³⁰Minde and Grytten 1997, 61–82 and Grytten and Minde 1998, 42–58.

³¹Grytten 2005, 57–80.

³²Grytten 2004a, 47–98.

5.3 Problems connected to historical wage data

Working with historical wage data is a complicated task for several reasons. In the first place, the data is not always in abundance. The longer we go back in time, the more difficult it is to trace relevant data, or in fact, data at all. Often we are left with rather few observations, and their validity and reliability may often be questioned. In this work we have set certain requirements for the data to be used. There should be several observations for an occupation in any year to be taken into account. Also, the reported figures need to be representative for a wider group of workers belonging to this occupational group.

Secondly, time series often lack consistency and persistency. Very often time series on wages as well as other variables continue for a limited period. Thereafter, we have to construct new series from other sources, often based on different principles of accounting and different variable definitions. Some series may be given in annual wages, some in monthly and some in daily or even hourly wages. When we take into account that the definition of e.g. a craftsman versus a manufacturing worker can differ substantially between sources and over time, we can easily see that we may be running into problems. Thus, we seek to construct consistent series by splicing them and calculating them into a comparable unit of account, both in terms of currency, time and wage units.³³

This brings us to a third challenge: definitions and classifications. The character of different occupations has changed widely during the last three centuries. Hence, we have to decide on definitions and classifications of occupational belonging. We have decided a historical or dynamic approach, i.e. one belongs to a certain occupational group according to standard definitions or understandings at that time.³⁴ This means that what we nowadays would probably classify as craftsmen or artisans could be defined as manufacturing workers in the eighteenth, nineteenth and early twentieth century, depending on the understanding at that time. By choosing this method, we use a standard historical approach to the past; understanding history on its own terms.

A fourth major challenge is to reconcile present and historical wages. One basic problem here is how to treat boarding and lodging. For most employees in the eighteenth and early decades of the nineteenth century cash payments just made up a fraction of total wages. Very often the employers provided housing and food, and often even clothing for their employees' families. In many cases wages were in fact provided for families and not for individuals. On the other hand, the families had to offer their entire manpower to the employers. Thus, cash wages are not representative for total wages, and we should not look at individual payments, but family income from work.

Another problem connected to these arrangements is that the way of organizing these ties between employers and employees differed not only through time, but also within time, industries, sub-industries and even within companies. In some cases the company fully provided clothing, housing and food, in other cases only partly.³⁵ Thus, we have tried to find the necessary additions for boarding and lodging for each wage series in order to make them consistent over time. We will also

³³Grytten 2005, 62–65.

³⁴NOS 1994, 253–260.

³⁵Minde 1996, 69–76.

stress that this work does not focus on total income, but on wages. Additionally, our basic unit of study is not the household or the family, but the individual. This does not imply that salary paid with regard to support responsibilities do not count. Rather we are focusing on payment granted for the work effort carried out by each individual.

In the fifth place, there is a challenge connected to changing currencies and their par values, devaluations and revaluations. In early work on historical prices and wages from the nineteenth and early twenty centuries there is a clear tendency that scholars adjusted their data according to fluctuations in market values of currencies.³⁶ This implies that prices and wages were indirectly adjusted for inflation. In fact, this is a way of making nominal series more like real series. Here, in order to establish nominal series we omit and in a few cases even have to reverse this procedure. However, we are still left with huge challenges when it comes to different currencies used in the period we cover in the present work. In particular the period previous to 1816 is very difficult, as wages were reported in different kinds of currencies. As for the period 1813–1816, the Norwegian economy experienced monetary chaos with several monetary revisions and devaluations.³⁷ Thus, wages were reported in different currencies with different and fluctuating values. Through a thorough study of our data, exchange rates, monetary revisions and par contra devaluated values of currencies we have been able to sort out this problem in order to make the series consistent over time. Another problem is that money had different bargaining values at local markets. However, this was basically a problem for the price quotations more than for the wage data.³⁸

5.4 Sources

As already mentioned, the Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices constitute the most important source for the new and revised series presented here.

The archive holds price data back to 1641 and wage data back to 1751.³⁹ The bulk of the records, however, stems from the nineteenth century, and basically covers the period up to 1920. But some data also exist for some newer observations. It is probably one of the richest manual archives of its kind worldwide, with some million direct observations on both prices and wages. These are compiled and partly aggregated from a considerably higher number of observations. Thus, they are believed to represent a two-digit million observations on both prices and wages. We do not know the exact numbers.

The data kept in the archive are collected from various original sources. The most important ones are public records, local exchanges and bourses, trade and commerce chambers, merchant houses, industrial plants and different accounting material. Most wage data from the public sector are collected from public offices connected to the central or local governments and later Statistics Norway.

³⁶See e.g. NOS 1915, 2*.

³⁷Eitrheim 2005, 1–17.

³⁸Grytten 2004, 61–63.

³⁹Wedervang Archive, W043, W044 and W155.

Sailors' wages, which start as early as 1751, are basically collected from recruitment offices in the Norwegian ports, where the ship owners or captains by decree were to report wages of their crew.⁴⁰

Private wages for other industries are basically collected from the accounts of private companies, branch reports or later registrations made by Statistics Norway. For the period prior to 1850 the data in the archive, with the exception for sailors, are scarce when it comes to salaries. However, they are good enough to construct persistent annual series of crafts, manufacturing, agriculture and domestic services from the 1820s and 1830s. These never cover as many occupations as the registrations from Statistics Norway do for the period 1885–1910.⁴¹ Nevertheless, the archive offers annual data, whereas Statistics Norway offers data for six years with five years intervals only. Thus, the Wedervang Archive is the best source for wages from 1820 till the first two decades of the 1900s.

A second source of data in the series presented is, as already mentioned, Statistics Norway. In several publications they report both public and private wages for different industries and occupations along with information on income and property.⁴² These basically start in 1850. The records were originally taken by the magistrates in towns and cities and by the local police authority in the countryside (sheriffs (lensmenn) and their deputies). They were chiefly assembled by the ministry of domestic affairs until Statistics Norway was founded in 1883. Before 1875 the data basically covered domestic servants and hands hired by the major farms in the high seasons. The bulk of the data were not taken on an annual basis. The five-annual wage data were published by Statistics Norway under the title *Tables concerning Wages*.⁴³ Annual records on wages were not recorded regularly by Statistics Norway before the interwar years, despite the fact that they start earlier for some industries.

The third main source of data for wages are research works published by different scholars, especially the pioneer works done by Ingeborg Fløystad and Matti Goksøyr.⁴⁴ These records report wages for employees in manufacturing and crafts from the entire eighteenth century and the early nineteenth century. The data also enable us to include non-cash payments. Both Fløystad and Goksøyr have compiled their data from company records and accounts. In addition to these series, we use branch association records of payments per employee. The most important series is daily and hourly wages representative for all blue-collar employees in the mechanical engineering industry. These have later been included into the records of both Statistics Norway and the Wedervang Archive. The best overview of wages in the mechanical (engineering) industry is, perhaps, given in the work on the Norwegian Employers Association by Erling Petersen.⁴⁵

⁴⁰Wedervang Archive, W327.

⁴¹NOS 1911, 154–155.

⁴²NOS 1949, 360–368, NOS 1969, 545–560, NOS 1978, 537–574 and NOS 1994, 253–288.

⁴³NOS 1888, 1895, 1900, 1905, 1910, 1915, 1919, 1920 and 1921.

⁴⁴Fløystad 1979 and Goksøyr 1982.

⁴⁵Petersen 1950, 670–673.

5.5 Aggregates

The series presented here are basically meant to represent different occupations. Both micro and aggregated series are offered. In order to establish estimates of aggregates, we add several occupations within corresponding industries or sub-industries by giving each series a weight. For some occupations and industries, e.g. sailors in the merchant fleet, we do have annual numbers of observed wage units. When these are representative for the group we are dealing with, they serve as annual weights according to a Paasche approach. However, for most series we do not have these annual registrations of the number of employers belonging to each group. Thus, we have to find information elsewhere.

This is basically found in the national population censuses, taken approximately every tenth year,⁴⁶ which give information on the size of industries, sub-industries and occupational groups as well as on the distribution of gender in the labor force. Hence, by using these records we can give each series a weight according to their coverage, i.e. the size of the labor force within their industry they serve as representative indicators for. We can use this information to find constant weights covering several years. By combining them with the wage data we reach at weighted averages by a Laspeyres approach. Due to variable coverage at different periods, we do not always calculate “pure” averages. This would, in the first place, have caused breaks in the series. Secondly, we would have had sub-periods with wage levels not reflecting the total picture, but only the industries present in the data set. However, by splicing series we adjust for this problem. In consequence, we end up with conditional, but nevertheless representative averages rather than unconditional but not representative averages.

5.6 Wage series

In the following section we present nominal wages for several occupations within eight main industries. In order to make the series comparable they are presented in daily units. This is not a straightforward task. Those who were paid hourly, weekly, monthly or by annual salaries did not necessarily have full normal working days. Some of them were seasonal workers, some just hired in when useful. This implies that we need to be careful not drawing premature conclusions on the level of general income per day. In this chapter daily wages has been chosen as the basic unit of presenting continuous series, but we also refer some monthly and annual wages.

The series are also presented in Norwegian kroner, implying that the spesidaler (originally specie-daler) before 1875 and the riksdaler (originally rigsdaler) before 1816 are transformed into kroner. For the spesidaler we use the par exchange rate, i.e. four kroner to one spesidaler. For the different kinds of riksdaler we use, with some modifications, the official exchange rate of the outgoing currency against the incoming currency.⁴⁷ Hence, we arrive at continuous wage series from the early eighteenth century and up till 1940. As for the period after 1940, we refer to wage data published by Statistics Norway.

⁴⁶NOS 1949, 34–37 and NOS 1978, 36–37.

⁴⁷Eitheim 2005, 5–10 and Grytten 2004a, 54–61.

5.6.1 Agriculture and forestry

Most Norwegian farmers were independent small-scale farmers, and were not employed on a permanent basis on farms owned by others. However, during the high seasons the largest estates had to hire help from the smaller farmers in order to keep up with all the necessary work required to produce efficiently. In many cases such kind of work was to compensate for land rents, i.e. land rents were paid from small-scale farmers to landowners by working on the latter ones' farms. Our data from the agricultural industry stems from hired work.

The data are basically recorded from two sources, i.e. public records and the Wedervang Archive. The data in the Wedervang Archive were collected from 57 farms starting as early as 1820. These were some of the main farms in Norway at the time. Thus, they might not give a representative picture of the average income for farm hands. Also, they include different kinds of workers, like domestic servants, craftsmen, proto manufacturing workers, labor in forestry and work leaders. Hence, these data have to be critically used. They basically cover male labor up to 1850 and thereafter both male and female workers. However, some data exist for women also before 1850. Both summer and winter seasons are included. Most workers were partly paid in non-cash wages, which has to be included in our series. The coverage is best from 1850, with annual observations put together by Gjølberg and Lønningdal, but also the data from 1830 onwards can be used.⁴⁸ Additionally, a deeper dive into the Wedervang Archive makes it possible to include data from 1820 onwards.⁴⁹

In public records, later held and collected by Statistics Norway, we find observations of daily wages for agricultural workers for every fifth year starting in 1850 for men and 1875 for women. The records report daily wages for both the summer and the winter season. The five-annual series from the bureau can be complimented on the basis of annual figures given by the Wedervang Archive as indicator of the development from year to year. These records continue till 1915, when they are substituted with annual and more detailed wage series published by Statistics Norway.⁵⁰ In these latter series there is good coverage of both traditional agricultural industry and forestry. They also reflect seasonal differences, as data are given for four kinds of agricultural occupation for men and women during the summer season, i.e. spring, summer and autumn, and general farm work for men and women during the winter season. Additionally, they report wages paid for men in forestry during both summer and winter.

As said, the records report both wages with and without boarding. Here we include both, but with an emphasis on full cash wages without boarding. These were paid to workers who provided their own food. We prefer these when possible because they have the best coverage. Additionally, the difference between cash wages for workers with and without boarding to some extent mirror the value of boarding. For the period previous to 1850, most wage data do not include food provided for the workers on the farms. Thus, it has to be added to the cash wages. However, some workers were paid in cash only, and we do have some data on their wages previous to 1850 too. After 1850

⁴⁸Gjølberg 1974, 135–153 and Lønningdal 1984, 141–163.

⁴⁹Wedervang Archive, W027, W028, W204, W205 and W207.

⁵⁰NOS 1949, 366–367.

the picture is mixed. Full cash payments were more common from the last decades of the nineteenth and the dawn of the twentieth century, in particular during the interwar period. However, still a significant part, perhaps as many as all of the agricultural workers, were partly paid in non-wages until the post World War II era. Nevertheless, we give priority to the cash wages here, due to their relative preciseness.

There has been done some work on the value of extras, basically food and lodging. Both the Wedervang staff, Lønningdal and Gjølberg have tried to map the value of these services and added them into their wage series.⁵¹ They all conclude that boarding and lodging was by far the most important factor of income for hired labor in agriculture during the nineteenth century. A problem with most of these estimates is that they, with a possible exception for the Wedervang estimates, add a more or less fixed share of non-cash wages to the cash wages. Here, we try to examine annual values of non-cash wages independently of cash wages.

Food provided to labor on the farms has been added on the basis of a normal consumption basket for working class families, which is the closest we can come to agricultural workers in the existing public consumption surveys for years close up to the observations.⁵² Instead of adding a constant factor for food or a variable with a constant ratio to cash wages, we have found estimates of consumption in base years, i.e. 1850, 1880 and 1910 and calculated annual consumption by interpolation with a CPI as indicator of the fluctuations.⁵³ By doing this we find that previous additions for boarding and lodging tend to be both too static and too high, in some cases far too high.⁵⁴

The data for agriculture make it possible to compare male and female wages annually from the 1870s. Drawing more information from the Wedervang Archive it is also possible to give estimates on female wages in agriculture back to 1820. This is done by using information from farm accounts in the archive and estimates of the annual value of boarding and lodging on the basis of the above-mentioned consumption surveys.⁵⁵ In years where we do not have sufficient information on female wages we calculate them as a residual between total average and average male wages.

By connecting the data from Statistics Norway and the Wedervang Archive we arrive at continuous and persistent data for nominal wages in the agricultural sector in Norway 1820–1940. These are reported for men and women in Figure 5.6.1.

By looking at the relative share of female to male wages, we notice an interesting phenomenon. Female wages stayed relatively stable at around 60 per cent of male wages during the first decades. Then, after a short boom in the mid- and late 1850s they approached 65 per cent in the 1880s and 1890s. However, in the early 1900s female wages fell dramatically to male wages and were almost touching 50 percent just before the outbreak of World War I. Thereafter the gap was significantly narrowed until the late 1930s.

⁵¹Wedervang Archive, W089 and W091, Gjølberg 1974, 139–144, Lønningdal 1984, 37–43.

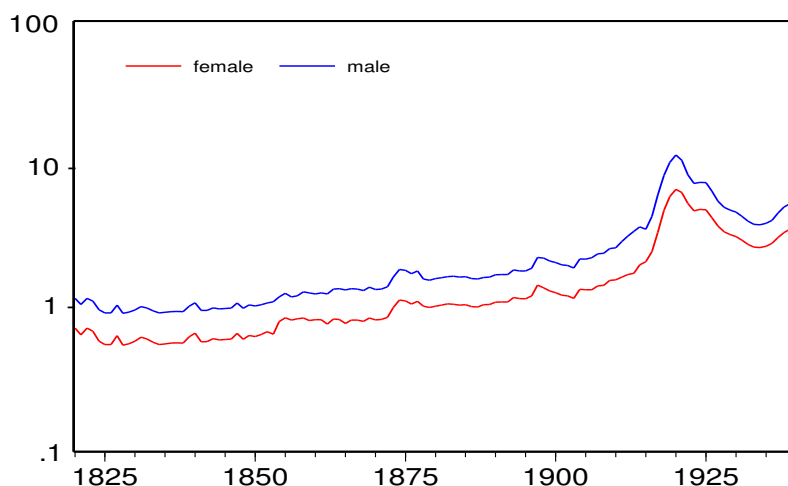
⁵²Statistical Office of Kristiania 1915, 144–149, Ramstad 1982, 482–492, Minde and Grytten 1997, 79 and Grytten and Minde 1998, 52–55,

⁵³Grytten 2004, 78–93.

⁵⁴Lønningdal 1984, 108, Wedervang Archive, W089 and W091

⁵⁵Wedervang Archive, W027, W205, Gjølberg 1974, 85–93.

FIGURE 5.1 Daily male and female wages in agriculture, incl. boarding and lodging, in NOK, 1820-1940. Semi-logarithmic scale.



Sources, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205, W207, NOS 1949, 366–367, Gjølborg 1974, 31–103 and Lønningdal 1984, 141–163.

A natural explanation for this development is that non-cash wages played a major role in the 1800s, whereas cash wages became more important during the increased market orientation of Norwegian farming in the 1900s. Thus, female wages dropped first. Then in the 1920s and 1930s one saw a general trend towards narrowing the gender gap.

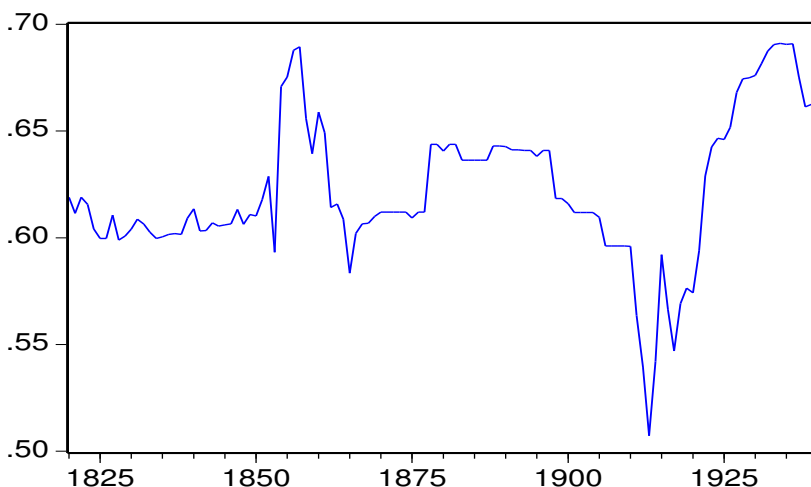
5.6.2 Construction

Within this industry we have labor from five different occupations: road construction, railway construction, bricklayers, telecommunication and harbor construction and maintenance. Our data start in 1850 and cover every year till 1940. Again, the data are taken basically from the Wedervang Archive the entire period up till 1940, and supplemented by data published by Statistics Norway for the interwar years.

The road construction data cover construction and maintenance work on public roads financed by local or central governments. The wages are reported on a daily basis. An astonishing number of more than 13.4 million observations were taken to arrive at annual numbers for piecework employees from the start in 1850 up to the interwar period. The corresponding number for workers on fixed salaries was almost 1.1 million. The data are reported practically from the entire country.⁵⁶ The wages were in principle paid in cash for the entire period. In many cases the workers were provided

⁵⁶Wedervang Archive, W118, W119A, W120A and W249.

FIGURE 5.2 Ratio of female to male wages in agriculture, 1820-1940.



Sources, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205, W207, NOS 1949, 366–367, Gjølborg 1974, 31–103 and Lønningdal 1984, 141–163.

food at work, for which they had to pay with a deduction in their cash wages. However, the wages reported in the archive were gross and not net wages in this respect. In addition, there were, to our knowledge, no significant change of practice during the period we are looking at. Thus, the reported wages are representative and consistently measured over the entire period. In consequence, we use them here. Both summer and winter season data are included.

From 1915 onwards, we also draw our series from Statistics Norway, which from 1921 becomes a major source for our data along with the data from the Wedervang Archive.⁵⁷ The data from the bureau include both fixed and piecework salaries in public road construction all over the country.

The second most important group within construction, reported here, is public railway construction. The main source up to the interwar period is again the Wedervang Archive.⁵⁸ The series in the archive starts in 1873 and goes on till 1940, with a significant lacuna 1884–1891. For the last 20–25 years the data on railway construction worker's wages from the Wedervang Archive are supplemented by data from Statistics Norway.⁵⁹ On the basis of the Archival data it has also been possible to give rough estimates on railway construction data back to 1854. The wages are partly reported as daily wages and partly as hourly wages. We use daily wages here. Thus, we have to transform hourly into daily wages. Till 1913 it was common with ten working hours per day, which is clearly reflected in the wage lists for railway construction workers. For 1914 we find records with both nine and ten

⁵⁷NOS 1949, 365.

⁵⁸Wedervang Archive, W245 and W249.

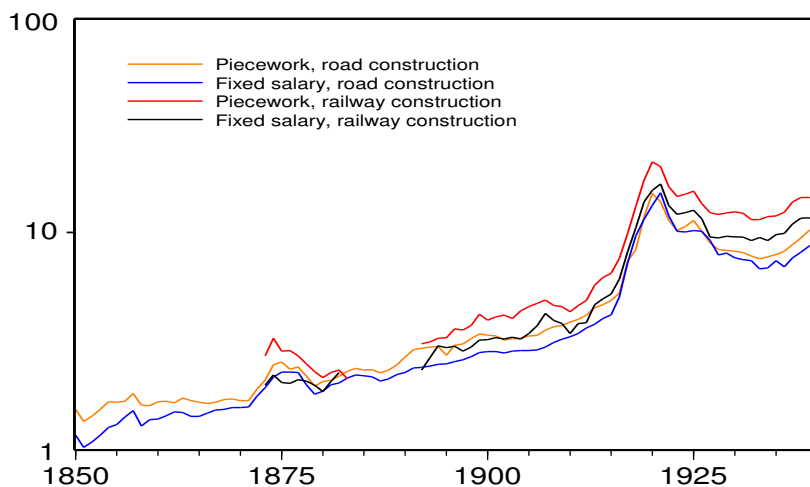
⁵⁹NOS 1949, 365.

hours as normal working days. For the period 1915–1917 a normal working day was nine hours, before it, at least officially, became eight in 1918.

As for food, we find the same pattern as for public road construction workers. Thus, we make no addition for boarding and lodging in these series. The number of observations of daily piecework and fixed wages for railway construction workers, which is the basis of the records in the Wedervang Archive, is an impressive number of 11.6 and 1.7 million respectively. The number of observations of hourly wages reflected in the archive is astonishingly 139.3 and 22.8 million respectively.⁶⁰ These numbers are not direct observations, but deducted from total wage expenses divided by total working hours.

Figure 5.6.2 maps the level and development of fixed paid and piecework labor within public road construction 1850–1940 and public railway construction 1873–1940. As revealed in the figure, hands engaged in piecework were paid significantly better than those engaged on fixed salaries. An exception is reported for road construction in the early 1920s, when the postwar depression caused less demand for labor. This primarily affected workers hired on short term and renewable piecework contracts, whereas workers on fixed long term contracts kept their full jobs longer.

FIGURE 5.3 Daily wages for piecework and fixed contracts in construction, in NOK, 1850–1940. Semi-logarithmic scale.



Sources, Wedervang Archive, W118, W119A, W120A, W245 and W249 and Alme 1993, 64–65.

From the interwar period we also include bricklayers, port (harbor) construction and maintenance workers and telegraph construction and maintenance workers into our series. These data were recorded and published by Statistics Norway annually with coverage for the up to 40 main cities and towns at the time. They were also taken at different months of the year. Hence, their coverage

⁶⁰Wedervang Archive, W245 and W249 and Alme 1993, 64–65.

must be considered good. These series were gathered and reported partly as hourly and partly as daily wages. We have transformed them all into daily wages in order to be able to summarize them consistently into aggregated series.⁶¹

5.6.3 Manufacturing and mining

In order to establish continuous wage series for manufacturing and mining we have to modify various kinds of data and link these to each other. By doing this we are able to come up with nominal series for every fifth year for several occupations as early as 1726–1806, and thereafter, annual series from 1820 onwards till 1940. The data are drawn from a variety of sources, basically the Wedervang Archive, Statistics Norway, records from industrial associations and previous work done on the basis of business archives.

