

## **SOCIOLOGY | RESEARCH ARTICLE**

# Population figures, gender distribution, patterns of settlement and migration in area of the Karmsund strait and Stavanger in the second half of the nineteenth century

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# Population figures, gender distribution, patterns of settlement and migration in area of the Karmsund strait and Stavanger in the second half of the nineteenth century

Olav Tysdal<sup>1\*</sup>

**Abstract:** This paper concerns population development in the coastal districts near Stavanger County (from 1919, the County of Rogaland) in the second half of the nineteenth century. Its objective is to throw light on relationships between population patterns and the development of commerce: the search for a livelihood being a primary motivating factor in people's choices of where to live. The study seeks to provide clear answers to questions relating to population developments in the area studied here. The collapse of spring herring fishing early in the 1870s and the crisis that struck the shipping industry in the 1880s had—both separately and together—serious consequences for population development in the areas around the Karmsund strait and Stavanger. Strong population growth came to an end. Emigration, which was sensitive to business cycles, grew substantially, bringing population growth to a virtual halt and simultaneously affecting its structure. Both internal migration and emigration from the country changed the pattern of settlement in Norway.



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### PUBLIC INTEREST STATEMENT

*Norway's west coast in the second half of the nineteenth century: demographic consequences of the collapse of the herring and shipping industries.* Primary determiners of strong population growth, gender distribution and patterns of settlement. The influence of business cycles. Can short distance migration aid our understanding of emigration from Norway to the US? This study aims to throw light on relationships between population development and economic crises in the area around Karmsund strait and Stavanger, Norway in the 1870s and 1880s. Its main findings are: the end of strong population growth in the area coincided with a substantial rise in emigration, affecting the region's population structure. Both internal migration and emigration changed local patterns of settlement. The study supports the thesis that the search for a secure livelihood is a primary motivating factor in people's choices of where to live, and that "Migration is a fundamental human activity" (Daniels, 1991, p. 3).

**Subjects:** Sociology of the Family; Sociology of Work & Industry; Historical Sociology; Urban History; Urban Sociology - Urban Studies; Modern History 1750-1945; Urban History

**Keywords:** economic crises; population figures; gender distribution; patterns of settlement; migration; emigration; Norway

### 1. Introduction

The lives of millions of Europeans were changed in the course of the nineteenth century. Developments in commerce—people’s sources of income—were marked by substantial growth in secondary and tertiary sectors and a consequent decline in primary ones. This has been called “[...] the path from primary to secondary to tertiary civilization” (Bade, 2003, pp. 33–35). Agriculture, which employed most people, was gradually reformed and modernized. With the growth of population in the nineteenth and early twentieth centuries, the absolute number of those working in rural and agricultural spheres also grew, while the proportion of the total laborforce had already started to decline. Traditional manual manufacturing (proto-industry) disappeared in many areas. Textile factories took over from domestic manufacturing, in some regions as early as the late eighteenth and early nineteenth centuries. In others, this was not until the second half of the nineteenth century. In both small and large towns, modern factory production became dominant, leading to a considerable increase in the size and number of towns. Net rural-urban migration played an important role in what was a complex process, marked by movement between towns and rural communities and an underlying growth of the rural population. The European path from an agrarian to an industrial society was characterized by a wide diversity of economic, population and migratory developments. “In rural regions with heavy population growth and insufficient job opportunities, a wide range of labour migrations expanded in the early modern age, and especially since the mid-eighteenth century” (Bade, 2003, p. 6).

In this paper, I will discuss these processes in the context of nineteenth century Norway: at a local, regional and national level. The main objective of the study is to map population development in the coastal districts in and near Stavanger County in the second half of the nineteenth century. My aim is to throw light on connections between population and economic development, with “the pursuit of a livelihood” as an important factor in people’s choice of where to settle. Transitions in trade and industry throughout the country towards the end of the nineteenth century had a major impact on patterns of employment. Industry, craft and commerce began to attract increasingly large numbers of people. The numbers of people employed in agriculture and fishing declined in absolute and relative terms. “The shift in employment was a significant cause of emigration from rural communities to the towns [...]. At the same time, both rural and urban populations were affected by migration to and from abroad” (Backer, 1965, p. 199).

The units for analysis used in this study are population development, population structure with an emphasis on gender distribution, as well as changes in settlement patterns, especially those related to internal and external migration. After the decade 1830–1840, population growth in the area being studied was markedly higher than the average growth for the country as a whole. This applies both to the rural and urban areas of the region. A further aim of this study is to map the relative numbers of males and females involved in these processes. Of all the demographic phenomena that marked the nineteenth century, it was migration that had the most evident consequences. Internal migration brought about changes in settlement patterns. As already indicated the numbers of people in the countryside decreased compared to those living in the towns. Developments in the area of the Karmsund strait and that around Stavanger were no exception: rather the contrary. At the same time as the herring industry was enjoying a boom, there occurred a sharp increase in the number of conurbations that the Norwegian parliament had given formal town status. Compared to many other parts of Norway, emigration from the region being studied was of relatively minor importance before the start of the 1880s. However, at this point the picture was radically transformed. Many of the victims of the crisis in the fisheries and shipping extended the geographical scope of their “search for a living” to the other side of the Atlantic. This study takes a closer look at that process. Its aim is

**Figure 1. Stavanger County/ Sørø-feltet showing the Boknafjord in the centre. To the north of that is the Karmsund strait, and the Stavanger area is south of the Boknafjord.**



to confirm or refute the hypothesis that economic decline in the area initially caused migration from rural areas to the towns leading to a steady growth of emigration to the USA at a second stage.

The geographical area covered by this study is the part of Norway's south-western coast that was known as the *Southern district (Sørø-feltet)* during the spring herring period (Østensjø, 1963, p. 144; Solhaug, 1976, p. 346).<sup>1</sup> It included the Karmsund strait and the north of Jæren, the coastal region to the west and south of Stavanger (Figure 1). Sometimes spring herring fishing in this area would attract huge numbers of fishermen. In those parts where the fishing activity was most intense, the percentage of the male population between 15 and 60 who crewed the fishing boats could be as high as 80–90. In addition to the fishing itself, processing and trading in the fish catches gave livelihoods to many more people (Langhelle, 1987, pp. 336–340; Solhaug, 1976, p. 371).

In the text, the expression “Karmsund strait and Stavanger Area” refers precisely to the area being studied here. It encompasses the market town of Haugesund, all of today's Karmøy municipality, part of which lies on the mainland to the east of Karmsund strait, and the rural municipalities of Bokn and Rennesøy, the market town of Stavanger with its nearest environs, i.e. the rural municipalities of Hetland and Håland and the small staple port of Sandnes in the rural municipality of Høyland.<sup>2</sup> It was considered important to include both rural and urban areas including those formally designated as towns, (small ports, staple towns and market towns).

The terms Boknafjord N and Boknafjord S are used to apply to the *rural* areas to the north and the south of the Boknafjord respectively, whereas the towns, with the exception of Skudeneshavn and Kopervik, are treated separately.

## 2. Herring and shipping

The following two paragraphs present a brief economic and demographic backdrop against which the study's findings can be assessed.

Population growth throughout the nineteenth century led to an increase in the number of people seeking employment. Most people had had to find work in the primary sectors: agriculture, forestry and fishing. Agricultural production increased, as did the numbers of employees in that sector. This increase persisted until the middle of the century but the proportion of the population who earned their livelihoods in agriculture sank from 85% in 1801 to less than 60% in 1875. The fishing sector also expanded in the nineteenth century: cod fishing off the coast of Sunnmøre and north of there and spring herring fishing on the south and west coasts. This expansion resulted from a natural

surge in the quantity of available fish, combined with increased recruitment to the fishing fleets. Catches mostly went for export, which improved the Norwegian balance of trade in the 1860s. Roughly 90,000 men participated in the large seasonal fishing catches (Helle, Dyrvik, Hovland, & Grønlie, 2013, pp. 213–215; Østensjø, 1963, pp. 147–148).

The Norwegian economy grew appreciably in the 1840s. In both agriculture and fishing, this growth varied according to natural fluctuations and local conditions. Every fish that was landed in Norway had to be cleaned by hand, one at a time, by people who worked in warehouses, boathouses, packing stations and salting houses. The number of salting-houses in the Southern district had risen from 521 in 1840 to 816 fifteen years later. Only 94 of these were owned by townspeople (Østensjø, 1963, p. 149). About 10,000 people, mostly women, were employed on land to process herring when fishing was in full swing. In the course of the nineteenth century, the fishing communities along the fairway exported an increasing proportion of the catches on their own ships to markets in the Baltic and around the Skagerak. Not only fishermen, processors and exporters, made money on the spring herring. In 1854, about two thousand buyers and skippers employing more than 500 so-called “fish-transport vessels”. They were busily engaged in transporting herring from the fishing area in the Southern district to the salting-houses in and around the towns (Østensjø, 1963, p. 150).<sup>3</sup>

From the mid 1820s there took place an uninterrupted period of growth for shipping, which was closely tied to the country’s foreign trade. One country after another abandoned protection of its own shipping, new markets were opened to unfettered competition, and international trade grew dramatically. Norwegian ship-owners took advantage of these developments. This expansion relied on technology that these ship-owners were familiar with: wooden ships and sails, and was concentrated along the coast from Bergen to Christiania (modern Oslo). In 1878, Norway had the world’s third largest merchant fleet (Helle et al., 2013, pp. 215–216).

Between 1850 and 1875, Norway’s merchant sailing fleet was larger than it had ever been. Much of this expansion was centred in the south of the country, however, Bergen, Stavanger County, Vestfold and Østfold contributed a lot to this maritime activity. The craftsmen who built vessels for Norwegian ship-owners continuously achieved greater speeds. While their use of sails gave Norwegian shipping a conservative image abroad, many ship-owners’ preference for sail was part of a strategically calculated choice: traditional technology was more profitable. However, competition was intense. This led to overinvestment, excess capacity and declining rates. International economic decline in 1875 spread rapidly to Norway. By 1878, the heyday of Norwegian maritime activity was at an end and gave way to economic stagnation.

Besides agriculture, fishing was the most important occupation in the districts of Karmsund and Stavanger. The effects on agriculture were both positive and negative. Where fishing had become a primary occupation, agriculture was to some extent neglected. In neighbouring areas at the same time, it was stimulated. Fishing enabled farmers to buy their own farm were they had previously been tenants (Østensjø, 1963, p. 152). An expanding urban population created favourable conditions for increased commercial agricultural production. This is a small-scale Norwegian parallel to international developments in which substantial urbanisation in the nineteenth century led to increased demand for labour-intensive products such as potatoes and milk, and increased the attraction of agricultural land near the largest conurbations (Bade, 2003, p. 59; Hohenberg & Hollen Lees, 1996, p. 177; Seip, 1997, p. 94; Try, 1979, pp. 272–275).

A relevant question is why did the herring disappear? Probably it had do with altered grazing pattern (Østrem, 2010, p. 241; Solhaug, 1976, pp. 351–353). Identifying the long term commercial consequences of the disappearance would require extensive investigation. However, one result was that it was more difficult to earn a livelihood by combining farming with fishing. Fewer households could rely on both. The collapse of herring fisheries around 1870 was the first stage in the process that was to lead to the disappearance of the traditional farmer-fisherman in the western area of Norway known as “Vestlandet” (Ve, 2009, p. 335). Traditional practice in which fishing was open to

all-comers gradually gave way to an industry dominated by professional fishermen. “Seine fishers began to take part in other and more distant fishing, specialising more and earning more than ever before” (Østensjø, 1963, pp. 153–154). The disappearance of spring herring from local waters made it necessary to fish elsewhere, for example, for larger herring off the coast of Nordland, or off Iceland. This, in turn, meant being away from home and farm for substantial periods, with all the inconveniences that that implied.

It was southern Karmøy, which suffered most when the spring herring disappeared, and the consequences have been the subject of some debate. An observer in the 1880s asserted that Skudeneshavn (the island’s most southerly staple port) still had not got over the crisis. Others considered that the crisis was of shorter duration in several places because people adapted themselves to the new situation, for example, by participating in herring fishing further north. Even before the crash, maritime enterprises which were partly independent of the herring trade had already established themselves in Skudeneshavn and were correspondingly less affected. However, they encountered problems when the shipping industry itself was engulfed in an international crisis (Østensjø, 1963, p. 153; Østrem, 2010, pp. 243–253).

Spring herring had been of paramount importance to Haugesund. It had literally lent lustre to every aspect of the life of that town. The transition from spring herring fishing in local waters to fishing for large mature herring in northern Norway led to a greater degree of specialization within the upper sections of the fishing industry: processing and export. People who worked as salters in surrounding towns and villages were forced to abandon salting and resume their former occupations. Herring processing was taken over by a limited number of men who were able to devote themselves to the trade and practice it in a big way (Hubbard, 2002, p. 91; Østensjø, 1958, pp. 240–243).

