Generation shift in the Swedish Labour Market

Preliminary version of chapter 8, in forthcoming report
"Fostering resilient economies: demographic transition in local labour markets"

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CHAPTER 8:

GENERATION SHIFT IN THE SWEDISH LABOUR MARKET[1]

There is a large generational shift in the Swedish labour market that will lead to a higher share of retirements in different sectors, regions and professions than in previous decades. As a result of the slower growth of the working age population, the labour supply is expanding less rapidly. Future increases in the working population will consist of foreign-born residents while the number of those born in Sweden is expected to decrease. Two case studies of particularly affected regions indicate that the addition of labour to these labour markets may be halved over a 15 year period, while an increasing number of retirements will create vacancies that have to be filled. Further efforts are needed nationally and especially regionally to meet future labour demand in particularly affected regions. The analysis highlights various measures which can be taken in order to alter future labour market prospects regarding the supply of labour in the sense that more persons become available for work.

1 This chapter was contributed by Torbjörn Israelsson, Swedish Public Employment Service, with national analysis and conclusions including actions to alleviate the consequences of the generation shift. Marwin Nilsson, Swedish Public Employment Service, provided regional analysis and the case studies. Jan Sundqvist, Dalarna and Timo Mulk-Pesonen, Norrbotten, Swedish Public Employment Service, also participated in the work with the case studies.

8.1 Introduction

This chapter highlights the general availability of labour and retirements nationally, regionally and from a local perspective in Sweden. The growth of the working age population will have consequences for labour supply and future employment trends. Without a continuous increase in the labour supply which would make it possible to increase employment, it would be difficult to achieve improvements in economic welfare. A generational shift will arise when the so-called baby-boomer generation from the 1940s, leaves the labour market. The purpose of this analysis is to describe future developments if current trends on the labour market persist. The chapter highlights various measures which can be taken in order to alter future labour market prospects regarding the supply of labour in the sense that more persons become available for work.

8.2 The generational shift and large scale retirement

The total population of Sweden is expected to increase by 1 140 000 persons between 2011 and 2025 and reach 10 535 000 in year 2025. This is less than half of the increase during previous 15 year period. The total increase in the population is determined by a positive net birth rate as well as by net migration.

The net birth rate is calculated to increase from less than 30 percent to about 60% while net migration is estimated to decrease from 70% to 40%, both expressed as a share of the change of total population up to 2025. The fertility rate in Sweden was 1.9% in 2012, which is high compared with other European countries. Sweden needs a long term fertility rate of 2.1 to maintain an unchanged level of population.

The supply of labour has increased significantly since the end of 1990s, especially during the last six years. This is the result of favorable developments in the labour market combined with a rapid growth of the working-age population (16-64 years). The increase in the working-age population in recent years is mainly attributable to large net immigration. In the future, increases in the working-age population will be dependent on persons born in other countries whereas the number of persons born in Sweden will continue to decline. However, the structure of immigration has changed. Nowadays it consists mainly of labour migrants rather than the inflow of refugees which had previously predominated.

Employment growth has risen sharply after the financial crisis in 2009 by about 120 000 people (2.8%) between 2009 and 2012. The strong increase in employment after the financial crisis has not led to major shortages of job seekers on the labour market and has therefore not had a significant negative impact on the economy. By Swedish standards, unemployment is high despite the large increase in employment. In 2012 the unemployment rate in Sweden was 8.0%, compared to 8.7% in 2010. These figures are below the European average. The reason that the unemployment rate has not fallen to a greater extent is due to the rapid growth of labour supply. Labour supply has increased steadily since the late 1990s. From 2010 to 2012, the labour force increased by a total of about 113 000 persons (2.4%). The labour force participation rate reached 81.5% in 2012 while the employment rate[2] rose to 74.9%. These levels are among the highest in Europe.

The long-term employment policy focuses on measures to strengthen the supply of labour since experience shows that labour supply will have major effects on the long run growth of employment at a time when the working-age population is expected to grow more slowly. During the first decade of the new century and especially after 2006, reforms were introduced for the specific purpose of increasing the labour supply. New reforms have been introduced in areas such as unemployment insurance, health insurance and labour market programs. An increase in the number of job seekers is expected to improve matching in the

[2] Share of active population in both cases.

labour market. During the same period, labour market policy has provided various forms of incentives to support active job seeking.

8.2.1 Large-scale retirement in the Swedish labour market

The working-age population, 16-64, according to population forecasts by Statistics Sweden (SCB) (2012), is expected to grow much less rapidly over the period 2011 to 2025 coming years at the same time as a substantial number of elderly workers will retire from the labour market. This anticipated growth in retirements will reduce the rate of increase in the working population. If current labour market behaviour remains unchanged, the increase in labour supply will slow down which will reduce the potential supply of worked hours. If this trend continues, this might in turn act to limit GDP growth. In addition, the generational shift will impact on different industries and regions differentially. There will be a greater impact on certain parts of the labour market than on others. Signs of growing recruitment problems may become evident in those sectors that are most affected.

All in all, over 1 600 000 people are expected to leave the labour market on grounds of age from 2011-2025, compared to approximately 1 300 000 retirements from 1996-2010. However, there are measures available to try to alleviate the effects of this generational shift. There is no single solution, but rather a series of different steps that may help produce a positive outcome (Public Employment Service, 2010).

The labour force has increased over the past decades due to the rapid growth of the working-age population. These conditions will change over the next few decades. The demographic impact on the labour supply will diminish due to weaker population growth. Nor will the age structure of the population have the same effect on the size of the labour force. For certain years, there will even be a risk of a negative demographic contribution to the labour force. In the long term, this means that the conditions for replacing the retiring labour force and increasing the employment rate will deteriorate significantly, especially in certain regions. Thus, the generational shift will be a major challenge since the inflow of young persons to the labour force will not be as large as during previous decades.

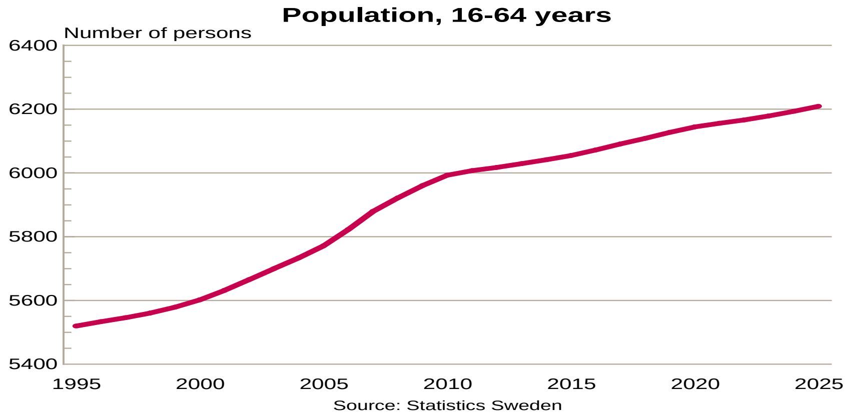
8.3 Labour supply: Slowing working age population growth and the importance of foreign born

During the second decade of the century, the growth of the working age population will slow down (Figure 75 on next page). These changes also differ on the regional basis whereby, the working-age population will grow at a slower pace in all 21 counties up until 2025 with many counties expect to experience a decline. The largest decline is expected in the counties of Norrbotten, Gotland and Dalarna. On the other hand, there will be an increase in the working age population in the county of Stockholm. All in all, this indicates that the discrepancies in conditions between regions when it comes to tackling demographic changes are expected to grow during the period to 2025.

The final outcome will be determined by the size of net immigration during the period. From 2006 to 2012, net immigration to Sweden was considerably higher than the historic average, and even higher than was estimated in the population forecasts. It is always difficult to anticipate the size of net immigration in any population forecast. Even in scenarios with higher net immigration, persons of working age will still grow more slowly from 2010 to 2030. It this pattern comes into reality, it will limit the opportunities to increase labour supply and employment rates in the country as a whole.

The modest population growth rate in the near future means that the underlying demographic growth of the labour supply will diminish from 2011 to 2025. After 2020, there will only be limited demographic additions to the labour force. Historically (Public Employment Service, 2004), the demographic addition to the labour force due to population changes has numbered less than 20 000 per annum since the beginning of the seventies (1970-2012). However since 1990, the average addition has been somewhat higher, or a little over 20 000 people per annum.

Figure 1. Sweden's population, 16-64 year



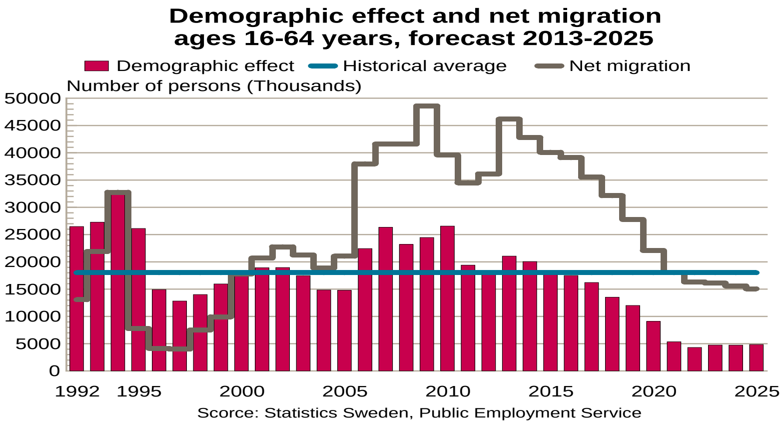
Source : Statistics Sweden

Regarding the period from 2011 to 2025, there are indicators that suggest that the demographic inflow of labour will be considerably lower. This would further limit our opportunities to increase the labour supply in the long term, in response to population development. In order to maintain the labour supply growth rate, labour market participation must increase within the existing population and / or increase net migration to higher levels.

A demographic projection[3] (Figure 76) indicates that the labour force will grow on average by around 10 000 persons annually from 2011 to 2025, based on the latest population forecast (from 2012) from Swedish Statistics. From 2020 until 2025, the rate will fall to a little over 5 000 persons annually, which corresponds to a quarter of long-term historical levels. Thus, after 2020, the demographic contribution to the labour force will be even weaker, which means that employment growth risks coming to a complete halt in many regions. As mentioned above, it is essential to maintain an annual contribution to the labour force of at least 20 000 people, in order to enable the maintenance of a rate of employment growth on a par with long-term historical levels. On a regional basis nine counties, based on current age-related behaviour patterns and activity rates, the labour force is expected to decline in absolute terms. More than half of those counties will have limited scope to increase their labour supply through population growth. The labour supply, therefore, must in those cases mainly grow by increasing levels of participation within the existing population. In the longer term, this leads to a worsening of the conditions for improving employment rates in many regions, which in turn risks curbing regional growth.

[3] Labour market participation in 2011, retrieved from the labour survey conducted by Swedish Statistics.