Our first source is the work carried out by Ingeborg Fløystad on wages for labor connected to Baasland and Næs Jernverk, a significant Norwegian iron producer in the eighteenth century, located close to Arendal.⁶² Fløystad reports wages for different occupations within manufacturing and crafts every fifth year, starting in 1726 and ending in 1806. The records give annual wages, where cash, boarding and lodging are all included. They are reported in riksdaler, ort and skilling (previously named schilling). A problem connected to this is the use of different types of the currencies called dalers, which tended to depreciate not only according to their decreasing silver content, but also relative to their formal silver value. Thus, we use the unit closest to the par silver value. Thereafter we have spliced the series in overlapping years according to formal exchange rates.⁶³

The next important source is the thesis by Matti Goksøy on working conditions at the Alvøen industrial plant outside Bergen, founded in 1897 and a pioneer in paper production based on hydraulic power.⁶⁴ The data cover different sets of observations. Here we use wage data covering the period from 1820 till 1865. Adding data from the Wedervang Archive we arrive at annual series for these years. They represent individual contracts between employees, their families and the plant. The payment depended on the contracts and remained fixed for several years. The wage level was, thus, a consequence of when the contracts were signed, the size of the family and the number of working hands in the family. Goksøy did not find signed contracts for every year. Thus, his series of cash wages tend to be stable over longer periods, which was in fact common at the time.

In addition to the cash wages, boarding and lodging counted for a significant part of total wages of the labor force at Alvøen. As already mentioned, consumption surveys from the mid 1800s provide us with information on the size of these non-cash payments. We arrive at about 60 per cent in 1850 and around 70 per cent in the early 1820s. By using the previously established consumer price index for Norway as indicator of the price movements of the non-cash wages, we are able to express these in current prices instead of fixed ratios, which is common among most writers on this topic. We add

⁶¹NOS 1920–1940.

⁶²Fløystad 1979, 595–596.

⁶³Eitrheim 2005, 8–10 and Grytten 2005, 65–66.

⁶⁴Goksøy 1982.

this to the cash wages and arrive at annual nominal wages 1820–1865.⁶⁵

In the Wedervang Archive we also find relevant wage information dating back to the early decades of the nineteenth century. A central source here is the records from Cappelen-Ulefoss, containing data of more than 20 different kinds of occupations related to manufacturing 1833–1867.⁶⁶ This source reveals that women were often paid only 25–30 per cent in cash wages, compared with men for similar types of manufacturing work. The files have significant lacunas, but are nevertheless very detailed, with records of names, dates of birth, family conditions and responsibilities, kinds of work and working hours. Thus, we are able to construct an annual series for daily wages among manufacturing workers at this important Norwegian industrial plant at the time. Our series derived from the Cappelen-Ulefoss files are for most years made up of more than 100 observations.

Another important source in the Wedervang Archive is economic records from the Kongsberg Sølvverk, a state controlled silver mine company dating back to 1624. In the records we have found wage data from 1820 onwards, just after the company restarted its silver production after a halt during the Napoleonic wars. The data report sporadic wages for blue collar, forestry and transport workers, whereas it is easier to follow the annual development of mining and manufacturing workers.⁶⁷ Due to the implicit way of reporting salaries, we hold these wage data to be somewhat inferior to the data collected from Cappelen-Ulefoss and Alvøen.

From the middle of the nineteenth century, the Wedervang Archive is the by far best source for manufacturing wages. The archive holds wages for various occupations in various manufacturing companies. Admittedly, the data are somewhat biased as the eastern parts of the country are best represented. For the 1830s and 1840s the data in the archive are dominated by huge industrial conglomerates within mining, wood and paper.⁶⁸ From the late 1840s textiles and mechanical industry take over this dominant position.⁶⁹ Women are included in the material for most years. For some series we have to add boarding and lodging. From the 1870s the archive reports annual data on the basis of some thousands observations of hourly, daily, weekly monthly and annual wages.⁷⁰ The most common unit is daily wages. The number of observations is increasing until 1920, thereafter falling.

Christian Venneslan's PhD-dissertation on the Norwegian manufacturing industry 1896–1939 provides new reliable and valid series of wages in manufacturing companies under the governmental demanded national insurance scheme. Most employees of companies of a certain size were covered by this arrangement, and thus, the series provided by Venneslan are of high value.⁷¹

For the last years prior to 1920 Statistics Norway becomes our main source for manufacturing wages, collected in up to almost 50 towns and industrial settlements.⁷² Additionally, Statistics Nor-

⁶⁵Grytten and Minde 1998, 52–54 and Grytten 2004, 90–93.

⁶⁶Wedervang Archive, W046, W048, W055 and W082.

⁶⁷Wedervang Archive W417

⁶⁸Wedervang Archive, W046, W047, W048, W055 W074, W082 and W417.

⁶⁹Wedervang Archive, W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

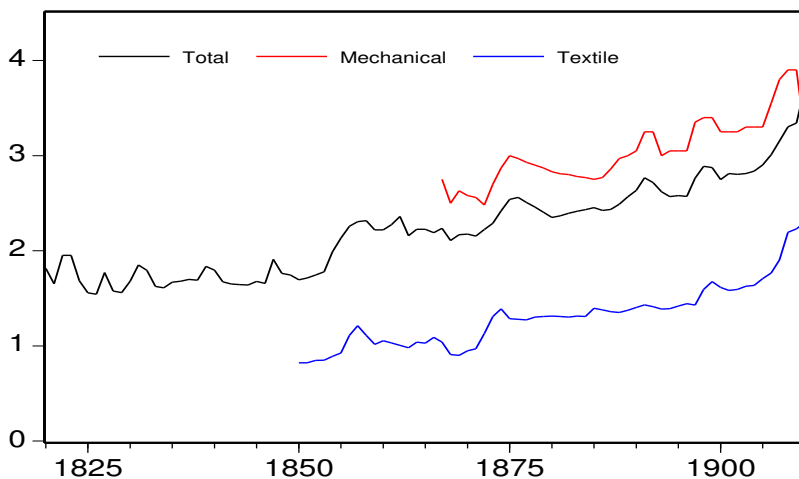
⁷⁰See e.g. Wedervang Archive. W284.

⁷¹Venneslan 2007.

⁷²NOS 1918–1941.

way give data on average manufacturing wages for key manufacturing branches and aggregated series for manufacturing as a whole. These, of course, have a very broad coverage of manufacturing wages in the interwar period, and represent both valid and reliable aggregated series of manufacturing wages during the last decades prior to World War II. However, in the data there is a negative bias towards new manufacturing industry in suburban areas and towards smaller companies located all over the country. Manufacturing plants organized in employers' federations are also better represented in these data than non-organized companies.⁷³ Erling Petersen is a main source for wages in mechanical engineering industry 1910–1940, through the rich and convincing data collection and presentation in his book on the Norwegian Employers Association 1900–1950.⁷⁴

FIGURE 5.4 Daily nominal wages in manufacturing industry, in NOK, 1820–1910.



Source, Goksøy 1982, NOS 1918–1941, NOS 1949, 364–365, Petersen 1950, 670–671, Grytten 1992, 159–167, Hodne, Grytten and Alme 1995, 240–241 and Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072, W074, W074, W080, W081, W082, W121, W284 and W417.

In Figure 5.6.3 we compare daily nominal wages for the “new” industries mechanical engineering and textile. As seen from the figure, mechanical (engineering) industry soon became a wage leader, whereas textile was lagging constantly behind. A major reason for the latter development was of course the huge share of female and young labor force in the textile industry, whereas mechanical engineering on the other hand had a significant share of skilled male workers.

⁷³NOS 1949, 364–365 and NOS 1918–1941.

⁷⁴Petersen 1950, 670–671.

5.6.4 Crafts

The data for crafts, like manufacturing, start in 1726. Again, our first source is Ingeborg Fløystad's work on the Baasland and Næs iron plant.⁷⁵ Fløystad reports five-annual wages for hammer-men and their assistants in manufacturing and for craftsmen connected to the iron plant in general. She also includes boarding and lodging in her series. The series constructed by Fløystad are reported as wages per year. In order to make them comparable with other data for crafts they are expressed as daily wages here by dividing them by the estimated number of 300 working days per year. These series conclude in 1806, just before the start of the high inflation period connected to the Napoleonic wars.

Thereafter, the Wedervang Archive is again our main source. First, we use wage data for senior blue-collar workers at the Kongsberg Sølvverk (silver plant) starting in 1820. These data report craftsmen responsible for smaller labor units. Again, the files basically provide us with implicit material on wages, which have to be extracted from financial records.⁷⁶ However, they serve as the best indicator we have available for salaries in crafts 1820–1833. The records stretch further up towards the end of the nineteenth century. We use them up to 1850. Boarding and lodging has been added here according to the same principles as for manufacturing workers.

We have persistent wage data on crafts from 1833 onwards. Most data for the first decades are taken from the Cappelen-Ulefoss industrial plant.⁷⁷ From 1875 the data have a significantly better coverage, reporting daily wages for painters, masons, carpenters, bakers, tailors, shoe makers. These data were basically collected in urban areas, i.e. in 18–40 towns and cities. From 1915 they include eleven different occupations within crafts, and data are given for both urban and rural labor nation-wide, despite a clear Oslo bias. Thus, the data from 1875 onwards reflect thousands of observations.⁷⁸ After 1915 Statistics Norway takes over as our most important source. They also reports an aggregated series of daily wages for skilled artisans 1914–1940, with a significant lacuna during three of the war years 1915–1917.⁷⁹

A problem with the data from Oslo is that they suddenly start chiefly to report piecework during the second half of the 1890s, and they also to some extent give priority to tariff wages compared to *ex post* paid wages. However, the generous information in the Wedervang Archive provides the opportunity to adjust for these pitfalls. This has not been done previously, and is, thus, done for the first time here. By revising the data previously used and adding new unused data from the archive we arrive at new series with more moderate fluctuations both at the second part of the 1870s and at the second part of the 1890s. Figure 5.6.4 clearly reveals the differences between the “revised” and the “old” figures.

This latter series from Statistics Norway shows higher wages than the other series covering the

⁷⁵Fløystad 1979, 595–596.

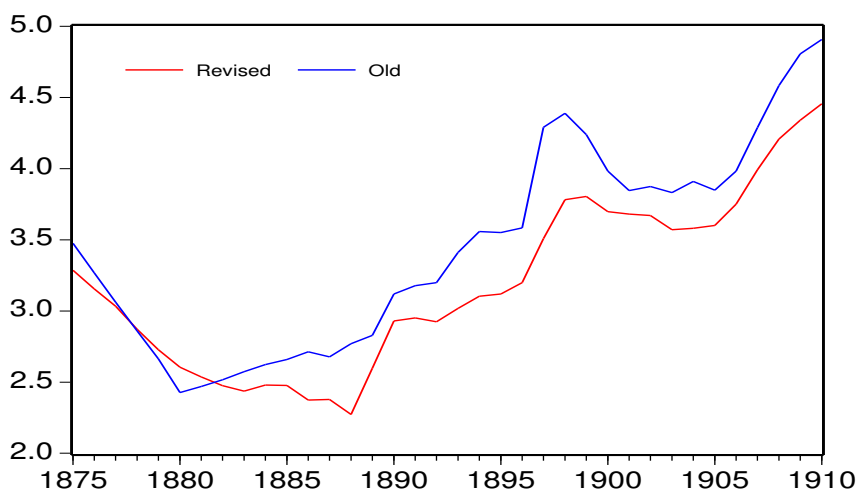
⁷⁶Wedervang Archive, W417.

⁷⁷Wedervang Archive, W046 and W055.

⁷⁸Wedervang Archive, W284.

⁷⁹NOS 1915–1941 and NOS 1949, 364–365.

FIGURE 5.5 Daily nominal wages for crafts, old and revised version, in NOK, 1875–1910.



Sources, Old: Alme 1993, 77–79. Revised NOS 1949, 364–365, Hodne, Grytten and Alme 1995, 240–241 and Wedervang Archive, W046, W055, W284 and W417.

same period. This is due to the fact that the series only include skilled artisans, whereas the other series also reflect artisans under training. The latter series is also more heavily based on artisans in organized industrial companies, which generally had higher wages than elsewhere. Finally, the aggregated series on skilled artisans from Statistics Norway does not include suburban labor to the same degree as the other series. Thus, they show higher wages.

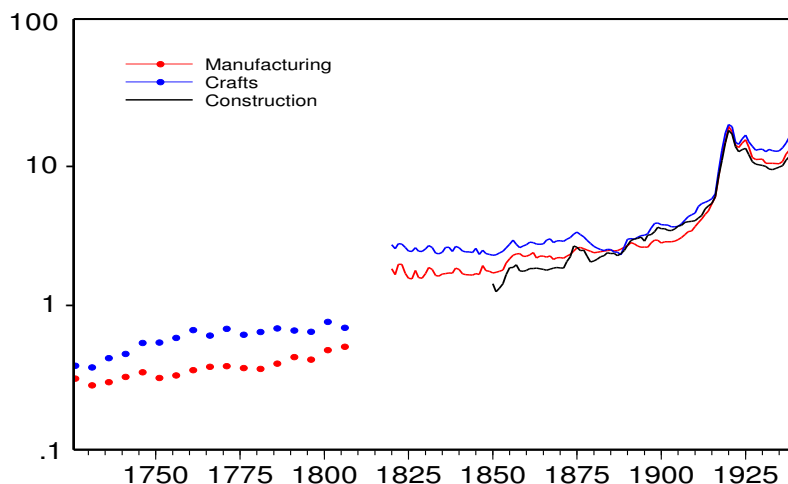
A drawback with the data on crafts is the wide exclusion of women. However, very few women had such occupations before the post World War II-period. Thus, the series presented here represent a fair share of labor in this industry.

Figure 5.6.4 shows the developments in representative average nominal wages for manufacturing, construction and crafts in Norway 1726–1940. Representative averages are meant as weighted averages according to the representability of the series. Thus, we only use the most representative and solid data sets. These are weighted by the size of the corresponding industry they seem to represent.

5.6.5 Communications

This industry is perhaps one of the most challenging in order to construct valid, reliable and persistent series. A major problem is to decide which occupations that historically were engaged within communications. Should, e.g. railway and telegraph maintenance in the nineteenth century be considered construction or communication? A related problem is that the sources do not always reveal differences of occupations. In other words: what does the term railway-worker include? In some cases

FIGURE 5.6 Daily nominal wages in construction, manufacturing and crafts, in NOK, 1726–1940. Semi-logarithmic scale.



Sources, Construction: Hodne, Grytten and Alme 1995, 242–243 ,Alme 1993, 64–65, NOS 1920–1940, NOS 1949, 365, Wedervang Archive, files W118, W119A, W120A, W245 and W249. Manufacturing: Fløystad 1979, 595–596, Goksøyr 1982, NOS 1918–1941, NOS 1949, 364–365, Petersen 1950, 670–671, Grytten 1992, 159–167, Hodne, Grytten and Alme 1995, 240–241 and Wedervang Archive, files W045, W046, W047, W048, W049, W054, W055, W056, W071, W072, W074, W074, W080, W081, W082, W121, W284 and W417. Crafts: Fløystad 1979, 595–596, NOS 1915–1941, NOS 1949, 364–365, Hodne, Grytten and Alme 1995, 240–241 and Wedervang Archive, files W046, W055, W284 and W417.

it may include conductors, cleaners, maintenance workers, construction workers and even railway station staff. In many cases we do not have sufficient information about the observations to separate one group from the other. Thus, it is tempting to define this anonymous group of railway workers as part of the communication industry. This is in principle, what we have done here.

Our data, compiled from the Wedervang Archive, start in 1850 with public road construction workers providing their own horses. Thus, these men obviously provided transport or communication services. The number of daily observations varied between 225 in 1851 and 29,685 in 1896. The data were originally assembled all over the country.⁸⁰ Since the payments included the hire of the workers' horses, they are of course higher than corresponding series of workers not providing their own horses. In the 1850s the difference seems to have fluctuated around 100 per cent, i.e. a 100 per cent wage compensation for bringing ones own horse. In the 1890s the compensation fluctuated around 29–36 per cent. The gap was closing even further and reached 22 per cent in 1914.⁸¹

From 1854 the mentioned data are supplemented with other files from the Wedervang Archive. In this case these are records of daily wages from railways, i.e. the Norwegian Main Railway Network

⁸⁰Wedervang Archive, W118, W119A, W120A and W249.

⁸¹Alme 1993, 62–63.

1854–1910.⁸² The staff of the archive had to work fast with these sources, as they were in the process of being destructed due to reluctance of investigation into internal affairs by the railway trade union. However, the Wedervang staff was able to compile information on daily wages for up to 237 workers during a single year.⁸³ To the degree they were provided with food and housing by their employer this was basically included in their cash wages. Thus, we do not have to add extras for boarding and lodging in order to compare this group with other groups of occupation.

From 1915 we can also utilize data from Statistics Norway. From then on we have data on forestry transport by labor providing their own horse.⁸⁴ From 1920 onwards, Statistics Norway also give data for drivers. They include both horse drivers and motor drivers, and thus, reflect an important part of passenger and goods transport nation wide. From 1921 the records from Statistics Norway also include an aggregated series for labor in ports occupied with maintenance, transportation, and loading and unloading cargo and passenger vessels.⁸⁵

From 1918 onwards Statistics Norway reports hourly wages for telegraph workers, and from 1921 daily wages paid by port authorities. Data are given for both fixed wages and piecework.⁸⁶ The sources do not always distinguish between construction, maintenance and communication work, and the data are presented in an aggregated form. Unfortunately we have not been able to solve this problem by looking into the original sources, since the best tracks we find also give aggregated series. Thus, we include these series both under construction and communication.

In Figure 5.6.5 we try to illustrate the uneven development of wages within communication inclusive and exclusive of horses provided by the hired labor force. This is not a straightforward task, as the data do not cover the same occupations during the entire period. Thus, we have to splice different kinds of occupations within transport. In consequence, the levels of wages for some occupations have to be adjusted upwards, whereas others have to be adjusted downwards. Anyhow, the graph gives information both on levels and developments of wages for labor providing and not providing their own horse. The figure also plots a graph for average wages in communication 1850–1940.

We read from the figure that the relative wages of manpower providing their own horse came down until the first years of World War I. During the war the supply of horsepower became insufficient, and thus, we see a rapid relative increase in wages for hands providing their own horses. This development continued during the post-war boom from 1919 to the spring of 1920. The difference was thereafter reversed during the years of crises both in the 1920s and 1930s. In the mid-1930s the extra payment for providing ones own horse became marginal according to this graph. However, for this decade the wage data are not easily comparable, as wages for men with their own horses basically are taken from forestry, which was more depressed than most other industries during the 1930s. On the other hand, the negative development of extra payment for horses mirrors the trend towards of more motorized vehicles, and thus, surplus in supply of pure horsepower.

⁸²Wedervang Archive, W058.

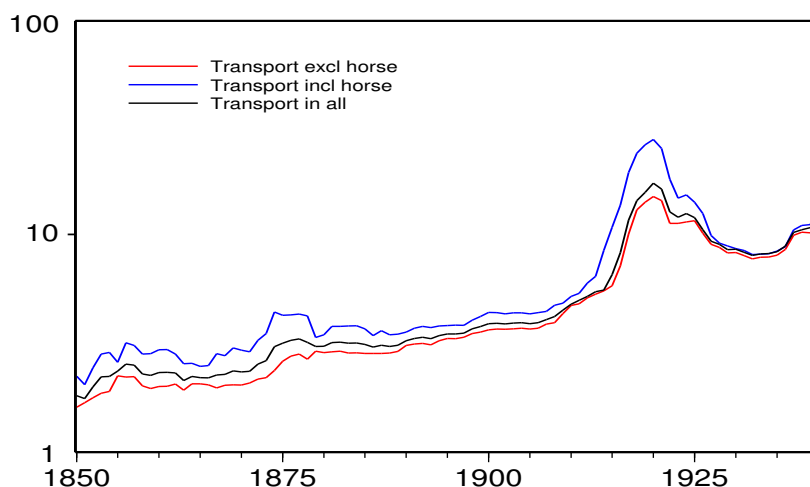
⁸³Alme 1993, 19 and Wedervang Archive, file 058.

⁸⁴NOS 1949, 367.

⁸⁵NOS 1949, 365.

⁸⁶NOS 1918–1941.

FIGURE 5.7 Daily nominal wages in domestic communications, in NOK, 1850–1914. Semi-logarithmic scale.



Sources, Wedervang Archive, files W058, W118, W119A, W120A, W245, W249 and NOS 1949, 366–367 and NOS 1918–1941.

5.6.6 Maritime transport

We present wages for sailors from the merchant fleet from 1751 till 1940, which means that these series stretches almost eighty years longer back than most previously established series for seamen in the Norwegian merchant fleet. Additionally, the new series presented here include all capacities of crew listed at all ports where the records were taken. For the years up to 1844, we have data from sailing vessels only, since steamers were not permanently introduced to the Norwegian ocean going merchant fleet at that time.⁸⁷ From 1844 till 1921, we have data from sailing and steam vessels. Diesel motor ships are added when they first came into use in the early 1900s.⁸⁸ Finally, from 1920/1921 we have data for steam and motorized ships. In the records, seamen’s wages are measured as monthly wages, without boarding and lodging.⁸⁹

The Wedervang Archive is used as source up till 1921. The section containing maritime wages is one of the richest and most impressive in the archive. The data in the section was collected from basically three types of sources. The first, which is a minor source, is *discharge lists* (“avmønstringslister”).⁹⁰ They were forms completed when sailors were discharged in domestic ports. The second source is *crew lists* (“bemandingslister”).⁹¹ These contain detailed information on the voyage, crew, replacement of crew and their salary in domestic and foreign ports. In many ways

⁸⁷Wedervang Archive, file W043.

⁸⁸Wedervang Archive, file W044.

⁸⁹Akstun 1960, 45–52 and NOS 1921–1941.

⁹⁰Wedervang Archive, files W173, W193, W320 and W407.

⁹¹Wedervang Archive, files W327, W329 and W330.

the *crew lists* constitute the best sources, since they include replacements in foreign ports. However, they were not utilized by the Wedervang team very often. The third, and most important source is *recruitment lists* (“pãmønstringslister”), i.e. forms completed when sailors were recruited.⁹² These provide information on the name of crew members, residence, occupation on board, port and date of signing-on, and wages. One should note that this information is given only on crew joining in Norwegian ports on Norwegian ocean going vessels. Domestic ocean transport is excluded from the data.

The *recruitment lists* form by far the bulk of data on maritime labor in the archive. The wage data in the present paper are, thus, basically compiled from the *recruitment lists*. The total number of monthly wage observations taken from the archive is almost 690000, of which close to 440000 are taken from sailing vessels, and the rest from steam ships and a few thousands from motor engine vessels.⁹³ The seamen’s wages in the archive are compiled from 26 major ports. Records are taken for 26 capacities of crew, of which 15 are from sailing ships and 25 cover steam or motorized ships.⁹⁴ Table 5.1 reports the number of observations by crew capacity for the Norwegian ocean going merchant fleet reported in the Wedervang Archive and used in the present work.

TABLE 5.1
Number of observations applied to present wages for sailors 1751–1921

	Number of observations		In all
	Sailing vessels	Motorized vessels	
Officers:			
First Mates	64427	26187	90614
Second Mates	10886	10940	21826
Third Mates	11469	12535	24004
Mates		479	479
	42072	2233	44305
Engine Officers:		29100	29100
First Engineers		11088	11088
Second Engineers		14727	14727
Third Engineers		2299	2299
Engineers		986	986
Ordinary Crew:			
Bestmen	320776	93595	414371
Bosuns	20920	1078	21998
Carpenters	10356	4671	15027
Sailmakers	27748	5490	33238
Able Seamen	3505		3505
Ordinary Seamen	121323	42449	163772
Junior Seamen	58089	25691	83780
Boys I (Dekkgutt)	56580	8730	65310
Boys II (Dreng)	9852	5030	14882
	12403	456	12859

⁹²Wedervang Archive, files W030, W032, W034, W035, W036, W038, W039, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188 and W189.

⁹³Wedervang Archive, files W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

⁹⁴Wedervang Archive, files W043 and W044

TABLE 5.1
 Number of observations applied to present wages for sailors 1751–1921

	Number of observations		
	Sailing vessels	Motorized vessels	In all
Engine Crew:		73918	73918
Assistant Engineers		1911	1911
Donkeymen		4902	4902
Stokers		55525	55525
Coal Heavers		10696	10696
Engine Boys		884	884
Mess Crew:	52212	28153	80365
Stewards	15599	12155	27754
Cooks and Stewards	8933	535	9468
Cooks	27680	10954	38634
Mess Boys		4509	4509
In all	437415	250953	688368

Sources, Wedervang Archive files W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

The data are taken from several lists in the archive, reporting both local registrations and national aggregates.⁹⁵ By combining these files, missing data have been added and calculation errors and misunderstandings by the Wedervang staff have been discovered and corrected.⁹⁶ The empirical bases of the series are quite strong from the early 1800s, and particularly from 1816 onwards.