Overseas emigration increased dramatically during the last decades of nineteenth century. This was the result of economic stagnation, marginal and overcrowded agricultural regions, religious persecution, and the hope of finding a better life (Baines, 1985/2002, pp. 178–180; Jerome, 1926, p. 82; Merriman, 2010, p. 762). Many people were vulnerable when the Norwegian economy faced the threat of hard times at the start of the 1880s (Gesme, 1993, pp. 144–146; Hagemann, 1997, p. 93; Semmingsen, 1950, p. 203). The decade is also associated with local crises: those in Arendal and Stavanger being the best known. The recession in Stavanger was primarily one in shipping, even though it was partly due to the crisis in the herring trade. The crisis in Haugesund primarily concerned herring fishing, even though shipping was also affected (Østensjø, 1958, p. 391).

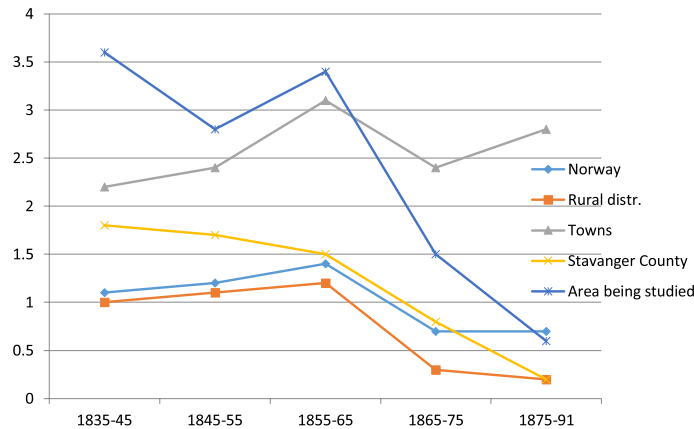
### **3. Main features of demographic developments from 1830s to the 1890s**

Population growth, changes in patterns of settlement, and internal and external migration are key elements in Norway’s nineteenth century demographic history. This growth was dramatic in the first half of the century: in the period following the Napoleonic wars till 1865, the population doubled. The mean annual increase in this period was never below 1% (Semmingsen, 1960, p. 151). In the middle of the nineteenth century, Norway continued to have the highest population growth in Europe. In the ten years from 1835 to 1845, average annual growth was 1.1% (Figure 2). This increased until the decade starting in 1855, when it reached 1.4% per annum. If this growth had continued at the same rate, Norway’s population would have been one million higher at the turn of the century than was actually the case. That is not what actually happened. By the 1890s, this relative growth had been halved and it was the rural communities that were hardest hit in the process.

Norway’s considerable population growth in the first half of the nineteenth century aroused attention. In his report for the years 1836–1840, the chief Stavanger County Governor (Amtmann), Vilhelm H. L. von Munthe af Morgenstjerne, noted that the number of paupers was a cause for anxiety and that expenses related to poor relief had increased dramatically. The Governor accounted for this development in the following way. Under the heading, “Considerably Increased Population” he opined that the population was growing as a result of prevailing liberal sentiment which encouraged a desire for independence and meant that everyone would sooner or later want to be his own

**Figure 2. Growth in percentage terms (average per annum) of native population in Norway, in rural districts in Norway, towns in Norway, Stavanger County and the area covered by this study 1835–1845, 1845–1855, 1855–1865, 1865–1875, 1875–1891.**

Source: Statistics Norway.



master and “[...] result in early marriages between people who own nothing and rely entirely on God’s providence or, without a care for the future, enter into these kinds of relationship without the means to feed a family [...]” (Statsarkivet i Stavanger, n.d., p. 134).

The County Governor’s observations concerned what are known facts. However, it is questionable whether his Malthusian generalizations about the cause of the problem were as well grounded. Malthus’ theories had considerable influence on nineteenth century attitudes to social problems. Population growth was seen as the cause of poverty and poverty as evidence of just that irresponsibility that County Governor von Munthe af Morgenstjerne attributes to the poor. The Norwegian theologian and sociologist, Eilert Sundt, rejected this explanation, insisting that rapid population growth was driven by “internal” factors: mechanisms within the population itself (Dyrvik, 1983, p. 178; Seip, 1997, pp. 78–79). Large families in the 1820s led to correspondingly many marriages twenty years later. Between 1820 and 1824, 8.7 marriages were entered into per 1,000 of the mean population in Norway during that period. Following a decline in the number of marriages during the 1830s, when the average rate was below seven, it increased to almost eight between 1840 and 1844 (Backer, 1965, p. 27, Table 1). One consequence of this population increase was a larger workforce, which, in turn, created economic growth and greater well-being. But competition also became stiffer. Sundt writes about “A time of overcrowding.” Many young people were searching in vain for work. It was a case of “vying for one’s daily bread” (Seip, 1997, p. 78).

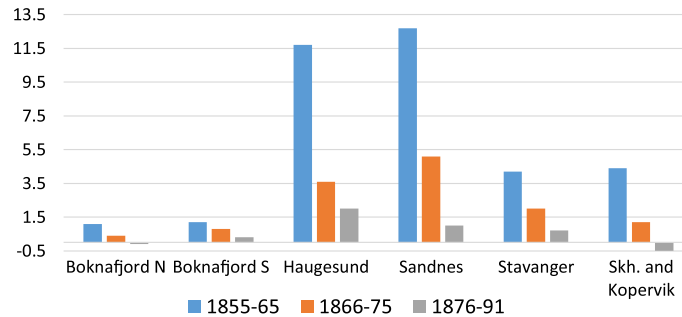
Strong urban growth and increased migration from many areas are two examples of the demographic changes that were taking place. Average rates of annual growth in Norway’s towns and cities were high throughout the nineteenth century. Between 1835 and 1855, this growth amounted to between 2 and 2.5% annually. At its peak, it reached over 3% in the decade between 1855 and 1865: corresponding to a doubling of the urban population every 20 years. The following decade saw a modest decline, but growth returned to nearly 3% in the period 1875–1891 (Figure 2).

In the period from 1835 to 1865, Stavanger County’s average annual growth was between 1.5 and 1.8%, placing it well above the national average. In the following decade, all of Norway, including Stavanger County, experienced a lower rate of population growth. That decline in the rate of growth came to an end in other parts of Norway between 1875 and 1891. However, the rate of growth continued to decline in Stavanger, where average growth during these 15 years was a mere 0.2%.

When considering population growth in the whole of the area being studied between 1835 and 1891, we are able to state the following: the total rate of growth between 1835 and 1865 was three times the average for the country as a whole and twice that of Stavanger County. In the decade 1855–1865, the population increased by over 1,200 yearly. The second fact worth noting is the marked reduction of this growth after 1865. In the period 1875–1891, the average yearly rate of growth was reduced by three quarters: to 300 new inhabitants.

**Figure 3. Percentage average annual population growth 1855–1891 in Boknafjord N, Boknafjord S, Skudeneshavn and Kopervik (1855–1865 Skudeneshavn only), Sandnes, Haugesund, Stavanger.**

Source: Statistics Norway.



The following paragraphs contain a more detailed mapping of population developments in the area between 1855 and 1891. If one looks at these developments in isolation, considerable differences are apparent in the various parts in the course of this period: the differences between urban and rural areas are particularly striking. This strong urban growth around the middle of the century was true of all the towns (Figure 3). This rate of growth was, in part, considerably higher than that of the average rate for the country as a whole (Figure 2). An annual rate of growth approaching 13% in Sandnes and 12% in Haugesund between 1855 and 1865 must be regarded as high. In 1801, Sandnes was a small port with a population of 150. In the first decades of the nineteenth century, growth was slow, but increased substantially from the 1840s onwards. Haugesund started from an even weaker population base and its relative growth in the earliest phase was very rapid. In this respect, Stavanger's annual average growth of 4% between 1855 and 1865 was no less rapid. In addition to the towns' natural population growth, an increasing proportion of the rural population surplus moved into the towns. About the middle of the century, the boom in the spring herring industry somewhat slowed down this trend. It resumed with greater momentum towards the 1890s, but stage migration to the US is also a part of this development.

The rapid rate of urban expansion subsided somewhat between 1866 and 1875 except in Sandnes and Haugesund. This was also the case in the country generally. Despite this decline, Stavanger also grew considerably in this period. Two of the herring towns in the Karmsund strait, Skudeneshavn and Kopervik, showed lower growth. There, it was well below the national average for 1866 and 1875, and actually declined between 1876 and 1891 by an average annual of 0.5%, compared with 1875. Roughly the same decline was apparent in the rural communities. In the area of Boknafjord N, growth was as low as 0.3% between 1866 and 1875. Here, we can note that developments in the rural municipalities varied considerably. The population was actually stable in the entire area because a strong population increase in Avaldsnes made up for a corresponding decline in Skudeneshavn and Åkra, Torvastad and Bokn. The same situation occurred between 1876 and 1891, when Avaldsnes almost stand still and Torvastad took the lead, while the population in the area remained stable. Here we must remind ourselves about the characteristics of rural–urban migration. “Even the major shift in employment structures in the process of industrialization, often misleadingly described as ‘countryside–city migration’ [...] migration took place as a rhythmic or rotating process, an animated transition in which personal life histories often went through multiple temporary movements back and forth until permanent settlement finally occurred” (Bade, 2003, p. 36; Hochstadt, 1996, pp. 156–161).

#### 4. Natural population growth

With growth and decline of population numbers as a guideline, it was easy to draw the conclusions in the above paragraph. The towns exceeded the rural communities by a clear margin. The next step in our mapping of population growth requires us to identify those demographic mechanisms that can account for the success of the towns. The population of a specific area is determined by two circumstances: natural growth (births minus deaths) and net migration (numbers moving in minus numbers moving out). In this paper, the focus is on the role that migration played in these demographic developments. In order to get the fullest possible picture of what was most important for the



population developments in question—fertility among the native population or migration—we must identify the scale of natural population growth. For example, internal migration was not the main cause of population growth in the cities of England and Wales in the nineteenth century. “About three-quarters of their population growth was from natural increase” (Baines, 1985/2002, p. 219).<sup>4</sup>

The number of births in a population is determined by two factors. The first of these is that fertility is higher among married people than among those that are not married.<sup>5</sup> The second is a natural consequence of the first, namely that nuptiality determines how many people of reproductive age live as couples (Dyrvik, 2004, p. 109). The starting point for mapping natural population growth in the area being studied must therefore be to enquire into how the pattern of nuptiality developed. The statistics covering population movement show the numbers of marriages entered into each year in the country as a whole, in rural communities and towns for the years 1856–1875 and specified for each diocese in the country, and after 1876 for each county (Backer, 1965, p. 24). The number of marriages entered into between 1856 and 1890 in the country varied considerably from year to year, but sank towards the end of this period. In the years 1886 to 1890, there were almost 1,000 fewer marriages compared with the years 1876–1880. While the crude rate of marriages in the years from 1856 to 1865 was 7.22 it declined to 6.35 between 1886 and 1890 (Backer, 1965, p. 27, Table 1).

If one wishes to study the pattern of marriages in smaller geographic areas, the sources prove challenging. Within the chronological limitations set by this study, we can find information from the individual deaneries (ecclesiastical areas of several parishes directed over by a dean) in Stavanger county between 1856 and 1865, and for the single parish between 1866 and 1890. This data shows that the rate of marriages in the area being studied varied more than was the case nationally (Table 1). Both in the rural communities and in the towns, it was higher than the national average between 1866 and 1885 and roughly similar or lower between 1885 and 1890. It is possible that these differences may be incidental consequences of the limited material available, however it is possible to discern a clear trend towards fewer marriages as one approaches the end of the period being studied. For example, nearly eight marriages per thousand mean population were entered into annually in the herring towns of Skudeneshavn and Kopervik in the decade 1866–1875. The corresponding number between 1886 and 1890 was lower than five. This information is an important part of the overall picture of population development in the area. Since most children were born to married couples, a decline in the number of marriages, caused by lower in-migration rates and economic stagnation, had to result in fewer births.

When mapping fertility and mortality, which is a precondition for discussing natural population growth, one also encounters limitations relating to sources. It is only after 1855 that one finds

**Table 1. Marriages per thousand of the mean population between 1855 and 1890**

	1856–1865		1866–1875	1876–1880	1881–1885	1886–1890
Karmsund deanery	6.6	Boknafjord N	6.8	8.2	8	6.5
Stavanger deanery (except Stavanger town)	7.4	Boknafjord S	8.3	7.8	7.8	6.5
		Haugesund	8.1	7.3	6.7	5.2
		Sandnes	7.3	8.2	6.3	5.1
Stavanger town	7.9	Stavanger	7.7	8.8	8.3	6.5
		Skh. and Kopervik	7.8	5.9	6.3	4.8
Norway	7.22*		6.85**	7.18	6.66	6.35

Source: Statistics Norway.