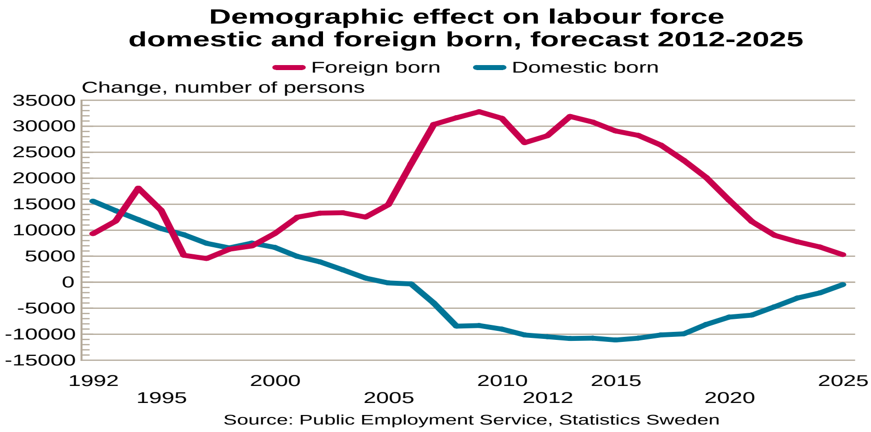
Figure 2. Sweden's demographic effect and net migration (16-64 years)



Source : Statistics Swedens, Public Employment Service

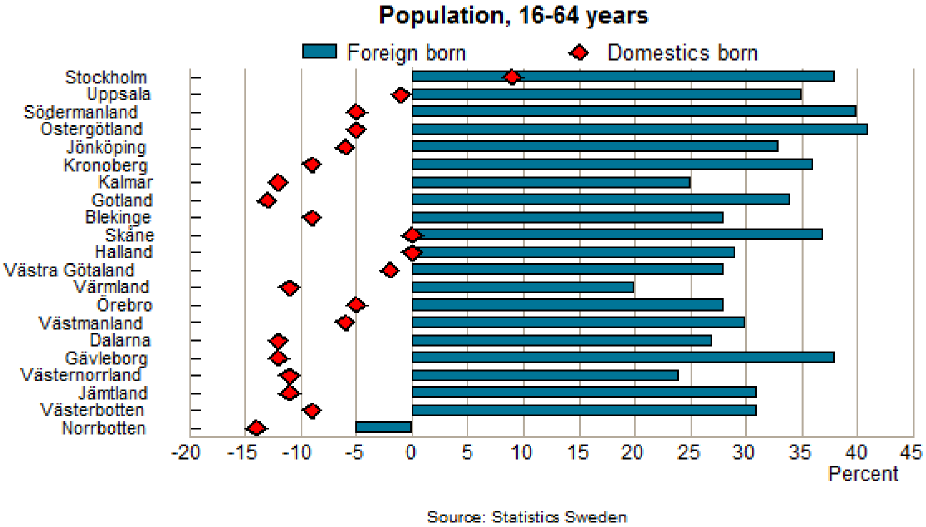
From 2011 to 2025, the demographic contribution of persons in the labour force will exclusively comprise foreign born residents, totalling about 255 000 people. The number of people born in Sweden will fall during the period, constituting a decline of about 105 000 people (Figure 77). Totalling those two population groups, the overall contribution to the labour force will be approximately 150 000 persons, i.e. an additional 10 000 per year on average. In all counties except Norrbotten, the number of foreign born in the labour force is expected to rise until 2025 with many regions growing over 30% over the next few years. Over the coming years, the number of domestic born in the labour force will only grow in urban regions such as Stockholm and Skåne. In the rest of the country, the number of domestic born in the labour force will decline, and in several regions in northern Sweden the decline is expected to exceed 10% from 2011-2025 (Figure 78).

Figure 3. Sweden domestic and foreign born (2012-2025)



Source : Public Employment Service, Statistics Sweden

Figure 4. Foreign and domestic born in Swedish counties



Source : Statistics Sweden

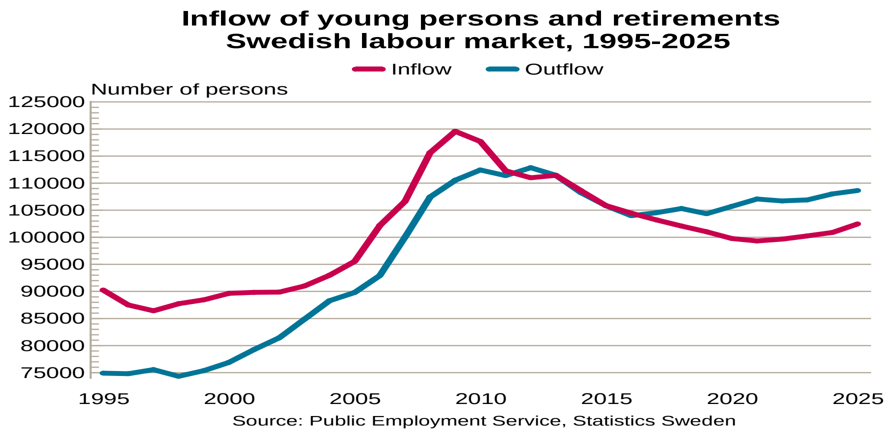
Thus, the changes to the future labour force concern the size of the contribution represented by the number of foreign born in the population, and their opportunities to enter the labour market. However, there are considerable opportunities to raise the labour market participation of several categories of foreign born residents who are already in the country.

8.4 Retirements: Trends, gender discrepancies, growing dependency ratios and industry-specific retirements

All in all, over 1 600 000 people are expected to leave the labour market on grounds of age from 2011-2025, compared to approximately 1 300 000 retirees from 1996-2010 (Figure 79). In other words, there will be 300 000 additional retirees in the period from 1996 to 2010. This also means that, for the first time in modern history, the number of youth entrants into the labour market is about the same as the number of elderly retirees in the workforce during the period from 2017 to 2025, i.e. a ratio of less than one between incoming and outgoing labour. Previous decades have always had a ratio in excess of one[4]. The maintenance of a higher level of youth entrants than retirees is a fundamental condition for long-term labour force and employment growth (hours worked) as well as for achieving good economic welfare.

[4] The ratio was 1.17 period 1995-2000 and 1.10 period 2000-2005, followed by 1.06 2005-2010.

Figure 5. Inflow of young persons and retirements Swedish labour market



Source : Public Employment Service, Statistics Sweden

On a regional basis Sweden will experience a large number of retirements on grounds of age at a regional/local level. There will be considerable differences between labour markets, for the country as a whole, 35% of the labour force will retire between 2011 and 2025. The largest proportion of retirees is expected in the counties of Norrbotten and Dalarna where close to 40% are expected to retire during that period. An additional six counties will also see high levels of retirements on grounds of age. The exception is the county of Stockholm where 32% of the labour force is expected to retire during the same period.

There are gender differences in the ratio between entries and retirements in the Swedish labour market. For women, there is a trend reversal in the net inflow to the labour market in 2013 when the ratio falls below one. For men, the ratio does not fall below one until 2018. This is linked to the fact that the labour market participation rate for women, particular foreign born women, is already at a lower level than it is for foreign born men, coupled with the fact that women leave the labour market earlier than men. The gap between entries and retirements among women will grow until 2025. The men will not see a corresponding gap over the next few years since labour force inflow will for most years remain higher than the outflow up until 2018. After 2018, the ratio falls below one and will stay below one for the remainder of the period. The conclusion is that the lower ratios will primarily affect women. The contribution of young women to the labour market will be too low compared to their current labour market participation. A greater number of women can enter the labour force compare to the rate among men, which means there is an unused potential here, primarily among foreign born women.

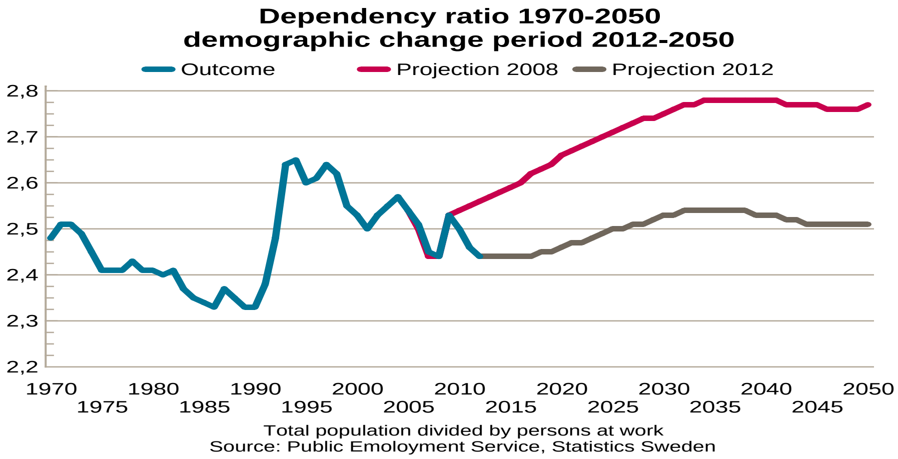
The population growth up until 2025 has consistently been revised upwards in the latest population forecasts, which has affected the projection of dependency ratios in Sweden. The reason is that net immigration over the past few years has significantly exceeded the assumptions made in different forecasts. The diminishing contribution of the working age population, coupled with a large increase of the non-working-age population will have consequences for dependency ratios, which is ration of the whole population against the number of people in work[5].

The dependency ratio from 2000 to 2010 has fluctuated at around 2.5; meaning that one person has 1.5 person dependants besides himself/herself. Over the next two decades and beyond 2030, the ratio will increase from the ratio of 2.45 in 2012. The extent to which the ratio will increase is linked to population

[5] The dependency ratio is calculated by dividing the total population by the number of people in work. i.e. the employed minus absents from work.

growth as well as the contributions to the labour market. From 2012 to 2020 the employment rate needs to grow by an average of 20 000 people[6] per annum in order to maintain the dependency ratio at its present level (2.45). Figure 80 illustrates the future changes in the dependency ratio from 2012 to 2050, with two different projections, one made in 2008 and one made in 2012, whereby significant differences occur. The dependency ratio is not growing as much in the 2012 projection as it did in the projection from 2008. This is because of a higher population growth rate, as an assumption (due to higher net immigration) in the 2012 projection. In the 2008 projection, the dependency ratio rises to 2.8 up until 2030, i.e. one employed person will have almost two additional dependants. That ratio has fallen in the 2012 projection and will level out at a little over 2.5. In that projection, the dependency ratio will approximately peak at the 2009 level, equivalent to the ratio for the first years of the century.

Figure 6. Dependency ratio 1970-2050



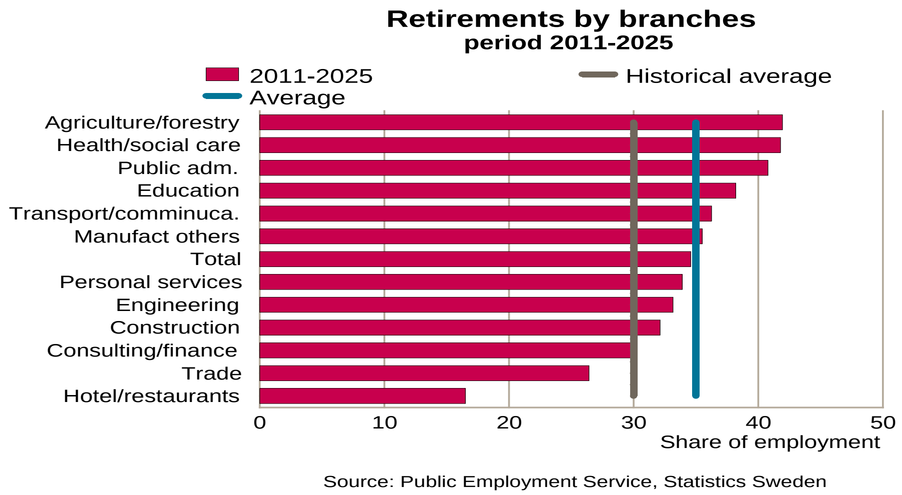
Source : Public Employment Service, Statistics Sweden

As illustrated in Figure 80 future population changes will have a major and critical impact on dependency ratio developments. There is also an additional factor that has affected the discrepancies for the two projections. A higher proportion of persons of working age have found employment from 2008 to 2012. It is therefore essential to maintain or increase the employment rate for the population of working age (by increasing labour market participation). This will result in scenarios that limit the increase in the dependency ratio, in spite of an ageing population and the subsequent additional strain on the welfare system.