For the period up to 1813, the data are reported in riksdaler. For the period 1813–1816, different types of the riksdaler and riksbankdaler have been used. From 1816 through 1876, wages are reported in spesidaler.⁹⁷ From 1877 onwards, they are reported in kroner. We have converted all data into kroner according to the procedure mentioned above.⁹⁸

For the interwar period, we use two different sources: data collected by Frode Akstun and by Statistics Norway. These are both taken from crew lists kept and reported by the ship owner's association.⁹⁹ Unfortunately, the number of crew capacities in these data is down to nine, and they basically account for steam and motor engine vessels. We don't know the exact number of observations these data are reflecting. However, on the basis of our sources, we can estimate them to more than 196.000.¹⁰⁰ The data here are presented without boarding and lodging, since they are omitted in the entire data set. Thus, it is best to exclude them when comparing relative developments within the wage series of the merchant fleet.

Since the well organized files containing sailors' wages in the Wedervang Archive include the number of observations for each port and capacity of crew, it is easy to compute aggregated series. Figure 5.6.6 reports wages for officers, ordinary sailors and mess crew (services), recruited in domestic ports by the Norwegian ocean going merchant fleet 1751–1940.

5.6.7 Domestic services

Also in the case of domestic services the Wedervang Archive is the key source for the early decades of the nineteenth century. For the period 1830–1850, we have traced data on female domestic servants in accounts from major Norwegian farms, basically quoted as daily, but also as weekly or monthly wages.¹⁰¹ These data are partly processed by Gjølberg in his work on farm wages from 1974.¹⁰² We have recalculated them into daily wages for the reason of comparison. According to these records, cash-wages stayed stable, whereas the supplements for housing and lodging fluctuated significantly. We have aggregated data from different farms up to one series. The statistical basis for this series is week, since the amount of annual observations are few, and even in some cases wages are just reported to have been stable over spans of several years. However, they still serve as indicators of the wage development in the period.

⁹⁵Wedervang Archive, files W043, W044, W248 and W329.

⁹⁶Wedervang Archive, files W030, W032, W034, W035, W036, W038, W039, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188 and W189

⁹⁷Wedervang Archive, files W043, W044.

⁹⁸Eitrheim 2005, 8–10 and Grytten 2005, 62–65.

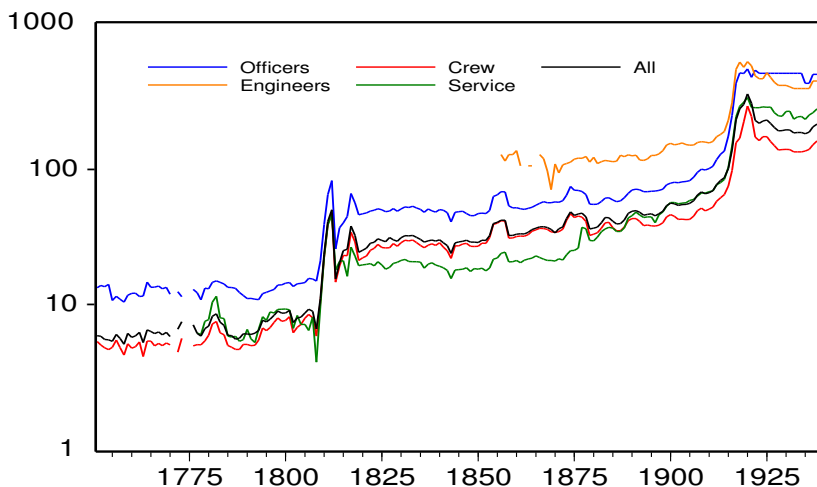
⁹⁹Akstun 1960, 45–52 and NOS 1921–1941.

¹⁰⁰Akstun 1960, 11–25 and NOS 1969, 77–80.

¹⁰¹Wedervang Archive, files W028 and W204.

¹⁰²Gjølberg 1974, 85–107.

FIGURE 5.8 Monthly wages for sailors in the Norwegian merchant fleet, in NOK, 1751–1940. Semi-logarithmic scale



Sources, Wedervang Archive, files W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349, Akstun 1960, 45–52 and NOS 1921–1941.

For the period between 1850–1920 the records improve significantly. Statistics Norway gives quinquennial data on wages for domestic male and female servants in rural and urban areas for this period.¹⁰³ The records are given for cash-wages only. Thus, one has to add for non-cash supplements, such as food and housing. By looking into the original material for these records, copied and kept at the Wedervang Archive, we find that there are some minor discrepancies between these copies of the original sources and the figures given by Statistics Norway for the first decades. Thus, we adjust the latter accordingly.

Alongside these records, we use Torill Lønningdal's aggregated annual series of wages for domestic female servants on major farms in eastern Norway 1850–1910.¹⁰⁴ These are constructed on the basis of files from the Wedervang Archive.¹⁰⁵ We use these records, with assistance from Ole Gjølberg's work on the wage development of agricultural workers and the annual series for female domestic servants in nineteenth century Norway, to construct estimates of annual wages for male servants from 1850 onwards.¹⁰⁶ It is reassuring that the records from the Wedervang Archive and Statistics Norway are closely correlated both in levels and in movements.

We run into two major challenges working with the data given for 1850 onwards. In the first place, they are primarily given as annual, secondarily as monthly or weekly salaries. In order to

¹⁰³NOS 1949, 366–367.

¹⁰⁴Lønningdal 1984, 141–163.

¹⁰⁵Wedervang Archive, files W009, W013, W014 and W021.

¹⁰⁶Gjølberg 1974, 85–107.

improve their comparability, we transform them into daily wages. Then, the central question is: how many days a year did they work? From the work by Lønningdal we know that it was common with one day off per week including vacations, which were not commonly given.¹⁰⁷ This lasted way up to World War II. Hence, the number of working days should be 313 per year. By dividing annual cash wages with these we arrive at daily numbers.

Our second challenge is to add for non-cash payments, basically housing and food (boarding and lodging) provided by the household or the farm where they served. Lønningdal has suggested fixed sums to be added to cash wages. These are given for periods stretching over several years.¹⁰⁸ However, by examining the composition of consumption expenditures from the nineteenth century, we conclude that the supplements must have been given a far too high value.¹⁰⁹ By finding the share of the household budget used on food and housing, we find reasonable sums to be added to the cash wages.¹¹⁰ These values differed between town and countryside. Their value is adjusted according to the price movements for food and housing in the Norwegian consumer price index for the period. Hence, by adding these extras to the cash wages we arrive at annual series of nominal daily wages for domestic servants stretching until World War II.

From 1915 Statistics Norway gives annual records of domestic female servants, and from 1918 also for cleaning and laundry ladies.¹¹¹ These data are given for the urban areas. By taking a closer look at the records from the statistical office, we notice that there is some confusion about boarding and lodging. An example of this can be taken from the office's publication *Statistical Survey 1948*. According to table 194, page 367, female domestic servants in rural areas earned an average annual salary of 291 kroner, including boarding and lodging in the early 1930s. This implies daily wages, boarding and lodging included, below one krone, which is significantly less than half of the value of boarding and lodging calculated by Statistics Norway for female domestic servants in urban areas. By crosschecking the data, we notice that the annual series for rural domestic services do not include boarding and lodging. We must also conclude, according to consumption surveys, that the values for non-cash payments are far too high in the other tables by the office.¹¹² By using the cash-wages and adding estimated non-cash wages provided for these women on the basis of consumption surveys and price developments, we obtain representative series of their full wages.¹¹³

To obtain annual wages for male and female servants in the urban areas, we have interpolated with the development of wages for men and women serving in rural areas. The interpolations are run between the five-annual observations up till 1915. For male labor in rural domestic services we have interpolated between the five-annual observations 1850–1875 with the help of series for domestic services in agriculture left by Gjølberg along with corresponding female series by Lønningdal.¹¹⁴

¹⁰⁷Lønningdal 1984, 23–36.

¹⁰⁸Lønningdal 1984, 104–109.

¹⁰⁹Minde and Grytten 1997, 61–82.

¹¹⁰Grytten and Minde 1998, 42–58.

¹¹¹NOS 1949, 364–365 and NOS 1918–1941.

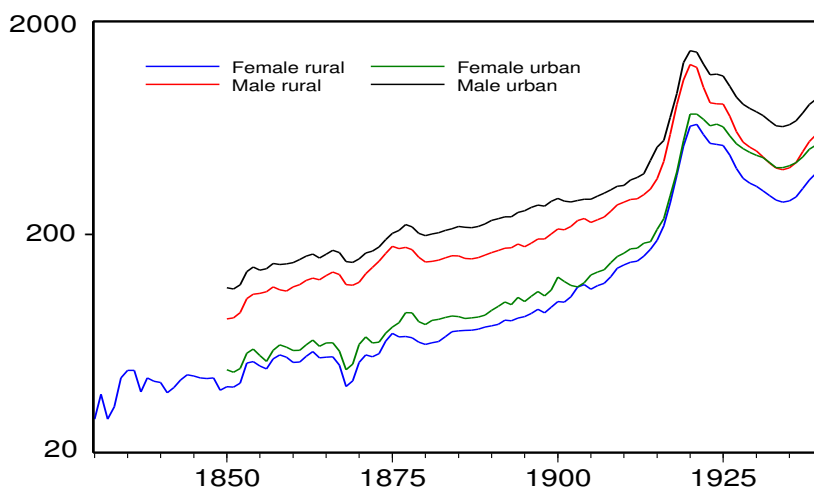
¹¹²Grytten 1992, 162.

¹¹³NOS 1978, 530–532 and 576 and Grytten 2004, 92–93.

¹¹⁴Gjølberg 1974, 61–68 and 94–107.

This, of course, means that three of the four data sets for domestic services before 1875 have weaker foundation than most other series. Figure 5.6.7 shows the development of urban and rural wages for domestic services both for men and women.

FIGURE 5.9 Annual wages for domestic servants, incl. boarding and lodging, in NOK, 1830–1940. Semi-logarithmic scale



Sources, Wedervang Archive, files Wedervang Archive, files W009, W013, W014, W021, W028 and W204, NOS 1949, 364–367, NOS 1918–1941, Gjølberg 1974, 61–68 and 85–107, Lønningdal 1984, 23–36, 104–109 and 141–163, Minde and Grytten 1997, 61–82, Grytten and Minde 1998, 42–58, NOS 1978, 530–532 and 576 and Grytten 2004, 92–93.

5.6.8 Public services

This is in fact one of the most difficult groups to map wage developments for. Neither the Wedervang Archive nor Statistics Norway is rich on wage data from this sector. Admittedly, the Wedervang Archive holds some sporadic data from the early nineteenth century, but these are not consistent with the series presented here.¹¹⁵ Also, Elisabeth Bjørsvik has studied salaries for public servants in her PhD-dissertation on the public sector's contribution to GDP in Norway 1830–1865. However, she does not give consistent series of individual wages.¹¹⁶

The best available source is probably Kjell Bjørn Minde, who studied the profitability of higher education in Norway 1885–1960. In his work he gives annual salaries for public servants according to their tariffs.¹¹⁷ We neither know the composition of employees nor how long they had been serving. In addition, we do not now their actual extra incomes for family responsibilities or compensation

¹¹⁵Wedervang Archive, file W028.

¹¹⁶Bjørsvik 2004, 290–310.

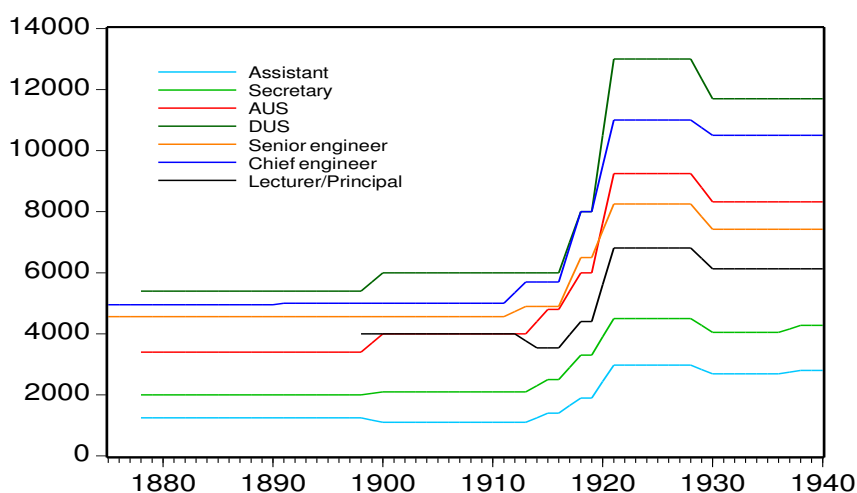
¹¹⁷Minde 1993, 25–123* (appendix).

for high inflation periods. Hence, these data are just tariffs and not at all *ex post* wages. Thus, they cannot be compared with the other figures presented here. They do not fluctuate as much as the other series, and in particular during high inflation periods they do not step up as much as wages for other occupations.

Anyway, on the basis of the work by Minde, we present average annual tariff wages for civil servants hired by both the central and local governments. These are civil servants employed by the central ministries, i.e. assistants and senior assistants, secretaries and senior secretaries, undersecretaries of state (AUS) and deputy undersecretaries of state (DUS). In addition, we present central government tariff wages for lecturers and training principals, assistant engineers, engineers, senior engineers and chief engineers.

Figure 5.6.8 offers a picture of the levels and developments of tariff wages for employees in the public sector from 1875 till 1940. Note the stability in relative wages between the different occupations.

FIGURE 5.10 Annual tariff wages for civil servants, in NOK, 1875–1940



Source, Minde 1993, 25–123* (appendix).

5.7 Conclusions

This chapter offers an overview of existing, new and revised historical wage figures for different professions within eight main industries in Norway from the early eighteenth century till 1940. The main industries represented are agriculture and forestry, construction, manufacturing and mining, crafts, communications, maritime transport, domestic services and public services. The most long-

reaching series start as early as 1726, i.e. manufacturing and crafts, whereas the series with the highest coverage, i.e. sailors, start in 1751. All series presented here conclude in 1940. From the post-World War II years and onwards, Statistics Norway has a valid and systematic coverage of wage data, which can be spliced with those presented here. This is discussed in Chapter 6 of this book.

Three major sources have been utilized in order to compile the data. The most important is the Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices, kept at the Norwegian School of Economics and Business Administration in Bergen. The archive holds an impressive number of observations and is probably one of the richest of its kind in the world. The second most important source is records from Statistics Norway, whereas the third important source is previous work carried out on the basis of private business archives.

In order to make our data comparable, we have transformed the cited wages into one basic unit of account within the different professions. All series are transformed into kroner. This is in principle done by using par exchange values between outgoing and incoming currencies at the moment of exchange. Most series are also presented in daily wages here. However, for sailors we offer persistent and continuous series on monthly wages. As for public servants, we use annual salaries. For all groups we use *ex post* wages, except for employees in the public sector, where we use tariff wages. Thus, they cannot be directly compared to the other series.

We include both cash and non-cash payments in most of our series. Hence, we have calculated the value of boarding and lodging and added to the cash payments when necessary. However, this is not done for sailors. The main reason for this is that these data are reported persistently without boarding and lodging for the entire period. Also, boarding and lodging was not necessarily considered part of the sailors' wages. The sailors still had their own houses and provided their families own food.

The figures provided here should make a sound ground for comparisons between professions, within periods and over time. They also make it possible to compare payments for men compared to women, piecework compared to fixed wages and urban labor compared to rural labor.

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5.A Daily wages

5.A.1 Female labor force in agriculture

TABLE 5.A.1
Daily wages for female labor force in agriculture

	Spring	Summer season			Mean	Winter season Work	Total Repr mean
		Summer	Autumn	Others			
1820							0.72
1821							0.64
1822							0.72
1823							0.68
1824							0.58
1825							0.55
1826							0.55
1827							0.64
1828							0.55
1829							0.56
1830							0.58
1831							0.62
1832							0.60
1833							0.57
1834							0.55
1835							0.56
1836							0.56
1837							0.57
1838							0.56
1839							0.62
1840							0.66
1841							0.58
1842							0.58
1843							0.61
1844							0.59
1845							0.60
1846							0.60
1847							0.66
1848							0.60
1849							0.64
1850							0.63
1851							0.65
1852							0.68
1853							0.65
1854							0.80
1855							0.85
1856							0.82
1857							0.83
1858							0.85
1859							0.81
1860							0.82
1861							0.82
1862							0.77
1863							0.83

TABLE 5.A.1
Daily wages for female labor force in agriculture

	Summer season				Mean	Winter season Work	Total Repr mean
	Spring	Summer	Autumn	Others			
1864							0.83
1865							0.78
1866							0.82
1867							0.82
1868							0.80
1869							0.85
1870							0.82
1871							0.83
1872							0.86
1873							1.00
1874							1.13
1875					1.19	0.89	1.12
1876							1.06
1877							1.11
1878							1.02
1879							1.00
1880					1.09	0.83	1.03
1881							1.04
1882							1.06
1883							1.06
1884							1.04
1885					1.12	0.84	1.05
1886							1.02
1887							1.01
1888							1.05
1889							1.05
1890					1.16	0.89	1.09
1891							1.10
1892							1.10
1893							1.18
1894							1.16
1895					1.23	0.93	1.16
1896							1.21
1897							1.44
1898							1.38
1899							1.31
1900					1.36	1.02	1.28
1901							1.22
1902							1.21
1903							1.16
1904							1.35
1905					1.42	1.08	1.34
1906							1.34
1907							1.42
1908							1.44
1909							1.55
1910					1.66	1.29	1.57
1911							1.64
1912							1.71

TABLE 5.A.1
Daily wages for female labor force in agriculture

	Spring	Summer season			Mean	Winter season Work	Total Repr mean
		Summer	Autumn	Others			
1913							1.74
1914							2.00
1915	2.12	2.35	2.22	2.00	2.21	1.78	2.10
1916	2.44	2.66	2.54	2.65	2.59	2.13	2.47
1917	3.35	3.59	3.52	3.66	3.55	2.87	3.38
1918	4.68	5.07	5.10	5.20	5.05	4.09	4.81
1919	5.98	6.49	6.42	6.10	6.31	5.13	6.02
1920	6.81	7.37	7.13	6.76	7.09	5.74	6.75
1921	6.61	7.16	6.94	5.80	6.74	5.44	6.41
1922	5.58	6.02	5.82	4.70	5.63	4.61	5.38
1923	4.88	5.27	5.07	4.45	4.99	4.12	4.77
1924	4.93	5.30	5.12	4.86	5.10	4.24	4.89
1925	4.98	5.32	5.14	4.58	5.07	4.24	4.86
1926	4.47	4.77	4.58	3.80	4.47	3.72	4.29
1927	3.86	4.12	3.99	3.44	3.91	3.22	3.73
1928	3.52	3.75	3.64	3.16	3.56	2.95	3.41
1929	3.36	3.55	3.43	3.13	3.40	2.84	3.26
1930	3.23	3.44	3.34	2.96	3.28	2.78	3.16
1931	3.04	3.26	3.16	2.77	3.10	2.61	2.98
1932	2.84	3.05	2.94	2.60	2.90	2.43	2.78
1933	2.71	2.90	2.80	2.52	2.77	2.32	2.65
1934	2.67	2.87	2.77	2.56	2.75	2.30	2.64
1935	2.72	2.93	2.83	2.63	2.81	2.35	2.69
1936	2.84	3.05	2.96	2.81	2.94	2.47	2.83
1937	3.10	3.32	3.25	3.18	3.24	2.74	3.11
1938	3.37	3.58	3.52	3.31	3.48	3.00	3.36
1939	3.57	3.77	3.71	3.56	3.68	3.17	3.55
1940	3.88	4.11	4.06	3.74	3.99	3.27	3.81

5.A.2 Male labor force in agriculture

TABLE 5.A.2
Daily wages for male labor force in agriculture

	Labor on board (Cash wages)				Summer season work				Winter season	Total Repr mean	
	Day-hired	Summer	Winter	Mean	Board	Spring	Summer	Autumn			Others
1820	0.40				0.46						1.16
1821	0.40				0.38						1.05
1822	0.40				0.46						1.16
1823	0.40				0.42						1.11
1824	0.40				0.32						0.97
1825	0.40				0.28						0.92
1826	0.40				0.28						0.92
1827	0.40				0.37						1.04
1828	0.36				0.32						0.91
1829	0.36				0.33						0.93
1830	0.38				0.34						0.97
1831	0.38				0.37						1.02
1832	0.38				0.36						0.99
1833	0.38				0.32						0.95
1834	0.38				0.30						0.92
1835	0.38				0.31						0.93
1836	0.38				0.32						0.94
1837	0.38				0.32						0.94
1838	0.38				0.32						0.94
1839	0.43				0.33						1.03
1840	0.48				0.32						1.08
1841	0.43				0.28						0.96
1842	0.44				0.27						0.96
1843	0.47				0.27						1.00
1844	0.46				0.27						0.98
1845	0.45				0.28						0.99
1846	0.44				0.30						0.99
1847	0.46				0.34						1.08
1848	0.43				0.30						0.99
1849	0.48				0.30						1.05
1850	0.48	0.61	0.35		0.29				1.23	0.80	1.03
1851	0.50				0.29						1.05
1852	0.52				0.31						1.08
1853	0.47				0.33						1.10
1854	0.61				0.36						1.19
1855	0.65	0.83	0.44		0.38				1.52	1.00	1.26
1856	0.59				0.42						1.19
1857	0.61				0.42						1.21
1858	0.66				0.37						1.29
1859	0.62				0.38						1.27
1860	0.62	1.21	0.44		0.40				1.49	0.93	1.25
1861	0.61				0.41						1.27
1862	0.55				0.40						1.25

Sources: Gjøølberg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

TABLE 5.A.2
Daily wages for male labor force in agriculture

	Labor on board (Cash wages)				Summer season work				Winter season	Total Repr mean		
	Day-hired	Summer	Winter	Mean	Board	Spring	Summer	Autumn			Others	Mean
1863	0.62				0.40							1.35
1864	0.62				0.40							1.36
1865	0.57	1.23	0.55		0.39					1.59	1.09	1.33
1866	0.60				0.42							1.36
1867	0.59				0.43							1.35
1868	0.56				0.45							1.32
1869	0.63				0.43							1.39
1870	0.60	1.26	0.56		0.42					1.56	1.14	1.34
1871	0.60				0.42							1.35
1872	0.65				0.45							1.40
1873	0.87				0.48							1.64
1874	1.07				0.50							1.85
1875	1.02	1.68	0.89		0.51					2.14	1.60	1.83
1876	0.96				0.50							1.73
1877	1.07				0.51							1.81
1878	0.76				0.47							1.59
1879	0.85				0.43							1.56
1880	0.85	1.53	0.69		0.46					1.83	1.34	1.60
1881	0.87				0.46							1.62
1882	0.90				0.47							1.65
1883	0.92				0.47							1.66
1884	0.91				0.46							1.64
1885	0.92	1.52	0.76		0.43					1.94	1.42	1.65
1886					0.43							1.60
1887					0.42							1.59
1888					0.43							1.63
1889					0.45							1.64
1890		1.26	0.82		0.47					1.99	1.47	1.70
1891					0.47							1.71
1892					0.47							1.71
1893					0.44							1.84
1894					0.44							1.81
1895		1.38	0.90		0.43					2.10	1.58	1.81
1896					0.44							1.89
1897					0.43							2.25
1898					0.45							2.23
1899					0.47							2.12
1900		1.63	1.11		0.49					2.37	1.82	2.07
1901					0.48							2.00
1902					0.47							1.98
1903					0.47							1.90
1904					0.46							2.20
1905		1.73	1.19		0.47					2.50	1.92	2.19
1906					0.48							2.24
1907					0.51							2.38
1908					0.52							2.41

Sources, Gjølberg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

TABLE 5.A.2
Daily wages for male labor force in agriculture

	Labor on board (Cash wages)				Summer season work					Winter season	Total Repr mean	
	Day-hired	Summer	Winter	Mean	Board	Spring	Summer	Autumn	Others			Mean
1909					0.52							2.60
1910		2.08	1.53		0.54					2.94	2.35	2.63
1911					0.55							2.91
1912					0.59							3.17
1913					0.62							3.43
1914					0.63							3.69
1915		2.82	2.26		0.72	3.64	4.00	3.64	3.32	3.70	3.08	3.55
1916					0.87	4.30	4.72	4.31	4.83	4.56	3.81	4.37
1917					1.08	6.04	6.65	6.12	6.87	6.44	5.37	6.18
1918					1.53	8.40	9.07	8.55	9.26	8.85	7.23	8.45
1919					1.64	10.61	11.35	10.62	10.96	10.94	8.94	10.44
1920		9.05	7.22		1.92	12.03	13.03	12.06	11.95	12.37	9.93	11.76
1921						11.39	12.35	11.41	9.60	11.37	9.08	10.80
1922						9.16	9.85	9.03	7.46	9.02	7.12	8.55
1923						7.75	8.39	7.72	7.01	7.82	6.25	7.43
1924						7.72	8.40	7.78	7.53	7.94	6.42	7.56
1925						7.79	8.42	7.81	7.15	7.89	6.43	7.52
1926						6.94	7.50	6.88	5.84	6.90	5.61	6.58
1927						5.85	6.38	5.79	5.13	5.87	4.74	5.59
1928						5.26	5.73	5.20	4.78	5.31	4.30	5.06
1929						5.02	5.44	4.94	4.62	5.06	4.14	4.83
1930						4.84	5.26	4.79	4.43	4.89	4.01	4.67
1931						4.53	4.93	4.53	4.07	4.58	3.74	4.37
1932						4.19	4.56	4.20	3.78	4.24	3.45	4.04
1933						3.98	4.33	3.97	3.66	4.04	3.27	3.84
1934						3.93	4.27	3.93	3.70	4.00	3.25	3.81
1935						3.99	4.33	4.02	3.84	4.09	3.34	3.90
1936						4.18	4.51	4.20	4.07	4.28	3.52	4.09
1937						4.63	5.02	4.70	4.78	4.82	3.99	4.61
1938						5.10	5.55	5.22	5.06	5.29	4.45	5.08
1939						5.39	5.87	5.50	5.32	5.58	4.72	5.36
1940						5.88	6.38	6.00	5.59	6.03	4.87	5.74

Sources: Gjølborg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

5.A.3 Labor force in forestry

TABLE 5.A.3
Daily wages for labor force in forestry

	Summer season work	Winter season work	Others	Total Repr mean
1913	3.35			3.35
1914	3.54			3.54
1915	3.58		3.69	3.65
1916	4.11		4.59	4.40
1917	5.98		6.93	6.55
1918	9.87	10.67	9.53	9.86
1919	11.22	11.51	11.09	11.21
1920	12.92	13.68	12.60	12.91
1921	10.92	9.44	11.56	10.95
1922	8.23	7.59	8.51	8.24
1923	7.58	7.59	7.58	7.58
1924	7.98	8.19	7.89	7.98
1925	7.44	7.03	7.61	7.44
1926	6.18	5.72	6.38	6.19
1927	5.30	5.08	5.40	5.31
1928	4.88	4.77	4.93	4.88
1929	4.74	4.73	4.75	4.74
1930	4.59	4.51	4.62	4.59
1931	4.25	4.11	4.31	4.25
1932	3.95	3.87	3.99	3.96
1933	3.81	3.77	3.82	3.81
1934	3.85	3.89	3.83	3.85
1935	3.98	4.03	3.96	3.98
1936	4.30	4.44	4.24	4.30
1937	5.14	5.51	4.98	5.13
1938	5.45	5.41	5.46	5.45
1939	5.71	5.87	5.64	5.71
1940	6.29		6.29	6.29

Source, Statistics Norway 1949, 366-367.