\*Mean 1856–1865.

\*\*Mean 1866–1875.

annual figures for births and deaths at parish/municipality level in the printed statistical material. This means that we must wait until the second half of the nineteenth century before it is possible to calculate the natural population growth in the individual parts of the area being studied.

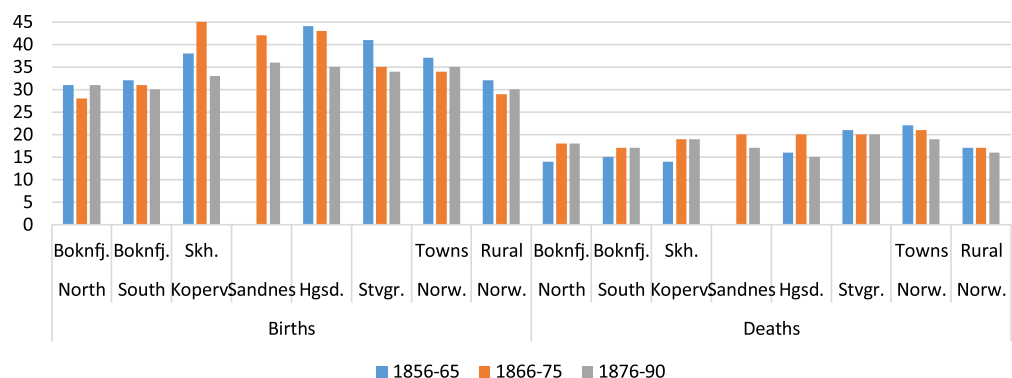
The birth rate in the areas in Boknafjord N and Boknafjord S remained a fairly stable 30 per 1,000 of the mean population between 1856 and 1891, and thus close to corresponding figures for the country as a whole (Figure 4). We can take note of a decline of 0.3% in the rural communities to the north of the Boknafjord from the decade 1856–1865 to the following one, 1866–1875. Incidental effects due to sparse statistical material may explain this; however, it is interesting that the birth rate in rural communities throughout the country showed a similar tendency during these years. This is where the effects of what Norwegian historians refer to as “Sundic waves” were apparent. Large cohorts of young people in the years following 1815 reached the age at which they would marry 25–30 years later. The next wave came in the 1860s, with similar consequences, but on a lesser scale (Dyrvik, 1987, p. 327).

The highest rates between 1856 and 1865 are to be found in Stavanger and Haugesund. A birth rate of well over 40 was high, and considerably above the 36.6 average for all the other towns in Norway (Figure 4). In the course of the following decade, the birth rate in Stavanger declined towards the national average, but they remained high in Haugesund and in the other three towns in the areas studied here. Of these, population growth in Sandnes increased that town’s importance (Figure 3). Then, in the years from 1876 to 1891, the birth rate in these towns also fell to that of the national average.

The crude mortality rates among the rural population in the years 1856 to 1865 in the area was about three per thousand lower than the average for the country as a whole. This indicates that the conditions under which people lived were generally good. In the following 25 years, these rates increased slightly, especially in the Boknafjord N area, and stabilised approximately at the national average. It is difficult to account for this. One possible explanation may be that out-migration led to a greater proportion of older people in the population. In the towns too, mortality rates varied over time. They were considerably below the national average in Haugesund and Sandnes in the first phase, roughly the national average in the middle phase, but then declined somewhat in the years between 1876 and 1891. These variations too may be difficult to account for. One reason for this may be the paucity of source material. However, it is also important to remember that the towns in question were small and relatively new. In-migration changed the population structure. Young people with lower death rates became a more dominant part of the population. It was a period of economic prosperity. Employment opportunities made it easier for the younger generation in the towns, native and newcomers to start families. However, we have also seen that the number of marriages declined in the second half of the 1880s. In the older of the “large towns”, Stavanger, the mortality rate was roughly the national urban average in the period between 1855 and 1891.

**Figure 4. Births and deaths per 1,000 of the mean population in the years 1855–1891 Boknafjord N, Boknafjord S, Skudeneshavn and Kopervik (1855–1865 only Skudeneshavn), Sandnes (1866–1890), Haugesund, Stavanger, towns and rural communities in Norway.**

Source: Statistics Norway.



As we shall see later, in-migration was particularly important in the towns of Haugesund and Sandnes. This meant that a large proportion of the population was young, and mortality correspondingly low. Considerable levels of in-migration meant that a smaller percentage of the population belonged to age-groups with the highest rates of mortality (Myhre, 1977, p. 29). Everything indicates that they avoided being caught in “the urban mortality trap” (Hohenberg & Hollen Lees, 1996, p. 258).<sup>6</sup> Before 1815, years in which urban births exceeded deaths were exceptional, whereas they became the norm after 1845. Then, the exceptions only occurred in particular circumstances, such as when cholera struck Christiania in 1853, in years of economic crisis or when economic pressures led to an unfavorable gender or age distribution (Myhre, 1977, pp. 28–29).

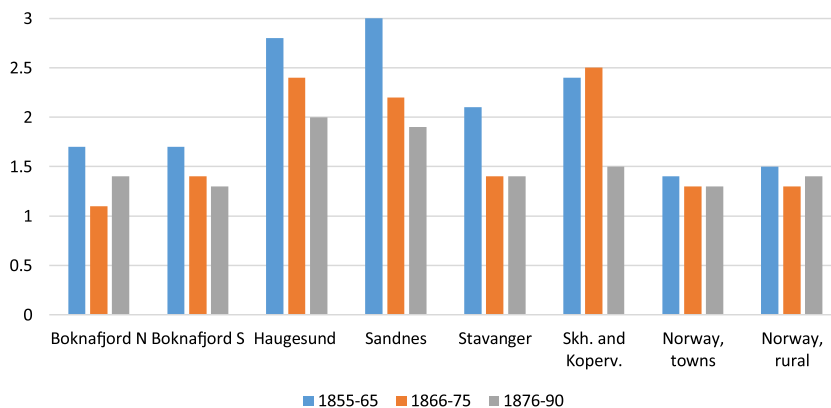
Mapping the role of migration in the population development of this area is central to the present study. In order to confirm or refute the hypothesis that economic decline forced rural inhabitants to move to the towns, and at the next turn, to emigrate in growing numbers to the USA, it is necessary to document natural population growth in the area, based on crude rates of births and deaths (Myhre, 1977, p. 29).<sup>7</sup> By subtracting the proportion of growth that can be accounted for by the surplus generated by the population itself, it is then possible to arrive at the scale of net migration in the various areas. Apart from mapping the pattern of marriages mentioned above, the demographic factors that underlie and influence normal birth rates and rates of mortality, e.g. age and gender distribution, will not be discussed further here.

Figure 5 shows the natural average percentage population growth between 1855 and 1891 in the various parts of the area being studied. Two findings are noteworthy. Firstly the relatively high level of growth early in this period. Here, the figures for Sandnes and Haugesund are outstanding. A natural average growth of 3 and 2.8% respectively was twice the corresponding average rate in all other Norwegian towns in the same period. The figures for Stavanger too were then well above the national average. Those for Haugesund were still high in the decade 1866–1875, whereas the difference between those for births and deaths had declined in Stavanger, where it barely exceeded the national average and persisted through the final period. In the decade 1866–1875, the average natural population growth in Skudeneshavn, Kopervik and Sandnes was almost double that of the average for all other Norwegian towns and only marginally lower than that in Haugesund. The other remarkable circumstance is the degree to which natural population growth declined in Haugesund and these three other towns between the 1850s and the 1880s. Natural population growth remained high in Sandnes throughout this period, whereas it declined towards the national average in Skudeneshavn and Kopervik.

In the earliest phase, between 1855 and 1865, natural population growth in the rural parts of the area remained above the national average. While this level was maintained in the south, the average levels north of the Boknafjord fell appreciably between 1866 and 1875. It should also be noted that natural population growth declined in rural areas throughout Norway during this period. However, these fluctuations were greater in the rural communities in the Boknafjord N area. While these levels were maintained in the south, the average declined noticeably to the north of the

**Figure 5. Natural population growth in the years 1855–1891, Boknafjord N, Boknafjord S, Skudeneshavn and Kopervik (1855–1865 Skudeneshavn only), Sandnes, Haugesund, Stavanger, towns and rural communities.**

Source: Statistics Norway.



Boknafjord between 1866 and 1875. Besides this, natural population growth declined markedly in rural communities throughout the country during this period, but the effects were greater in the rural communities in Boknafjord N. It is difficult to account for this decline, but it seems reasonable to suppose that the collapse of the spring herring industry had especially negative consequences for these areas, including increased out-migration. The majority of those who chose to leave were young people who were starting out in life. At the same time, it presents something of a challenge to account for the fact that the natural population growth was approximately the same as for rural communities throughout Norway in the last period between 1876 and 1891.

In short, we can conclude that the natural population growth in the area being studied early in the period between 1855 and 1891 was partly far beyond the national average in some areas and about average in others. It sank between 1876 and 1891, and settled at about the national average in all the areas except in Haugesund and Sandnes.

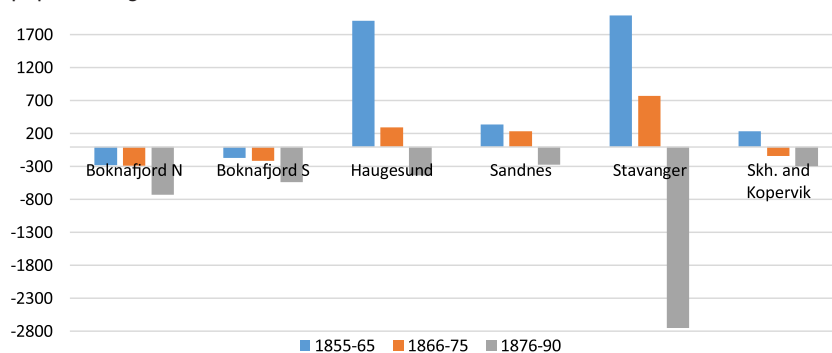
### 5. Towards negative migration numbers

Now that we know the scope of both the natural population growth and the total population growth that took place in the individual geographical areas, it is possible to assess the role that migration alone had for population development. The picture is complex, but some trends are clear. Developments were roughly similar in both rural areas. Boknafjord N, the area in which the spring herring industry was most important, suffered a population decline due to net out-migration in all three periods between 1856 and 1891 (Figure 6). In the years between 1856 and 1865, a strong annual natural population growth of 1.7% made up for some of this loss. Between 1866 and 1875 average natural population growth in the four municipalities was 407 persons. That corresponded to 1.1% a year. In the course of these 10 years, net migration was 302 below zero (Figure 6). The population increased by 105, which corresponded to an annual growth of 0.3% (Figure 3). It should be noted that there were considerable local differences. Avaldsnes, with its copper works at Vistnes, enjoyed a strong growth in population, thereby increasing the average, while the other three municipalities suffered a decline in population. That was the picture in the period between 1876 and 1891. It is true that the natural population growth increased somewhat, but net out-migration increased even more. In Avaldsnes too, figures for migration were negative in the course of these 15 years. Virtually the entire birth surplus of 800 disappeared from the four combined communities. The population recorded in 1875 remained virtually static (Appendix A, Table A1).

Developments in the rural parts of Boknafjord S, Stavanger's neighbouring municipalities, were very similar to those described above in Boknafjord N. Figures for migration were negative in all three part periods between 1856 and 1891. Natural population growth between 1856 and 1865 was high and the population increased by 1.2% annually in that period (Figure 3). Between 1866 and 1875, natural growth was somewhat weaker. If net migration had been zero, a considerable population surplus of 1.4% would nevertheless have increased the population by 1,500. Since 162 more people moved out of the area during this period than moved in, the actual growth was 1.2%—or 1,338 in absolute numbers. Natural population growth continued to be high in the years between 1876 and 1891. However even higher negative migration numbers accounted for the fact that actual annual population growth remained at a modest 0.3%.

**Figure 6. Net migration 1856–1865, 1866–1875, 1876–1891 in Boknafjord N, Boknafjord S, Haugesund, Sandnes, Stavanger, Skudeneshavn and Kopervik (1856–1865 only Skudeneshavn). Absolute numbers.**

Source: Statistics Norway.