The distribution of retirees according to age varies between different industries in the Swedish labour market, see Figure 81. The fisheries, agricultural and forestry industries will see the highest share of retirees. These industries constitute a small part of the Swedish labour market and employ less than two% of total employment. Nevertheless, around 42% of the 70 000 employed will retire between 2011 and 2025, corresponding to almost 30 000 persons. The share can be compared to 35%for the labour market as a whole, or the historical average of 30%.

[6] With the assumption that the share of absenteeism from work remain unchanged.

Figure 7. Retirements by branches in Sweden



Source : Public Employment Service, Statistics Sweden

Retirement on the grounds of age is almost as high within the public sector as within agriculture and forestry. From 2011 to 2025 around 41% of public sector employees will retire from the labour market. This corresponds to around 605 000 persons. The current level of inflow of labour to the sector would mean a contribution of around 435 000 persons. This means that the difference between inflow and outflow amounts to over 175 000 people. If the current situation prevails, the public sector faces significant difficulties in replacing all of the retirees. It would require a significant higher inflow of young persons in the sector.

The greatest number of public sector retirees is expected in the health and social care sector. This is also where the largest gap between retirees and the inflow of new employees occurs. During the period, 42% of the sector's labour force is expected to retire from the labour market which corresponds to around 410 000 persons. The current inflow of new employees to the sector would be of the order of 270 000 persons which means a discrepancy of 140 000 employees, i.e. a gap of almost 10 000 persons a year. In the period to 2025, the proportion of older people aged over 80 in Sweden will increase by 36%, which will increase the needs of the care for the elderly. All this means that the health and social care sector will be faced with a significant deficit if the current level of inflow remains unchanged. This may lead to considerable difficulties replacing the retiring employees. There are also increasing demands on health and social care as the baby-boomers from the 1940s are expected to require more of these services, which would necessitate greater recruitment. There is also a regional aspect to all these labour needs – the share of retirees is higher in sparsely populated regions that experience increasing shortages of new labour. This recruitment dilemma is significantly difficult to resolve in the light of a steadily diminishing labour supply in rural regions.

In the education sector, the number of retirees is somewhat lower than in health and social care, around 38%, which corresponds to almost 140 000 people. The current inflow provides 120 000 new employees. This would mean a deficit of over 20 000 people, i.e. about 1 500 more per year have to enter the education sector in order to compensate for retirements.

The public administration sector employs around 150 000 people. Out of those, around 60 000, or as much as 41%, will retire from the labour market on grounds of age from 2011 to 2025. The inflow is estimated to be 50 000 people, which means a discrepancy of 10 000. This corresponds to almost 1 000 people per year. There are uncertainties in this sector to the extent it will be possible to compensate for retirements. Future developments in this sector depend very much on political decisions.

The number of retirees leaving the manufacturing sector is at roughly the same level as the labour market as a whole. From 2011 to 2025, 34%will retire from the labour market which corresponds to around 240 000 people. The current inflow of labour is of the order of 200 000 new employees. This means that the gap between inflow and retirements, under current conditions amounts to 40 000 people. To fill this gap would require almost 3 000 additional entrants into the manufacturing sector. However the manufacturing sector is tending to reduce its work force which suggests that the future inflow may be sufficient to compensate for retirements. However, in all probability, there will continue to be a shortfall in relation to occupations requiring higher education. The primary interest of the manufacturing sector will rather be to focus on finding employees who have the right skill sets. However young people appear to be reluctant to embark on long industry-related educational programmes. At present the numbers enrolling on such programmes are far too low to cover the labour needs of occupations that have higher skill requirements.

Previously, the construction industry had a high average age level. As a result of the recruitment efforts made between 2006 and 2011, it has fallen. Between 2011 and 2025, the number of retirees in the construction industry is estimated to be 34% which is equivalent to 87 000 persons. This figure is somewhat lower than the labour market average. Under current conditions, the inflow of new recruits will lead to a shortfall of about 10 000 persons. In other words, there will be a continuing need to recruit personnel into the construction industry in order to maintain employment levels. However, estimates indicate that the construction industry will grow in the long term and will need an inflow of labour considerably higher than the figure of almost 90 000 retirements.

The private service sector is a large and heterogeneous industry, employing around 1.8 million people, making it the largest sector in the Swedish labour market. The number of retirees is estimated at 515 000 or 29% which is somewhat lower than in other sectors due to the lower average age in large parts of the private service sector. In the retail as well as hotel and restaurant sectors, retirement levels are at 26 and 17% respectively. In the business services, leasing and computer consultancy sectors, average age is lower than for the labour market as a whole and the share of retirees is around 30%, compared to 33% in personal services.

The highest share of retirements on grounds of age in the private service sector is found in the transport industry at 36%, with over 95 000 people will retire from the labour market up until 2025. With the currently estimated inflow of new labour there will be a gap of almost 20 000 people must be bridged in order to maintain employment. All other service industries have been able to meet their labour requirements and if job-seekers continue to apply to those industries to the same extent as before, labour supply will be sufficient from a national perspective. Regionally, however, imbalances may occur in regions that have less access to new labour.

The average age of the self-employed is high. According to estimates, almost half of them are estimated will leave the labour market by 2025. However this projection is uncertain since many self-employed people continue to work beyond retirement age. The precise age at which self-employed people discontinue their businesses may vary considerably depending on the nature of the operations. The conclusion that many of the self-employed will retire from the labour market is correct, but the extent to which it will happen and at what point in time is difficult to quantify.

8.5 Local case studies

The case studies describe the situation in two local labour markets, one in Dalarna County and one in Norrbotten County. These are the two counties are most affected by the generational shift in the country. The selected municipalities will therefore provide an appropriate reflection of local labour markets affected by the generational shift in Sweden. The first case study covers developments in three municipalities in Dalarna, which are suitable representatives for the county. Those municipalities are Mora, Älvdalen and Orsa. All three are a part of the long term growth in the tourist industry as well as on-going changes in other specific industries. Case study number two in Norrbotten covers the demographic challenges faced by the municipalities of Kiruna and Pajala. These two municipalities are particularly interesting as mining plays a large role in both municipalities, a fast growing industry which is competing with other sectors for available labour.

8.5.1 Case study: Mora, Orsa, Älvdalen in County Dalarna

County Dalarna

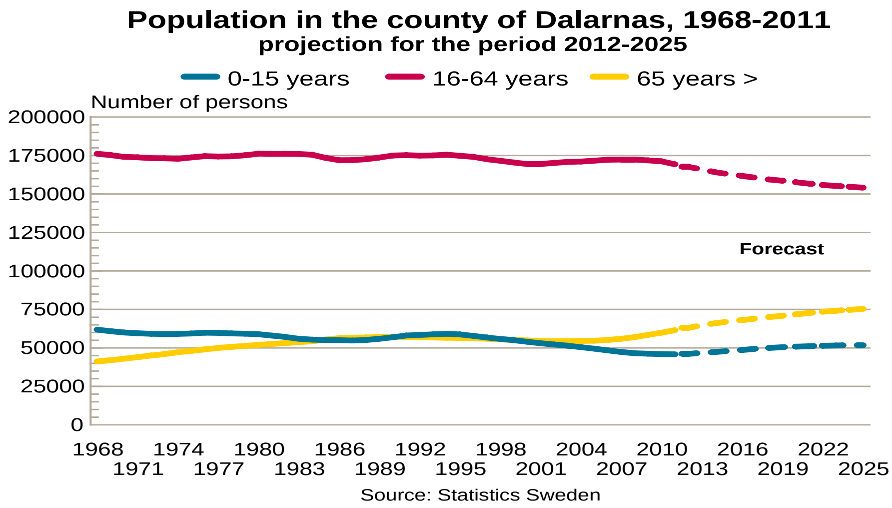
The county of Dalarna consists of 15 municipalities and in 2011, the total population in the county reached 276 000. Dalarna is one of the two counties which is most impacted by the generational shift in the labour market. Average age in the county is high and a substantial proportion of the working age population will be retiring on grounds of age over the next few years. From 2011-2025, almost 40% are expected to retire from the labour market. At the same time, there is an unfavourable population trend in the region.

Since 1995, population figures for the county have fallen by four%, or more than 13 000 persons. The population under 15 years of age has fallen by more than 20%, corresponding to 13 000 persons, while the working age population between 16 and 64 has fallen by over three%, or by 5 500, in the same period. Instead, the number of older people in the county has risen. In 2011, the number of people of 65 years of age or above was 61 000, corresponding to 22% of the county population, and their number has grown by 5 000, or almost 9%, since 1995. In particular, people aged 80 or older have increased significantly in number. Since 1995, this age group has grown by close to 17%.

According to the Sweden Statistics population forecast, the county's population figures will stop falling during the next few years and in 2025, population in the county will total a little over 280 000. Thus, the county's population is estimated to grow by 1.6%, or by 4 500 persons, from 2011-2025. However there are some differences between the age groups.

The population figures for persons between 16 and 64 are expected to continue to fall (Figure 82). The number of persons in this age group is expected to fall by almost ten%, or 15 000 people, up until 2025. However the number of younger people in the county, i.e. people aged from 0-15 years is expected to grow over coming years. The increase is estimated at 12%, or close to 6 000 persons. The strongest population growth is to be expected among those aged 65 or older, where figures will grow by 20%, or by 14 000 persons, up until 2025. In 2025, more than 25% of the county's population will be aged 65 or older, compared to just over 20% in 2011. This projection is based on the assumption that current population trends remain unchanged for the period up until 2025.

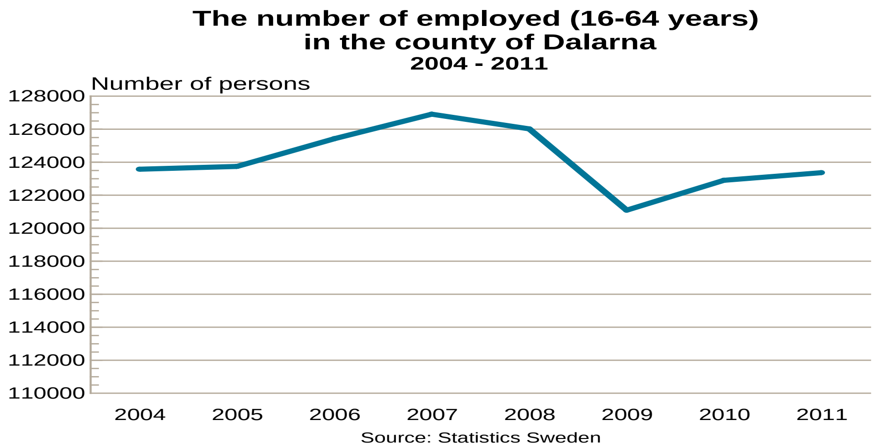
Figure 8. Population in the county of Dalarnas (1968-2011)



Source : Statistics Sweden

In 2011, the number of employees in the county of Dalarna was 123 000 which was equivalent to an employment rate for the county of 73%, which is higher than the national average of 72%. Employment in the county fell by close to 5 000 to 121 000 due to the financial crisis of 2009 (Figure 83). The manufacturing sector was particularly hard hit and the number of employees in the sector fell by 2 500 persons in 2009. After 2009, there has been some recovery in the labour market and employment has risen. However employment rates in the county are still lower than before the crisis. In the manufacturing sector, where employment rates fell most sharply in 2009, the rates have only slowly increased during 2010 and 2011. The strongest employment trend after 2009 has been seen in agriculture and forestry, business services and construction.