5.A.4 Agriculture and forestry

TABLE 5.A.4
Average (mean) daily wages in Agriculture and forestry

	Agriculture		Forestry	Board	Total Repr mean
	female	male			
1820	0.72	1.16		0.46	1.03
1821	0.64	1.05		0.38	0.93
1822	0.72	1.16		0.46	1.03
1823	0.68	1.11		0.42	0.98
1824	0.58	0.97		0.32	0.85
1825	0.55	0.92		0.28	0.81
1826	0.55	0.92		0.28	0.81
1827	0.64	1.04		0.37	0.92
1828	0.55	0.91		0.32	0.81
1829	0.56	0.93		0.33	0.82
1830	0.58	0.97		0.34	0.85
1831	0.62	1.02		0.37	0.90
1832	0.60	0.99		0.36	0.88
1833	0.57	0.95		0.32	0.84
1834	0.55	0.92		0.30	0.81
1835	0.56	0.93		0.31	0.82
1836	0.56	0.94		0.32	0.83
1837	0.57	0.94		0.32	0.83
1838	0.56	0.94		0.32	0.83
1839	0.62	1.03		0.33	0.91
1840	0.66	1.08		0.32	0.96
1841	0.58	0.96		0.28	0.84
1842	0.58	0.96		0.27	0.85
1843	0.61	1.00		0.27	0.88
1844	0.59	0.98		0.27	0.87
1845	0.60	0.99		0.28	0.87
1846	0.60	0.99		0.30	0.88
1847	0.66	1.08		0.34	0.95
1848	0.60	0.99		0.30	0.88
1849	0.64	1.05		0.30	0.92
1850	0.63	1.03		0.28	0.91
1851	0.65	1.05		0.29	0.93
1852	0.68	1.08		0.30	0.97
1853	0.65	1.10		0.32	0.95
1854	0.80	1.19		0.35	1.10
1855	0.85	1.26		0.36	1.16
1856	0.82	1.19		0.39	1.11
1857	0.83	1.21		0.39	1.13
1858	0.85	1.29		0.34	1.17
1859	0.81	1.27		0.34	1.14
1860	0.82	1.25		0.36	1.14
1861	0.82	1.27		0.37	1.15
1862	0.77	1.25		0.36	1.10

Sources, Gjøølberg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

TABLE 5.A.4
Average (mean) daily wages in Agriculture and forestry

	Agriculture		Forestry	Board	Total Repr mean
	female	male			
1863	0.83	1.35		0.36	1.18
1864	0.83	1.36		0.35	1.18
1865	0.78	1.33		0.34	1.13
1866	0.82	1.36		0.36	1.17
1867	0.82	1.35		0.37	1.17
1868	0.80	1.32		0.38	1.15
1869	0.85	1.39		0.36	1.21
1870	0.82	1.34		0.35	1.16
1871	0.83	1.35		0.35	1.17
1872	0.86	1.40		0.37	1.22
1873	1.00	1.64		0.39	1.44
1874	1.13	1.85		0.41	1.63
1875	1.12	1.83		0.41	1.61
1876	1.06	1.73		0.40	1.52
1877	1.11	1.81		0.41	1.60
1878	1.02	1.59		0.37	1.38
1879	1.00	1.56		0.34	1.37
1880	1.03	1.60		0.36	1.41
1881	1.04	1.62		0.36	1.43
1882	1.06	1.65		0.36	1.46
1883	1.06	1.66		0.36	1.46
1884	1.04	1.64		0.35	1.44
1885	1.05	1.65		0.33	1.45
1886	1.02	1.60		0.32	1.43
1887	1.01	1.59		0.32	1.42
1888	1.05	1.63		0.32	1.46
1889	1.05	1.64		0.33	1.46
1890	1.09	1.70		0.34	1.52
1891	1.10	1.71		0.34	1.53
1892	1.10	1.71		0.34	1.53
1893	1.18	1.84		0.31	1.64
1894	1.16	1.81		0.31	1.62
1895	1.16	1.81		0.31	1.61
1896	1.21	1.89		0.31	1.69
1897	1.44	2.25		0.30	2.01
1898	1.38	2.23		0.32	1.97
1899	1.31	2.12		0.33	1.88
1900	1.28	2.07		0.34	1.83
1901	1.22	2.00		0.33	1.77
1902	1.21	1.98		0.32	1.75
1903	1.16	1.90		0.32	1.68
1904	1.35	2.20		0.31	1.94
1905	1.34	2.19		0.32	1.93
1906	1.34	2.24		0.32	1.97
1907	1.42	2.38		0.33	2.09
1908	1.44	2.41		0.34	2.12

Sources, Gjøllberg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

TABLE 5.A.4
Average (mean) daily wages in Agriculture and forestry

	Agriculture		Forestry	Board	Total Repr mean
	female	male			
1909	1.55	2.60		0.34	2.29
1910	1.57	2.63		0.35	2.31
1911	1.64	2.91		0.36	2.53
1912	1.71	3.17		0.38	2.73
1913	1.74	3.43	3.35	0.39	2.92
1914	2.00	3.69	3.54	0.40	3.18
1915	2.10	3.55	3.65	0.47	3.26
1916	2.47	4.37	4.40	0.56	3.99
1917	3.38	6.18	6.55	0.70	5.62
1918	4.81	8.45	9.86	0.99	7.72
1919	6.02	10.44	11.21	1.06	9.56
1920	6.75	11.76	12.91	1.25	10.76
1921	6.41	10.80	10.95		9.92
1922	5.38	8.55	8.24		7.91
1923	4.77	7.43	7.58		6.89
1924	4.89	7.56	7.98		7.02
1925	4.86	7.52	7.44		6.99
1926	4.29	6.58	6.19		6.12
1927	3.73	5.59	5.31		5.22
1928	3.41	5.06	4.88		4.73
1929	3.26	4.83	4.74		4.52
1930	3.16	4.67	4.59		4.37
1931	2.98	4.37	4.25		4.09
1932	2.78	4.04	3.96		3.79
1933	2.65	3.84	3.81		3.61
1934	2.64	3.81	3.85		3.58
1935	2.69	3.90	3.98		3.66
1936	2.83	4.09	4.30		3.84
1937	3.11	4.61	5.13		4.31
1938	3.36	5.08	5.45		4.73
1939	3.55	5.36	5.71		5.00
1940	3.81	5.74	6.29		5.36

Sources, Gjøølberg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

5.A.5 Road and railway construction

TABLE 5.A.5
Daily wages in road and railway construction

	Road construction			Railway construction		
	Piecework	Fixed contract	Mean	Piecework	Fixed contract	Mean
1850	1.52	1.15	1.43			
1851	1.33	1.01	1.25			
1852	1.41	1.07	1.33			
1853	1.52	1.15	1.43			
1854	1.65	1.25	1.55			1.95
1855	1.64	1.29	1.60			2.58
1856	1.66	1.40	1.64			2.50
1857	1.80	1.50	1.78			2.42
1858	1.59	1.27	1.58			2.30
1859	1.58	1.36	1.57			2.24
1860	1.65	1.37	1.63			2.18
1861	1.66	1.42	1.65			2.34
1862	1.63	1.48	1.62			2.43
1863	1.72	1.47	1.71			2.22
1864	1.67	1.41	1.65			2.29
1865	1.64	1.41	1.63			2.29
1866	1.62	1.46	1.61			2.25
1867	1.64	1.51	1.63			2.32
1868	1.69	1.52	1.68			2.28
1869	1.70	1.55	1.69			2.32
1870	1.67	1.55	1.67			2.37
1871	1.67	1.56	1.67			2.33
1872	1.89	1.75	1.88			2.51
1873	2.08	1.92	2.07	2.70	1.97	2.60
1874	2.46	2.15	2.45	3.27	2.20	3.16
1875	2.53	2.27	2.52	2.84	2.03	2.72
1876	2.34	2.27	2.34	2.86	2.01	2.73
1877	2.40	2.26	2.40	2.70	2.09	2.61
1878	2.17	1.98	2.17	2.48	2.06	2.42
1879	1.95	1.79	1.94	2.28	1.97	2.25
1880	2.05	1.85	2.04	2.14	1.84	2.10
1881	2.08	1.98	2.08	2.26	2.05	2.22
1882	2.17	2.02	2.17	2.32	2.26	2.31
1883	2.29	2.13	2.28	2.11		2.11
1884	2.36	2.20	2.36			
1885	2.32	2.18	2.32			
1886	2.33	2.16	2.32			
1887	2.25	2.06	2.24			
1888	2.32	2.11	2.31			
1889	2.45	2.21	2.44			
1890	2.67	2.26	2.65			
1891	2.89	2.37	2.86			
1892	2.93	2.39	2.90	3.08	2.32	3.05
1893	2.97	2.42	2.93	3.14	2.65	3.08

Sources, Alme 1993, 64-65, Wedervang Archive, W118, W119A, W120A, W245 and W249.

TABLE 5.A.5
Daily wages in road and railway construction

	Road construction			Railway construction		
	Piecework	Fixed contract	Mean	Piecework	Fixed contract	Mean
1894	2.99	2.47	2.95	3.27	3.01	3.23
1895	2.72	2.48	2.70	3.28	2.95	3.25
1896	3.03	2.54	2.98	3.62	3.00	3.51
1897	3.07	2.59	3.03	3.57	2.84	3.53
1898	3.25	2.68	3.19	3.75	2.97	3.65
1899	3.42	2.80	3.36	4.23	3.20	4.10
1900	3.38	2.83	3.32	3.97	3.22	3.88
1901	3.35	2.83	3.29	4.11	3.29	3.98
1902	3.20	2.79	3.15	4.19	3.24	4.03
1903	3.25	2.84	3.21	4.04	3.30	3.85
1904	3.26	2.86	3.22	4.38	3.24	4.15
1905	3.35	2.86	3.30	4.59	3.44	4.55
1906	3.37	2.88	3.32	4.75	3.74	4.71
1907	3.56	2.97	3.50	4.93	4.27	4.89
1908	3.70	3.12	3.64	4.65	3.96	4.60
1909	3.75	3.23	3.69	4.59	3.83	4.53
1910	3.89	3.32	3.83	4.34	3.44	4.28
1911	4.00	3.44	3.95	4.64	3.82	4.61
1912	4.18	3.65	4.13	4.90	3.86	4.83
1913	4.54	3.80	4.47	5.77	4.68	5.70
1914	4.68	4.04	4.61	6.28	4.99	6.18
1915	4.90	4.20	4.82	6.56	5.25	6.40
1916	5.31	5.09	5.29	7.70	6.17	7.38
1917	7.47	7.35	7.46	10.06	8.27	9.64
1918	8.48	9.85	8.63	13.49	10.73	12.71
1919	12.08	11.75	12.04	17.91	14.17	16.77
1920	15.52	13.66	15.32	21.78	16.02	19.54
1921	14.16	15.60	14.59	20.68	17.16	19.50
1922	11.60	12.16	11.77	16.64	13.58	15.95
1923	10.40	10.32	10.38	15.01	12.39	14.55
1924	10.88	10.24	10.69	15.38	12.60	14.96
1925	11.60	10.40	11.24	15.90	12.94	15.45
1926	10.32	10.32	10.32	13.88	11.81	13.60
1927	9.12	9.36	9.19	12.61	9.70	12.29
1928	8.48	8.00	8.34	12.36	9.61	12.08
1929	8.40	8.16	8.33	12.58	9.78	12.34
1930	8.32	7.76	8.15	12.71	9.72	12.50
1931	8.20	7.60	8.02	12.53	9.70	12.33
1932	7.92	7.52	7.80	11.69	9.34	11.52
1933	7.68	6.88	7.44	11.70	9.66	11.56
1934	7.84	6.96	7.58	12.09	9.34	11.94
1935	8.04	7.52	7.88	12.18	9.96	12.02
1936	8.32	7.04	7.94	12.65	10.09	12.47
1937	8.96	7.76	8.60	14.14	11.16	13.86
1938	9.60	8.24	9.19	14.83	11.89	14.53
1939	10.40	8.80	9.92	14.86	11.94	14.60
1940	10.80	9.04	10.27	14.79	11.55	14.29

Sources, Alme 1993, 64-65, Wedervang Archive, W118, W119A, W120A, W245 and W249.

5.A.6 Misc. Construction works

TABLE 5.A.6
Daily wages in misc. Construction works

	Cobblestone layers	Telegraph construction			Port construction		
		Piecework	Fixed contract	Mean	Fixed	Occasional workers	Mean
1895	3.21						
1896							
1897							
1898							
1899							
1900	3.55						
1901							
1902							
1903							
1904							
1905	3.96						
1906							
1907							
1908							
1909							
1910	4.13						
1911							
1912							
1913							
1914							
1915	5.22						
1916							
1917							
1918	10.16	1.52	1.22	13.01			
1919	12.64	2.05	1.52	16.30			
1920	14.96	2.57	1.81	19.04			
1921	16.56	2.26	1.56	16.68	12.08	9.44	10.76
1922	12.96	1.94	1.24	14.12	10.24	8.88	9.56
1923	13.44	1.94	1.27	14.18	10.00	8.48	9.24
1924	13.20	2.26	1.24	16.04	10.32	8.56	9.44
1925	14.16	1.79	1.27	13.28	10.24	8.88	9.56
1926	12.64	1.50	1.17	11.34	10.72	8.96	9.84
1927	11.52	1.13	1.09	8.96	9.84	8.56	9.20
1928	11.20	1.33	1.06	10.10	10.56	7.76	9.16
1929	11.12	1.07	1.02	8.46	10.08	7.60	8.84
1930	11.12	1.01	1.02	8.10	9.68	7.52	8.60
1931	10.96	0.94	0.99	7.62	9.52	7.36	8.44
1932	10.80	0.96	0.98	7.72	9.04	7.20	8.12
1933	10.72	1.08	1.05	8.58	8.96	6.96	7.96
1934	10.64	1.05	1.03	8.36	9.44	7.20	8.32
1935	10.64	1.13	1.03	8.84	9.28	6.96	8.12
1936	10.88	1.20	1.10	9.40	9.76	7.04	8.40
1937	11.68	1.28	1.17	10.02	9.92	8.80	9.36
1938	12.40	1.35	1.23	10.56	10.48	9.36	9.92

Sources, Hodne, Grytten and Alme 1995, 242-243, Statistics Norway, 1949, 365, Wedervang Archive, W245 and W249.

TABLE 5.A.6
Daily wages in misc. Construction works

	Cobblestone layers	Telegraph construction			Port construction		
		Piecework	Fixed contract	Mean	Fixed	Occasional workers	Mean
1939	12.40	1.39	1.31	10.96	11.36	9.36	10.36
1940	12.40	1.77	1.36	13.34	11.04	10.16	10.60

Sources, Hodne, Grytten and Alme 1995, 242-243, Statistics Norway, 1949, 365, Wedervang Archive, W245 and W249.

5.A.7 Construction

TABLE 5.A.7
Average daily wages in construction

	Road construction	Railway construction	Bricklayers	Telegraph construction	Port/Harbour construction	Total Repr mean
1850	1.43					1.43
1851	1.25					1.25
1852	1.33					1.33
1853	1.43					1.43
1854	1.55	2.19				1.65
1855	1.60	2.58				1.85
1856	1.64	2.50				1.85
1857	1.78	2.42				1.94
1858	1.58	2.30				1.76
1859	1.57	2.24				1.74
1860	1.63	2.18				1.77
1861	1.65	2.34				1.82
1862	1.62	2.43				1.82
1863	1.71	2.22				1.84
1864	1.65	2.29				1.81
1865	1.63	2.29				1.80
1866	1.61	2.25				1.77
1867	1.63	2.32				1.81
1868	1.68	2.28				1.83
1869	1.69	2.32				1.85
1870	1.67	2.37				1.84
1871	1.67	2.33				1.83
1872	1.88	2.51				2.04
1873	2.07	2.60				2.21
1874	2.45	3.16				2.63
1875	2.52	2.72				2.57
1876	2.34	2.73				2.44
1877	2.40	2.61				2.45
1878	2.17	2.42				2.23
1879	1.94	2.25				2.02
1880	2.04	2.10				2.06
1881	2.08	2.22				2.11
1882	2.17	2.31				2.20
1883	2.28	2.11				2.24
1884	2.36					2.36
1885	2.32					2.32
1886	2.32					2.32
1887	2.24					2.24
1888	2.31					2.31
1889	2.44					2.44
1890	2.65					2.65
1891	2.86					2.86
1892	2.90	3.05				2.94
1893	2.93	3.08				2.97

Sources, Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243, NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249.

TABLE 5.A.7
Average daily wages in construction

	Road construction	Railway construction	Bricklayers	Telegraph construction	Port/Harbour construction	Total Repr mean
1894	2.95	3.23				3.02
1895	2.70	3.25	3.21			2.84
1896	2.98	3.51				3.12
1897	3.03	3.53				3.15
1898	3.19	3.65				3.30
1899	3.36	4.10				3.55
1900	3.32	3.88	3.55			3.46
1901	3.29	3.98				3.46
1902	3.15	4.03				3.37
1903	3.21	3.85				3.37
1904	3.22	4.15				3.46
1905	3.30	4.55	3.96			3.61
1906	3.32	4.71				3.67
1907	3.50	4.89				3.84
1908	3.64	4.60				3.88
1909	3.69	4.53				3.90
1910	3.83	4.28	4.13			3.94
1911	3.95	4.61				4.11
1912	4.13	4.83				4.30
1913	4.47	5.70				4.78
1914	4.61	6.18				5.00
1915	4.82	6.40	5.22			5.22
1916	5.29	7.38				5.81
1917	7.46	9.64				8.00
1918	8.63	12.71	10.16	13.01		10.45
1919	12.04	16.77	12.64	16.30		13.95
1920	15.32	19.54	14.96	19.04		16.92
1921	14.59	19.50	16.56	16.68	10.76	15.98
1922	11.77	15.95	12.96	14.12	9.56	13.05
1923	10.38	14.55	13.44	14.18	9.24	12.00
1924	10.69	14.96	13.20	16.04	9.44	12.41
1925	11.24	15.45	14.16	13.28	9.56	12.68
1926	10.32	13.60	12.64	11.34	9.84	11.47
1927	9.19	12.29	11.52	8.96	9.20	10.23
1928	8.34	12.08	11.20	10.10	9.16	9.82
1929	8.33	12.34	11.12	8.46	8.84	9.73
1930	8.15	12.50	11.12	8.10	8.60	9.64
1931	8.02	12.33	10.96	7.62	8.44	9.46
1932	7.80	11.52	10.80	7.72	8.12	9.10
1933	7.44	11.56	10.72	8.58	7.96	8.99
1934	7.58	11.94	10.64	8.36	8.32	9.16
1935	7.88	12.02	10.64	8.84	8.12	9.36
1936	7.94	12.47	10.88	9.40	8.40	9.60
1937	8.60	13.86	11.68	10.02	9.36	10.49
1938	9.19	14.53	12.40	10.56	9.92	11.11
1939	9.92	14.60	12.40	10.96	10.36	11.55
1940	10.27	14.29	12.40	13.34	10.60	11.84

Sources, Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243, NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249.

5.A.8 Early manufacturing

TABLE 5.A.8
Daily wages in early manufacturing

	Wages incl board and lodging			Cash wages				Mean	Board and lodging	Total repr mean
	Furnace	Miners	Others	Skilled	Papermill	Sawmill	Others			
1726	0.21	0.23	0.13							0.20
1727										
1728										
1729										
1730										
1731	0.21	0.17	0.14							0.18
1732										
1733										
1734										
1735										
1736	0.22	0.19	0.15							0.19
1737										
1738										
1739										
1740										
1741	0.19	0.24	0.16							0.20
1742										
1743										
1744										
1745										
1746	0.22	0.25	0.17							0.22
1747										
1748										
1749										
1750										
1751	0.22	0.21	0.17							0.20
1752										
1753										
1754										
1755										
1756	0.23	0.21	0.18							0.21
1757										
1758										
1759										
1760										
1761	0.36	0.28	0.19							0.28
1762										
1763										
1764										
1765										
1766	0.33	0.31	0.23							0.30
1767										
1768										
1769										

Sources, Fløystad 1979, 595-596, Goksøyr 1982, Wedervang Archive, W046, W047, W048, W055, W074, W082 and W417.

TABLE 5.A.8
Daily wages in early manufacturing

	Wages incl board and lodging			Cash wages				Board and lodging	Total repr mean	
	Furnace	Miners	Others	Skilled	Papermill	Sawmill	Others			
1770										
1771	0.34	0.32	0.23						0.30	
1772										
1773										
1774										
1775										
1776	0.33	0.30	0.23						0.29	
1777										
1778										
1779										
1780										
1781	0.33	0.31	0.20						0.29	
1782										
1783										
1784										
1785										
1786	0.38	0.31	0.24						0.32	
1787										
1788										
1789										
1790										
1791	0.40	0.34	0.30						0.35	
1792										
1793										
1794										
1795										
1796	0.39	0.31	0.30						0.34	
1797										
1798										
1799										
1800										
1801	0.59	0.45	0.42						0.49	
1802										
1803										
1804										
1805										
1806	0.62	0.48	0.43						0.52	
.									.	
.									.	
.									.	
1820				1.00	0.67			0.83	1.22	2.05
1821				1.00	0.67			0.84	1.03	1.86
1822				1.00	0.72			0.86	1.34	2.20
1823				1.03	0.73			0.88	1.32	2.20
1824				1.01	0.70			0.85	1.05	1.90
1825				1.01	0.70			0.85	0.90	1.76

Sources, Fløystad 1979, 595-596, Goksøyr 1982, Wedervang Archive, W046, W047, W048, W055, W074, W082 and W417.