The situation in the towns, Stavanger, Haugesund, Kopervik, Skudeneshavn and Sandnes, was somewhat different. Here too, natural population growth was very high in the period 1856–1865. In addition, due to net in-migration, average annual population growth was high: about 12% in Sandnes and Haugesund, over 4% in Skudeneshavn and Stavanger. Between 1866 and 1875, natural population growth declined somewhat, as did migration, which was negative in Skudeneshavn and Kopervik. This resulted in more moderate population growth, even though that continued to be high, especially in Sandnes and Haugesund. Out-migration exceeded in-migration in all the towns between 1876 and 1891. (Appendix A, Table A2) Due to continued high natural population growth, the number of inhabitants nevertheless increased in the course of this period. Haugesund had the highest level of growth: 2% annually. Skudeneshavn and Kopervik continued to show a high level of natural population growth. However, the level of out-migration was so high that the population of these two towns declined by 0.5% annually between 1876 and 1890 (Figure 3).

We can summarise population developments between 1856 and 1891 in the area being studied as follows. Natural population growth was high in all the areas, being well over the average for the country as a whole (Figure 5). This was also the case in the rural areas between 1856 and 1865. However, natural population growth there corresponded to the national average after 1865. Figures for negative migration numbers remained stable between 1876 and 1891. Figures for negative migration numbers remained stable between 1876 and 1891 (Figure 3), in contrast to the situation between 1856 and 1865, when the population grew by about 1% annually. In the towns, natural population growth was exceptionally high between 1856 and 1865: far above the average for all the towns in Norway. The towns also had a considerable birth surplus between 1866 and 1891, which, with the exception of Stavanger, continued to exceed the national average. This strong urban and rural population growth, which characterised the start of this period, levelled out, due to changes in the pattern of migration. Between 1876 and 1891, out-migration was greater than immigration in all parts of the area being studied (Figure 6). While the population of Stavanger grew by 4.2% annually between 1856 and 1865, growth declined to 0.7% annually between 1876 and 1891. These variations in the small towns of Haugesund and Sandnes were even greater. Those that suffered most were Skudeneshavn and Kopervik, whose populations actually declined (Figure 3).

## 6. When the spring herring disappeared

The Norwegian economy grew appreciably in the 1840s. In both agriculture and fishing, this growth varied according to natural fluctuations and local conditions. Every fish that was landed in Norway had to be cleaned by hand, one at a time, by people who worked in warehouses, boathouses, packing stations and salting houses. Processors, exporters, buyers and skippers were busily engaged in transporting herring from the fishing area in the Southern district to the salting-houses in and around the towns. In the course of the nineteenth century, the fishing communities along the fairway exported an increasing proportion of the catches on their own ships to markets in the Baltic and around the Skagerak. In the preceding decades, strong population growth in the area being studied was both directly and indirectly driven by the herring industry. For that reason, it is scarcely surprising to find demographic traces at the point of time when this industry collapsed. These are most obvious in areas whose economy had been dominated by the spring herring industry. “Combined with continued population growth, [the result of] the collapse of home economy structures and growing attraction of the secondary and tertiary employment sectors [...] was a general mobilization of rural and agricultural labour potential” (Bade, 2003, p. 64). This resulted in more migration between rural areas and from rural areas to towns. This was the case on the European continent, and especially in the expansive centres where agriculture was conducted according to capitalist principles, such as in East Elbia, northern France and the Dutch provinces of Holland and Friesland (Bade, 2003, p. 64). “Consequently, the small family production community essentially lost its core, psychological attachments to the insufficiently productive land were loosened, and a latent willingness to migrate permanently within the country or to emigrate overseas grew” (Bade, 2003, p. 66).

A corresponding development, albeit on a smaller scale, took place in Norway. Examples cited in this study are consistent with the wider picture. Increasing migration, leading in time to weaker

population growth and a partial decline in population numbers, can be indicative of a crisis. The population declined or its growth stagnated in areas where the herring industry collapsed or had been very important. Where fishing was to some extent kept going, or in areas in which fishing for mature herring supplemented established fishing activity, as was the case in Nordland, the population continued to grow rapidly (Tysdal, 2013, p. 6).

These examples confirm neo-classical economic micro-theory, according to which improved employment opportunities—and, perhaps, hopes of greater rewards—motivate people to move elsewhere (Massey et al., 1993, pp. 434–435). This would particularly be the case with the failure of an under-developed economy like the situation in the coastal area of Western Norway in the nineteenth century. Short-term job opportunities were scarce (Hatton & Williamson, 1998, pp. 16–17). There were no welfare arrangements or insurance systems, which might have secured the livelihoods of those who were affected. Migration was the solution for single individuals and for entire families. For the first time in several decades, the greater part of the centre of the spring herring industry was marked by net out-migration. The entire birth surplus disappeared in the part of the area being studied lying to the north of the Boknafjord, with the exception of Haugesund and, to some extent, Avaldsnes.

This tendency was most obvious in the last period covered by this study: between 1876 and 1891, when the population in the area being studied grew by a mere 8.5%: an annual average of 0.56%. Most remarkable in the years after 1875 was the fact that earlier strong population growth, lasting from 1840 until the 1870s, was now reduced by two thirds. This trend has been partly captured in the statistics for the decade 1866–1875. Nevertheless, it is the findings for the period 1876–1891 that leave no doubt about the fact that a dramatic change in the pace of population growth had taken place. The towns were least hard hit: their total populations grew 11%. As we have seen, that growth was nevertheless much lower than the 43% recorded in the towns across the country over the period. It was mainly men that left the towns. The number of men living in towns in the county increased by 1,140 (or 7.7%) between 1875 and 1891. The rural population grew by a modest 3.6%. The total number of women increased by 6.8%, while the number of men remained the same.

A prominent feature of migration to towns in the second half of the nineteenth century was that the majority of the migrants came from the surrounding countryside. Furthermore, seasonal work was widespread in the towns, especially among migrants who had access to income in the rural communities, but which was nevertheless insufficient to sustain them throughout the year. Lack of paid work during periods when this was either scarce or non-existent caused working people to move into and out of the towns. Circular migration, and in the course of time, chain migration may be used to label these rural–urban patterns of migration in Europe (Bade, 2003, pp. 41–45; Page Moch, 2003, pp. 127–129).

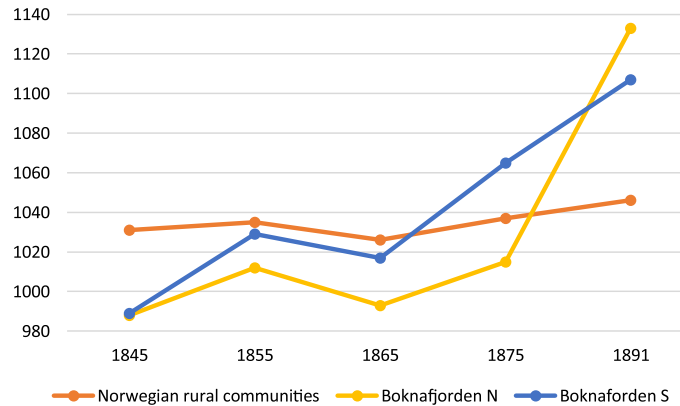
### **7. A majority of women**

We have seen that the broad outlines of population development that characterised Karmsund and Stavanger in the nineteenth century do not correspond to those in the rest of the country. Growth in the first half was considerably greater than elsewhere. By way of contrast, stagnation in the second half was more severe than in other parts of the country. The dramatic decline from very rapid to very slow growth, lasting for 30–40 years, deserves close attention. A key element in accounting for this may be found in the relationship between population development and economic fluctuations. A further obvious question to ask concerns the consequences of these developments for the population structure.

This raises a further question about what consequences this development had for the population structure of these areas (Dyrvik, 1983, p. 24).<sup>8</sup> A survey of the relative numbers of males and females may help to provide an answer. Starting with the rural districts, Figure 7 shows the proportion of males to females between 1845 and 1891 in the country as a whole, in Boknafjord N and Boknafjord S. While the female population exceeded that of males by 45–50 per 1,000 of the mean population throughout the period 1845 to 1891, this changed in the area studied here. In both the two rural

**Figure 7. Females per 1,000 males in 1845, 1855, 1865, 1875 and 1891 in rural communities in Norway, Boknafjord N, Boknafjord S.**

Source: Statistics Norway.



areas, the proportion of females subsequently grew, noticeably to the north of the Boknafjord. In this area, the proportion of males to females was equal in the period when the herring fishing industry was thriving. Indeed, in 1865, men were actually in the majority. However, in 1890, the female population exceeded that of males by 140 per 1,000 of the mean population. In other words, it was not only the herring that disappeared; there were fewer men too.

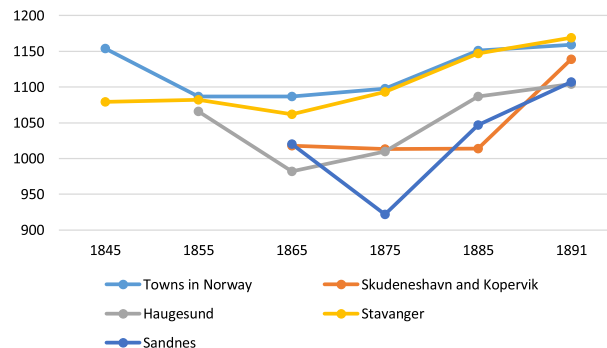
Figure 8 shows the ratio of males to females in all Norwegian towns, and in the towns in the area being studied between 1845 and 1891. On average, these towns had a considerable majority of females (1,154 for every 1,000 males). While this dropped slightly, the imbalance was still noticeable between 1855 and 1875 and only returned to 1845 levels in 1875. A relatively modest gender imbalance (compared to the national average) in the towns in the area being studied gave way to considerably greater imbalance by 1891. At this time, the ratio of 1,150 females for every 1,000 males corresponded roughly to the average in Norwegian towns and cities.

Stavanger is the only town in the area for which we have statistical information for 1845. The gender imbalance there was much smaller than that for the rest of Norway's urban population. This picture scarcely changes before 1855, from which year we also have figures for Haugesund. Surprisingly, the male population there exceeded that of women in 1865, whereas in the other two herring towns, Skudeneshavn and Kopervik, the proportion of males to females was roughly even until the mid 1880s. In the small towns too, the picture changed in the years up to 1891, when Skudeneshavn and Kopervik, for example, had almost 150 more women than men per thousand of the mean population.

Figure 7 illustrates the different ways in which males and females affected population development in the rural areas in the latter part of the period being studied, 1875–1891. During these years,

**Figure 8. Females per 1,000 males in the towns of Norway, in Skudeneshavn and Kopervik, Haugesund, Stavanger and Sandnes in 1845, 1855, 1865, 1875 and 1891.**

Source: Statistics Norway.



as many as eight of ten “new” inhabitants were females. The rural female population increased by 21% while the number of men did not change at all. The fact that the male population in the rural communities in the area declined by two between 1891 and 1875 demonstrates a dramatic degree of gender imbalance (Appendix A, Table A3). The study shows that women were in a majority in all the rural municipalities and towns whose populations grew for example in Sandnes, where the proportion of females in the population increased by 20%, compared to scarcely 5% in the case of men. Female population growth was also highest to the north of the Boknafjord: in Haugesund, and especially in the rural municipalities of Håland and Torvastad. By way of contrast, in all those areas whose populations declined (such as the rural municipalities of Skudenes and Avaldsnes) the scale of that decline was greatest in the case of men (Appendix A, Table A3).

We can conclude that the entire male birth surplus in the rural areas in the years between 1876 and 1891 was matched by out-migration of males from the region. In the towns, females contributed to 54% of their total growth, compared with 25% in the case of males. This finding is scarcely less remarkable when we bear in mind that male births always exceed female births by a good 5% (Backer, 1965, p. 104).<sup>9</sup> Some of the above phenomenon may be accounted for by a considerably higher rate of male child mortality at the time, especially young infants (Fuglum, 1978, pp. 330–331). However, as we shall see, there were other more important factors.

We can summarise these findings as follows. At the time when the spring herring fisheries dominated the economy of this area, its gender distribution was fairly even, notwithstanding a slight predominance of females in the towns. Developments during the period from 1865 to 1891 led to a considerable gender imbalance in the rural areas as well as in the towns.

## 8. Pattern of migration in the countryside

The findings so far call for answers to the following questions related to population development in the area being studied from the end of the 1850s until 1890: Why did population growth tail off in such a marked way? What accounted for the obvious differences between the rural communities and the towns? Why was gender imbalance in this area greater than that in the rest of the country? Where did the men go? The numbers of men did not increase in the countryside, and only slightly in the towns. In addition to the significance of a low excess of births it is obvious that *migration* was a powerful force behind the demographic changes that were identified in the first part of this study.

We are able to trace extensive population migration over various distances throughout history. We can be certain that people of all kinds moved: women and men, young and old, poor and rich, satisfied and dissatisfied, people in search of security and those in search of adventure, industrious and lazy. It may be challenging to explain why people have migrated, what has underlain migration—what has motivated it (Marsella & Ring, 2003, pp. 9–10). One of the oldest theory of migration is *Neoclassical Economics Theory* (Harzig, Hoerder, & Gabaccia, 2009, pp. 62–64). The theory offers the following explanation. “[...] international migration, like its internal counterpart, is caused by geographic differences in the supply of and demand for labor” (Massey, 1999, p. 35).