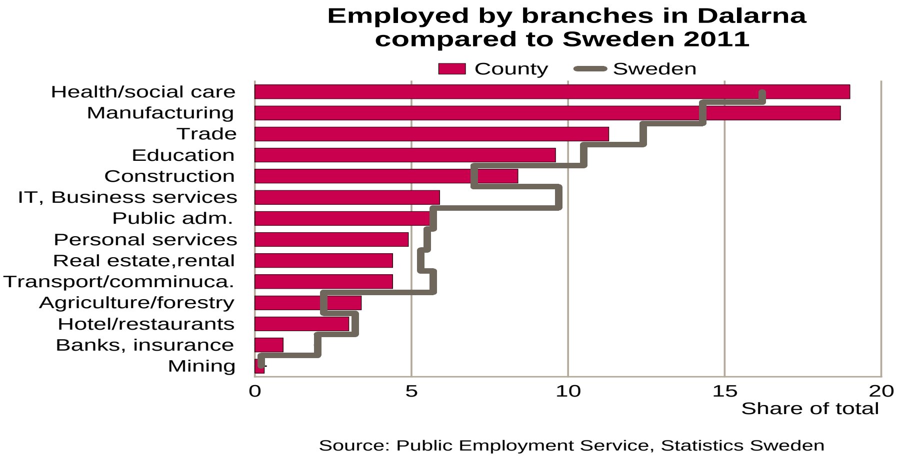
Figure 9. Number of employed (16-64 years) in the county of Dalarna (2004-2011)



Source : Statistics Sweden

The health and social care as well as manufacturing are the two primary sectors in terms of employment. Those two sectors have a higher share of employment than in the nation as a whole along with the construction industry, which employs around eight%. Over the past few years, employment has mostly grown in agriculture and forestry as well as in IT and business services, where 3.5 and 6.0% respectively worked in 2011. The retail trade employed a little over 11%, making retail the third largest sector in the county (Figure 84).

Figure 10. Employed by industry sector in Dalarna compared to Sweden (2011)



Source : Public Employment Service, Statistics Sweden

Mora, Orsa and Älvdalen

The first case study covers developments in three municipalities in the county of Dalarna, which are suitable representatives for the county. Those municipalities are Mora, Älvdalen and Orsa. They are all connected to the growth of the tourist industry as well as other specific industries in the region. They are facing considerable challenges in the near future associated with the large numbers of elderly people leaving the labour market together with unfavourable population trends. Mora municipality is the largest in terms of population. In 2011, Mora's population was 20 000, Älvdalen's 7 000 and Orsa's close to 7 000. This means that 12% of the county's population lived in one of those three municipalities.

Table 1. Mora, Älvdalen and Orsa local facts

Facts	Mora	Älvdalen	Orsa
Total population (2011)	20 107 inh.	7 184 inh.	6 867 inh.
Population change 1995-2011:	-4.0%	-13.0%	-7.0%
Labour market participation 16-64 years (2011)	83.6%	83.7%	78.4%
-domestic born men	86.3%	84.4%	81.5%
-domestic born women	82.5%	84.5%	77.5%
-foreign born men	74.9%	70.9%	67.7%
-foreign born women	68.8%	74.5%	63.1%
Employment rates 16-64 years (2011)	74.6%	73.3%	68.0%
-men	75.6%	73.2%	69.1%
-women	73.5%	73.4%	66.8%
Unemployment (16-64 years). Q3 2012[1]	7.7%	8.3%	9.0%

-men	8.1%	7.6%	9.2%
-women	7.3%	9.1%	8.8%
Retirements 2011-2025[2]	40%	40%	39%

[1] Total number registered with Arbetsförmedlingen

[2] Share of employed November 2007

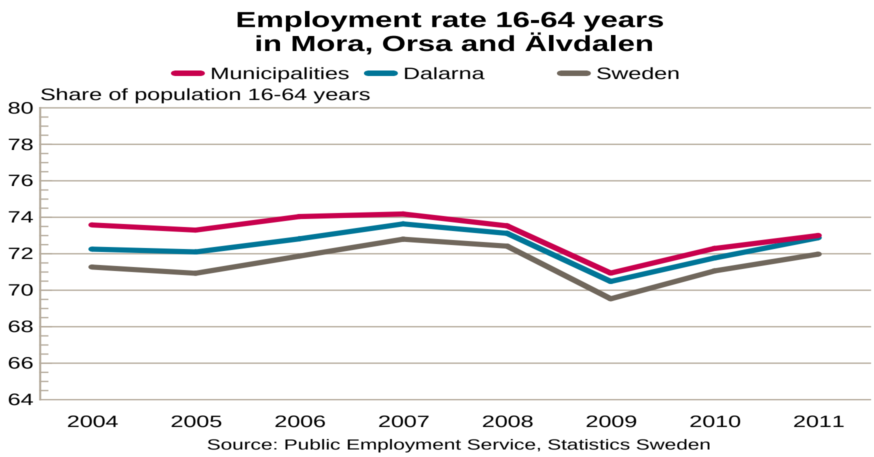
Source :

Differences in employment rates between the municipalities

The share of the population in employment between 16 and 64 years of age, the employment rate, is higher in County Dalarna than in the nation as a whole. Out of the three municipalities in the case study, the employment rate is highest in Mora, at 74.6% in 2011. In Älvdalen and Orsa, employment rates were 73.3 and 68.0% respectively. Thus, the employment rate is almost seven percentage points higher in Mora than in Orsa. The employment rate is higher among men than women, except in Älvdalen, where the share of employed women is higher than the share of employed men.

In 2009, employment rates fell across all municipalities (Figure 85). They have risen subsequently, due to the fact that the number of persons of working age has fallen rather than that the number of employed in the municipalities has increased. Since 2009, employment rates have risen more rapidly in Mora and Älvdalen than it had in Orsa. However the employment rates in the municipalities are still lower than before the financial crisis.

Figure 11. Mora, Orsa and Älvdalen employment rates

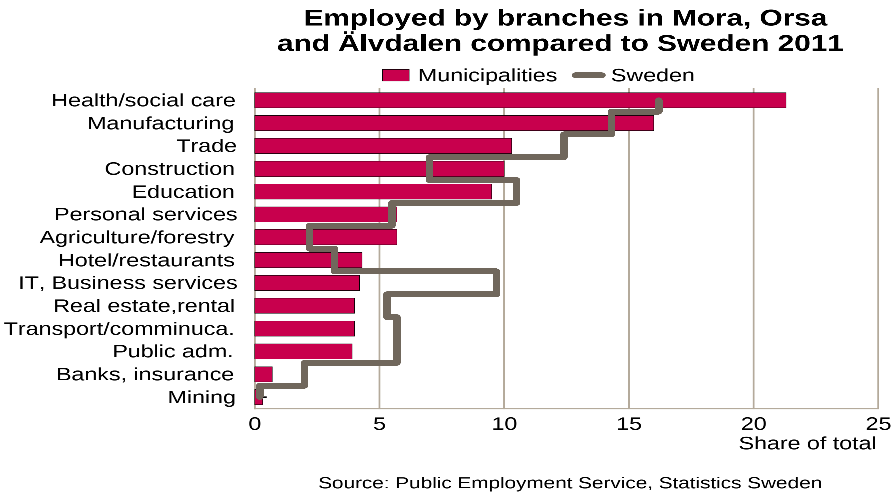


Source : Public Employment Service, Statistics Sweden

The importance of tourism

The industry structure is similar in all three municipalities, but is different in many aspects from the industry structure in the country as a whole (Figure 86). The region host many small businesses in the manufacturing sector as well as in the tourist industry. A large proportion of the employed also works in the health and social care sector. In Mora, many work in manufacturing. According to the estimates from representatives of the municipalities, the tourist industry has the highest potential for employment growth in the future. The tourist industry is expanding and representatives from the municipalities expect that it will continue to do so over the next five to ten years, which also will have a positive impact on other sectors such as transport, retail trade and hotels and restaurants. The transport sector is expected to see a positive effect from the growth of the forestry industry as well. This latter sector is expected to continue to be important for industry in the whole region, even if the number of people employed by it remains low. Representatives from the municipalities estimate that aggregate employment will increase in the region over the next five to ten years. In order to meet this goal, one of the most important challenges will be to increase the labour force and attract a growing number of graduates into the region.

Figure 12. Combined local study areas: Employed by branches compared to Sweden



Source : Public Employment Services, Statistics Sweden

The growing population share of the elderly

One aspect common to all three municipalities in the case study is a population decline over the past few years. From 1995-2011, the largest population decline, 13%, occurred in the municipality of Älvdalen. In Orsa and Mora, populations declined by 7 and 4% respectively. These figures may be explained in all three municipalities by a declining net birth rate and net outward migration. The fertility rate in the region has been at a level just over 1.9% in recent years, about the same as the national level. Net migration differs quite widely between years, but in recent years it has been slightly positive.

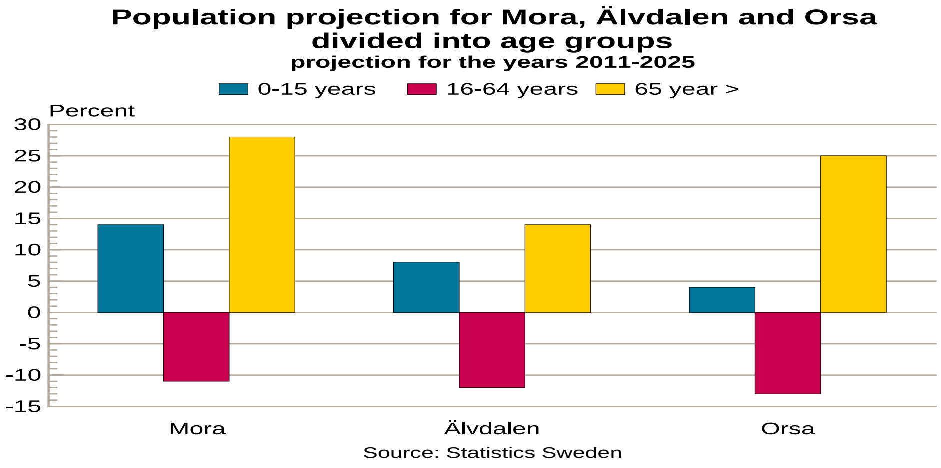
The 0-15 age group accounted for the largest decline in relative population share. The working-age population has also seen a decline in its relative share over the past few years due to the fact that many young people leave the region and move to metropolitan areas.

However, there is a net inflow of people over the age of 30, many whom move to the region due to family connections or the proximity to beautiful natural surroundings. There is also an inflow of people in these age groups due to refugee immigration. The population aged 65 and above has grown in all three municipalities. This means that the elderly constitute a growing share of the population.

According to the population forecast up until 2025 from Sweden Statistics, the composition of the population will change adversely in all three municipalities. The number of people of working age will fall by over 10% from 2011-2025. The number of people in the age group 0-15 years of age will increase slightly up until 2025 (Figure 87). The largest relative increase in population will be seen among people of 65 years or older. In both Mora and Orsa the number of people of 65 years or older will grow by 25% until

2025. In Älvdalen, the increase is 15%. The increase in the over 80s age group is estimated at 35% in the region which is the same level as for the whole country. It is important to stress that all of these projected population trends are dependent on the current population patterns being constant, i.e. the current trends remain unchanged.