TABLE 5.A.8
Daily wages in early manufacturing

	Wages incl board and lodging			Cash wages				Mean	Board and lodging	Total repr mean
	Furnace	Miners	Others	Skilled	Papermill	Sawmill	Others			
1826				1.01	0.70			0.85	0.89	1.74
1827				1.03	0.75			0.89	1.11	2.00
1828				1.02	0.73			0.88	0.90	1.78
1829				1.02	0.73			0.88	0.88	1.76
1830				1.03	0.77			0.90	0.99	1.89
1831				1.07	0.80			0.93	1.15	2.09
1832				1.07	0.80			0.93	1.09	2.02
1833				1.07	0.80	0.67		0.90	0.93	1.83
1834				1.07	0.80	0.73	0.80	0.92	0.89	1.82
1835				1.07	0.83	0.73	0.87	0.94	0.94	1.88
1836				1.07	0.83	0.77	0.80	0.94	0.96	1.89
1837				1.07	0.83	0.80	0.80	0.94	0.98	1.92
1838				1.07	0.83	0.80	0.80	0.94	0.97	1.91
1839				1.07	0.83	0.97	0.87	0.98	1.10	2.07
1840				1.07	0.83		0.87	0.96	1.07	2.03
1841				1.07	0.83		0.90	0.97	0.92	1.89
1842				1.07	0.83		0.90	0.97	0.90	1.86
1843				1.07	0.83		0.90	0.97	0.89	1.85
1844				1.08	0.83		0.90	0.98	0.88	1.85
1845				1.10	0.83	0.93	0.87	0.99	0.91	1.89
1846				1.08	0.83	0.80	0.87	0.96	0.91	1.87
1847				1.07	0.83	1.07	0.90	1.00	1.16	2.16
1848				1.03	0.83		0.90	0.95	1.04	1.99
1849				1.07	0.83		0.90	0.97	1.00	1.97
1850				1.10	0.83		0.90	0.98	1.04	2.02
1851				1.13	0.83			0.98	1.04	2.02
1852					0.83			0.98	1.04	2.03
1853					0.83			0.98	1.07	2.05
1854					1.00			1.18	1.20	2.38
1855					1.00			1.18	1.26	2.44
1856					1.07			1.26	1.33	2.59
1857					1.07			1.26	1.38	2.64
1858					1.13			1.34	1.42	2.75
1859					1.13			1.34	1.33	2.67
1860					1.20			1.42	1.37	2.78

Sources, Fløystad 1979, 595-596, Goksøyr 1982, Wedervang Archive, W046, W047, W048, W055, W074, W082 and W417.

5.A.9 Mechanical (engineering) industry

TABLE 5.A.9
Daily wages in mechanical (engineering) industry

	Wage rates			Wage earnings			Others	Total Repr mean
	Skilled	Unskilled	All	Skilled	Unskilled	All		
1850							1.59	1.88
1851							1.67	1.98
1852							1.76	2.09
1853							1.85	2.19
1854							1.95	2.31
1855							2.42	2.87
1856							2.34	2.77
1857							2.28	2.70
1858							2.2	2.61
1859							2.23	2.64
1860							2.18	2.58
1861							2.34	2.77
1862							2.43	2.88
1863							2.22	2.63
1864							2.29	2.71
1865							2.29	2.71
1866							2.25	2.67
1867			2.75			2.75	2.32	2.75
1868			2.50			2.50	2.28	2.50
1869			2.63			2.63	2.32	2.63
1870			2.58			2.58	2.37	2.58
1871			2.56			2.56	2.33	2.56
1872			2.48			2.48	2.51	2.48
1873			2.70			2.70	2.37	2.70
1874			2.87			2.87	2.49	2.87
1875			3.00			3.00		3.00
1876			2.97			2.97		2.97
1877			2.93			2.93		2.93
1878			2.90			2.90		2.90
1879			2.87			2.87		2.87
1880			2.83			2.83		2.83
1881			2.81			2.81		2.81
1882			2.80			2.80		2.80
1883			2.78			2.78		2.78
1884			2.77			2.77		2.77
1885			2.75			2.75		2.75
1886			2.77			2.77		2.77
1887			2.86			2.86		2.86
1888			2.97			2.97		2.97
1889			3.00			3.00		3.00
1890			3.05			3.05		3.05
1891			3.25			3.25		3.25
1892			3.25			3.25		3.25
1893			3.00			3.00		3.00

Sources, Hodne, Grytten, Alme, 1995, 240-241, NOS 1918-1941, Petersen 1950, 670-671, Wedervang Archive, W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

TABLE 5.A.9
Daily wages in mechanical (engineering) industry

	Wage rates			Wage earnings			Others	Total Repr mean
	Skilled	Unskilled	All	Skilled	Unskilled	All		
1894			3.05			3.05		3.05
1895			3.05			3.05		3.05
1896			3.05			3.05		3.05
1897			3.35			3.35		3.35
1898			3.40			3.40		3.40
1899			3.40			3.40		3.40
1900			3.25			3.25		3.25
1901			3.25			3.25		3.25
1902			3.25			3.25		3.25
1903			3.30			3.30		3.30
1904			3.30			3.30		3.30
1905			3.30			3.30		3.30
1906			3.55			3.55		3.55
1907			3.80			3.80		3.80
1908			3.90			3.90		3.90
1909			3.90			3.90		3.90
1910	4.10	2.94	3.20			4.21		4.21
1911	4.20	3.06	3.20			4.28		4.28
1912	4.43	3.22	3.40			4.52		4.52
1913	4.62	3.50	3.60			4.79		4.79
1914	4.74	3.65	3.42			4.96		4.96
1915	4.41	3.42	3.04			4.63		4.63
1916	4.50	3.51	3.20			4.73		4.73
1917	6.57	5.49	4.88			7.74		7.74
1918	8.32	6.80	7.12			9.10		9.10
1919	13.20	11.04	11.28			14.60		14.60
1920	16.72	14.24	14.24	24.00	20.48	19.92		19.88
1921	16.64	13.92	14.24	21.52	18.16	18.40		18.4
1922	12.40	10.24	10.80	15.60	12.96	13.36		13.39
1923	11.84	9.68	10.24	14.40	11.92	12.64		12.67
1924	12.72	10.64	10.88	15.52	12.64	13.44		13.45
1925	13.68	11.60	11.76	17.84	15.76	15.36		15.37
1926	11.84	10.08	10.40	14.96	12.56	13.04		13.02
1927	10.08	8.56	8.80	12.08	10.24	10.48		10.44
1928	9.68	8.16	8.40	12.00	10.32	10.40		10.42
1929	9.60	8.00	8.32	12.08	10.08	10.32		10.34
1930	9.60	8.00	8.32	12.16	10.16	10.40		10.42
1931	9.20	7.84	8.08	10.96	9.20	9.68		9.65
1932	9.20	7.84	8.16	10.96	9.20	9.76		9.78
1933	9.12	7.68	8.16	10.88	8.88	9.76		9.74
1934	9.12	7.60	8.00	11.04	9.12	9.76		9.78
1935	9.12	7.52	7.92	11.28	9.12	9.84		9.82
1936	9.28	7.52	7.92	11.68	9.36	10.00		9.96
1937	10.08	8.32	8.56	13.04	10.48	10.96		10.94
1938	10.88	8.96	9.44	14.08	9.20	12.00		11.97
1939	10.96	8.96	9.44	14.32	11.52	12.24		12.26
1940	11.52	9.60	10.08	14.80	12.24	12.96		12.94

Sources, Hodne, Grytten, Alme, 1995, 240-241, NOS 1918-1941, Petersen 1950, 670-671, Wedervang Archive, W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

5.A.10 Textile industry

TABLE 5.A.10
Daily wages in textile industry

	Spinners		Prespinners Fixed	Twiners	Haspers	Weavers Piece- work	Chairmen	Male workers	Female workers		Total Repr mean
	Fixed	Piece- work							Fixed	Piece- work	
1850	0.67				1.05						0.82
1851	0.67				1.05						0.82
1852	0.70				1.07						0.85
1853	0.73				1.03						0.85
1854	0.73				1.13						0.89
1855	0.83				1.07						0.93
1856	1.10				1.13						1.11
1857	1.20				1.23						1.21
1858	1.13	1.13				1.04					1.11
1859	1.04	1.04				0.92					1.02
1860	1.10	1.08	1.13			0.91					1.05
1861	0.93	1.14	1.20		1.10	1.02					1.03
1862	0.77	1.07				1.06					1.01
1863	0.70	1.06	0.90	0.70	0.80	1.02					0.98
1864	0.87	1.22	0.97	0.90	0.87	0.98					1.04
1865	0.87	1.13	1.20	1.00	1.03	1.00					1.03
1866	1.07	1.27	1.07	1.10	1.03	0.98					1.09
1867	0.97	1.21	1.07	0.93	1.03	1.02					1.04
1868	0.60	1.15	1.00	1.00	1.00	0.90					0.91
1869	0.80	1.12	0.97	0.93	0.93	0.86					0.90
1870	1.00	1.19	0.93	1.03	1.10	0.83					0.95
1871	0.93	1.13	1.20	1.20	1.20	0.88					0.97
1872	0.97	1.32	1.13	1.20	1.13	1.11					1.13
1873	1.07	1.49	1.30	1.17	1.27	1.36					1.31
1874	1.10	1.65	1.33	1.23	1.30	1.42					1.39
1875	1.13	1.27	1.30	1.23	1.33	1.30	1.97	1.20			1.29
1876	1.17	1.36	1.33	1.20	1.40	1.25	1.90				1.28
1877	1.17	1.28	1.39	1.20	1.41	1.22	1.85				1.27
1878	1.18	1.25	1.38	1.16	1.39	1.39	2.15				1.30
1879	1.13	1.24	1.10		1.38	1.30	2.20				1.31
1880	1.05	1.25	1.14	1.10	1.25	1.29	2.25	1.25			1.31
1881	1.07	1.33	1.20		1.18	1.22	2.20				1.31
1882	1.05	1.26	1.23		1.21	1.17	2.15				1.30
1883	1.07	1.35	1.27		1.38	1.27	2.25				1.31
1884	1.09	1.28	1.26	1.08	1.40	1.18	2.20				1.31
1885	1.10	1.22	1.30	1.10	1.48	1.14	3.75	2.15	1.20	1.40	1.40
1886	1.10	1.25	1.32	1.10	1.39	1.06	3.75	2.10	1.20	1.40	1.38
1887	1.10	1.06	1.31	1.12	1.35	1.08	3.75	2.10	1.20	1.40	1.36
1888	1.06	1.16	1.15	1.22	1.24	1.11	3.75	2.10	1.20	1.40	1.35
1889	1.08	1.10	1.27	1.24	1.39	1.09	3.75	2.10	1.20	1.40	1.37
1890	1.12	1.12	1.29	1.29	1.37	1.18	3.75	2.20	1.20	1.40	1.40
1891	1.10	1.39	1.29	1.37	1.34	1.15	3.75	2.20	1.20	1.40	1.43
1892	1.12	1.26	1.37	1.33	1.34	1.08	3.75	2.20	1.20	1.35	1.41

Sources, NOS 1918-1941, Wedervang Archive, W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

TABLE 5.A.10
Daily wages in textile industry

	Spinners		Prespinners	Twiners	Haspers	Weavers	Chairmen	Male workers	Female workers		Total Repr mean
	Fixed	Piece-work	Fixed						Fixed	Piece-work	
1893	1.12	1.25	1.33	1.28	1.21	1.06	3.75	2.20	1.20	1.35	1.39
1894	1.12	1.29	1.20	1.18	1.39	1.12	3.75	2.20	1.20	1.35	1.39
1895	1.13	1.34	1.29	1.30	1.33	1.17	3.75	2.20	1.20	1.35	1.42
1896	1.11	1.35	1.44	1.48	1.34	1.10	3.75	2.20	1.20	1.35	1.44
1897	1.11	1.37	1.38	1.25	1.46	1.10	3.75	2.20	1.20	1.35	1.43
1898	1.20	1.38	1.40	1.50	1.54	1.29	4.00	2.50	1.50	1.63	1.59
1899	1.37	1.41	1.50	1.50	1.72	1.50	4.00	2.50	1.50	1.75	1.68
1900	1.39	1.52	1.33	1.34	1.60	1.22	4.00	2.50	1.50	1.75	1.62
1901	1.40	1.43	1.20	1.22	1.53	1.31	4.00	2.50	1.50	1.75	1.58
1902	1.34	1.60	1.19	1.01	1.32	1.26	4.45	2.75	1.50	1.75	1.59
1903	1.31	1.64	1.33	1.08	1.44	1.25	4.45	2.75	1.50	1.75	1.63
1904	1.31	1.64	1.18	1.03	1.74	1.23	4.45	2.75	1.50	1.75	1.64
1905	1.32	1.58	1.58	1.23	1.88	1.26	4.45	2.75	1.50	1.75	1.71
1906	1.35	1.61	1.77	1.44	1.89	1.39	4.45	2.75	1.50	1.75	1.77
1907	1.33	1.65	1.78	1.44	1.82	1.52	5.25	3.00	1.75	2.13	1.90
1908		1.65				1.61	5.25	3.00	1.90	2.38	2.19
1909		1.67				1.81	5.25	3.00	1.90	2.38	2.23
1910		1.70				1.86					2.30

Sources, NOS 1918-1941, Wedervang Archive, W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

5.A.11 Interwar manufacturing industry

TABLE 5.A.11
Daily wages in interwar manufacturing industry

	Mining Miners	Pulp and paper industry			Sawmill industry			All manufacturing industry			
		Chemical pulp	Mechanical pulp	Papermills	Skilled	Unskilled	Others	Export	Other	All	
1914								4.66	4.57	4.62	
1915										5.18	
1916										5.77	
1917										7.84	
1918								10.46		11.68	
1919								14.13	15.30	14.06	
1920			19.95	18.87	18.19			18.40	17.76	18.08	
1921	16.48		14.97	15.01	14.69	14.49	13.17	15.34	19.06	18.10	18.58
1922	13.28		13.16	13.26	12.94	12.92	11.88	13.66	14.42	13.71	14.07
1923			13.75	13.67	12.8	12.36	11.42	12.99	12.90	13.26	13.10
1924			14.9	14.97	14.03	12.98	11.99	13.65	13.96	14.34	14.15
1925			14.94	14.77	14.17	13.21	12.08	13.92	14.52	15.90	15.21
1926	12.32		12.4	12.24	11.92	13.75	11.42	12.63	13.74	14.34	14.04
1927	10.8		10.6	10.29	10.12	11.03	10.17	11.08	11.78	12.56	12.17
1928	10.16		10.28	9.86	9.87	11.25	9.83	10.58	11.57	11.54	11.56
1929	10.4		10.46	9.94	9.82	11.14	9.59	10.6	11.59	11.59	11.59
1930			10.54	9.79	9.79	10.92	9.93	10.58	11.51	11.66	11.59
1931			9.66	9.02	9.22	9.86	9.23	9.95	11.21	10.89	11.05
1932			9.66	9.02	9.22				11.10	11.17	11.14
1933			9.86	8.88	9.22				11.05	11.07	11.06
1934			9.86	8.88	9.22				10.83	11.20	11.02
1935			9.83	8.52	9.2				10.78	11.22	11.00
1936			10.14	9.67	9.38				11.08	11.53	11.31
1937					11.68				11.79	12.46	12.13
1938					11.44				12.91	13.67	13.29
1939					11.68				12.95	13.91	13.43
1940					12.35				13.65	15.27	14.46

Sources, NOS 1918-1941, NOS 1949, 364-365.

5.A.12 Misc manufacturing industry

TABLE 5.A.12
Daily wages in misc manufacturing industry

	Iron foundry		Brickworks		Tobacco ind Skilled	Destilleries Workers	Others	Total Repr mean
	Casters	Ord workers	Furnace workers	Stone workers				
1850							1.59	1.43
1851							1.67	1.51
1852							1.76	1.59
1853							1.85	1.67
1854							1.95	1.76
1855							2.42	2.18
1856							2.34	2.11
1857							2.28	2.06
1858							2.2	1.98
1859						1.07	2.23	2.01
1860						1.06	2.18	1.99
1861						1.05	2.34	1.97
1862						1.04	2.43	1.96
1863						0.99	2.22	1.86
1864						0.94	2.29	1.77
1865						0.96	2.29	1.81
1866						0.97	2.25	1.82
1867						1.04	2.32	1.96
1868						1.04	2.28	1.96
1869						0.98	2.32	1.84
1870						1.00	2.37	1.88
1871						1.01	2.33	1.90
1872						1.15	2.51	2.16
1873						1.30	2.37	2.44
1874						1.37	2.49	2.58
1875	3.00	2.67	3.00	3.00	3.60	1.42	2.00	2.67
1876	3.45	2.64			3.49	1.38		2.74
1877	3.30	2.61			3.39	1.35		2.66
1878	3.16	2.59			3.29	1.27		2.58
1879	3.02	2.56			3.19	1.20		2.49
1880	2.83	2.51	2.83	2.83	3.08	1.21	1.87	2.45
1881	2.81	2.51			3.26	1.23		2.45
1882	2.80	2.50			3.46	1.29		2.51
1883	2.78	2.49			3.67	1.31		2.56
1884	2.76	2.49			3.88	1.30		2.61
1885	2.75	2.48	2.80	2.80	4.00	1.30	1.85	2.57
1886	2.63	2.59	3.00	2.88	3.75	1.30	1.90	2.58
1887	2.54	2.59	3.00	2.88	3.75	1.27	1.90	2.56
1888	2.68	2.59	3.00	2.88	3.75	1.29	1.90	2.58
1889	2.68	2.59	3.00	2.88	4.25	1.30	1.90	2.66
1890	2.94	2.93	3.25	3.30	4.00	1.32	2.25	2.86
1891	3.19	3.12	3.50	3.48	4.00	1.39	2.38	3.01
1892	3.19	2.67	3.00	3.00	4.00	1.44	2.00	2.76
1893	3.10	2.67	3.00	3.00	4.00	1.44	2.00	2.74
1894	3.10	2.82	3.25	3.20	3.30	1.44	2.00	2.73
1895	3.16	2.82	3.25	3.20	3.30	1.44	2.00	2.74
1896	3.10	2.82	3.25	3.20	3.27	1.44	2.00	2.73

TABLE 5.A.12
Daily wages in misc manufacturing industry

	Iron foundry		Brickworks		Tobacco ind	Distilleries	Others	Total
	Casters	Ord workers	Furnace workers	Stone workers	Skilled	Workers		Repr mean
1897	3.35	3.27	3.50	4.00	3.27	1.49	2.30	3.03
1898	3.39	3.33	3.50	4.00	3.78	1.54	2.50	3.15
1899	3.39	3.42	3.50	4.00	3.50	1.54	2.75	3.16
1900	3.29	3.21	3.13	3.50	3.25	1.54	3.00	2.99
1901	3.25	3.42	3.25	4.00	3.63	1.54	3.00	3.16
1902	3.25	3.33	3.25	4.00	3.63	1.54	2.75	3.11
1903	3.30	3.03	3.10	3.50	3.75	1.56	2.50	2.96
1904	3.48	3.03	3.10	3.50	3.75	1.58	2.50	2.99
1905	3.90	3.03	3.10	3.50	3.75	1.58	2.50	3.05
1906	4.05	3.03	3.10	3.50	3.75	1.58	2.50	3.07
1907	4.20	3.03	3.10	3.50	3.75	1.73	2.50	3.12
1908	4.30	3.33	3.25	4.25	3.75	1.88	2.50	3.32
1909	4.50	3.42	3.25	4.25	3.75	1.88	2.75	3.40
1910	4.65	3.55			3.55			3.52

5.A.13 Manufacturing

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1726	0.20				0.20
1727					
1728					
1729					
1730					
1731	0.18				0.18
1732					
1733					
1734					
1735					
1736	0.19				0.19
1737					
1738					
1739					
1740					
1741	0.20				0.20
1742					
1743					
1744					
1745					
1746	0.22				0.22
1747					
1748					
1749					
1750					
1751	0.20				0.20
1752					
1753					
1754					
1755					
1756	0.21				0.21
1757					
1758					
1759					
1760					
1761	0.28				0.28
1762					
1763					

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243, NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249, Manufacturing: Fløystad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167, Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950, 670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072, W074, W074, W080, W081, W082, W121, W284 and W417, Crafts: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1764					
1765					
1766	0.30				0.30
1767					
1768					
1769					
1770					
1771	0.30				0.30
1772					
1773					
1774					
1775					
1776	0.29				0.29
1777					
1778					
1779					
1780					
1781	0.29				0.29
1782					
1783					
1784					
1785					
1786	0.32				0.32
1787					
1788					
1789					
1790					
1791	0.35				0.35
1792					
1793					
1794					
1795					
1796	0.34				0.34
1797					
1798					
1799					
1800					
1801	0.49				0.49
1802					
1803					
1804					

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243,
NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249,
Manufacturing: Fløystad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167,
Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950,
670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072,
W074, W074, W080, W081, W082, W121, W284 and W417,
Crafts: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941,
NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1805					
1806	0.52				0.52
.					.
.					.
1820	2.05				1.82
1821	1.86				1.65
1822	2.20				1.95
1823	2.20				1.95
1824	1.90				1.69
1825	1.76				1.56
1826	1.74				1.54
1827	2.00				1.77
1828	1.78				1.58
1829	1.76				1.56
1830	1.89				1.68
1831	2.09				1.85
1832	2.02				1.79
1833	1.83				1.63
1834	1.82				1.61
1835	1.88				1.67
1836	1.89				1.68
1837	1.92				1.70
1838	1.91				1.69
1839	2.07				1.84
1840	2.03				1.80
1841	1.89				1.67
1842	1.86				1.65
1843	1.85				1.64
1844	1.85				1.64
1845	1.89				1.68
1846	1.87				1.66
1847	2.16				1.91
1848	1.99				1.76
1849	1.97				1.74
1850	2.02	1.88	0.82	1.59	1.70
1851	2.02	1.98	0.82	1.67	1.71
1852	2.03	2.09	0.85	1.76	1.74
1853	2.05	2.19	0.85	1.85	1.78
1854	2.38	2.31	0.89	1.95	1.99

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243,
NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249,
Manufacturing: Fløystad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167,
Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950,
670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072,
W074, W074, W080, W081, W082, W121, W284 and W417,
Crafts: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941,
NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1855	2.44	2.87	0.93	2.42	2.13
1856	2.59	2.77	1.11	2.34	2.26
1857	2.64	2.70	1.21	2.28	2.31
1858	2.75	2.61	1.11	2.20	2.32
1859	2.67	2.64	1.02	2.01	2.22
1860	2.78	2.58	1.05	1.99	2.22
1861		2.77	1.03	1.97	2.28
1862		2.88	1.01	1.96	2.36
1863		2.63	0.98	1.86	2.16
1864		2.71	1.04	1.77	2.23
1865		2.71	1.03	1.81	2.23
1866		2.67	1.09	1.82	2.19
1867		2.75	1.04	1.96	2.24
1868		2.50	0.91	1.96	2.11
1869		2.63	0.90	1.84	2.17
1870		2.58	0.95	1.88	2.18
1871		2.56	0.97	1.90	2.15
1872		2.48	1.13	2.16	2.22
1873		2.70	1.31	2.44	2.29
1874		2.87	1.39	2.58	2.42
1875		3.00	1.29	2.67	2.54
1876		2.97	1.28	2.74	2.56
1877		2.93	1.27	2.66	2.51
1878		2.90	1.30	2.58	2.46
1879		2.87	1.31	2.49	2.41
1880		2.83	1.31	2.45	2.35
1881		2.81	1.31	2.45	2.37
1882		2.80	1.30	2.51	2.39
1883		2.78	1.31	2.56	2.41
1884		2.77	1.31	2.61	2.43
1885		2.75	1.40	2.57	2.45
1886		2.77	1.38	2.58	2.42
1887		2.86	1.36	2.56	2.43
1888		2.97	1.35	2.58	2.49
1889		3.00	1.37	2.66	2.57
1890		3.05	1.40	2.86	2.63
1891		3.25	1.43	3.01	2.77
1892		3.25	1.41	2.76	2.72
1893		3.00	1.39	2.74	2.62
1894		3.05	1.39	2.73	2.57
1895		3.05	1.42	2.74	2.58