Norway has a long history of migration. “Internal migration had, of course, occurred in earlier times. For centuries there had been some movement from the countryside to the small towns [...]” (Semmingsen, 1960, p. 153). People migrated and still migrate for many different, individual reasons and are driven by many different motives (*Foreløpig indstilling, utvandringslovgivingen*, 1913, pp. 81–88, 166–167). In a historical context, Eilert Sundt’s familiar formulation “Vying for one’s daily bread” is particularly relevant. The reasons that especially many Norwegians emigrated in the period following the American Civil War and up to the First World War have been summarized by the Committee for Emigration, which the Norwegian parliament set up in 1912/1913 with a mandate to draft a bill concerning emigration (*Foreløpig indstilling, utvandringslovgivingen*, 1913).<sup>10</sup>

Considerable attention has been paid to the growing level of emigration from Norway from the middle of the 1860s. However, it is important to remember that at the same time, and partly due to



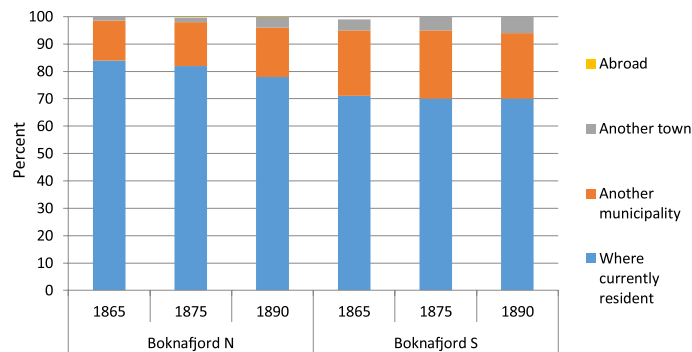
the same forces, there was considerable internal migration, which was to some extent interwoven with mass emigration. Migration took place from countryside to towns, but also between towns, from the towns to the countryside and, not least, between rural communities. While 60% of the populations of urban communities in 1875 were native-born, the corresponding figure for rural communities was 70%. Despite the fact that economic development in the towns was more rapid and that it brought with it an increased demand for labour, which natural population growth was unable to satisfy, emigration from the towns exceeded that from rural communities. There were two reasons for this. Statistics Norway point out that urban dwellers are more mobile than countryfolk and an even larger flow of people were moving between towns than from the countryside to the towns (*Contribution to Norwegian Population Statistics NOS, 1882*, p. 174). In their own individual ways, both streams of migrants would set their stamp on the development of Norwegian society in the last half of the nineteenth century. Migration was also to determine the course of population development between 1875 and 1891 in important ways in the area studied here.

It is no easy task to find reliable and accurate sources of information on which to base historical migration studies in general. This description primarily concerns documentation of work-related migration, but is valid for Europe generally, including Norway, in the years following the Napoleonic wars (Lucassen, 1987, p. 7). Semmingsen points out: “Unfortunately Norway has no annual statistics of internal migration” (Semmingsen, 1960, p. 153). Registration was slow to get started and was incomplete right up to present day. The censuses from 1865 onwards contain information about which parish or town each individual was born in. They also contain information about the country of birth of those born outside Norway. This makes it possible to determine how many people moved into the area in question prior to the census and who were still alive when it took place (Dyrvik, 1983, p. 169, 171).

Figures 9 and 10 show the percentages for the place of birth of inhabitants present in the area being studied in 1865, 1875, 1885 (only the towns) and 1890. This kind of survey of the population in an area makes it possible to gain a rough picture of the main flows of this migration. For example, a

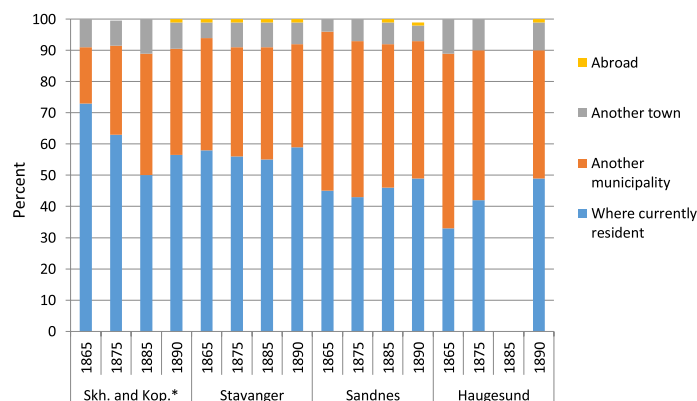
**Figure 9. Inhabitants in the rural communities of the area being studied who had been born in municipalities in which they were currently resident, those born in a different rural municipality, those born in a town or abroad, 1865, 1875, and 1890. Percent.**

Source: Statistics Norway.



**Figure 10. Inhabitants of towns in Stavanger County (other than Egersund and Sogndalstrand) who were born in the communities where currently resident, those born in a different town, those born in a different rural municipality and those born abroad, 1865, 1875, 1885 and 1890. Percent. \*1865: Skudeneshavn, 1885: Kopervik.**

Source: Statistics Norway.



high percentages of native-born inhabitants, shown in the dark blue parts of the columns in Figures 9 and 10, indicate low levels of internal migration.

All three censuses between 1865 and 1890 showed that the rural area of Boknafjord N had a higher percentage of native-born inhabitants than Boknafjord S. The difference was greatest in 1865, with 84% in the north, compared with roughly 70% in the south. Even though spring herring was important in the south, it was even more so in the north, where Skudenes rural municipality was particularly prominent. The fact that over 90% of the inhabitants of this municipality were native-born is remarkable, considering the strong influx of people in connection with the spring herring fishing. A probable explanation is that this was a matter of high mobility and large-scale seasonal influx. Tilly draws a distinction between mobility and migration, depending on the degree to which leaving the home was regarded as final (Tilly, 1978, pp. 50–51).

This aspect of internal migration was not captured in the source material. It is therefore possible that some movement has escaped notice. The censuses prior to 1875 had been based on what were called *judicial or native population*, that is to say that those people who were included “[...] resided permanently [...]” in each inhabited place. The 1875 and subsequent censuses included everyone who was actually present, and a specific note was to be made of those who were temporarily absent. In addition, specific information was given about those who were temporarily present. In this way, the completed census forms contain de facto “[...] figures showing the population belonging to the place in question” (*Contribution to Norwegian Population Statistics NOS*, 1882, p. 210).

The censuses prior to 1875 would seem to be those most likely to contain registration errors regarding seasonal migrants who were participating in the spring herring fisheries in the west of Norway. Two factors suggest that this was not the case, and that the graphs for 1865 (Figures 9 and 10) are accordingly very accurate. The censuses were conducted around the new year, before fishing was really underway. Those who were responsible for conducting the censuses in the rural municipalities: parish priests, curates, sheriffs and, especially, schoolteachers, were very familiar with local conditions. The objective was to map the native population in each census district, so familiarity with local conditions was important. In parishes where one could, in addition, expect “[...] substantial numbers of common fishermen at the turn of the year, it would be expedient to secure a sufficient number of extra counters so that temporarily resident fishermen could be counted before they left the place” (*Contribution to Norwegian Population Statistics NOS*, 1882, pp. 211–212).

Access to a source of livelihood will always be decisive for an area’s attraction for potential newcomers. Traces of population development in the rural municipality of Avaldsnes, measured as a percentage of native-born inhabitants (not shown in Figure 9), provide a good example of this. There, the percentage of native-born inhabitants declined from 80 to 70 between 1865 and 1875. This happened in spite of the fact that Avaldsnes too was hit by the collapse of the spring herring industry. The resulting loss of employment was compensated for after 1865, when a copper mining plant, “Vignæs Værk” (Vignæs Works), at Vignes farm came into operation. In 1875, the population at Vignæs Works numbered one thousand (*NOS Folketællingen i Norge*, n.d., p. 45). The fact that the municipality had 50 foreign-born inhabitants in 1875 and 1891 was also due to this mining activity.<sup>11</sup>

Proximity to Stavanger is the most important reason for the low percentage of native-born inhabitants in all the rural municipalities in the Boknafjord S area. This explanation is consistent with the larger picture. In 1865 only 2.2% of the inhabitants of Norway’s 462 rural municipalities had been born in towns and 39% of these were residents of only 26 rural municipalities, which were themselves virtual suburbs of twelve of the country’s largest towns (Myhre, 1977, p. 34). Many people moved to Hetland, which completely encircled Stavanger, and parts of which were already relatively densely populated.

This study shows that migration from rural municipality to rural municipality was the dominant pattern in the area being studied here. A clear majority of newcomers to one rural municipality had been born in another. Migration from towns to rural municipalities was of marginal importance, particularly in areas where the population was stagnant. This may be considered somewhat surprising since several studies show that economic crises tend to lead to urban–rural return. One explanation may be that town dwellers considered it unlikely that they would find livelihoods in the depressed, relatively crowded rural municipalities. However, as we shall see later, considerable turnover in the towns reflected changes in the wider population from year to year. This aspect of internal migration is not captured in these net totals for migration from towns to rural communities. The study has also shown that in those days, there was very little likelihood of meeting a foreigner in the rural municipalities on the periphery of Stavanger County. This group is not shown in Figure 9, since foreigners never counted for more than 1% in any of the rural municipalities. With the exception of Avaldsnes, and to some extent, Hetland, scarcely any foreigners lived in the rural municipalities between 1865 and 1891. This contrasts hugely with today’s conditions. However, a few more foreigners were registered in the last census carried out during the period under consideration.<sup>12</sup>

### 9. The pattern of migration in the towns

“The most powerful expressions of the interaction between changes in employment structures and geographical population movements were urban growth and the increase in urban-industrial economic conurbations” (Bade, 2003, p. 41). This international trend also characterised population development in Norway during the nineteenth century. In the period 1835–1891, the mean population growth of its towns varied between 2.2 and 3.1% (Figure 2). Between 1845 and 1890, the number of urban areas in the country almost doubled from 87 to 163 (Myhre, 1977, p. 26, Table 5). The proportion of urban dwellers in Norway rose from 23.5% in 1875 to 29.3% in 1891 (Myhre, 1977, p. 19, Table 3). About 475,000 people (far more than half of the total population increase between 1835 and 1890) settled in towns and urban areas (Myhre, 1977, p. 19, Table 2). “The general population growth in the course of industrialization definitely served the cities far more than the countryside.” (Bade, 2003, p. 42). Changes in the structure of commerce, often related to economic crises, could have set these processes in motion. “The single most important reason for out-migration in rural areas was probably the decline of rural industries and the growth of employment in urban areas” (Baines, 1985/2002, p. 100, note 24).

In this area, the relative importance of the towns in terms of population increased. The flow of people moving from the countryside to the towns was even faster than in the country as a whole. Both the total number of inhabitants and the proportion of the population of Stavanger County living in urban areas almost doubled, from 17 to 32%, between 1845 and 1875. This was in large part due to natural population growth, but migration was also a factor (Figure 5 and 6). At that point, urban growth in the county almost came to a halt. Between 1876 and 1891, growth in total number was only 3% (Myhre, 1977, p. 19, Table 3). This reduced pace of urbanisation was partly due to the fact that population growth in this period was a mere third of what it had been around the middle of the century.

It is noteworthy that in 1865, as many as 73% of the population of the expanding herring town of Skudeneshavn had actually been born there. By way of comparison barely 53% of the urban dwellers in Norway were natives of the towns they lived in (Myhre, 1977, p. 35, Table 10. The figures for 1865 refer to the native population). This makes a striking contrast with Haugesund, where in the census of 1865, only a third of the inhabitants said that they had been born there. The numbers for Skudeneshavn and Kopervik have been combined for 1875 and 1890 (Figure 10). The proportion of natives declined noticeably between 1865 and 1875, and as far as Kopervik was concerned this decline continued during the following decade. While the population remained fairly stable a steadily declining number of those born in the town were actually living there at the time of the census. We have seen earlier that natural population growth had remained strong and steady. The fact that population numbers did not rise (Appendix A, Table A3) can be accounted for by considerable in-migration and out-migration of which outward migration was greatest. The fact the percentage of native-born inhabitants declined indicates that those leaving included a high proportion of native-born inhabitants.