Figure 13. Mora, Älvdalen and Orsa population projections by age groups (2011-2025)

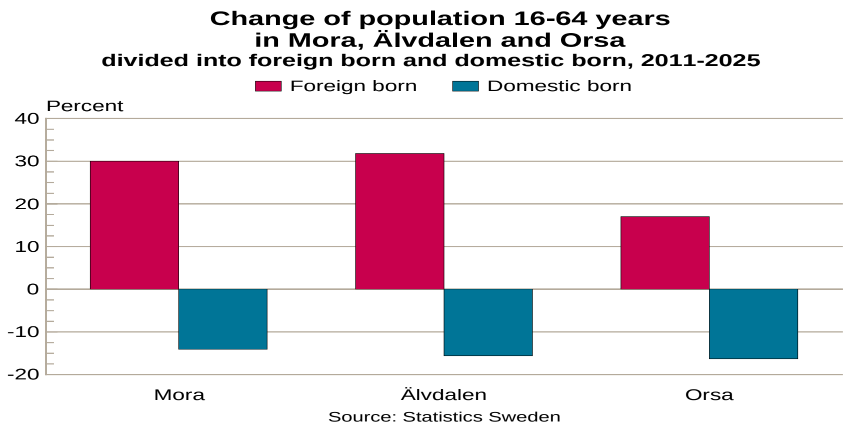


Source : Statistics Sweden

Population growth through immigration

The entire net inflow of people of working age for the next few years consists of immigrants (Figure 88). In both Mora and Älvdalen, the number of foreign born will grow by 30% until 2025, based on the assumption that these municipalities maintain their current share of net immigration. In Orsa, the increase is 17%. Over the coming years up until 2017, the number of immigrants of working age in the three municipalities will grow by an average of 50 persons per year. After that, the rate of increase will slow down due to the assumption that immigration as a whole will be lower according to the population forecast.

Figure 14. Mora, Alvdalen and Orsa 16-64 years projected population change (2011-2025)

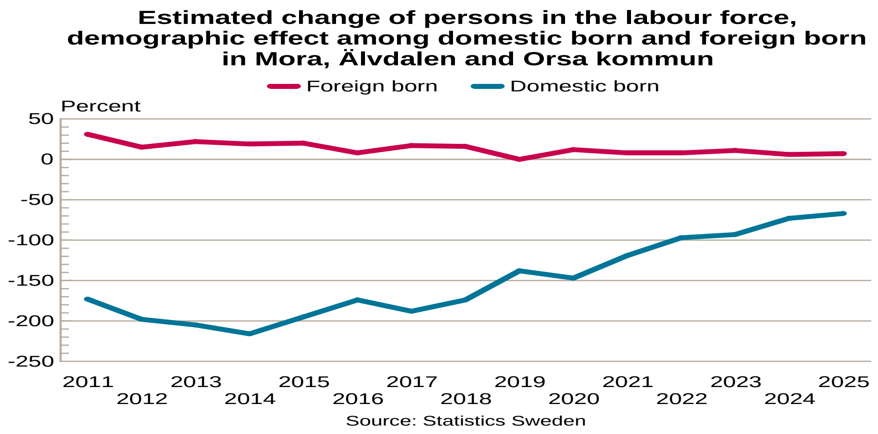


Source : Statistics Sweden

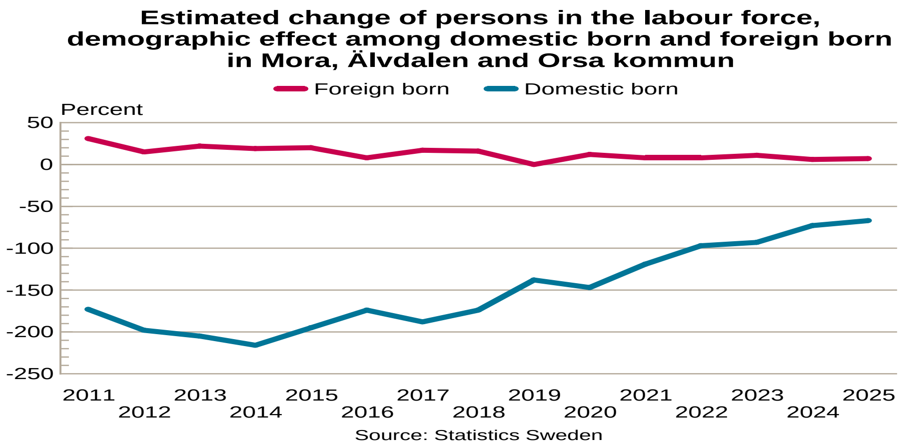
The number of domestic born people in the labour force will however fall by around 15% as a result of demographic changes over the period up until 2025 (Figure 89). Thus, there is significant potential among the immigrant population, which is expected to rise over the next few years. However, unemployment among foreign born is quite high in all three municipalities and there is room to reduce unemployment by making better use of existing labour resources in this group.

There is also room in the municipalities to increase labour market participation among immigrants, not least among non-European women. Labour market participation among foreign born residents is over 10 percentage points lower than for those born in Sweden in all three municipalities. Over the next few years, the demographic inflow of labour will consist exclusively of immigrants, while the share of the population born in Sweden will fall during the period up until 2025. The inflow of immigrant labour would increase further if the gap between labour market participation rates for foreign and domestic born residents was reduced.

Figure 15. Combined local study areas: domestic and foreign born in the labour force



Source : Statistics Sweden

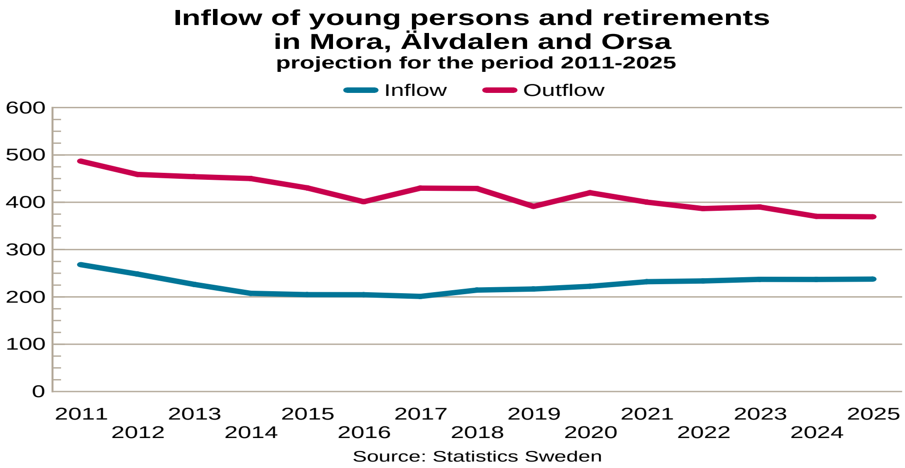


Higher level of retiring than youth entries

Up until 2025, the ratio between inflow and outflow to and from the labour market will be less than one, 0.54, i.e. the number of people retiring due to age will be higher than the number of youth (16-30 years of age) who are expected to enter the labour market. This is an indication that the long-term growth potential of the labour supply is being curtailed.

All in all, nearly 6 000 people will retire on grounds of age in the three municipalities while only 3 000 young people are expected to enter the labour market. This shortfall of about 3 000 people between the inflow of young entrants and the outflow of retirees is about twice the current inflow of labour. If this scenario comes about, both the labour force and employment will suffer long term decline. There will have to be a change in this trend, otherwise the region will be unable to maintain economic growth and an increasing number of employed. The inflow of labour would have to be at least at the same level as the outflow to maintain the current level of employment in long term.

Figure 16. Combined local study areas: inflow of young persons and retirements



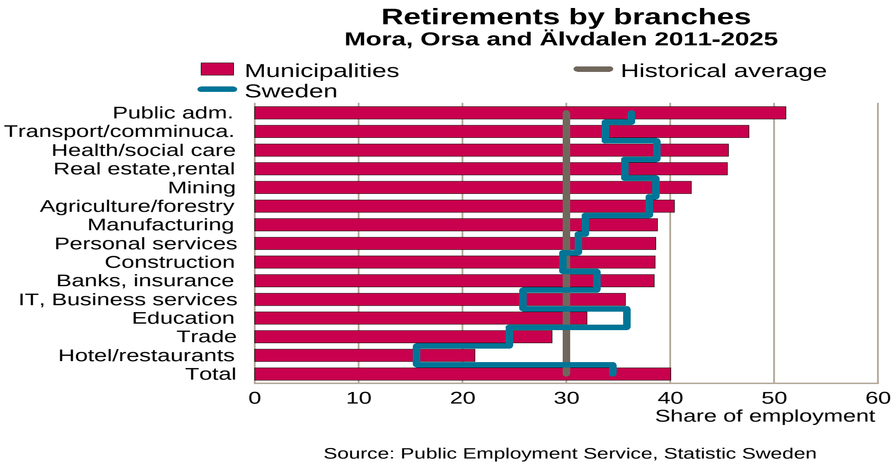
Source : Statistics Sweden

High share of retires in the public sector – labour shortages in some professions

The average age of private sector employees is high in all three municipalities. Mora, Orsa and Älvdalen also have a high share of persons working in the public sector. The average age of public sector employees is high.

Approximately 40% of all employees in the three municipalities are expected to retire on grounds of age up until 2025. That is significantly higher than the historical figure of 30%. The share of retirees across different sectors in the three municipalities will be consistently higher than in most sectors in the country as a whole, particularly in the areas of public administration, transport and health and social care (Figure 91).

Figure 17. Combined local study areas: Retirements by industry sector



Source : Public Employment Service, Statistics Sweden

According to representatives from the municipalities, it will be a considerable challenge to replace all those retiring on grounds of age in the health and social care sector. It may be necessary to recruit labour abroad. There is an insufficient interest in these educational programmes among young people to make up for the retirements. The major challenge is to raise interest in educational programmes and work in the healthcare sector. This will become even more essential once the baby-boomers born in the forties start requiring healthcare on a large scale. The municipalities collaborate in recruiting people to work in their own core services. They also collaborate in the area of municipal IT operations. These collaborations reduce the costs for individual municipalities and facilitate recruitment.

The municipalities fear labour shortages in the following sectors, both short-term and long-term:

- Healthcare
- Care for the elderly and disabled
- Education
- Technological consultancy/Engineering

Municipal strategies for increasing labour supply

Mora, Orsa and Älvdalen municipalities are all working actively and in collaboration to introduce measures to facilitate future business developments. The municipalities argue that it is important to continue developing infrastructure in order to attract new business and labour to the region. It is also important to expand the broadband networks in the region.

They also stress the importance of providing good guidance counselling for schoolchildren. The inflow of young people into the local labour market will not be sufficient to make up for all the elderly retirees. It is important that young people entering the labour market have an education that makes them employable. The municipalities foresee difficulties in recruiting labour within certain sectors that require university degrees and they are actively working with the university in the region in order to influence both the contents and the directions of their programmes. The municipalities are also planning a project in collaboration with Swedish Public Employment Service and Swedish Social Insurance Agency with the aim of mobilising those who are furthest from the labour market and who currently constitute an unutilised labour resource.

In order to attract people to the region, the municipalities are marketing themselves at trade fairs and conventions. The main attraction of the region is its proximity to wildlife and nature. There is also plenty of undeveloped land, for example in attractive places near lakes and mountains, for housing that might attract valuable labour to the region.

All in all, the municipalities are actively working on facilitating future business development. Listed below are some measures that aim to increase labour supply and facilitate future recruitment.

- Joint skill supply project between municipalities in order to facilitate recruitment of important labour in the region.
- Providing attractive plots for new construction in the region.
- Expanding the fibre optics network in the region, improving IT communication.
- Receiving newcomers to the region – labour market unit and a contact person for every family/person moving here.
- Collaborating between municipalities on public services – IT-issues, salaries, water supply, waste management, skill supply in municipality services.
- Coordinating Swedish Public Employment Service and Swedish Social Insurance and county interventions for people/labour with special support needs.

8.5.2 Case study: Kiruna and Pajala in County Norrbotten

County Norrbotten

Norrbotten is the other county, besides Dalarna, that suffers most from the generational shift in the labour market. The average age of the labour force in the county is high and many persons will be retiring from the labour market over the next few years. At the same time, the number of younger members of the population has been falling for some time due to people moving to metropolitan areas, which has led to an unfavourable population pyramid.