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243,
 NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249,
 Manufacturing: Fløystad 1979, 595-596, Goksoyr 1982, Grytten 1992, 159-167,
 Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950,
 670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072,
 W074, W074, W080, W081, W082, W121, W284 and W417,
 Crafts: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941,
 NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1896		3.05	1.44	2.73	2.57
1897		3.35	1.43	3.03	2.76
1898		3.40	1.59	3.15	2.89
1899		3.40	1.68	3.16	2.88
1900		3.25	1.62	2.99	2.75
1901		3.25	1.58	3.16	2.81
1902		3.25	1.59	3.11	2.80
1903		3.30	1.63	2.96	2.81
1904		3.30	1.64	2.99	2.84
1905		3.30	1.71	3.05	2.90
1906		3.55	1.77	3.07	3.01
1907		3.80	1.90	3.12	3.15
1908		3.90	2.19	3.32	3.30
1909		3.90	2.23	3.40	3.34
1910		4.21	2.30	3.52	3.73
1911		4.28			3.81
1912		4.52			4.06
1913		4.79			4.36
1914		4.96		4.62	4.72
1915		4.63		5.18	5.02
1916		4.73		5.77	5.46
1917		7.74		7.84	7.81
1918		9.10		11.68	10.91
1919		14.60		14.06	14.22
1920		19.88		18.08	18.62
1921		18.4		18.58	18.53
1922		13.39		14.07	13.87
1923		12.67		13.10	12.97
1924		13.45		14.15	13.94
1925		15.37		15.21	15.26
1926		13.02		14.04	13.73
1927		10.44		12.17	11.65
1928		10.42		11.56	11.22
1929		10.34		11.59	11.22
1930		10.42		11.59	11.24
1931		9.65		11.05	10.63
1932		9.78		11.14	10.73
1933		9.74		11.06	10.66
1934		9.78		11.02	10.64
1935		9.82		11.00	10.65
1936		9.96		11.31	10.90

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243,
NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249,
Manufacturing: Fløystad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167,
Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950,
670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072,
W074, W074, W080, W081, W082, W121, W284 and W417,
Crafts: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941,
NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1937		10.94		12.13	11.77
1938		11.97		13.29	12.89
1939		12.26		13.43	13.08
1940		12.94		14.46	14.00

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243, NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249, Manufacturing: Fløyestad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167, Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950, 670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072, W074, W074, W080, W081, W082, W121, W284 and W417, Crafts: Fløyestad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

5.A.14 Small-scale crafts (artisans)

TABLE 5.A.14
Daily wages in small-scale crafts (artisans)

	Painters	Bricklayers		Joiners	Bakers	Shoemakers	Tailors	Total Repr mean
		Skilled	Unskilled					
1833		2.43						2.43
1834		2.41						2.41
1835		2.46						2.46
1836		2.66						2.66
1837		2.67						2.67
1838		2.50						2.50
1839		2.71						2.71
1840		2.65						2.65
1841		2.51						2.51
1842		2.48						2.48
1843		2.48						2.48
1844		2.46						2.46
1845		2.63						2.63
1846		2.38						2.38
1847		2.55						2.55
1848		2.42						2.42
1849		2.38						2.38
1850		2.35						2.35
1851		2.37						2.37
1852		2.44						2.44
1853		2.51						2.51
1854		2.65						2.65
1855		2.80						2.80
1856		3.00						3.00
1857		2.80						2.80
1858		2.65						2.65
1859		2.73						2.73
1860		2.79						2.79
1861		2.90						2.90
1862		2.88						2.88
1863		2.81						2.81
1864		2.80						2.80
1865		2.83						2.83
1866		3.00						3.00
1867		3.06						3.06
1868								
1869								
1870								
1871								
1872								
1873								
1874								
1875	3.60	4.30		3.67	2.25	3.13	3.50	3.45
1876	3.30	4.16		3.49	2.25	2.88	3.30	3.27

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.14
Daily wages in small-scale crafts (artisans)

	Painters	Bricklayers		Joiners	Bakers	Shoemakers	Tailors	Total Repr mean
		Skilled	Unskilled					
1877	3.03	4.02		3.14	2.25	2.63	3.10	3.04
1878	2.77	3.88		2.80	2.25	2.38	2.90	2.83
1879	2.54	3.75		2.45	2.25	2.13	2.70	2.62
1880	2.10	3.58		2.13	2.25	1.88	2.50	2.36
1881	2.23	3.51		2.30	2.25	1.93	2.60	2.44
1882	2.37	3.45		2.35	2.25	1.98	2.70	2.49
1883	2.51	3.39		2.40	2.25	2.03	2.80	2.55
1884	2.67	3.32		2.45	2.25	2.08	2.90	2.60
1885	2.75	3.25		2.25	2.25	2.13	3.00	2.58
1886	2.75	3.00		2.25	2.60	2.00	2.75	2.54
1887	2.75	3.00		2.25	2.66	2.00	2.75	2.55
1888	2.75	3.23		2.44	2.66	2.00	2.75	2.63
1889	2.88	3.29		2.48	2.66	2.13	2.75	2.69
1890	3.13	3.50		2.65	2.97	2.40	2.75	2.89
1891	3.13	3.50		2.78	3.00	2.50	2.75	2.94
1892	3.13	3.50		2.78	3.00	2.50	3.00	2.98
1893	3.50	3.75		3.00	3.00	2.55	3.00	3.15
1894	4.00	4.25		3.00	3.00	2.55	3.25	3.35
1895	4.00	4.25		3.00	3.25	2.50	3.25	3.38
1896	4.00	4.50		3.13	3.58	2.75	3.25	3.53
1897	4.50	5.23		3.58	3.84	3.00	3.50	3.94
1898	4.50	5.23		3.84	3.79	3.00	3.50	4.00
1899	4.50	5.13		3.78	3.71	3.44	3.75	4.05
1900	4.38	4.75		3.78	3.67	3.28	3.67	3.94
1901	4.25	4.40		3.76	3.50	3.17	3.92	3.86
1902	4.00	4.40		3.71	3.67	3.17	4.17	3.85
1903	4.00	4.15		3.71	3.67	3.17	4.17	3.82
1904	4.00	4.70		3.68	3.67	3.17	4.17	3.89
1905	4.25	4.25		3.58	3.67	3.17	4.17	3.85
1906	4.25	4.63		3.71	3.75	3.38	4.17	3.97
1907	4.75	5.50		4.17	3.75	3.38	4.17	4.31
1908	5.25	5.50		4.50	4.33	3.67	4.25	4.62
1909	5.75	5.75		4.75	4.33	4.00	4.25	4.86
1910	6.00	5.75		4.75	4.33	4.36	4.25	4.96
1911								
1912								
1913								
1914								
1915	7.15	7.19	6.51	5.49	5.67	5.53	5.42	6.08
1916								
1917								
1918	11.54	12.73	11.30	12.85	10.35	11.19	12.61	11.88
1919	14.80	16.10	15.30	15.70	12.90	12.20	14.30	14.54
1920	17.17	17.67	16.50	17.17	17.17	18.67	16.83	17.30
1921	17.00	17.67	16.67	16.50	15.83	16.00	16.33	16.55
1922	13.00	13.50	12.50	12.83	13.00	13.83	12.33	12.98
1923	12.50	13.00	12.00	12.33	12.50	13.17	11.83	12.46

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.14
Daily wages in small-scale crafts (artisans)

	Painters	Bricklayers		Joiners	Bakers	Shoemakers	Tailors	Total Repr mean
		Skilled	Unskilled					
1924	14.00	15.00	13.50	14.00	12.00	13.50	13.33	13.64
1925	15.00	16.00	14.50	14.83	12.50	14.33	14.00	14.47
1926	13.67	14.17	13.00	13.17	11.33	12.50	12.33	12.91
1927	12.50	13.00	11.83	12.17	9.67	11.67	11.50	11.80
1928	11.83	12.17	11.00	11.33	9.50	10.33	10.67	11.02
1929	12.00	12.33	11.17	11.67	9.50	10.33	11.00	11.20
1930	12.00	12.33	11.17	11.50	9.33	10.50	11.00	11.16
1931	11.83	12.17	11.00	11.33	9.17	10.33	10.83	11.00
1932	11.67	12.17	11.00	11.33	9.17	10.33	10.83	10.97
1933	11.83	12.17	11.00	11.33	9.17	10.33	10.83	11.00
1934	11.67	12.17	11.00	11.33	9.17	10.33	10.83	10.97
1935	11.83	12.33	11.00	11.50	9.17	10.33	10.83	11.05
1936	11.83	12.33	11.00	11.50	9.17	10.33	10.83	11.05
1937	13.00	13.50	12.50	12.67	9.83	11.17	12.17	12.17
1938	14.00	14.33	13.50	13.67	10.33	11.67	13.33	13.04
1939	14.00	14.33	13.50	13.83	10.33	11.83	13.33	13.10
1940	14.00	14.33	13.50	13.99	10.33	11.99	13.33	13.16

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

5.A.15 Large scale crafts

TABLE 5.A.15
Daily wages in large scale crafts

	Iron crafters Skilled	Iron crafters Unskilled	Others	Masons Summer	Masons Winter	Carpenters Summer	Carpenters Winter	All types	Total Repr mean
1726	0.28	0.19	0.21						0.24
1727									
1728									
1729									
1730									
1731	0.31	0.21	0.18						0.24
1732									
1733									
1734									
1735									
1736	0.34	0.25	0.24						0.28
1737									
1738									
1739									
1740									
1741	0.37	0.24	0.26						0.29
1742									
1743									
1744									
1745									
1746	0.47	0.31	0.29						0.35
1747									
1748									
1749									
1750									
1751	0.57	0.25	0.28						0.35
1752									
1753									
1754									
1755									
1756	0.58	0.29	0.29						0.38
1757									
1758									
1759									
1760									
1761	0.83	0.46	0.37						0.54
1762									
1763									
1764									
1765									
1766	0.74	0.41	0.37						0.50
1767									
1768									
1769									

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.15
Daily wages in large scale crafts

	Iron crafters Skilled	Iron crafters Unskilled	Others	Masons Summer	Masons Winter	Carpenters Summer	Carpenters Winter	All types	Total Repr mean
1770									
1771	0.83	0.49	0.37						0.55
1772									
1773									
1774									
1775									
1776	0.99	0.38	0.38						0.50
1777									
1778									
1779									
1780									
1781	0.83	0.41	0.37						0.53
1782									
1783									
1784									
1785									
1786	0.89	0.44	0.39						0.56
1787									
1788									
1789									
1790									
1791	0.87	0.44	0.42						0.54
1792									
1793									
1794									
1795									
1796	0.80	0.43	0.38						0.53
1797									
1798									
1799									
1800									
1801	1.13	0.69	0.55						0.77
1802									
1803									
1804									
1805									
1806	0.98	0.60	0.56						0.70
.									.
.									.
.									.
1820								2.68	2.68
1821								2.51	2.51
1822								2.72	2.72
1823								2.70	2.70
1824								2.56	2.56
1825								2.42	2.42

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.15
Daily wages in large scale crafts

	Iron crafters Skilled	Iron crafters Unskilled	Others	Masons Summer	Masons Winter	Carpenters Summer	Carpenters Winter	All types	Total Repr mean
1826								2.40	2.40
1827								2.55	2.55
1828								2.41	2.41
1829								2.40	2.40
1830								2.50	2.50
1831								2.64	2.64
1832								2.56	2.56
1833								2.33	2.33
.									.
.									.
.									.
1867								2.24	2.82
1868								2.11	2.65
1869								2.17	2.73
1870								2.18	2.74
1871								2.15	2.71
1872								2.22	2.80
1873								2.29	2.88
1874								2.42	3.05
1875						3.20		2.54	3.20
1876						3.06			3.06
1877						3.00			3.00
1878						2.94			2.94
1879						2.90			2.90
1880						2.85			2.85
1881						2.60			2.60
1882						2.45			2.45
1883						2.30			2.30
1884						2.33			2.33
1885						2.35			2.35
1886						2.17			2.17
1887						2.17			2.17
1888						2.42			2.42
1889						2.52			2.52
1890						2.96			2.96
1891						2.96			2.96
1892						2.86			2.86
1893						2.86			2.86
1894						2.80			2.80
1895						2.80			2.80
1896						2.80			2.80
1897						3.15			3.15
1898						3.60			3.60
1899						3.60			3.60
1900						3.50			3.50
1901						3.50			3.50

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.15
Daily wages in large scale crafts

	Iron crafters Skilled	Iron crafters Unskilled	Others	Masons Summer	Masons Winter	Carpenters Summer	Carpenters Winter	All types	Total Repr mean
1902						3.50			3.50
1903						3.15			3.15
1904						3.10			3.10
1905						3.20			3.20
1906						3.40			3.40
1907						3.60			3.60
1908						3.70			3.70
1909						3.70			3.70
1910						3.80		4.10	3.80
1911								4.20	3.89
1912								4.43	4.11
1913								4.62	4.28
1914								4.77	4.42
1915				4.88	4.26	4.81	4.26		4.61
1916				6.56	5.10	6.43	5.09		5.94
1917				9.38	7.22	9.23	7.24		8.48
1918				12.59	9.87	12.41	9.96	12.65	12.07
1919				14.91	12.20	14.72	12.19	17.46	15.88
1920				16.07	13.71	16.14	13.71	19.72	17.80
1921				12.86	12.69	13.29	12.83	19.39	16.80
1922				10.36	10.15	10.53	10.27	14.94	13.10
1923				9.81	9.16	9.99	9.28	14.54	12.55
1924				10.44	9.31	10.62	9.54	15.95	13.56
1925				9.89	8.96	10.10	9.20	17.10	14.08
1926				8.30	7.98	8.58	8.23	15.44	12.57
1927				7.27	6.94	7.53	7.20	14.54	11.62
1928				6.85	6.35	7.11	6.54	13.66	10.88
1929				6.70	6.05	6.93	6.20	13.88	10.92
1930				6.40	5.80	6.65	6.02	14.01	10.89
1931				5.93	5.50	6.10	5.71	13.33	10.32
1932				5.60	5.14	5.88	5.34	14.09	10.65
1933				5.44	4.93	5.65	5.13	13.70	10.34
1934				5.44	4.87	5.79	5.06	13.50	10.22
1935				5.56	4.94	5.79	5.14	13.62	10.32
1936				5.88	5.19	6.15	5.42	14.58	11.01
1937				6.77	5.78	7.04	6.07	15.57	11.91
1938				7.07	6.33	7.34	6.62	17.30	13.12
1939				7.59	6.73	7.92	7.04	17.65	13.52
1940				7.97	7.02	8.32	7.35	17.51	13.57

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

5.A.16 Crafts

TABLE 5.A.16
Average daily wages in crafts

	Small scale	Large scale	Others	Total Repr mean
1726		0.24		0.24
1727				
1728				
1729				
1730				
1731		0.24		0.24
1732				
1733				
1734				
1735				
1736		0.28		0.28
1737				
1738				
1739				
1740				
1741		0.29		0.29
1742				
1743				
1744				
1745				
1746		0.35		0.35
1747				
1748				
1749				
1750				
1751		0.35		0.35
1752				
1753				
1754				
1755				
1756		0.38		0.38
1757				
1758				
1759				
1760				
1761		0.54		0.54
1762				
1763				
1764				
1765				
1766		0.50		0.50
1767				
1768				
1769				

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241,
NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.16
Average daily wages in crafts

	Small scale	Large scale	Others	Total Repr mean
1770				
1771		0.55		0.55
1772				
1773				
1774				
1775				
1776		0.50		0.50
1777				
1778				
1779				
1780				
1781		0.53		0.53
1782				
1783				
1784				
1785				
1786		0.56		0.56
1787				
1788				
1789				
1790				
1791		0.54		0.54
1792				
1793				
1794				
1795				
1796		0.53		0.53
1797				
1798				
1799				
1800				
1801		0.77		0.77
1802				
1803				
1804				
1805				
1806		0.70		0.70
.				.
.				.
.				.
1820			2.68	2.68
1821			2.51	2.51
1822			2.72	2.72
1823			2.70	2.70
1824			2.56	2.56
1825			2.42	2.42

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241,
NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.16
Average daily wages in crafts

	Small scale	Large scale	Others	Total Repr mean
1826			2.40	2.40
1827			2.55	2.55
1828			2.41	2.41
1829			2.40	2.40
1830			2.50	2.50
1831			2.64	2.64
1832			2.56	2.56
1833	2.43		2.33	2.33
1834	2.41			2.31
1835	2.46			2.37
1836	2.66			2.56
1837	2.67			2.57
1838	2.50			2.40
1839	2.71			2.60
1840	2.65			2.55
1841	2.51			2.42
1842	2.48			2.38
1843	2.48			2.38
1844	2.46			2.36
1845	2.63			2.52
1846	2.38			2.29
1847	2.55			2.45
1848	2.42			2.32
1849	2.38			2.29
1850	2.35			2.26
1851	2.37			2.28
1852	2.44			2.34
1853	2.51			2.41
1854	2.65			2.55
1855	2.80			2.69
1856	3.00			2.88
1857	2.80			2.69
1858	2.65			2.55
1859	2.73			2.63
1860	2.79			2.68
1861	2.90			2.79
1862	2.88			2.77
1863	2.81			2.70
1864	2.80			2.69
1865	2.83			2.72
1866	3.00			2.88
1867	3.06	2.82	2.24	2.94
1868		2.65	2.11	2.77
1869		2.73	2.17	2.85
1870		2.74	2.18	2.86
1871		2.71	2.15	2.83
1872		2.80	2.22	2.92

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241,
NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.16
Average daily wages in crafts

	Small scale	Large scale	Others	Total Repr mean
1873		2.88	2.29	3.01
1874		3.05	2.42	3.18
1875	3.45	3.20	2.54	3.29
1876	3.27	3.06		3.15
1877	3.04	3.00		3.03
1878	2.83	2.94		2.87
1879	2.62	2.90		2.73
1880	2.36	2.85		2.60
1881	2.44	2.60		2.54
1882	2.49	2.45		2.47
1883	2.55	2.30		2.44
1884	2.60	2.33		2.48
1885	2.58	2.35		2.48
1886	2.54	2.17		2.37
1887	2.55	2.17		2.38
1888	2.63	2.42		2.27
1889	2.69	2.52		2.60
1890	2.89	2.96		2.93
1891	2.94	2.96		2.95
1892	2.98	2.86		2.92
1893	3.15	2.86		3.02
1894	3.35	2.80		3.10
1895	3.38	2.80		3.12
1896	3.53	2.80		3.20
1897	3.94	3.15		3.51
1898	4.00	3.60		3.78
1899	4.05	3.60		3.80
1900	3.94	3.50		3.70
1901	3.86	3.50		3.68
1902	3.85	3.50		3.67
1903	3.82	3.15		3.57
1904	3.89	3.10		3.58
1905	3.85	3.20		3.60
1906	3.97	3.40		3.75
1907	4.31	3.60		3.99
1908	4.62	3.70		4.21
1909	4.86	3.70		4.34
1910	4.96	3.80	4.10	4.46
1911		3.89	4.20	4.96
1912		4.11	4.43	5.20
1913		4.28	4.62	5.31
1914		4.42	4.77	5.44
1915	6.08	4.61		5.63
1916		5.94		6.08
1917		8.48		8.68
1918	11.88	12.07	12.65	12.30
1919	14.54	15.88	17.46	16.27

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241,
NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.16
Average daily wages in crafts

	Small scale	Large scale	Others	Total Repr mean
1920	17.30	17.80	19.72	18.61
1921	16.55	16.80	19.39	18.02
1922	12.98	13.10	14.94	13.98
1923	12.46	12.55	14.54	13.52
1924	13.64	13.56	15.95	14.78
1925	14.47	14.08	17.10	15.71
1926	12.91	12.57	15.44	14.11
1927	11.80	11.62	14.54	13.13
1928	11.02	10.88	13.66	12.31
1929	11.20	10.92	13.88	12.48
1930	11.16	10.89	14.01	12.53
1931	11.00	10.32	13.33	12.03
1932	10.97	10.65	14.09	12.46
1933	11.00	10.34	13.70	12.22
1934	10.97	10.22	13.50	12.08
1935	11.05	10.32	13.62	12.19
1936	11.05	11.01	14.58	12.81
1937	12.17	11.91	15.57	13.82
1938	13.04	13.12	17.30	15.19
1939	13.10	13.52	17.65	15.46
1940	13.16	13.57	17.51	15.42

Sources: Fløyestad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241,
NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

5.A.17 Communications

TABLE 5.A.17
Average daily wages in communications

	Railway staff	Drivers excl horse	Road work incl horse	Forrestry incl horse	Piece- work	Telegraph Fixed	Mean	Fixed	Port authorities Occasional	Mean	Total Repr mean
1850		1.59	2.22								1.80
1851		1.67	2.03								1.75
1852		1.76	2.43								1.98
1853		1.85	2.82								2.20
1854	1.95	1.82	2.87								2.21
1855	2.58	1.88	2.58								2.35
1856	2.50	1.90	3.18								2.53
1857	2.42	2.00	3.09								2.50
1858	2.30	1.70	2.82								2.27
1859	2.24	1.65	2.83								2.24
1860	2.18	1.80	2.95								2.31
1861	2.34	1.65	2.96								2.32
1862	2.43	1.65	2.82								2.30
1863	2.22	1.60	2.54								2.12
1864	2.29	1.80	2.55								2.21
1865	2.29	1.80	2.47								2.19
1866	2.25	1.80	2.49								2.18
1867	2.32	1.60	2.83								2.25
1868	2.28	1.75	2.77								2.27
1869	2.32	1.73	3.01								2.35
1870	2.37	1.67	2.94								2.33
1871	2.33	1.80	2.89								2.34
1872	2.51	1.80	3.27								2.53
1873	2.37	2.00	3.51								2.63
1874	2.49	2.23	4.43								3.05
1875	2.65	2.57	4.28								3.17
1876	2.81	2.70	4.30								3.27
1877	2.90	2.73	4.33								3.32
1878	3.00	2.33	4.25								3.19
1879	3.44	2.37	3.37								3.06
1880	3.35	2.37	3.47								3.06
1881	3.20	2.57	3.80								3.19
1882	3.24	2.57	3.80								3.20
1883	3.13	2.57	3.81								3.17
1884	3.14	2.57	3.82								3.18
1885	3.10	2.57	3.70								3.12
1886	3.10	2.57	3.44								3.04
1887	3.10	2.57	3.62								3.10
1888	3.13	2.57	3.47								3.06
1889	3.07	2.73	3.49								3.10
1890	3.25	2.93	3.57								3.25
1891	3.28	3.00	3.72								3.33
1892	3.29	3.03	3.80								3.37

Sources: Sources, NOS 1918-1941, NOS 1949, 366-367, Wedervang Archive, files W058, W118, W119A, W120A, W245 and W249.

TABLE 5.A.17
Average daily wages in communications

	Railway staff	Drivers excl horse	Road work incl horse	Forrestry incl horse	Telegraph			Port authorities			Total Repr mean
					Piece- work	Fixed	Mean	Fixed	Occasional	Mean	
1893	3.20	3.03	3.75								3.33
1894	3.34	3.17	3.81								3.44
1895	3.39	3.27	3.83								3.50
1896	3.38	3.27	3.85								3.50
1897	3.49	3.27	3.84								3.53
1898	3.55	3.47	4.06								3.69
1899	3.67	3.47	4.22								3.79
1900	3.82	3.50	4.41								3.91
1901	3.87	3.50	4.40								3.92
1902	3.86	3.50	4.34								3.90
1903	3.90	3.50	4.39								3.93
1904	3.95	3.50	4.39								3.95
1905	3.87	3.50	4.34								3.90
1906	3.95	3.50	4.40								3.95
1907	4.28	3.50	4.46								4.08
1908	4.25	3.65	4.76								4.22
1909	5.00	3.70	4.87								4.52
1910	5.10	4.40	4.94								4.81
1911		4.40	5.02								5.02
1912		4.70	5.24								5.24
1913		4.90	5.51								5.51
1914		4.90	5.61								5.61
1915		5.30		11.03							6.62
1916		6.73		13.98							8.39
1917		9.20		19.86							11.92
1918		12.72		24.46	1.52	1.22	13.01				14.68
1919		14.00		26.73	2.05	1.52	16.30				16.04
1920		15.33		28.36	2.57	1.81	19.04				16.60
1921		14.67		25.73	2.26	1.56	16.68	12.08	9.44	10.76	16.60
1922		11.50		18.45	1.94	1.24	14.12	10.24	8.88	9.56	12.99
1923		11.50		15.09	1.94	1.27	14.18	10.00	8.48	9.24	12.28
1924		11.67		15.60	2.26	1.24	16.04	10.32	8.56	9.44	12.78
1925		11.83		14.42	1.79	1.27	13.28	10.24	8.88	9.56	12.23
1926		10.67		11.13	1.50	1.17	11.34	10.72	8.96	9.84	10.74
1927		10.00		8.80	1.13	1.09	8.96	9.84	8.56	9.20	9.48
1928		9.33		8.10	1.33	1.06	10.10	10.56	7.76	9.16	9.17
1929		9.00		7.86	1.07	1.02	8.46	10.08	7.60	8.84	8.67
1930		9.33		7.63	1.01	1.02	8.10	9.68	7.52	8.60	8.70
1931		9.17		7.15	0.94	0.99	7.62	9.52	7.36	8.44	8.42
1932		8.83		6.73	0.96	0.98	7.72	9.04	7.20	8.12	8.14
1933		9.00		6.48	1.08	1.05	8.58	8.96	6.96	7.96	8.28
1934		9.00		6.50	1.05	1.03	8.36	9.44	7.20	8.32	8.30
1935		9.17		6.69	1.13	1.03	8.84	9.28	6.96	8.12	8.47
1936		9.83		7.03	1.20	1.10	9.40	9.76	7.04	8.40	8.99
1937		11.67		8.40	1.28	1.17	10.02	9.92	8.80	9.36	10.42
1938		11.67		9.17	1.35	1.23	10.56	10.48	9.36	9.92	10.74

Sources: Sources, NOS 1918-1941, NOS 1949, 366-367, Wedervang Archive, files W058, W118, W119A, W120A, W245 and W249.