At this point it is important to remember that a stable population does not mean that the people in the place concerned are not mobile. Skudeneshavn and Kopervik both exhibited natural population growth during this entire period. Both in and out-migration were the regulating factors that nevertheless kept the population at a stable level. It was not simply a matter of the surplus population moving away. Variation in the percentage of native-born inhabitants was due to general population migration from one year to another. Custom registers from Kristiania, Norway, 1846/1847 collected at one of the main roads in to the town, shows that 8,000 persons passed in and 7,000 passed out (Myhre, 1977, p. 33). This phenomenon, known technically as “turnover”, has been identified in many European towns, such as Rouen in the eighteenth century. Studies of that town and the port of Marseilles show that emigrants included established families with children, who are the least mobile members of any population (Page Moch, 2003, p. 95, 128).<sup>13</sup>

If one uses this increase in the percentage of native-born inhabitants as an indication of a town's ability to attract incomers, the effects were most obvious in Haugesund. There, the number of native-born inhabitants increased from 33% in 1865 to 49% in 1890, which was roughly the national average at the time. It indicates that Haugesund's reputation as a place that could offer newcomers a good living declined during this period. We have already seen that the damage caused by the collapse of the spring herring industry was partly mitigated by participation in other fishing activity and by major investment in shipping. When this too failed, the town encountered major economic problems, especially in the 1880s.

The population of Stavanger increased greatly from the 1820s to the 1860s. For example, the fact that its percentage of native-born inhabitants decreased from 58 in 1865 to 56 in 1875 (370 native-born inhabitants in the mean population replaced by immigrants) demonstrates its reputation as a good place to settle. This development persisted through to 1885, when 55% of the town's inhabitants were registered as born outside the town boundaries, 36% in a different rural municipality and 8% in another town. Between then and 1891, the population declined. By that time its percentage of native-born inhabitants was 10% higher than the average for all Norwegian towns. This clearly demonstrates the demographic consequences of the commercial crises and economic stagnation that Stavanger suffered during these years.

## 10. Emigration

Emigration was to have important consequences for the development of Norway's population in the second half of the nineteenth century. While the average level of emigration prior to 1850 was between one and two per thousand of mean population—and never more than three per thousand, the average far more than doubled between 1866 and 1890. Between 1879 and 1883, when emigration was at its peak, an average of eleven of every thousand Norwegians left their country. In Europe, only Ireland exceeded this loss of population through emigration in the 1880s (Baines, 1991, p. 4; Semmingsen, 1960, p. 151, Table 3). In total, almost 350,000 Norwegians emigrated in the period 1866–1890. They left from all parts of the country, however, the scale of emigration varied considerably over time and from place to place. In strict numerical terms, the flow was strongest from the countryside. In the fifty years from 1866 to 1915, 71.5% of emigrants came from rural communities compared to 28.5% from towns. However, relative to their populations, the reverse was true. From the years 1871–1875 proportionately more of the urban population emigrated when compared to emigration among rural population (NOS VII.25 *Utvandringsstatistikk*, 1921, p. 36).

“The young, single, and childless historically have been most likely to take to the road” (Baines, 1985/2002, p. 100; Page Moch, 2003, p. 13).<sup>14</sup> Migration is in other words, always a selective process. Also the nature of emigration from Norway changed over time. In the early stages the majority of emigrants were whole families “[...] but in the subsequent decades we find a long trend only interrupted by minor fluctuations in which there was a growing proportion of men to women, of young people to older people and of single persons to married persons.” (Semmingsen, 1960, p. 158). As Table 2 shows, the age group 15–29 years forms an increasingly large proportion of those who emigrated from Norway between 1866 and 1890. At the start of this period, from the mid 1860s, fewer

**Table 2. Male and female emigrants from Norway, 1866–1890 (relative numbers)**

Year	Male						Female					
	Age						Age					
	0–14	15–29	30–44	45–59	60–	Total	0–14	15–29	30–44	45–59	60–	Total
1866–1870	29.6	39.6	21.6	7.5	1.7	100	34.5	34.5	19.9	8.5	2.6	100
1871–1875	27.2	46.2	18	6.9	1.7	100	29.6	43.4	16.4	8.4	2.2	100
1876–1880	19.5	55.9	17.1	5.6	1.9	100	26.9	46.4	16.4	7.7	2.6	100
1881–1885	23.5	52.9	16.5	5.5	1.6	100	27.5	47	16.1	6.9	2.5	100
1886–1890	16.1	61.7	16.1	4.6	1.5	100	21.3	55.5	15	5.9	2.3	100

Source: Backer (1965, Table 93).

than 40% of males belonged to this group, compared to 60% in the years from 1886 to 1890. A corresponding change occurred in the age groupings of females. The age group “children 0–14 years” was reduced, but for both sexes, emigrants in the category “30–44” years also became less frequent. The fact that there were fewer emigrants from these two groups suggests that there were correspondingly fewer archetypal family groups of the kind that had been so numerous in earlier phases of the emigration process (NOS VII.25 *Utvandringsstatistikk*, 1921, p. 39).

Between 1866 and 1890, an increasingly larger proportion of those who emigrated from Norway were males (Table 3). The period, which has been divided into five-year intervals, shows an average ratio of 1,323 males to every 1,000 females. The fact that males were in such a majority is even more striking when seen in relation to the gender imbalance of 1,050 females to every 1,000 males. The significance of this strong connection between migration and population structure should not be ignored.

When considering the ratio of males to females in the emigrant population, it is important to consider those from the towns and those from the countryside separately. In this case, we only have available data for the five-year periods: 1876–1880, 1881–1885 and 1886–1890. These show that male inhabitants of rural communities were far more likely to emigrate than were female. While male emigrants from the towns numbered, on average, 1,200 males for every 1,000 females, corresponding records from rural districts show that male emigrants outnumbered their female counterparts by 500 per 1,000 (Table 3). The fact that North America acted as a greater magnet for males had important consequences for Norway’s population structure. The gender imbalance in the population at large became steadily more obvious. While in the years 1866–1870 there were 961 males per 1,000 females, the ratio of males to females sank to 935 in the course of the next 20 years (Table 3). In the last half of the nineteenth century, there were considerably fewer males than females over 15 years of age. This was due to a combination of higher male mortality (Note 9 and Fuglum, 1978, pp. 330–331) and the fact that the majority of emigrants were male (Backer, 1965, pp. 104, 189–190). Following the wave of emigration that took place at the start of the 1880s, Norway experienced the greatest ever preponderance of females in its history. The generations that were affected by this, namely those born between 1851 and 1860, were to spend their lives in a society where females formed an exceptionally large majority (Table 3, right column).

It is important to clarify the degree to which emigration compounded the severe gender imbalance in the area being studied, which has been described earlier. Between 1875 and 1891, the population of this area stabilized at between 55,000 and 60,000. A total of almost 11,000 of this population emigrated in the course of these 15 years: 4,000 from the rural communities and approximately 7,000 from the towns. This large-scale emigration had profound consequences, one of which was that population growth came to a halt. Another consequence was that emigration intensified the existing gender imbalance in the period in question. The exact extent of this is difficult to quantify because there are gaps in regional and local statistics.<sup>15</sup> However, it is possible to use the same

**Table 3. Emigrated males per 1,000 females, 5-year intervals 1866–1890 (relative numbers)**

Year	Gender distribution emigrants from the whole country	Gender distribution emigrants from countryside communities	Gender distribution emigrants from the towns	Gender distribution in the population as a whole
1866–1870	1,296	–	–	961
1871–1875	1,192	–	–	956
1876–1880	1,445	1,479	1,334	955
1881–1885	1,269	1,356	1,080	944
1886–1890	1,413	1,600	1,120	935
Average 1866–1890	1,323	1,478	1,178	–

Source: Backer (1965, p. 166, Table 92).

distribution norms that applied to males and females in the country as a whole. The average for the three five-year periods recorded between 1876 and 1891 shows that the percentage of males compared to females who emigrated from rural communities was 60:40 (NOS VII.25 *Utvandringsstatistikk*, 1921, p. 40). Applied to the area being studied, this would suggest that 2,400 of the 4,000 who emigrated from the rural communities were males, and 1,600, females. In the towns, the percentage of male emigrants was 54 compared to 46 for females. If the same distribution norms are applied to towns in the area being studied, they suggest that in the course of this 15-year period, they lost as many as 3,800 of their male and 3,200 of their female inhabitants.

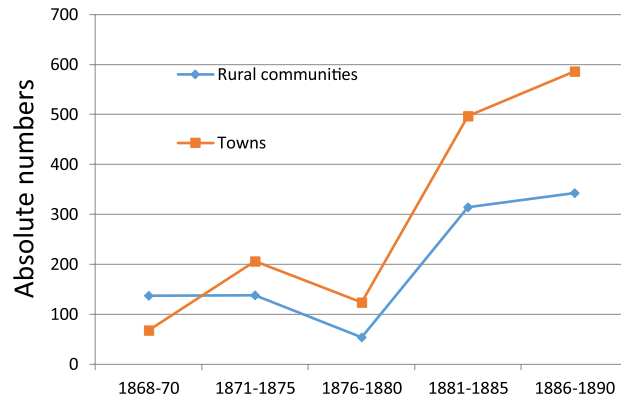
### 11. Substantial growth

Considerable variations over time—and from place to place—characterise emigration from Norway in the nineteenth century. “Emigration did not follow an even course, but fluctuated considerably with the changes in general business conditions occurring in Norway and in the USA” (Backer, 1965, p. 217). In general, we can say that emigration was relatively moderate from regions in which new enterprises got underway and absorbed the surplus of a growing population (Semningsen, 1950, pp. 76–81). Nevertheless, there are local differences, which are difficult to explain. Different traditions and patterns of migration developed locally, even within such small geographic units as the parish. It is known that many farmers, both in the core area for spring herring fishing and in its periphery, used the surplus they got from participating in fishing to secure their primary means of living: the farm. Tenant farmers could purchase land that they had previously rented. They could also invest in domestic animals, soil improvement, land reclamation, mechanisation and so on. We may wonder why more people did not choose the alternative option: purchase a transatlantic ticket and take with them start-capital for life as an American farmer.

In Karmsund and the area around Stavanger, emigration was a marginal phenomenon in the decades prior to 1875. One may say that it was put on hold until the 1880s, when, by way of contrast, it became extensive. Figure 11 shows that the annual average emigration from the towns was three times higher in the period 1871–1875 than it had been in the previous period, 1868–1870, while the figures for the rural communities had remained unchanged. It is necessary to add that percentage average annual population growth was falling between 1866 and 1875 especially for the towns (Figure 3). It is nevertheless remarkable that in the following five years, emigration declined both from towns and from the countryside. In the light of the collapse of the spring herring industry, this may seem counter-intuitive. An interesting historical parallel is the post-1900, economically motivated and crisis driven wave of emigration that occurred in Norway’s most southern region (Sørlandet) (Backer, 1965, p. 165; NOS VII.25 *Utvandringsstatistikk*, 1921, p. 9; Semningsen, 1950, pp. 224–225, 1960, p. 156). The fact that no corresponding wave occurred in the areas near the Karmsund strait and Stavanger must be attributed to economic decline in the USA at the time (Norman & Rundblom, 1987, p. 64; Semningsen, 1950, pp. 82–84).<sup>16</sup> Statistics suggest that the economic depression in the

**Figure 11. Emigration from the area studied to countries outside Europe 1868–1890. Absolute numbers, annual average over 5 year periods except for 1868–70.**

Source: Statistics Norway.



USA, the most important destination for Norwegian emigrants, affected their motivation in differing degrees. Areas from which Norwegians had been emigrating for some time were scarcely affected. That depression did not halt emigration from districts in Oppland, Sogn and Fjordane, Telemark or Hedmark. Emigrants from these places employed well-established networks which had been built up by many years, and were affected by macroeconomic factors to a lesser degree (Backer, 1965, p. 165, Table 91. About migration and networks see: Massey, 1999, pp. 43–45).