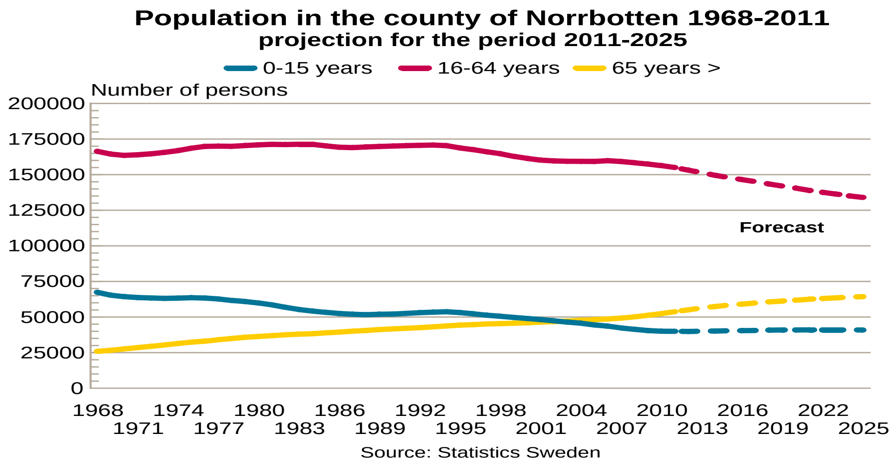
The county of Norrbotten is the largest county in Sweden in terms of surface area and covers close to one quarter of Sweden. Norrbotten is one of the counties with the highest rate of population decline over the past few years. Population has fallen every year since the mid-nineties. In 2011 the population was slightly above 248 000.

The working age-population has declined by seven% since 1995, or 12 000 persons, while persons over the age of 65 have increased during the same period. The latter now constitute more than 20% of the population. The number of persons over the age of 80 has also increased by over 30% since 1995.

According to the Sweden Statistics population forecast, the population will continue to decline over the coming years and by 2025, the population will total 239 000. In particular, they estimate a severe decline among people of working age. This group is estimated to fall by 14%, or close to 21 000. By 2025 the working-age population will total 134 000.

The number of persons between 0 and 15 years of age is estimated to rise slightly over the next few years. However the most significant population growth will occur among people aged 65 or older, with an estimated increase of 20%, or over 10 000. By 2025, this group is estimated to comprise 64 000 persons. This means that in 2025, more than one quarter of the population in the county will be 65 years or older. This projection for the different age groups assumes that the current population pattern is constant up until 2025, i.e. the current trends remain unchanged (Figure 92).

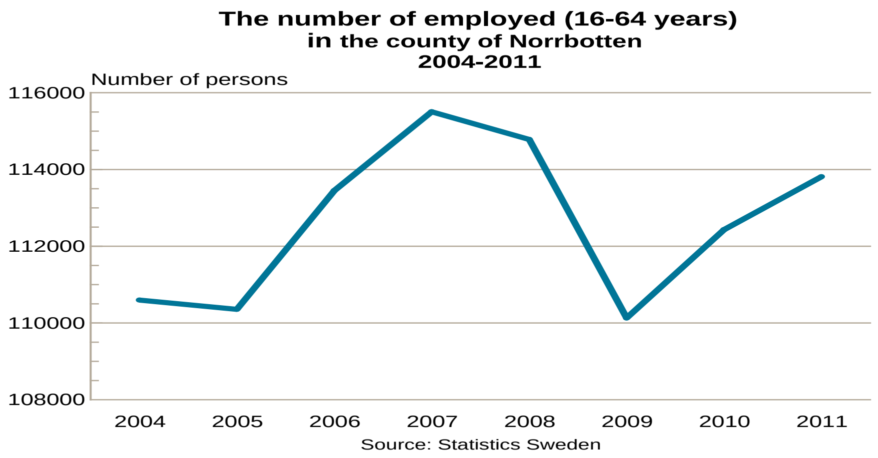
Figure 18. Population in the county of Norrbotten by age groups



Source : Statistics Sweden

The labour market trends have been positive in 2010 and 2011 which is largely attributable to the expansion of the mining industry, e.g. the opening of the new mine in Pajala, which has increased the demand for labour in the region. The number of people in employment (16-64 years of age) in the county was 114 000 in 2011. The employment rate was 73%, which is somewhat higher than the national average (Figure 93).

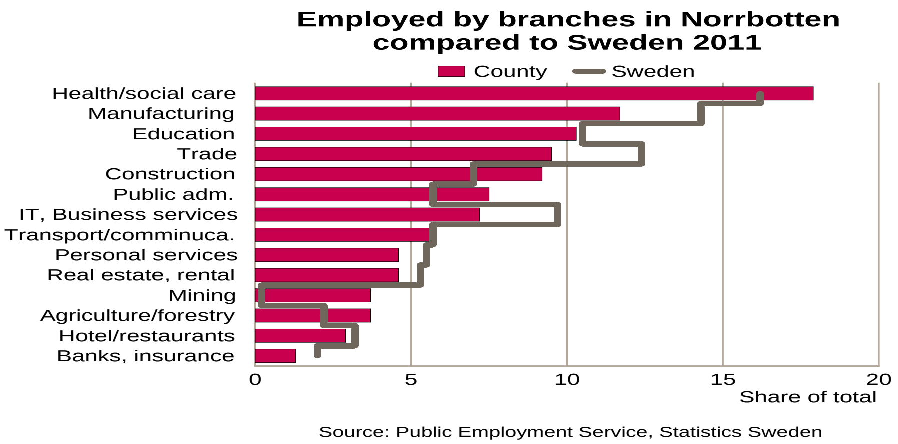
Figure 19. Number of employed (16-64 years) in the county of Norrbotten



Source : Statistics Sweden

In the county of Norrbotten, close to 20% of employees work in health and social care and more than 15% work in manufacturing and mining. Other large sectors in the county are education, retail trade and construction, each of which employ around 10 ten% of all employees in the county. Construction, mining as well as agriculture and forestry have seen the highest growth in term of number of employees over the past few years. Mining, health and social care as well as agriculture and forestry employ a higher share of the labour force than in the country as a whole (Figure 94).

Figure 20. Employed by industry sector in Norrbotten compared to Sweden



Source : Public Employment Services, Statistics Sweden

Kiruna and Pajala

Local case studies in the municipalities of Kiruna and Pajala, in the county of Norrbotten from 2011 to 2025, are particularly interesting as mining plays a large role in both municipalities, competing with other sectors for the available labour. Kiruna has been a mining town since the end of the nineteenth century and next to the municipality, the mining company is the largest employer in Kiruna. In Pajala, only recently, a new large mine was opened and the first deliveries of iron ore are expected in the beginning of 2013.

Kiruna municipality has around 23 000 inhabitants and Pajala a little over 6 000. Both municipalities have seen a decline in population over the past few years. In Pajala, the population has fallen by over 20% from 1995-2011, while the decline in Kiruna for that period has been a little over 10%. A falling net birth rate and negative net migration during recent years are the principal explanation of this negative trend. The fertility rate in the region has been around 1.9% in recent years which is roughly the same as in Sweden as whole. Net migration in Pajala which has been negative for many years has been reversed recently. There are also better signs regarding net migration in Kiruna. The number of elderly people leaving the labour force in Kiruna and Pajala is also expected to be substantial over the coming years.

Table 2. Kiruna and Pajala local facts

Facts	Kiruna	Pajala
Total population (2011)	22 967 inh.	6 270 inh.
Population change 1995-2011:	-11.1%	-22.8%
Labour market participation 16-64 years (2011)	87.7%	89.9%
-domestic born men	89.6%	94.9%
-domestic born women	86.5%	85.3%
-foreign born men	82.1%	85.3%
-foreign born women	82.7%	85.7%
Employment rates 16-64 years (2011)	80.6%	74.0%
-men	82.0%	75.6%
-women	79.0%	72.1%
Unemployment (16-64 years). Q3 2012[1]	4.2%	8.0%
-men	3.7%	8.3%
-women	4.9%	7.5%
Retirements 2011-2025[2]	40%	46%

[1] Total number registered with Arbetsförmedlingen

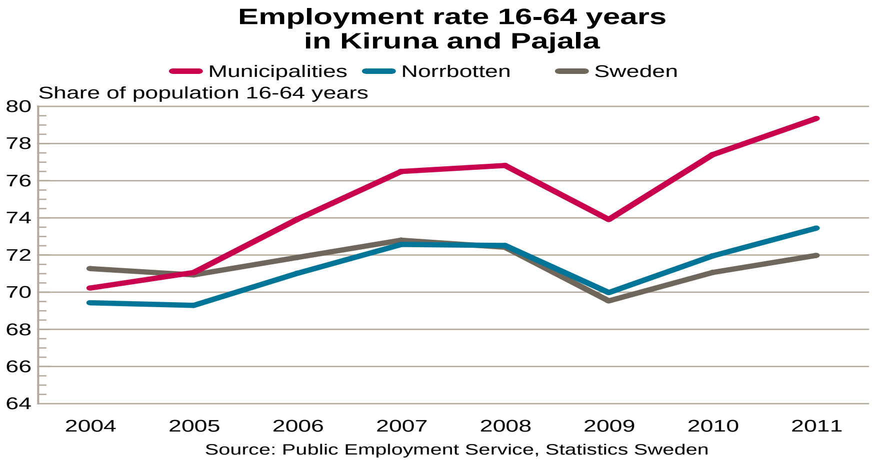
Source :

Employment rates in Kiruna close to the highest in the country

Employment rates in Kiruna are the second highest in the country. Over 80% of people aged 16-64 were in employment in 2011, which is a high level compared with other municipalities. In Pajala, the employment rate was 74.0%. Compared to the national average, the employment rate in both municipalities is high among all age groups, especially among the youth (19-34 years of age). It is also high among women, not least in Kiruna.

In both Kiruna and Pajala, employment rates have been rising over the past few years (Figure 95), largely due to the expansion of mining throughout the region. This has also had a positive impact on other sectors. Since 2004, the employment rate in Pajala has increased by 11 percentage points and in Kiruna, by close to 9 percentage points. The rise is more or less equally large for both men and women. The higher employment rate is due to an increase in the number of people in employment over the past few years. However there is also a demographic effect where a decline in the number of persons of working age has pushed the employment rate upwards.

Figure 21. Kirunan and Pajala employment rates



Source : Public Employment Service, Statistics Sweden

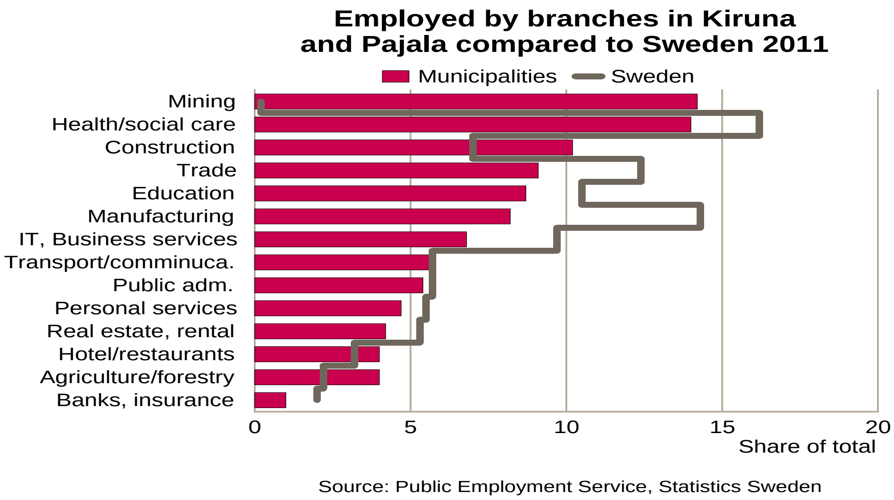
Municipal sector and mining

In Kiruna, almost 20% of all employees work in the municipality. The second largest employer is mining, which has an employment share of 25%. In addition, there are a significant number of persons who, directly or indirectly, are dependent on the mining industry. Just over ten% work in health and social care.