TABLE 5.A.17
Average daily wages in communications

	Railway staff	Drivers excl horse	Road work incl horse	Forrestry incl horse	Telegraph			Port authorities			Total Repr mean
					Piece- work	Fixed	Mean	Fixed	Occasional	Mean	
1939		11.83		9.25	1.39	1.31	10.96	11.36	9.36	10.36	10.96
1940				10.55	1.77	1.36	13.34	11.04	10.16	10.60	11.68

Sources: Sources, NOS 1918-1941, NOS 1949, 366-367, Wedervang Archive, files W058, W118, W119A, W120A, W245 and W249.

5.B Monthly wages

5.B.1 Sailors on sailing vessels, excl. board

TABLE 5.B.1
Monthly wages for sailors on sailing vessels, excl. board

	Officers	Crew	Mess	Total Mean all
1751	8.87	3.71		4.09
1752	9.22	3.51		4.05
1753	9.05	3.36		3.84
1754	9.38	3.27		3.82
1755	7.22	3.38		3.73
1756	7.73	3.81		4.17
1757	9.23	4.22		4.89
1758	8.79	3.74		4.45
1759	9.84	4.49		5.30
1760	10.13	4.17		4.98
1761	10.17	4.27		5.09
1762	9.64	4.61		5.40
1763	9.70	3.65		4.58
1764	12.16	4.68		5.62
1765	11.20	4.68		5.46
1766	11.22	4.34		5.28
1767	11.41	4.51		5.43
1768	10.94	4.34		5.18
1769	11.20	4.54		5.39
1770	10.00	4.41		5.05
1771				
1772	10.40	3.92		5.68
1773	9.60	4.90	6.00	6.40
1774				
1775				
1776	10.80	4.33		6.09
1777	10.24	4.43	5.33	5.16
1778	9.13	4.41	5.20	5.08
1779	11.05	4.70	6.46	5.73
1780	10.92	5.14	6.62	5.97
1781	12.15	6.18	8.80	6.99
1782	12.41	6.44	9.66	7.28
1783	12.14	5.36	6.84	6.36
1784	11.81	5.19	6.75	6.02
1785	11.18	4.36	5.08	5.14
1786	11.15	4.23	5.00	5.11
1787	11.00	4.09	5.07	4.82
1788	10.27	4.09	4.67	4.91
1789	9.81	4.44	4.80	5.28
1790	9.33	4.43	5.66	5.25
1791	9.37	4.35	4.86	5.21

Sources: Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.1
Monthly wages for sailors on sailing vessels, excl. board

	Officers	Crew	Mess	Total Mean all
1792	9.22	4.37	4.57	5.32
1793	9.16	4.75	5.70	5.57
1794	10.11	5.80	6.96	6.57
1795	10.33	5.54	6.54	6.39
1796	10.56	5.82	7.52	6.67
1797	10.82	6.35	7.39	7.11
1798	11.59	6.82	7.82	7.61
1799	14.54	8.07	9.80	9.20
1800	14.93	8.19	9.85	9.24
1801	15.13	8.69	9.72	9.63
1802	14.18	6.69	7.19	7.92
1803	14.80	7.31	8.87	8.52
1804	14.93	7.66	7.66	8.64
1805	15.10	8.49	7.67	9.24
1806	16.14	9.02	6.95	9.80
1807	16.02	8.55	8.61	9.49
1808	15.46	6.34	4.17	7.12
1809	21.47	11.08	10.33	11.65
1810	38.53	22.74	22.78	23.94
1811	62.79	38.97	38.44	40.66
1812	78.63	46.44	45.20	48.99
1813	26.04	15.21	18.50	16.06
1814	36.64	19.78	21.26	20.84
1815	39.59	23.45	21.53	25.29
1816	44.07	23.35	16.73	25.95
1817	63.91	34.01	26.80	37.71
1818	54.89	29.18	23.19	32.40
1819	45.30	21.62	19.82	24.62
1820	45.96	22.53	20.14	25.48
1821	46.58	23.15	20.23	26.38
1822	48.14	25.48	20.54	28.60
1823	48.73	26.30	19.82	29.00
1824	49.81	28.03	21.14	30.70
1825	49.02	26.60	20.06	29.90
1826	47.59	26.46	18.74	29.26
1827	48.08	26.55	19.32	31.26
1828	50.00	28.41	20.60	30.13
1829	47.90	27.14	20.94	29.48
1830	49.65	28.79	21.64	31.15
1831	51.39	29.96	21.94	32.27
1832	50.92	29.65	21.24	32.20
1833	51.96	30.05	21.18	32.35
1834	50.51	28.90	21.16	31.38
1835	49.36	27.51	21.04	30.42
1836	47.05	26.58	19.07	29.05
1837	49.71	27.65	20.31	29.68
1838	48.19	28.28	20.81	30.02

Sources: Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.1
Monthly wages for sailors on sailing vessels, excl. board

	Officers	Crew	Mess	Total Mean all
1839	47.25	27.53	20.04	29.52
1840	49.26	28.78	19.68	30.15
1841	48.67	26.84	19.19	28.82
1842	46.73	25.24	18.39	27.44
1843	40.39	22.36	16.12	24.21
1844	47.13	27.30	18.51	28.64
1845	47.51	27.37	18.62	29.17
1846	47.83	28.16	18.72	29.42
1847	46.11	28.48	19.16	30.01
1848	44.67	27.17	18.08	29.04
1849	44.68	27.08	18.91	29.09
1850	46.17	27.19	18.76	28.82
1851	46.48	28.56	19.04	29.97
1852	46.20	28.50	18.22	29.79
1853	48.55	31.27	19.03	32.25
1854	60.83	38.73	22.05	39.32
1855	62.51	39.57	22.42	40.10
1856	65.82	41.14	24.15	41.42
1857	65.55	40.83	24.66	41.38
1858	52.02	30.94	21.01	32.23
1859	50.40	31.06	21.04	32.28
1860	50.62	31.77	21.61	32.98
1861	49.72	32.08	20.80	33.21
1862	49.36	31.88	21.68	33.11
1863	49.97	32.74	22.15	33.98
1864	50.87	34.59	22.43	35.63
1865	52.56	35.39	23.30	36.42
1866	54.14	36.32	22.62	37.27
1867	55.28	36.16	22.06	37.33
1868	54.34	35.66	21.64	36.99
1869	55.00	34.32	21.60	36.12
1870	55.43	34.00	21.36	36.38
1871	55.13	34.32	22.04	36.39
1872	56.73	35.74	21.58	37.65
1873	61.74	41.30	23.18	42.85
1874	71.37	46.15	24.77	48.20
1875	66.34	43.18	25.16	45.65
1876	66.27	44.12	25.94	46.34
1877	65.42	43.45	36.82	46.08
1878	62.42	40.48	36.00	43.43
1879	53.28	32.05	29.57	35.31
1880	53.14	32.63	29.38	35.77
1881	53.58	33.74	31.45	36.89
1882	55.48	36.08	34.07	39.22
1883	58.55	39.41	35.46	42.21
1884	59.57	40.04	36.82	42.87
1885	56.66	36.47	35.82	39.77

Sources: Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.1
Monthly wages for sailors on sailing vessels, excl. board

	Officers	Crew	Mess	Total Mean all
1886	55.13	34.55	33.91	37.94
1887	55.25	34.32	33.66	37.63
1888	57.85	36.48	36.13	39.71
1889	62.18	40.70	42.42	44.36
1890	66.09	42.08	43.75	45.94
1891	66.81	42.03	46.29	46.54
1892	65.99	39.99	43.73	44.77
1893	63.91	36.91	41.71	41.92
1894	63.29	36.70	41.84	41.81
1895	62.64	35.82	41.71	41.14
1896	63.49	35.96	41.71	41.08
1897	64.45	36.58	42.45	41.73
1898	65.68	38.02	44.92	43.23
1899	69.56	42.32	49.39	47.40
1900	72.39	44.03	52.37	49.25
1901	73.48	42.70	53.26	48.51
1902	71.90	38.90	50.10	45.19
1903	72.28	39.26	50.68	45.51
1904	73.06	38.80	50.94	45.41
1905	74.25	38.77	53.11	45.59
1906	77.81	40.50	53.42	46.94
1907	86.92	44.64	57.15	51.78
1908	91.85	44.88	60.23	52.76
1909	90.93	43.09	60.39	51.42
1910	93.91	44.79	62.89	52.83
1911	100.22	45.87	64.85	54.92
1912	116.21	50.44	74.25	61.30
1913	127.79	52.67	80.30	65.45
1914	129.93	54.31	83.92	67.78
1915	196.45	74.18	112.97	90.06
1916	292.33	96.80	157.98	125.26
1917	397.08	128.97	238.57	168.19
1918	496.40	163.70	309.50	224.42
1919	426.59	171.54	330.87	245.87
1920	471.30	232.33	422.06	309.19
1921	400.00	115.00		172.00

Sources: Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

5.B.2 Sailors on steam and motorized vessels, excl board

TABLE 5.B.2
Monthly wages for sailors on steam and motorized vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1844			30.00		30.00
1845					
1846					
1847					
1848					
1849					
1850					
1851					
1852		110.00	30.60	28.00	42.62
1853				40.00	40.00
1854		40.00	32.00		32.62
1855	64.00		36.00	36.00	38.55
1856	72.00	120.00	38.00	39.00	48.64
1857	62.00	108.00	36.56	39.00	43.09
1858	100.00	120.00	34.10	39.00	44.21
1859	72.00	120.00	35.38	39.00	42.52
1860	59.20	128.00	34.07		43.03
1861	65.60	100.00	34.06		41.68
1862	72.00		36.47		40.21
1863	73.00	100.00	39.41		47.15
1864	75.20	100.00	37.38		46.11
1865	78.50		39.20		44.44
1866	94.29	120.00	38.10		46.17
1867	92.31	112.00	39.22		52.91
1868	90.33	92.00	38.08		45.25
1869	82.67	68.00	40.76	32.00	47.11
1870	86.86	103.00	39.92	28.00	52.75
1871	69.07	89.00	37.76	39.33	48.59
1872	75.00	101.82	40.19	42.67	49.30
1873	78.27	103.69	48.46	56.67	56.51
1874	82.40	106.33	46.31	54.00	56.88
1875	116.10	111.50	48.92	52.00	68.62
1876	86.36	113.20	47.51	51.33	57.94
1877	84.21	112.82	45.27	40.08	55.69
1878	81.33	116.27	44.68	45.00	54.72
1879	68.98	106.12	40.07	46.21	51.18
1880	76.00	114.94	41.68	43.13	53.07
1881	70.58	103.78	40.73	35.78	50.33
1882	76.91	106.90	44.17	49.18	54.56
1883	75.07	109.19	42.72	48.48	56.69
1884	68.33	108.13	42.90	49.09	53.80
1885	75.86	106.97	40.45	54.68	55.20
1886	78.26	107.56	41.35	55.55	57.45
1887	77.51	118.87	42.37	52.00	56.40

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.2

Monthly wages for sailors on steam and motorized vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1888	79.50	116.11	42.86	46.67	58.37
1889	81.00	119.38	44.81	53.10	60.90
1890	78.81	117.51	45.84	56.31	59.34
1891	82.62	118.59	46.10	57.19	59.37
1892	79.30	110.03	43.51	56.21	57.84
1893	76.06	109.17	42.68	53.55	57.89
1894	77.26	111.70	43.87	53.11	58.11
1895	80.99	118.32	43.99	51.35	59.43
1896	78.29	118.19	43.94	37.66	53.49
1897	78.76	121.13	43.98	56.02	59.52
1898	78.30	127.89	44.82	55.52	60.07
1899	83.72	140.09	46.24	59.25	61.78
1900	82.45	143.83	47.62	61.76	63.11
1901	82.40	140.43	46.47	60.07	62.87
1902	82.59	141.75	45.98	61.37	61.94
1903	84.20	144.96	45.84	61.13	62.36
1904	84.18	140.83	45.73	62.04	63.02
1905	84.33	139.79	45.93	62.75	64.04
1906	87.79	140.19	47.18	61.91	63.80
1907	92.23	145.61	50.77	63.92	67.96
1908	96.10	147.69	53.40	66.84	71.45
1909	94.48	146.89	50.57	65.85	68.64
1910	96.55	145.05	51.72	66.83	69.29
1911	99.16	148.46	52.95	67.26	70.31
1912	109.46	160.15	57.77	73.35	76.54
1913	119.09	166.63	61.19	75.60	81.57
1914	126.75	174.20	63.87	79.91	84.17
1915	158.65	209.03	71.68	95.94	96.10
1916	219.21	276.51	91.89	136.09	129.65
1917	380.47	476.19	146.23	220.46	212.82
1918	448.02	535.95	156.27	261.00	252.93
1919	446.64	493.69	204.38	278.82	270.85
1920	479.89	539.98	263.64	300.88	320.39
1921	419.11	505.55	222.73	258.07	275.31
1922	470.00	430.00	159.19	256.31	208.40
1923	447.00	409.00	150.52	256.62	199.16
1924	447.00	409.00	160.27	259.62	206.82
1925	447.00	452.00	160.51	257.62	209.86
1926	447.00	418.00	147.87	259.00	198.14
1927	447.00	387.00	138.69	236.15	186.17
1928	447.00	368.00	129.12	224.85	176.23
1929	447.00	368.00	129.88	223.38	176.61
1930	447.00	368.00	130.51	241.46	179.35
1931	447.00	359.00	130.16	242.15	178.53
1932	447.00	350.00	125.18	213.08	170.50
1933	447.00	350.00	125.22	220.62	171.48
1934	447.00	350.00	125.18	222.69	171.71

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.2

Monthly wages for sailors on steam and motorized vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1935	380.00	350.00	126.79	211.85	167.82
1936	380.00	350.00	130.62	228.08	172.72
1937	440.00	395.00	140.69	236.54	187.90
1938	440.00	395.00	149.43	251.23	196.27
1939	440.00	395.00	152.10	255.31	198.77
1940	440.00	395.00	153.08	257.31	199.75

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

5.B.3 Sailors on all vessels, excl board

TABLE 5.B.3
Average monthly wages for sailors on all vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1751	13.86		5.80		6.40
1752	14.40		5.48		6.33
1753	14.14		5.26		6.01
1754	14.66		5.11		5.98
1755	11.29		5.28		5.83
1756	12.08		5.96		6.52
1757	11.54		5.27		6.11
1758	10.98		4.67		5.56
1759	12.30		5.61		6.63
1760	12.66		5.22		6.23
1761	12.71		5.34		6.36
1762	12.05		5.76		6.75
1763	12.13		4.56		5.72
1764	15.20		5.85		7.02
1765	14.00		5.85		6.83
1766	14.02		5.42		6.60
1767	14.26		5.64		6.79
1768	13.67		5.43		6.48
1769	14.00		5.67		6.74
1770	12.50		5.51		6.31
1771					
1772	13.00		4.90		7.10
1773	12.00		6.13	7.50	8.00
1774					
1775					
1776	13.50		5.41		7.61
1777	12.80		5.53	6.67	6.62
1778	11.42		5.51	6.50	6.35
1779	13.81		5.88	8.07	7.16
1780	13.65		6.43	8.27	7.46
1781	15.18		7.73	11.00	8.74
1782	15.52		8.05	12.08	9.11
1783	15.18		6.70	8.55	7.95
1784	14.77		6.49	8.44	7.53
1785	13.97		5.45	6.35	6.42
1786	13.93		5.29	6.25	6.38
1787	13.75		5.11	6.33	6.02
1788	12.83		5.11	5.84	6.13
1789	12.27		5.55	6.00	6.59
1790	11.67		5.54	7.07	6.56
1791	11.71		5.43	6.07	6.52
1792	11.52		5.46	5.71	6.65
1793	11.45		5.94	7.12	6.96

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.3
Average monthly wages for sailors on all vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1794	12.64		7.25	8.70	8.21
1795	12.91		6.93	8.18	7.99
1796	13.20		7.28	9.40	8.34
1797	13.53		7.94	9.24	8.88
1798	14.49		8.52	9.77	9.52
1799	14.54		8.07	9.80	9.20
1800	14.93		8.19	9.85	9.24
1801	15.13		8.69	9.72	9.63
1802	14.18		6.69	7.19	7.92
1803	14.80		7.31	8.87	8.52
1804	14.93		7.66	7.66	8.64
1805	15.10		8.49	7.67	9.24
1806	16.14		9.02	6.95	9.80
1807	16.02		8.55	8.61	9.49
1808	15.46		6.34	4.17	7.12
1809	21.47		11.08	10.33	11.65
1810	38.53		22.74	22.78	23.94
1811	62.79		38.97	38.44	40.66
1812	78.63		46.44	45.20	48.99
1813	26.04		15.21	18.50	16.06
1814	36.64		19.78	21.26	20.84
1815	39.59		23.45	21.53	25.29
1816	44.07		23.35	16.73	25.95
1817	63.91		34.01	26.80	37.71
1818	54.89		29.18	23.19	32.40
1819	45.30		21.62	19.82	24.62
1820	45.96		22.53	20.14	25.48
1821	46.58		23.15	20.23	26.38
1822	48.14		25.48	20.54	28.60
1823	48.73		26.30	19.82	29.00
1824	49.81		28.03	21.14	30.70
1825	49.02		26.60	20.06	29.90
1826	47.59		26.46	18.74	29.26
1827	48.08		26.55	19.32	31.26
1828	50.00		28.41	20.60	30.13
1829	47.90		27.14	20.94	29.48
1830	49.65		28.79	21.64	31.15
1831	51.39		29.96	21.94	32.27
1832	50.92		29.65	21.24	32.20
1833	51.96		30.05	21.18	32.35
1834	50.51		28.90	21.16	31.38
1835	49.36		27.51	21.04	30.42
1836	47.05		26.58	19.07	29.05
1837	49.71		27.65	20.31	29.68
1838	48.19		28.28	20.81	30.02
1839	47.25		27.53	20.04	29.52

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.3
Average monthly wages for sailors on all vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1840	49.26		28.78	19.68	30.15
1841	48.67		26.84	19.19	28.82
1842	46.73		25.24	18.39	27.44
1843	40.39		22.36	16.12	24.21
1844	47.13		27.31	18.51	28.64
1845	47.51		27.37	18.62	29.17
1846	47.83		28.16	18.72	29.42
1847	46.11		28.48	19.16	30.01
1848	44.67		27.17	18.08	29.03
1849	44.68		27.08	18.91	29.07
1850	46.17		27.19	18.76	28.82
1851	46.48		28.56	19.04	29.97
1852	46.20	110.00	28.52	18.27	29.90
1853	48.55		31.27	19.11	32.24
1854	60.83	40.00	38.69	22.05	39.29
1855	62.51		39.55	22.47	40.09
1856	65.87	120.00	41.12	24.25	41.47
1857	65.51	108.00	40.79	24.70	41.38
1858	52.20	120.00	30.97	21.08	32.35
1859	50.56	120.00	31.13	21.18	32.40
1860	50.72	128.00	31.80	21.61	33.06
1861	49.87	100.00	32.10	20.80	33.25
1862	49.45		31.90	21.68	33.10
1863	50.16	100.00	32.81	22.15	34.09
1864	51.05	100.00	34.61	22.43	35.65
1865	52.84		35.44	23.30	36.41
1866	54.48	120.00	36.35	22.62	37.22
1867	55.89	112.00	36.20	22.06	37.30
1868	54.92	92.00	35.72	21.64	36.78
1869	55.09	68.00	34.35	21.61	35.75
1870	55.69	103.00	34.06	21.36	33.74
1871	55.35	89.00	34.37	22.17	36.08
1872	56.92	101.82	35.81	21.72	37.25
1873	62.04	103.69	41.49	23.65	42.54
1874	71.50	106.33	46.15	25.28	47.37
1875	67.34	111.50	43.27	25.36	44.78
1876	67.17	113.20	44.31	26.36	45.85
1877	66.01	112.82	43.53	36.90	46.50
1878	62.66	116.27	40.58	36.06	43.67
1879	53.74	106.12	32.37	29.91	35.94
1880	53.59	114.94	33.01	29.62	36.44
1881	53.75	103.78	33.82	31.49	37.06
1882	56.05	106.90	36.40	34.46	39.83
1883	59.30	109.19	39.64	35.98	43.24
1884	59.70	108.13	40.10	37.00	43.10
1885	57.52	106.97	36.71	36.49	40.77

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.3
Average monthly wages for sailors on all vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1886	55.99	107.56	34.90	34.56	39.02
1887	56.67	118.87	35.03	34.51	39.31
1888	59.74	116.11	37.09	36.58	41.62
1889	64.06	119.38	41.16	43.07	46.33
1890	67.59	117.51	42.63	44.63	47.92
1891	68.54	118.59	42.61	47.30	48.40
1892	67.83	110.03	40.60	45.12	47.12
1893	65.80	109.17	37.90	43.27	44.91
1894	65.88	111.70	38.28	43.65	45.60
1895	66.20	118.32	37.87	43.74	46.00
1896	66.51	118.19	37.64	39.82	44.53
1897	67.22	121.13	38.27	45.01	46.06
1898	68.42	127.89	39.82	47.44	47.94
1899	73.42	140.09	43.69	51.94	52.51
1900	75.45	143.83	45.37	55.21	54.54
1901	76.51	140.43	44.10	55.28	54.08
1902	76.08	141.75	41.94	54.10	52.60
1903	76.96	144.96	42.20	54.68	53.27
1904	77.57	140.83	41.85	55.08	53.49
1905	78.76	139.79	41.99	57.17	54.42
1906	83.25	140.19	44.31	58.14	56.99
1907	90.09	145.61	48.46	61.19	62.23
1908	94.65	147.69	50.41	64.47	65.46
1909	93.36	146.89	48.20	64.20	63.68
1910	95.76	145.05	49.59	65.67	64.70
1911	99.43	148.46	51.18	66.71	66.83
1912	110.76	160.15	56.33	73.52	73.83
1913	120.71	166.63	59.62	76.33	78.94
1914	127.14	174.20	62.83	80.35	82.54
1915	162.16	209.03	71.94	97.49	95.55
1916	225.91	276.51	92.34	137.82	129.30
1917	381.28	476.19	145.41	220.96	211.04
1918	450.05	535.95	156.56	262.45	251.99
1919	445.84	493.69	203.79	279.67	270.40
1920	479.53	539.98	263.16	302.24	320.22
1921	419.09	505.55	222.67	258.07	275.27
1922	470.00	430.00	159.19	256.31	208.40
1923	447.00	409.00	150.52	256.62	199.16
1924	447.00	409.00	160.27	259.62	206.82
1925	447.00	452.00	160.51	257.62	209.86
1926	447.00	418.00	147.87	259.00	198.14
1927	447.00	387.00	138.69	236.15	186.17
1928	447.00	368.00	129.12	224.85	176.23
1929	447.00	368.00	129.88	223.38	176.61
1930	447.00	368.00	130.51	241.46	179.35
1931	447.00	359.00	130.16	242.15	178.53