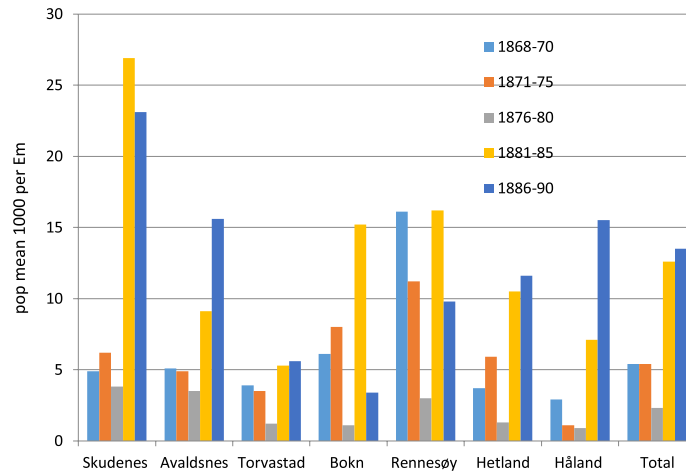
The situation was different for fishermen in the area being studied. In 1870, following decades of plentiful catches, these fishermen were suddenly left with no herring. Emigration did indeed increase to some extent in 1871–1873, but by 1874–1875 had fallen back to its previously modest levels. For decades, the completely dominant spring herring fishing had been an alternative to emigration in spite of its unreliability. As long as people could live well off rich supplies of herring, the USA was of less interest to them. Early in the 1870s, potential emigrants often lacked emigrant networks they could look to for support, and even where such networks did exist, they were not yet properly developed. When economic decline also struck the USA, emigration continued to seem a less attractive option and increases were short-lived. Nevertheless, the picture is a complex one, and combined figures for the county conceal local differences. As shown earlier, there were local differences in the extent of emigration which are not apparent in the aggregated figures for the entire county (Backer, 1965, p. 165, Table 91; Næss, 1984, pp. 104–105). There was a considerable level of emigration from districts that were less dependent on herring, especially in Ryfylke.<sup>17</sup>

In the five years 1871–1875, following the disappearance of herring stocks, emigration from the towns in the area being studied rose to three times its rate in the previous three years. However, this increase did not last long. Emigration almost halved in the next five years, 1876–1880, and levels were scarcely higher than for the towns and even lower from the rural communities, than what was the situation 10 years earlier. Between 1868 and 1875, figures from the rural communities remained stable, but fell back during the period 1876–1880. In the course of the next five years, the flow of emigrants again increased strongly. Emigration from the towns quadrupled, and six times as many people emigrated from the countryside. These increases continued into the next five-year period, 1886–1890, albeit less sharply.

Figure 12 shows relative numbers of emigrants from rural municipalities in the area being studied to countries outside Europe between 1868 and 1890.<sup>18</sup> In order to capture local variations, a lower level of aggregation has been chosen for this part of the study. Emigration has been recorded from each administrative unit, including the rural communities. These changes were most striking in Skudenes, the district that played the most important part in the spring herring fisheries. In the decade 1881–1890, annual emigration from there was five times what it had been in the period 1868–1880. With its stable population of about 4,600, the annual average of about 20 emigrants in the period 1868–1880 increased to almost 120 in the 1880s. The scale of emigration from Avaldsnes roughly trebled compared to the period 1868–1880. Torvastad, the rural municipality neighbouring

**Figure 12. Emigration from the rural municipalities in the area being studied to countries outside Europe 1868–1890. Relative figures for five-year periods.**

Source: Statistics Norway.



Haugesund, also shows a large increase in emigration after 1876–1880. However, the total growth through the entire period, not apparent in the aggregated data used in Figure 11, was relatively modest. Some of the same trend is apparent in Hetland rural municipality, south of the Boknafjord, although, with considerably more far-reaching consequences there. Emigrants from this municipality numbered slightly more than ten per thousand of its mean population in the course of the 1880s. The decline in emigration after 1868–1870 from Avaldsnes, Torvastad and Håland rural municipalities confirms the view that the collapse of the spring herring fisheries had little significant effect on levels of emigration from those areas in the very short-term, but this situation changed markedly in the 1880s, except in the case of Torvastad.

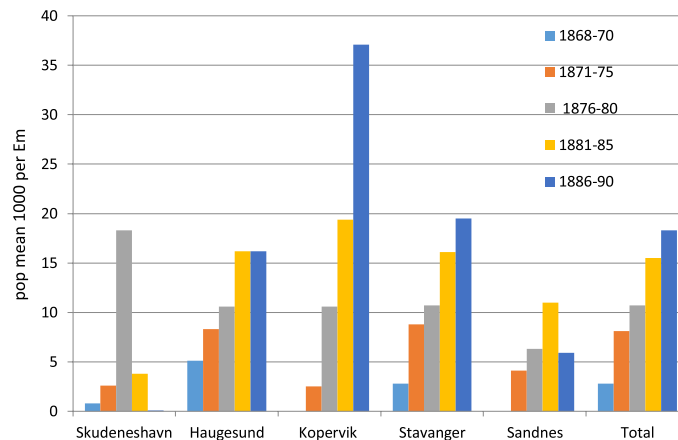
Figure 13 shows the relative numbers for emigration from the towns in the area in the period 1868–1890.<sup>19</sup> Its scale was modest at the start of the period, at which time the spring herring fishing was still important and the shipping industry was growing. There are no records of emigration from Kopervik or Sandnes in the years 1868–1870. The increase in the number of emigrants between 1871 and 1875 was fairly similar in Stavanger and Haugesund. However, while numbers abated in the latter town, they continued to grow in Stavanger until 1890. In that town, the average annual rate was almost 20 for the period 1886–1890. Of an estimated population of 22,500 inhabitants, 2,265 went to America during these years. Source data for emigration are more scant in the case of the other towns—and conclusions correspondingly less certain. Kopervik showed a major increase: from no recorded emigrants in the years 1868–1870 to an annual average rate of over 37 per 1,000 of the mean population in the years 1886–1890. In the course of these years, a total of 155 emigrants left this tiny staple town, which had only had 835 inhabitants in 1885.

Most people who left their rural communities for other places in Norway moved into towns. From the 1850s, the rate of urbanization was exceptionally high (Myhre, 2006, p. 256). The high relative figures show that this was also the case in the area being studied here (Figure 3). However, emigration also contributed to reducing the numbers of young people in these rural communities. In this way, mass emigration had direct and indirect effects on population patterns. We have already seen how, after 1875, in relative numbers, more people emigrated from Norwegian towns than from its rural districts. This was despite the fact that the majority of the population lived in the country districts as late as the 1950s (Backer, 1965, 164, Table 90; Myhre, 1977, p. 19, Table 3; Stugu, 2006, p. 386). Several factors are relevant here, not least the fact that young people formed a higher proportion of urban populations than of rural ones. Many of these younger town dwellers had moved from the countryside. “[...] one must assume that many of them, after a shorter or longer stay in the towns, decided to move on to America.” (Backer, 1965, p. 164). Step-by-step migration is an important concept because there is reason to believe that a substantial proportion of those who emigrated from the towns were recent internal migrants from the countryside (Ree, 2003, pp. 9–13; Wika, 1977, p. 15).<sup>20</sup>



**Figure 13. Emigration 1868–1890 from towns in the area being studied to countries outside Europe. Relative numbers per five-year period.**

Source: Statistics Norway.



Step-by-step migration is thus a phenomenon that must be taken into consideration if one is to understand the interplay between migration from the countryside to the towns in the area being studied. To some extent, it may account for this study’s findings that emigration from the rural municipalities sank during the five years 1876–1880, while increasing from the towns. Developments after 1880 support that supposition. Between 1866 and 1890 almost twice as many people emigrated from the towns as from the countryside. However, the total populations of the rural municipalities and the towns remained almost stable throughout this period: about 26,000 and 29,000 respectively. This also shows that the scale of emigration from towns in relative numbers was proportionally twice that from the rural municipalities.

Semningsen distinguishes between two categories of Norwegian towns where emigration was substantial: “[...] the stagnating towns and the fast-growing ones” (Semningsen, 1960, p. 156). Among the first group, she mentions small towns along the south coast, which were adversely hit by the decline in economic activity and the transition from sail to steam in the marine transport industry. Stavanger and Haugesund are in this group. She uses Christiania and Bergen as examples of the second group. Then, interestingly, she adds that less than half of the emigrants from Bergen in the years 1875 to 1894 had been born there. “The rest had moved in from the rural districts around Bergen, and the voyage to America was for them only a continuation of a process of migration stages” (Baines, 2002, pp. 38–39; Semningsen, 1960, p. 157). Though Bergen was a growing town, it faced problems, for instance in connection with the shipping industry crisis.

Semningsen’s description also partly fits the towns covered by this study. These experienced rapid economic, population and other growth up to the 1870s: they were all expanding cities. Despite this was the volumes of emigration modest (apart from a short-lived increase immediately after the collapse of the spring herring industry in the early 1870s). From the beginning of the 1880s, declining economic activity had a serious impact: emigration from these stagnating towns increased many times over in a very short time.

Some individuals or families who were deprived of a source of income when the spring herring disappeared may have moved to the nearest town as a first step to escape the crisis. This step by step migration is not fully captured in the sources. The figures showing generally high levels of out-migration between 1876 and 1891 (Figure 6) do not take this turnover into account. However, the collapse of the spring herring industry also had negative consequences for the towns and, in the case of Stavanger; these were compounded by the crisis in the shipping industry in the 1880s. While moving to a town might have seemed a sensible solution immediately after the crisis erupted, it might have failed to offer the hoped-for opportunities a few years later. At the same time, emigration became an increasingly attractive alternative. More and more people became infected by “America-fever”, and for those who had caught the infection, emigration was the best and, perhaps, the only cure.

## 12. Conclusion: Population development and economic fluctuations

This paper concerns population and the relationship between population development and economic fluctuations. The study has provided clear answers to questions relating to population developments in the area being studied. The average annual growth of 3.3% between 1835 and 1865 sank to 1.5 in the decade 1866–1875. In the years between 1876 and 1891, it declined even further: to 0.6%. The changes following the collapse of the spring herring industry were different in the towns and in the countryside. Population growth slowed down and in those rural areas where herring had been the most important part of the economy, the population actually declined. In the decades prior to 1870, spring herring had been an easily accessible means of livelihood: when it disappeared, the “herring folk” had to find alternative ways to make a living.

Changes in demographic structure comprise one component in the study of consequences for the development of a population that we may associate with economic fluctuations. In this context, we have focussed on the way in which the proportion of men to women changed in the second half of the nineteenth century. There was a gender imbalance in favour of females in Norway throughout the forty odd years that have been studied here (Figures 7 and 8). While the higher ratio of women in rural Norway only saw minor changes in this period, gender imbalance increased considerably in the area being studied. In the towns, relatively moderate gender imbalance in 1865 had become markedly worse by 1891. It seems that the economic crises described here were the most important indirect causes of this. Those who suffered had to find new sources of livelihood, which, in turn led to emigration in which men played the dominant part.

Stagnation and, in places, decline of the population affected patterns of settlement. In order to present a clear picture of how the process of internal migration played a major role in this development, the study includes identification of the inhabitants' places of birth. The native population has been subdivided into four categories: those born in the municipality in which they were current resident (natives of their communities), those born in a different rural municipality, those born in a different town and those born outside Norway. The findings are considered to indicate that communities with a low percentage of native-born inhabitants (in the region of 30%) must have experienced considerable influx from elsewhere. Conversely, a high percentage indicates a correspondingly high level of stability—low mobility among the population in question. The findings were unambiguous: The rural municipalities nearest the towns on the north and the south side of the Boknafjord had the lowest percentage of native-born inhabitants (Figure 9). This can be easily understood in the light of the fact that the proportion of the population who lived in towns and urban areas within Stavanger County almost doubled between 1845 and 1875. The towns and surrounding municipalities attracted newcomers.

In the area studied, the flow of migrants from rural municipalities to the towns before 1875 had been far greater than in other parts of the country. The pattern is reflected in the considerably lower percentage of native-born inhabitants in the towns, compared to the rural municipalities. Haugesund, only a third of whose inhabitants in 1865 were native-born, distinguished itself as the most popular one to move to. Skudeneshavn, with its 73% of native-born inhabitants, lies at the opposite end of the scale. When one considers the advantageous position of Skudeneshavn as far as herring fishing was concerned, this finding may seem unexpected. A partial explanation may be that the formal grant of staple town privileges in 1857 mostly amounted to a belated recognition that it already had an urban population. An early influx of people from elsewhere largely accounted for the enormous population growth of Haugesund, which had only had a population of 37 in 1835. Starting at a very low level, its percentage of native-born inhabitants would inevitably grow as part of this process.

The crisis in the herring industry did not immediately lead to increased emigration. This was postponed until the beginning of the 1880s and, in time, significantly boosted in the wake of the shipping crisis. The dominance of sailing ships in the Norwegian merchant fleet passed its hayday in 1878, when the entire country saw an increase in emigration (Ohman-Nielsen, 2011, pp. 91–96; Semmingsen, 1950, pp. 223–224). However, the area studied was exceptional in so far as the

increase occurred relatively suddenly and because it was so massive. A threefold to fourfold increase in the volume of emigration after 1880 is thus the most striking new aspect of population development in the region between 1876 and 1891. All told, about 11,000 inhabitants left the area studied in the course of these 15 years. The fact that previously strong population growth gave way to stagnation was a direct consequence of this increased emigration. The high mean population increase in the area being studied was greatly reduced in the period between 1835–1845 and 1875–1891 (Figure 2). The towns were the most seriously affected (Figure 3). Emigration also reduced rural population growth. An annual growth of 0.9% in the decade spanning 1855–1865 gave way to 0.2% between 1876 and 1891.