As in Kiruna, the largest employer in Pajala is the municipality with an employment share of 40%. A large proportion of municipal employees work in health and social care and education. Over the next few years, the industrial structure of Pajala will undergo significant changes as a consequence of the new mine that will employ a growing number of people.

Representatives from both municipalities estimate that the tourist industry will continue to expand in the region. Both Pajala and Kiruna forecast that the construction industry will employ more people in the future as the need for new housing will continue to rise. Housing shortage is currently a significant problem. Pajala, for example, has a queue for housing that corresponds to half the town's current population. Tourism linked to the Sami culture, innovative buildings and adventure tourism in the mountain region is significant in above all Kiruna. This sector is expected to grow in the future. The region also has extensive plans for space tourism linked to the space research centre in the area.

Figure 22. Employed by industry sectors (Kirunan and Pajala) compared to Sweden



Source : Public Employment Service, Statistics Sweden

Continued unfavourable population composition

In both Kiruna and Pajala, the number of people of working age has fallen sharply over the past few years. From 1995-2011, the working-age population declined by 27% in Pajala and by 14% in Kiruna. In the same period, the 0-15 year age group has fallen by close to 40% in Pajala and by almost 30% in Kiruna.

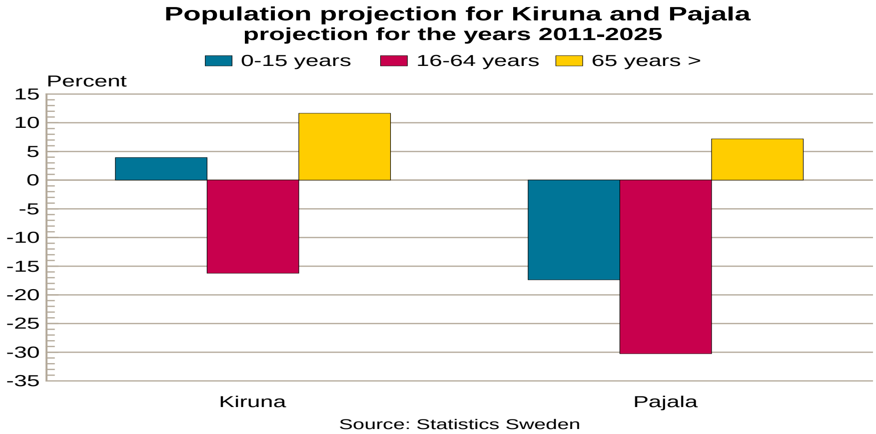
While the number of people in the working age population has fallen dramatically in both municipalities, the population aged 65 or above has remained stable in Pajala but increased by more than 30% in Kiruna. This means that the share of this age group has grown steadily over the past few years and currently constitutes 30% in Pajala and close to 20% in Kiruna. The number of persons above 80 years of age is expected to rise by about 50% up to 2025 in the two municipalities, fourteen percentages points higher than the whole country.

Pajala municipality has a declared goal of increasing its population to 10 000 people by the year 2020 -from 6 270 in 2011. In order to achieve this target, it will be necessary for the mining industry to attract labour that chooses to take up residence in the municipality and for many of the young people to opt to remain rather than move to metropolitan areas. Representatives from Kiruna municipality also believe that population will grow over the coming years although the housing shortage represents a substantial obstacle to a satisfactory population growth rate in both municipalities.

Sweden Statistics estimates that the populations of both Pajala and Kiruna will continue to decline up until 2025. It is based on the outcome of a number of parameters and is considered to be unduly pessimistic since the forecast is based on previously observed population changes in the municipalities. The reversed population trend is mainly attributable to the rapidly growing demand for labour in the expanding mining industry.

It is too early to predict the final outcome. Whatever the case, the population composition will continue to be severely imbalanced (Figure 97). As regards the population trend for the different age groups, it is anticipated that the 0-15 year's age group will increase slightly in Kiruna, whereas it is forecast to continue to decline in Pajala. At the same time, the number of people over 65 years of age will continue to increase considerably, particularly in the Kiruna municipality. Thus, an unfavourable population composition is forecast for both municipalities over the coming years. The working-age population trend may be reversed or at least become less adverse than is indicated by the population forecast, which is based on population patterns over the past few years.

Figure 23. Population projection per age group for Kiruna and Pajala



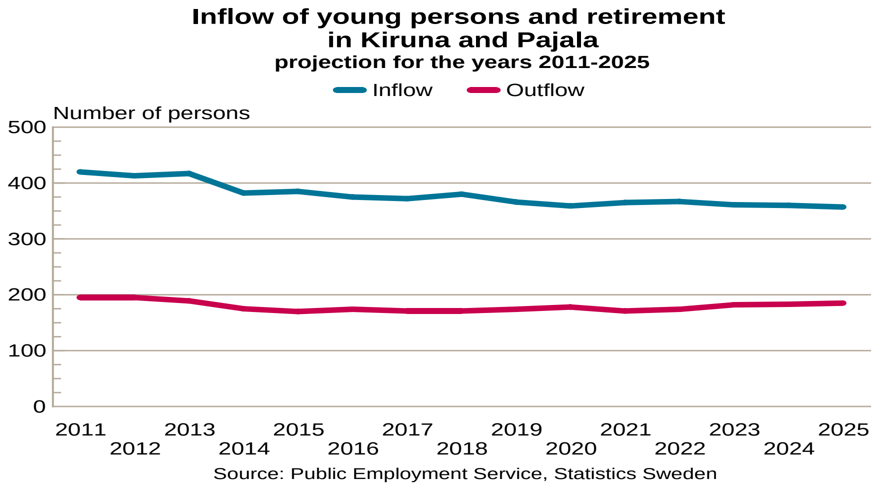
Source : Statistics Sweden

Large numbers of elderly retirees leave the labour market

From 2011-2025, the ratio between inflow and outflow to and from the labour market will be significantly less than one, i.e. the number of people retiring on grounds of age will be higher than the number of young people entering the labour market. Close to 2 500 young people will enter the labour market in both municipalities during 2011-2025 while close to 5 300 elderly retirees will leave the labour market. The ratio of 0.47 is low by comparison with other regions in the country. The shortfall of about 3 000 persons is more than twice the current inflow of labour.

If this imbalance remains oven a longer period, there will be an adverse effect on both the growth of the labour force and the level of employment. The region will see a decline in these magnitudes over the long term. This trend will have to be broken in the coming years. The inflow of labour will have to be at least at the same level as the outflow to maintain current levels of employment. The net flow is particularly imbalanced in Pajala municipality since in the public sector alone, the number of retirements far exceeds the number of young entrants into the labour market. There will also be a large number of elderly retirees in other sectors. The municipality is obviously facing considerable difficulties.

Figure 24. Inflow of young persons and retirement in Kiruna and Pajala



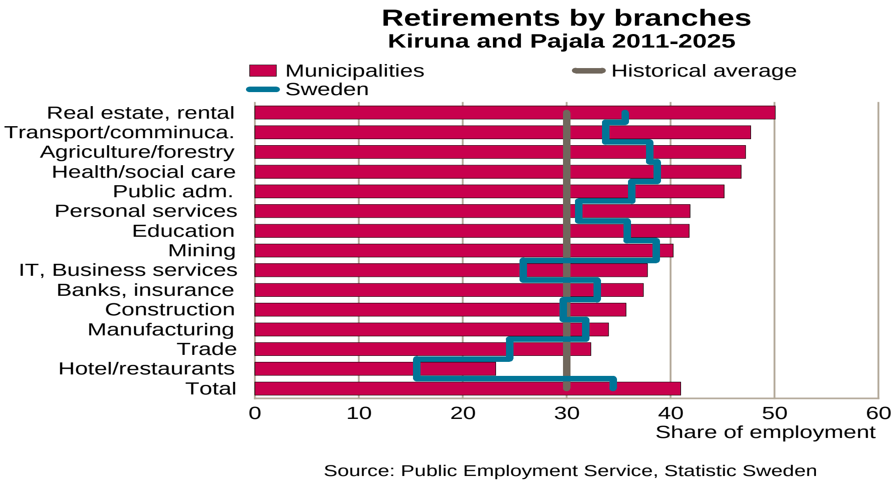
Source : Public Employment Service, Statistics Sweden

The share of elderly retirees is higher in Pajala than in Kiruna, 46 and 40% of employees respectively are expected to retire between 2011 and 2025. Figure 99 illustrates the retirement figures across several sectors in both municipalities. The share of elderly retirees in Pajala and Kiruna is higher for all sectors than in the country as a whole and is accordingly significantly higher than the historical average. In both Kiruna and Pajala, the number of retirees will be particularly large in the public sector. Representatives from the municipalities are especially concerned about how to solve the problem of covering future labour demands in the health and social care sector. Health and social care has limited opportunities to compete salary-wise with the mining industry which makes recruitment difficult. The municipalities are actively working on making both professions and workplaces in the health and social care sector more attractive. One such example is a project in Pajala municipality that aims to turn part-time employment within the health and social care sector into full-time employment. Both municipalities also see that there is a risk of future problems in recruiting engineers and other highly skilled specialists such as physicians.

The municipalities fear labour shortages in the following sectors, both short-term and long-term:

- Health and social care
- Care for the elderly and disabled
- Technological consultancy/Engineering
- Construction

Figure 25. Retirements by industry sector for Kiruna and Pajala



Source : Public Employment Service, Statistics Sweden

Municipal strategies for increasing labour supply

Collaboration between stakeholders is an important part of development for all industries in the region. Pajala has a labour market council on which several stakeholders are represented. It manages important issues related to business development in the municipality. As mentioned, Pajala has a vision to increase the population to 10 000 by 2020. Linked to that vision, strategies for various municipal policy areas are essential, such as culture, sports and leisure, housing, etc. Kiruna is in the process of establishing a similar labour market council.

The municipalities collaborate on planning education which is strategically important for business development and for the primary undertakings of the municipality. They operate educational programmes in collaboration with other municipalities in the north of Sweden, primarily programmes at post-secondary level. Collaboration between the municipalities makes it easier to achieve the requisite education volumes and facilitates recruitment of suitable education providers in the education system.

Underutilized labour resources can be found among recently arrived immigrants. According to representatives from the municipalities, integration has worked very well, and one important part of that integration link is to reach a high quality of courses in the Swedish language. Currently, there is a low level of labour immigration although it is estimated to rise in the future. The labour that is being recruited from other countries mainly consists of specialists in the area of health care. One issue that inhibits recruitment from other countries is the housing shortage in the municipalities.

In order to meet the future labour demands and increasing employment in the long term, it is important to have adequate vocational training programmes in the education system[7]. Another measure is to help family members of new employees to find suitable employment on the local labour markets. One problem in this area, as has been mentioned above, is that the demand for housing far outstrips the supply. Housing queues are consequently very long. The municipalities are conducting an on-going programme in

[7] For example educations planned by Swedish National Agency for Higher Vocational Education.

housing investment. However the expansion of this programme is limited by the lack of resources in the municipal budgets.

The municipalities strive to maintain a high level of quality in their core areas of expenditure, particularly health and social care and education. It is considered essential to offer the inhabitants high quality in those areas in order to make it attractive for people to stay in the region. In addition, it acts as an incentive for people to move to the region. Culture and leisure are also important factors that attract people to the region. The municipalities are investing in theatre, music, literature, the natural environment and a range of sporting facilities.