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.3
Average monthly wages for sailors on all vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1932	447.00	350.00	125.18	213.08	170.50
1933	447.00	350.00	125.22	220.62	171.48
1934	447.00	350.00	125.18	222.69	171.71
1935	380.00	350.00	126.79	211.85	167.82
1936	380.00	350.00	130.62	228.08	172.72
1937	440.00	395.00	140.69	236.54	187.90
1938	440.00	395.00	149.43	251.23	196.27
1939	440.00	395.00	152.10	255.31	198.77
1940	440.00	395.00	153.08	257.31	199.75

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

5.C Domestic services

5.C.1 Annual wages, domestic servants

TABLE 5.C.1
Annual wages in domestic services, domestic servants

	Rural			Urban			Total Repr mean Rur and urb		
	Cash wages Female	Male	Board and lodging	Mean	Cash wages Female	Male		Board and lodging	Mean
1830	28		128	172					181
1831	37		106	157					166
1832	28		128	172					181
1833	32		118	165					174
1834	44		88	145					153
1835	48		78	138					146
1836	48		78	138					146
1837	38		103	155					164
1838	44		88	145					153
1839	42		92	147					156
1840	42		93	149					157
1841	37		104	156					165
1842	40		99	152					161
1843	43		90	146					155
1844	46		84	142					150
1845	45		85	143					151
1846	44		88	145					153
1847	44		88	145					153
1848	44		88	145					153
1849	39		92	143					151
1850	40	83	89	142	48	116	107	169	149
1851	40	84	90	143	47	114	109	169	150
1852	42	89	95	151	49	120	115	177	158
1853	52	103	100	167	57	138	121	194	174
1854	52	108	111	180	60	145	133	210	188
1855	50	109	117	184	56	140	140	213	192
1856	49	111	127	194	53	142	152	223	201
1857	54	117	126	199	59	151	152	229	207
1858	56	113	112	186	63	149	135	215	193
1859	55	112	113	185	61	150	135	214	193
1860	52	117	119	190	59	152	143	220	198
1861	52	120	122	195	59	157	147	226	203
1862	55	126	120	196	63	163	144	227	205
1863	58	128	120	199	66	166	144	230	208
1864	55	126	118	194	62	160	142	224	202
1865	55	132	115	193	64	166	138	223	201
1866	55	137	122	202	64	173	147	233	211
1867	50	134	127	202	59	169	153	233	211
1868	40	120	131	196	48	154	158	227	204
1869	43	119	125	191	51	152	151	222	200

Sources, Gjølborg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58, Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163, Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978, 530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

TABLE 5.C.1
Annual wages in domestic services, domestic servants

	Rural				Urban				Total Repr mean Rur and urb
	Cash wages		Board and lodging	Mean	Cash wages		Board and lodging	Mean	
	Female	Male			Female	Male			
1870	52	123	121	194	63	158	145	227	204
1871	56	135	123	202	68	168	147	236	212
1872	55	144	130	212	64	172	156	242	221
1873	57	154	138	224	65	180	166	253	232
1874	65	168	143	239	71	195	172	268	248
1875	71	181	145	249	76	208	175	277	257
1876	68	176	144	245	80	215	173	280	255
1877	69	179	147	248	89	229	176	293	262
1878	68	174	133	233	88	223	160	275	246
1879	65	161	121	215	81	208	146	252	226
1880	63	153	131	221	78	203	158	261	233
1881	64	154	131	222	82	207	157	264	235
1882	65	156	134	226	83	210	161	269	239
1883	69	160	132	228	84	215	159	269	241
1884	72	164	129	228	86	219	155	267	240
1885	73	163	122	222	85	224	147	259	234
1886	73	159	120	219	83	222	145	256	231
1887	73	158	119	218	84	221	143	254	229
1888	74	160	122	222	85	224	146	259	233
1889	76	165	126	229	86	230	152	267	241
1890	77	169	130	235	91	239	157	277	249
1891	78	173	131	238	95	244	158	282	252
1892	82	177	129	240	99	249	156	285	255
1893	81	178	121	232	97	249	146	273	245
1894	84	185	121	235	105	260	145	281	250
1895	85	180	120	234	100	265	145	278	248
1896	88	187	121	239	106	275	145	285	254
1897	92	196	119	242	111	282	143	289	258
1898	89	196	126	246	106	279	151	292	262
1899	94	207	131	258	113	294	157	306	275
1900	100	218	136	271	130	303	163	328	291
1901	99	216	133	267	124	294	160	318	285
1902	105	224	129	270	119	291	155	309	283
1903	117	239	129	282	117	296	155	308	291
1904	120	244	126	283	122	300	151	309	292
1905	114	234	130	280	133	300	156	323	295
1906	118	241	132	287	137	311	158	330	302
1907	122	248	138	298	141	320	166	343	314
1908	131	264	143	313	152	332	171	359	329
1909	143	283	141	326	162	345	169	368	341
1910	148	291	146	337	168	348	176	380	353
1911	153	299	151	347	176	369	181	396	365
1912	154	302	161	360	177	379	194	412	379
1913	163	316	168	377	187	395	202	431	397
1914	175	335	170	394	190	456	205	448	414
1915	193	374	196	443	217	525	235	514	469

Sources, Gjølborg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58, Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163, Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978, 530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

TABLE 5.C.1
Annual wages in domestic services, domestic servants

	Rural			Mean	Urban			Mean	Total Repr mean Rur and urb
	Cash wages Female	Cash wages Male	Board and lodging		Cash wages Female	Cash wages Male	Board and lodging		
1916	226	451	235	528	243	565	283	590	551
1917	289	603	293	676	311	723	353	746	702
1918	389	829	414	934	402	933	497	1005	961
1919	532	1082	444	1141	562	1304	534	1244	1180
1920	658	1278	521	1365	749	1482	627	1522	1424
1921	672	1238	484	1326	749	1458	582	1473	1381
1922	601	1000	409	1130	709	1281	492	1316	1200
1923	547	846	386	1022	661	1144	464	1221	1098
1924	542	838	425	1055	673	1152	511	1280	1141
1925	536	834	435	1060	653	1129	523	1271	1141
1926	482	733	372	929	593	1011	447	1124	1004
1927	418	621	336	815	545	899	404	1019	894
1928	376	555	315	745	517	833	379	959	829
1929	357	525	304	711	497	796	365	922	793
1930	345	505	294	687	481	769	354	893	768
1931	329	473	281	653	469	738	338	861	735
1932	312	442	277	628	445	696	333	829	708
1933	298	420	276	610	421	660	332	801	686
1934	291	412	277	605	421	656	333	802	684
1935	295	421	284	617	430	669	342	819	698
1936	308	445	292	641	445	698	352	847	725
1937	337	500	316	701	473	758	380	910	786
1938	369	558	329	754	514	832	395	972	843
1939	397	600	333	791	538	880	400	1006	879
1940	425	657	390	885	506	882	469	1051	953

Sources, Gjølberg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58, Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163, Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978, 530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

5.C.2 Daily wages, misc private services

TABLE 5.C.2
Daily wages in domestic services, misc private services

	Housekeeper	Cleaninglady	Launderette worker	Total Repr mean
1914	1.95			2.25
1915	2.33			2.68
1916	2.70			3.11
1917	3.07			3.54
1918	3.45	4.50	4.50	3.98
1919	4.80	5.80	5.30	5.20
1920	6.40	8.70	8.50	7.51
1921	6.40	7.90	8.50	7.27
1922	6.05	7.00	7.50	6.63
1923	5.65	6.80	7.33	6.33
1924	5.75	7.00	7.33	6.44
1925	5.60	6.80	7.83	6.41
1926	5.10	6.45	6.67	5.82
1927	4.70	5.85	6.00	5.31
1928	4.45	5.50	5.42	4.96
1929	4.30	5.35	5.50	4.86
1930	4.15	5.25	5.33	4.72
1931	4.05	4.95	5.17	4.54
1932	3.85	4.80	5.00	4.37
1933	3.65	4.75	4.67	4.18
1934	3.65	4.70	4.67	4.17
1935	3.70	4.75	5.00	4.28
1936	3.85	4.90	5.33	4.46
1937	4.20	5.00	6.00	4.80
1938	4.40	5.50	6.33	5.12
1939	4.60	5.60	6.33	5.25
1940	4.70	5.70	6.33	5.33

Sources, NOS 1918-1941, NOS 1949, 365-366.

5.C.3 Average daily wages

TABLE 5.C.3
Average daily wages in domestic services

	Domestic servants			Others	Total Repr mean
	Rural	Urban	Mean		
1830	0.55		0.58		0.69
1831	0.50		0.53		0.63
1832	0.55		0.58		0.69
1833	0.53		0.56		0.66
1834	0.46		0.49		0.58
1835	0.44		0.47		0.55
1836	0.44		0.47		0.55
1837	0.50		0.52		0.62
1838	0.46		0.49		0.58
1839	0.47		0.50		0.59
1840	0.47		0.50		0.59
1841	0.50		0.53		0.62
1842	0.49		0.51		0.61
1843	0.47		0.49		0.59
1844	0.45		0.48		0.57
1845	0.46		0.48		0.57
1846	0.46		0.49		0.58
1847	0.46		0.49		0.58
1848	0.46		0.49		0.58
1849	0.46		0.48		0.57
1850	0.45	0.54	0.47		0.56
1851	0.46	0.54	0.48		0.57
1852	0.48	0.57	0.50		0.60
1853	0.53	0.62	0.56		0.66
1854	0.57	0.67	0.60		0.71
1855	0.59	0.68	0.61		0.73
1856	0.62	0.71	0.64		0.76
1857	0.64	0.73	0.66		0.78
1858	0.59	0.69	0.62		0.73
1859	0.59	0.68	0.62		0.73
1860	0.61	0.70	0.63		0.75
1861	0.62	0.72	0.65		0.77
1862	0.63	0.73	0.65		0.78
1863	0.64	0.73	0.66		0.79
1864	0.62	0.71	0.65		0.77
1865	0.62	0.71	0.64		0.76
1866	0.65	0.75	0.67		0.80
1867	0.65	0.75	0.67		0.80
1868	0.62	0.73	0.65		0.77
1869	0.61	0.71	0.64		0.76
1870	0.62	0.73	0.65		0.77
1871	0.65	0.75	0.68		0.80

Sources, Gjøllberg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58,
Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163,
Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978,
530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

TABLE 5.C.3
Average daily wages in domestic services

	Domestic servants			Others	Total Repr mean
	Rural	Urban	Mean		
1872	0.68	0.77	0.71		0.84
1873	0.72	0.81	0.74		0.88
1874	0.76	0.86	0.79		0.94
1875	0.80	0.88	0.82		0.98
1876	0.78	0.89	0.81		0.97
1877	0.79	0.94	0.84		0.99
1878	0.74	0.88	0.78		0.93
1879	0.69	0.81	0.72		0.86
1880	0.71	0.83	0.75		0.88
1881	0.71	0.85	0.75		0.89
1882	0.72	0.86	0.77		0.91
1883	0.73	0.87	0.77		0.92
1884	0.73	0.86	0.77		0.92
1885	0.72	0.84	0.75		0.89
1886	0.71	0.82	0.74		0.88
1887	0.70	0.82	0.74		0.88
1888	0.72	0.84	0.76		0.90
1889	0.74	0.87	0.78		0.93
1890	0.76	0.90	0.81		0.96
1891	0.77	0.92	0.82		0.97
1892	0.78	0.93	0.83		0.98
1893	0.76	0.89	0.80		0.95
1894	0.77	0.92	0.82		0.97
1895	0.77	0.91	0.81		0.97
1896	0.78	0.93	0.83		0.99
1897	0.80	0.95	0.85		1.01
1898	0.81	0.96	0.86		1.02
1899	0.85	1.01	0.91		1.08
1900	0.90	1.08	0.96		1.14
1901	0.89	1.05	0.94		1.12
1902	0.89	1.02	0.94		1.11
1903	0.94	1.02	0.97		1.15
1904	0.94	1.03	0.97		1.15
1905	0.93	1.08	0.98		1.17
1906	0.96	1.10	1.01		1.20
1907	1.00	1.15	1.05		1.25
1908	1.05	1.21	1.11		1.31
1909	1.09	1.24	1.14		1.36
1910	1.14	1.28	1.19		1.41
1911	1.17	1.33	1.23		1.46
1912	1.22	1.39	1.28		1.52
1913	1.27	1.46	1.34		1.59
1914	1.33	1.52	1.40	2.25	1.66
1915	1.50	1.74	1.59	2.68	1.93
1916	1.80	2.01	1.87	3.11	2.25

Sources, Gjølberg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58, Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163, Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978, 530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

TABLE 5.C.3
Average daily wages in domestic services

	Domestic servants			Others	Total Repr mean
	Rural	Urban	Mean		
1917	2.30	2.54	2.39	3.54	2.74
1918	3.19	3.43	3.28	3.98	3.50
1919	3.89	4.25	4.03	5.20	4.39
1920	4.68	5.21	4.88	7.51	5.69
1921	4.54	5.04	4.73	7.27	5.51
1922	3.87	4.51	4.11	6.63	4.89
1923	3.50	4.18	3.76	6.33	4.55
1924	3.61	4.38	3.91	6.44	4.69
1925	3.63	4.35	3.91	6.41	4.68
1926	3.18	3.85	3.44	5.82	4.17
1927	2.79	3.49	3.06	5.31	3.75
1928	2.55	3.29	2.84	4.96	3.49
1929	2.43	3.16	2.72	4.86	3.38
1930	2.35	3.06	2.63	4.72	3.27
1931	2.24	2.95	2.52	4.54	3.14
1932	2.15	2.84	2.42	4.37	3.02
1933	2.09	2.74	2.35	4.18	2.91
1934	2.07	2.75	2.34	4.17	2.90
1935	2.11	2.81	2.39	4.28	2.97
1936	2.20	2.90	2.48	4.46	3.09
1937	2.40	3.12	2.69	4.80	3.34
1938	2.58	3.33	2.89	5.12	3.57
1939	2.71	3.45	3.01	5.25	3.69
1940	3.03	3.60	3.26	5.33	3.89

Sources, Gjøølberg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58,
Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163,
Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978,
530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

5.D Public services

5.D.1 Annual tariff wages, central administration

TABLE 5.D.1
Annual tariff wages in public services, central administration

	Assistant I	Assistant II	Secretary I	Secretary II	Assistant under- secretary of state	Deputy under- secretary of state	Total Repr mean
1878	1500	1248	2000	2000	3400	5400	1997
1879	1500	1248	2000	2000	3400	5400	1997
1880	1500	1248	2000	2000	3400	5400	1997
1881	1500	1248	2000	2000	3400	5400	1997
1882	1500	1248	2000	2000	3400	5400	1997
1883	1500	1248	2000	2000	3400	5400	1997
1884	1500	1248	2000	2000	3400	5400	1997
1885	1500	1248	2000	2000	3400	5400	1997
1886	1500	1248	2000	2000	3400	5400	1997
1887	1500	1248	2000	2000	3400	5400	1997
1888	1500	1248	2000	2000	3400	5400	1997
1889	1500	1248	2000	2000	3400	5400	1997
1890	1500	1248	2000	2000	3400	5400	1997
1891	1500	1248	2000	2000	3400	5400	1997
1892	1500	1248	2000	2000	3400	5400	1997
1893	1500	1248	2000	2000	3400	5400	1997
1894	1500	1248	2000	2000	3400	5400	1997
1895	1500	1248	2000	2000	3400	5400	1997
1896	1500	1248	2000	2000	3400	5400	1997
1897	1500	1248	2000	2000	3400	5400	1997
1898	1500	1248	2000	2000	3400	5400	1997
1899	1563	1174	2400	2050	3700	5700	2127
1900	1625	1100	2800	2100	4000	6000	2256
1901	1625	1100	2800	2100	4000	6000	2256
1902	1625	1100	2800	2100	4000	6000	2256
1903	1625	1100	2800	2100	4000	6000	2256
1904	1625	1100	2800	2100	4000	6000	2256
1905	1625	1100	2800	2100	4000	6000	2256
1906	1625	1100	2800	2100	4000	6000	2256
1907	1625	1100	2800	2100	4000	6000	2256
1908	1625	1100	2800	2100	4000	6000	2256
1909	1625	1100	2800	2100	4000	6000	2256
1910	1625	1100	2800	2100	4000	6000	2256
1911	1625	1100	2800	2100	4000	6000	2256
1912	1625	1100	2800	2100	4000	6000	2256
1913	1625	1100	2800	2100	4000	6000	2256
1914	1825	1250	3050	2300	4400	6000	2464
1915	2025	1400	3300	2500	4800	6000	2671
1916	2025	1400	3300	2500	4800	6000	2671
1917	2375	1650	3900	2900	5400	7000	3111
1918	2725	1900	4500	3300	6000	8000	3551

Sources, Source, Minde 1993, 25-123* (appendix).

TABLE 5.D.1
Annual tariff wages in public services, central administration

	Assistant I	Assistant II	Secretary I	Secretary II	Assistant under- secretary of state	Deputy under- secretary of state	Total Repr mean
1919	2725	1900	4500	3300	6000	8000	3551
1920	3312	2438	5250	3900	7625	10500	4360
1921	3900	2975	6000	4500	9250	13000	5169
1922	3900	2975	6000	4500	9250	13000	5169
1923	3900	2975	6000	4500	9250	13000	5169
1924	3900	2975	6000	4500	9250	13000	5169
1925	3900	2975	6000	4500	9250	13000	5169
1926	3900	2975	6000	4500	9250	13000	5169
1927	3900	2975	6000	4500	9250	13000	5169
1928	3900	2975	6000	4500	9250	13000	5169
1929	3810	2831	5825	4275	8788	12350	4963
1930	3720	2688	5650	4050	8325	11700	4757
1931	3720	2688	5650	4050	8325	11700	4757
1932	3720	2688	5650	4050	8325	11700	4757
1933	3720	2688	5650	4050	8325	11700	4757
1934	3720	2688	5650	4050	8325	11700	4757
1935	3720	2688	5650	4050	8325	11700	4757
1936	3720	2688	5650	4050	8325	11700	4757
1937	3720	2744	5650	4163	8325	11700	4788
1938	3720	2800	5650	4275	8325	11700	4819
1939	3720	2800	5650	4275	8325	11700	4819
1940	3720	2800	5650	4275	8325	11700	4819

Sources, Source, Minde 1993, 25-123* (appendix).

5.D.2 Annual tariff wages, technical and higher schooling

TABLE 5.D.2
Annual tariff wages in public services, technical and higher schooling

	Assitant engineer	Engineer	Engineering Senior engineer	Chief engineer	Mean	Schooling Lecturer/ Principal
1875	2040	3333	4560	4950	3223	
1876	2040	3333	4560	4950	3223	
1877	2040	3333	4560	4950	3223	
1878	2040	3333	4560	4950	3223	
1879	2040	3333	4560	4950	3223	
1880	2040	3333	4560	4950	3223	
1881	2040	3333	4560	4950	3223	
1882	2040	3333	4560	4950	3223	
1883	2040	3333	4560	4950	3223	
1884	2040	3333	4560	4950	3223	
1885	2040	3333	4560	4950	3223	
1886	2040	3333	4560	4950	3223	
1887	2040	3333	4560	4950	3223	
1888	2040	3333	4560	4950	3223	
1889	2040	3333	4560	4950	3223	
1890	2040	3333	4560	4950	3223	
1891	2040	3360	4560	5000	3236	
1892	2040	3360	4560	5000	3236	
1893	2040	3360	4560	5000	3236	
1894	2040	3360	4560	5000	3236	
1895	2040	3360	4560	5000	3236	
1896	2040	3360	4560	5000	3236	
1897	2040	3360	4560	5000	3236	
1898	2040	3360	4560	5000	3236	4000
1899	2040	3360	4560	5000	3236	4000
1900	2040	3360	4560	5000	3236	4000
1901	2040	3360	4560	5000	3236	4000
1902	2040	3360	4560	5000	3236	4000
1903	2040	3360	4560	5000	3236	4000
1904	2040	3360	4560	5000	3236	4000
1905	2040	3360	4560	5000	3236	4000
1906	2040	3360	4560	5000	3236	4000
1907	2040	3360	4560	5000	3236	4000
1908	2040	3360	4560	5000	3236	4000
1909	2040	3360	4560	5000	3236	4000
1910	2040	3360	4560	5000	3236	4000
1911	2040	3360	4560	5000	3236	4000
1912	2270	3580	4730	5350	3463	4000
1913	2500	3800	4900	5700	3690	3771
1914	2500	3800	4900	5700	3690	3543
1915	2500	3800	4900	5700	3690	3543
1916	2500	3800	4900	5700	3690	3543
1917	3100	4400	5700	6850	4385	3972

Sources, Source, Minde 1993, 25-123* (appendix).

TABLE 5.D.2

Annual tariff wages in public services, technical and higher schooling

	Assitant engineer	Engineer	Engineering Senior engineer	Chief engineer	Mean	Schooling Lecturer/ Principal
1918	3700	5000	6500	8000	5080	4400
1919	3700	5000	6500	8000	5080	4400
1920	4225	5875	7375	9500	5878	5606
1921	4750	6750	8250	11000	6675	6813
1922	4750	6750	8250	11000	6675	6813
1923	4750	6750	8250	11000	6675	6813
1924	4750	6750	8250	11000	6675	6813
1925	4750	6750	8250	11000	6675	6813
1926	4750	6750	8250	11000	6675	6813
1927	4750	6750	8250	11000	6675	6813
1928	4750	6750	8250	11000	6675	6813
1929	4513	6413	7838	10750	6372	6472
1930	4275	6075	7425	10500	6068	6131
1931	4275	6075	7425	10500	6068	6131
1932	4275	6075	7425	10500	6068	6131
1933	4275	6075	7425	10500	6068	6131
1934	4275	6075	7425	10500	6068	6131
1935	4275	6075	7425	10500	6068	6131
1936	4275	6075	7425	10500	6068	6131
1937	4500	6075	7425	10500	6158	6131
1938	4725	6075	7425	10500	6248	6131
1939	4725	6075	7425	10500	6248	6131
1940	4725	6075	7425	10500	6248	6131

Sources, Source, Minde 1993, 25-123* (appendix).

5.D.3 Average annual tariff wages

TABLE 5.D.3
Average annual tariff wages in public services

	Central administration	Technical sector (engineers)	Higher schools	Total Repr mean
1875		3223		2750
1876		3223		2750
1877		3223		2750
1878	1997	3223		2733
1879	1997	3223		2733
1880	1997	3223		2733
1881	1997	3223		2733
1882	1997	3223		2733
1883	1997	3223		2733
1884	1997	3223		2733
1885	1997	3223		2733
1886	1997	3223		2733
1887	1997	3223		2733
1888	1997	3223		2733
1889	1997	3223		2733
1890	1997	3223		2733
1891	1997	3236		2740
1892	1997	3236		2740
1893	1997	3236		2740
1894	1997	3236		2740
1895	1997	3236		2740
1896	1997	3236		2740
1897	1997	3236		2740
1898	1997	3236	4000	2769
1899	2127	3236	4000	2834
1900	2256	3236	4000	2899
1901	2256	3236	4000	2899
1902	2256	3236	4000	2899
1903	2256	3236	4000	2899
1904	2256	3236	4000	2899
1905	2256	3236	4000	2899
1906	2256	3236	4000	2899
1907	2256	3236	4000	2899
1908	2256	3236	4000	2899
1909	2256	3236	4000	2899
1910	2256	3236	4000	2899
1911	2256	3236	4000	2899
1912	2256	3463	4000	2967
1913	2256	3690	3771	2989
1914	2464	3690	3543	3047
1915	2671	3690	3543	3151
1916	2671	3690	3543	3151
1917	3111	4385	3972	3666
1918	3551	5080	4400	4180

Sources, Source, Minde 1993, 25-123* (appendix).

TABLE 5.D.3
Average annual tariff wages in public services

	Central administration	Technical sector (engineers)	Higher schools	Total Repr mean
1919	3551	5080	4400	4180
1920	4360	5878	5606	5064
1921	5169	6675	6813	5949
1922	5169	6675	6813	5949
1923	5169	6675	6813	5949
1924	5169	6675	6813	5949
1925	5169	6675	6813	5949
1926	5169	6675	6813	5949
1927	5169	6675	6813	5949
1928	5169	6675	6813	5949
1929	4963	6372	6472	5687
1930	4757	6068	6131	5425
1931	4757	6068	6131	5425
1932	4757	6068	6131	5425
1933	4757	6068	6131	5425
1934	4757	6068	6131	5425
1935	4757	6068	6131	5425
1936	4757	6068	6131	5425
1937	4788	6158	6131	5467
1938	4819	6248	6131	5510
1939	4819	6248	6131	5510
1940	4819	6248	6131	5510

Sources, Source, Minde 1993, 25-123* (appendix).