One of the primary objectives of this study was to shed light on the importance of migration for the development of the populations in the areas of Karmsund and Stavanger. The survey has shown that it played a decisive role from 1840 to the 1890s. A pattern of migration marked by rural-urban movement was dominant despite the fact that the material presented in the paragraph, *Patterns of movement in the countryside* indicates that there was a considerable population turnover. Many people moved in and out over the years. What can account for this? It is most important to recall that exploitation of the spring herring resource was most closely associated with the rural areas of Western Norway. The herring was caught along the coast, and the processing and preparation for export were mostly carried out there, but in the towns too. In the course of time, the rural communities became increasingly involved in the transport of salted herring on boats owned by rural people themselves. There is a lot of evidence suggesting that this is a Norwegian variant of a phenomenon that, in other parts of Europe, is known as “rural industry”. This rural industry played a particularly important role in the economies of many areas in the eighteenth century and a large part of the nineteenth century. This was a distinctive feature of extensive collaboration and mutual dependence between town and countryside. The rural communities’ contribution to this collaboration was primarily related to providing raw materials and labour for semi-finished products. The provision of capital, completion and marketing of the goods was left to the towns (Bade, 2003, pp. 3–4; Merriman, 2010, pp. 367–368; Page Moch, 2003, pp. 61–62). A key question here is what happened in those areas where rural industry came under pressure and eventually disappeared. There arose a situation in which increased investment in primary production was needed to compensate for loss of income from rural industry: a development in which the “rural communities were ruralised” (Page Moch, 2003, pp. 115–117). Another alternative in the pursuit of a living was migration. In the earliest phases of industrialisation, “[...] the disproportionate gap between population growth and employment options that induced migration initially increased to a decisive degree” (Bade, 2003, p. 38; O’Donoghue & O’Donoghue, 2003, p. 107). The next paragraphs show how this played out in the area in question here.

The parallel to developments in the area around the Karmsund strait and Stavanger seems obvious. It is true that what collapsed here was not rural industry in its classical sense, but the local herring fishing—and—in the course of time, a shipping industry that also had links to the rural communities. “[...] gradually the farmers took to shipping ever-increasing amounts of their produce in their own vessels [...]” (Østensjø, 1963, p. 149). Boat-building was an important source of employment in many rural places between Lista and Nordfjord on Norway’s west coast (Østensjø, 1963, p. 150). Providing new means of earning a living for a rapidly developing population presented a considerable challenge. The rural communities were hardest hit and three patterns of response manifested themselves. The first of these was a revitalisation of agriculture from within. Even though farmers’ participation in the spring herring fisheries had benefited agriculture, it had nevertheless led to farms being neglected in many areas. Following the collapse of the herring industry, professional roles became more distinct: farmers became more obviously farmers. Secondly, the collapse brought about changes in the fishing industry itself. Catches no longer came right up to the shoreline, as they had done earlier. Among other things, fishing in more distant waters required larger boats, more capital and lengthier periods from home on the part of those involved. It was less common to find split households with one foot in agriculture and the other in fishing. Migration was a third alternative for country dwellers who were affected by the crises. This solution too has obvious

international parallels, among others, the variety of migration patterns. The experience of Flemish home weavers in the early nineteenth century is one example. “When domestic industry collapsed here in the years after 1820, a mass search for new sources of income also was necessitated [...] migratory labour to France” (Lucassen, 1987, p. 186). At the same time as we can maintain that while the main movement was from countryside to town, there were currents in the opposite direction and considerable turnover in the towns. All the local administrative units that were studied experienced net out migration in the final period from 1876 to 1891 (Figure 6). Emigration became an important alternative for increasing numbers of people who were in pursuit of a livelihood.

The conclusion to be drawn from this study is clear. The economic crises that struck the area around Karmsund strait and Stavanger, the collapse of spring herring fishing early in the 1870s and the crisis that struck the shipping industry in the 1880s had—both separately and together—serious consequences for population development. The statistics support such a causal connexion. Strong population growth came to an end. We were able to support the hypothesis that economic slumps first drove country people to the towns and subsequently, in increasing numbers, to the USA. Emigration that was sensitive to business cycles, such as that brought about by the collapse in the herring and shipping industry, grew substantially, bringing the population’s growth to a virtual halt and simultaneously affecting its structure. The fact that the majority of those who emigrated were men created a major gender imbalance (Table 3). As local data is not available, we have to suggest that the situation in the Karmøy strait and Stavanger area was the same as that in the country as a whole. This was most apparent in the rural municipalities that had enjoyed approximate gender balance in the years when herring had been plentiful. Both migration within Norway and emigration from the country changed its settlement pattern. The herring crisis augmented the flow of people to the towns and encouraged many to emigrate. However, there was also considerable turnover in the towns, which lost relatively more of their inhabitants through emigration. There is also considerable evidence that step-by-step migration became more important.

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#### Notes

1. The term “Southern district” (*Søndre distrikt*) was widely used as a common term for the coastal fishing grounds off the waters near Stavanger County (now Rogaland County) and Southern Bergenhus County (now Hordaland County). The main southern fishing grounds as such stretched between Skudenes and Espevær. The spring herring period of the nineteenth century lasted from 1808 until 1870.
2. Market town and staple town are granted special privileges by national authorities, the Parliament; also called *formal* towns. The term “urban areas” is used for the Norwegian term “*tettsted*”.
3. “This traffic was made possible by the liberal shipping law of 1836, which provided that farmers and others with certain experience at sea could transport loads of herring to Gothenburg.”

4. “This estimate [...] assumes that birth and death rate of migrants and natives were identical. If allowance is made for migrant age structure, then migration caused about 40% of population growth and natural increase 60%.”
5. Births out of wedlock could matter here. In general, the rate of births out of wedlock in nineteenth century Norway was low (Dyrvik, 1983, p. 127).
6. “Throughout Europe urban death rates regularly exceeded rural ones during most of the nineteenth century” (Page Moch, 2003, pp. 44–45).
7. The percentage of females in the age group 15–50 years in the entire population is partly reflected in the birth rate. With a low illegitimate birthrate, nuptiality and age distribution are also significant.
8. A precondition for surveying the structure of a population in a particular area is knowledge about gender, age and marital status.
9. “Except from smaller variations, the gender proportion [by birth] has in our country since the mid nineteenth century been 106 males to 100 females.”
10. For a summary of Europeans’ motives for emigrating to the Americas in the nineteenth and twentieth centuries (see Page Moch, 2003, pp. 149–153).
11. There were two main categories of foreigners in Norwegian industry: experts and skilled employees, who had been recruited, and immigrants in search of employment, most of the latter from Sweden (Myhre, 2003, pp. 237–239).
12. <https://www.ssb.no/statistikkbanken/selectvarval/saveselections.asp>  
<http://www.ssb.no/a/kortnavn/folkendrkv/2012k4/kvart11.html>  
About 85,000 foreigners (people who had neither parents nor grandparents who had been born in Norway) were registered resident in Rogaland County in 2012.

- These comprised roughly 19% of the county's 450,000 inhabitants.
13. "[...] population registers for the nineteenth century confirm both the importance of migration from the immediate hinterland, or 'demographic basin', and high rates of population turnover that have been inferred from preindustrial records" (Lucassen & Lucassen, 1999, pp. 33–34).
  14. "The evidence that current migrants contained a disproportionate share of young adults is overwhelming."
  15. The author has used a great deal of his own and others' time searching for local emigration statistics for the period 1860–1890 containing information regarding gender and age from the various types of administrative units in the area studied. Unfortunately, these efforts have been fruitless.
  16. "The American economic recession that began in 1873 also held back emigration from the Nordic countries for some years [...]"
  17. The parish of Hjelmeland in the eastern part of Stavanger County lost 10.5% of the population in the period 1856–1860 and similar 11.5% loss of the population in the neighboring parish of Suldal between 1861 and 1865 (Solheim Pedersen, 1982, pp. 22–23).
  18. The numbers of inhabitants for the years 1876–1880, 1881–1885 and 1886–1890 have been calculated on the basis of the censuses of 1875 and 1891.
  19. The population numbers in the five year periods: 1876–1880, 1881–1885 and 1886–1890 have been calculated from the censuses of 1875, 1885 and 1891.
  20. A central theme is the question of who should be considered to be an urban citizen. Discussion relating to length of residence in a town before the decision to emigrate is taken. More references can be found in Tysdal (2013, note 89).

#### Cover image

Source: Museum Stavanger AS Muségt. 16 4010 Stavanger  
Tlf. 51 84 27 00 [post@stavanger.museum](mailto:post@stavanger.museum).

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## Appendix A

**Table A1.** Native population 1865, 1875, and 1891. Male and female. Absolute numbers and percent growth

	1865			+/- in % 1855-1865			1875			+/- in % 1865-1875			1891			+/- in % 1875-1891		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Skudenes and Åkra	2400	2357	4757	-4.7	-6.7	-5.7	2319	2366	4685	-3.4	0.4	-1.5	2260	2434	4694	-2.5	2.9	0.2
Avaldsnes municip.	2355	2380	4735	-3.7	-6.5	-5.1	2660	2722	5382	13	14	13.7	2538	2884	5422	-4.8	5.6	0.7
Torvastad municip.	1856	1818	3674	14.1	12.6	13.3	1778	1805	3583	-4.2	-1	-2.5	2054	2438	4492	13	26	20
Bokn municip.	531	531	1062				498	499	997	-6.2	-6	-6.1	416	456	872	-25	-11	-18

Source: Statistics Norway.

**Table A2.** 1876-1891 Emigration, Immigration, Net. migration

Place	Outmigration and emigration	Immigration	Net. migration
Skudeneshavn	-25	-351	-376
Haugesund	-989	556	-433
Kopervik	-242	28	-214
Sandnes	-148	-122	-270
Stavanger	-4631	1884	-2747

Source: Statistic Norway.

**Table A3.** Females per 1,000 males in rural communities and towns in the area being studied 1845, 1855, 1865, 1875, 1885, 1895 and 1891

	1845				1855				1865				1875				1891			
	M	F	Total	F. per 1,000 M.	M	F	Total	F. per 1,000 M.	M	F	Total	F. per 1,000 M.	M	F	Total	F. per 1,000 M.	M	F	Total	F. per 1,000 M.
Skudenes and Åkra	2,490	2,516	5,006	1,010	2,518	2,526	5,044	1,003	2,400	2,357	4,757	982	2,319	2,366	4,685	1,173	2,260	2,434	4,694	1,077
Avaldsnes	2,138	2,118	4,256	990	2,446	2,545	4,991	1,040	2,355	2,380	4,735	1,011	2,660	2,722	5,382	1,023	2,538	2,884	5,422	1,136
Torvastad	1,521	1,468	2,989	965	1,627	1,615	3,242	993	1,856	1,818	3,674	980	1,778	1,805	3,583	1,015	2,054	2,438	4,492	1,187
Bokn									531	531	1,062	1,000	498	499	997	1,002	416	456	872	1,096
Rennesøy	1,093	1,104	2,197	1,010	1,197	1,217	2,414	1,017	1,207	1,245	2,452	1,031	1,129	1,272	2,401	1,127	1,058	1,231	2,289	1,163
Hetland	2,801	2,644	5,445	943	2,106	2,138	4,244*	1,015	2,554	2,522	5,076	987	2,975	3,040	6,015	1,021	2,991	3,045	6,036	1,018
Höland	1,133	1,087	2,220	959	1,254	1,324	2,578	1,056	1,389	1,433	2,822	1,032	1,503	1,574	3,077	1,047	1,543	1,758	3,301	1,139
Total rural areas	11,176	10,937	22,113	987	11,148	11,365	22,513	1,019	12,292	12,286	24,578	1,000	12,862	13,278	26,140	1,032	12,860	14,246	27,106	1,108
Skudenes-shavn									617	592	1,209	959	657	660	1,317	1,005	590	606	1,196	1,027
Haugesund					516	550	1,066	1,066	1,625	1,596	3,221	982	2,199	2,222	4,421	1,010	2,729	3,013	5,742	1,104
Kopervik									355	382	737	1,076	422	431	853	1,021	363	454	817	1,250
Stavanger	4,158	4,488	8,646	1,079	5,628	6,089	11,717	1,082	8,072	8,575	16,647	1,062	9,693	10,595	20,288	1,093	10,392	12,151	22,543	1,169
Sandnes									495	505	1,000	1,020	784	723	1,507	922	821	909	1,730	1,107
Total towns	4,158	4,488	8,646	1,079	6,144	6,639	12,783	1,080	11,164	11,650	22,814	1,044	13,755	14,631	28,386	1,063	14,895	17,133	32,028	1,150
Total a.b.s.	16,346	16,515	32,861	1,010	17,292	18,004	35,296	1,041	23,456	23,936	47,392	1,020	26,617	27,909	54,526	1,049	27,755	31,379	59,134	1,131

Source: Norwegian Statistics.





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