8.6 Actions to alleviate the consequences of the generational shift

Policies to stimulate labour supply

All in all, over 1 600 000 people are expected to leave the labour market on grounds of age from 2011-2025, compared to approximately 1 300 000 retirements from 1996-2010. However, there are measures available to try to alleviate the effects of this generation shift. There is no single solution, but rather a series of different steps that may help produce a positive outcome. In the following, we will consider a number of policy measures that could lead to a more efficient utilisation of existing labour resources, national and local[8]. Measures to increase population and labour supply in the long term will also be examined, and most of these measures are linked to active policies on regional and local levels.

1. More efficient utilisation of existing labour resources

After 2006, economic policy in Sweden has focused on increasing labour supply. New reforms have been introduced, such as changes to the unemployment insurance system, the health insurance system[9] and a new labour market policy. An Earned Income Tax Credit has also been introduced. The emphasis throughout has been on the need to improve incentives for job-seeking and participation in the labour market.

An increased supply of labour is also expected to contribute to an improvement in matching in the labour market. In addition to structural reforms, a number of temporary measures were introduced in connection with the financial crisis of 2008 and 2009, in order to alleviate the negative effects of the recession. The focus of these emergency measures was to reduce the impact of the fall in the employment rate, avoid long-term, high-level unemployment and maintain participation in the labour force. Labour policy since 2006 has included a significantly larger element of incentives to support active job seeking, primarily through changes in the unemployment insurance system. One of the effects of these changes has been to improve the matching process in the labour market.

The policy's main focus on stimulating labour supply has also had a substantial impact. The labour force has grown steadily since 2006 and significantly much more than during previous comparable economic periods. The number of persons in the labour force has risen in many different groups over the past few years, for example among citizens born abroad. In international terms, Sweden has a high rate of labour market participation, among the highest in Europe. In spite of this, there is further potential for raising the labour supply to even higher levels among various parts of the population. In order to facilitate

[8] Sweden has a national labour market policy.

[9] The National Social Health Insurance Agency introduced new rules in 2010 which meant that people with work ability should be tested after a period of three month in the insurance system. The responsibility for this assessment lay with the Public Employment Service. In order to accommodate the needs of people whose entitlement to sickness benefits had expired, the Employment Policy Programme for Working Life Introduction was introduced on 1 January 2010. Its aim was to offer participants individualized labour market measures that determined the need for support during a transition to work. The Working Life Introduction programme lasted for a maximum of three months.

a continued supply of labour in the future, it is essential to harness the available labour resources among people of working age throughout the entire country. This can be done through effective labour market policy and by taking other types of initiatives in other policy areas as economic policy, industry policy, education policy and social policy, in line with what has been mentioned above (Public Employment Service, 2009).

Irrespective of the economic situation, it is essential to harness the resources of the unemployed. Efficient matching is essential although many unemployed also need skill training. As well as education, on-the-job training may also be required in many instances, in order to provide the essential work-life experience.

Close to 400 000 people are registered as unemployed at the Swedish Public Employment Service, (including persons in programmes with activity support). Of those 400 000 unemployed, more than 100 000 have been unemployed for more than three years over the past ten years. This group of long-term unemployed comprises persons who have recurring periods of unemployment and who have difficulties finding a stable foothold in the labour market. This is one of several ways to measure the size of the groups that have difficulties establishing themselves in the labour market irrespective of the economic situation. The methods used to measure this form of harmful unemployment vary as, consequently, do the results.

The group of unemployed with the greatest difficulties in entering the labour market, irrespective of the economic situation, is often referred to as the structurally unemployed. In an international comparison, Sweden had the lowest share of structurally unemployed in Europe. Minimising structural unemployment remains the single most important task for labour market policy. One way of reducing this type of unemployment is to increase the employability of the unemployed by means of training and/or work experience.

It is also possible to limit structural unemployment by stimulating job creation in sectors that have lower skill requirements[10]. However this will not counteract the effects of the generational shift. But it will affect the number of hours worked and will therefore provide a positive contribution to GDP growth. Over the coming years, there is a need to focus on a selective labour market policy that concentrates resources on the unemployed who have the greatest need for different measures. This would help to constrain the growth of structural unemployment and thereby alleviate the negative impact of the generation shift.

The focus of labour market policy is on the avoidance of long-term unemployment. Among other things, this work involves a search for new and more sustainable solutions to harness the labour resources that can be found among groups who have the greatest difficulties in finding employment. Many of them have limited education, elementary school at best. Over a quarter of the unemployed (including job-seekers in programmes with activity support) registered at the Swedish Public Employment Service do not have a leaving certificate from the upper secondary school.

Certain groups are over-represented among those who have particular difficulties in finding employment: unemployed people from 55-64 years of age, foreign born; individuals with occupational disabilities and young adults who left school without a leaving certificate. Labour market policy has always lacked instruments to provide a more adequate education programme such as an upgrade to upper secondary school level for those unemployed who lack a proper upper secondary school education. Those groups of unemployed who are far from reaching that level need long-term training commitments; to start with, basic adult education, followed by vocation training. The municipalities have the primary responsibility for the provision of longer basic education programmes for their citizens. However this issue

[10] Measures have been implemented in the form of ROT and RUT, enabling households to purchase subsidised services.

requires more collaboration between the municipalities and the Swedish Public Employment Service in order to improve the employability of the unemployed who lack necessary basic education.

One trend that will affect labour supply, both in the short-term and long-term, is the fact that young adults in each single age group leave elementary school and upper secondary school without a leaving certificate. This is also a dilemma shared by other countries. This share has remained unchanged in Sweden in recent years at around 20% of each age group. About half of this group finish their education at a later date. However the other half is faced with difficulties entering the labour market, even during periods of high labour demand[11]. For that reason, it is essential to minimise the size of this group as early and as far as possible which would naturally facilitate the generational shift.

Another way of increasing the labour supply is to improve mobility in the labour market, i.e. stimulating the unemployed to switch profession (from declining to expanding professions) or to move to a new location. Such measures are exceedingly important in order to resolve recruitment problems. The Swedish Public Employment Service is actively working to enable job-seekers to accept jobs in other places outside their home region. Commuting is an alternative solution that offers a substantial potential for further development in the future. Commuting to work often brings benefits to the home municipality as well as the municipality in which the workplace is located. Infrastructure investments are important to facilitate commuting, in both roads and railroads.

2. Foreign-born residents constitute an important labour potential

The greatest potential for an increase in labour supply and employment in the future rests with foreign born residents, particularly with non-European women[12]. The entire chain of integration from the point of arrival in Sweden, to the final objective of gaining employment must be improved. For that reason, the Swedish Public Employment Service has been given responsibility for the entire integration process concerning newly arrived refugees[13].

Skills in Swedish language are important and essential for immigrants seeking to establish themselves in the labour market. Swedish teaching for new immigrants plays an important role. However the quality of these teaching programmes has been criticized in a number of municipalities for failing to provide adequate skills. Validation schemes that would better assess the skills of foreign-born residents are also important. This applies to both education and work experience. Nearly 50% of new immigrants (refugees) who register at the Swedish Public Employment Service lack a leaving certificate at the upper secondary school level. In order to provide upper secondary school level education to as many of this group as possible, vocational study programmes will have to be expanded in many municipalities. It is also important to change attitudes and to increase the understanding of foreign school leaving certificates among employers and fellow workers. In this context, the everyday business-focused approach adopted at the local Employment Offices is invaluable. It also establishes networks that enable unemployed immigrants to obtain employment and work experience.

3. Women – an underutilised labour potential

Labour market participation still differs between men and women. According to the Swedish Labour Force Survey from 2012, the relative participation rate among men between 16 and 64 years of age was

[11] Aproximally 5 percent of each age group.

[12] Public Employment Service, Labour Market Forecast, 2006-2012.

[13] The Introduction Activity Act targets newly arrived immigrants of working age (20-64) who have been given residence permits as refugees, or quota refugees. Newly arrived immigrants from 18-19 years of age, with no parents in Sweden, are also covered by this law, as are relatives of new arrivals. The new law came into effect on December 1, 2010.

84.2%, compared to 79.2% among women. There is accordingly a labour potential to be found among women, primarily among foreign born women. This varies between different parts of the country. Participation rates are higher in the urban centres and lower in rural areas.

However, it is difficult to establish to what extent it is possible to even out participation rates between men and women as well as between regions. The fact remains that there is still work to be done even though female labour market participation rates in Sweden are much higher than in most other countries. Further efforts to raise female participation rate can be undertaken across a wide spectrum, covering several policy areas. It involves issues of geographic mobility, distribution of job opportunities, education, breaking with cultural traditions, infrastructure, parental leave, childcare, etc.

4. The elderly – an important resource

The elderly are also an important labour resource even though by European standards, Sweden has high participation rates among the elderly. The primary issue is how to get as many as possible to work until retirement age which is currently 65 years of age in Sweden. However it is also a question of how to incentivise a greater number of people to continue working after 65 year of age. Increasingly, people continue to work after the age of 65, usually to 67[14]. There is an on-going political discussion about raising the right to remain in work until the age of 69.

A significant characteristic of those who work between 65 and 69 years of age is that many work part-time. One way of encouraging people to work until 65 years of age or beyond can be to improve the conditions for part-time work for elderly labour. It would also improve the opportunities for transferring knowledge from senior members of the labour force to new employees. The new pension system has established clear incentives for elderly workers to remain in the labour market for longer.

Potential labour resources are as follows (Public Employment Service, 2010):

- Intensive work programmes to provide the structurally unemployed in declining sectors and occupations with viable skills that will help them find a new job.
- Young people with inadequate education. These groups are greatly affected by high unemployment and many remain outside the labour market.
- Young people who are entering the labour market and whose education does not correspond to labour demands.
- Foreign-born residents who have inadequate education, particularly women.
- Unemployed persons who have occupational disabilities. This group is often extremely vulnerable to high unemployment. Many remain outside the labour market.
- Elderly workers, including the unemployed.
- Unemployed persons who lack geographical mobility.
- Regional differences in terms of labour force participation.

[14] Currently a person has the right to work until the age of 67. After 67 a person had to have an agreement with the employer to continue to work.

Population, employment and economic growth

Population growth is considered as a key factor in generating local economic growth (Klepke, 2001). Population growth is together with employment growth often used as an indicator of local growth (Bartik, 2005; Wolman and Spitzely, 1996; Cassel, 2008). Increase in residents' income is also a common indicator of local growth.

The factors underlying local economic growth may be viewed from a number of different perspectives. Public investment in infrastructure is said to be an important factor in generating local economic growth. More recently, the emerging concept of regional growth has come to include other dimensions than population, employment and income (Swedish Institute for Growth Policy Studies, 2008). In addition to the economic perspective, ecological and social dimensions have been given greater emphasis in different analyses.

A broader definition of local growth may be formulated in terms of sustainable economic growth, measured as some form of regional GDP value that encompasses the opportunity to develop in such a way that welfare in a broad societal perspective increases)Areana for Growth, 2006). Growth and development thus go hand in hand. Municipalities around Sweden are different; conditions differ, which means that every municipality must find their own way to define measures and their own way of work regarding local economic development. Work on growth issues must take into account each individual municipality-specific condition. Generally it would not be possible to say that a specific growth strategy would be better than others. It is important to observe those differences in population development and other key conditions in the process of planning appropriate activities which are relevant for the choice of growth strategy for municipalities, and the municipality's ability to develop welfare (Hautbois and Durand, 2004).

As mentioned above, there is not one solution or one kind of measure for local growth that fits all municipalities. Emerging policy must be adapted to the particular circumstances and the particular context prevailing in a municipality. Municipalities can initiate their own activities that contribute to the development of the municipality towards a specific growth perspective (Bartik, 2005; Robichau, 2010). However the intensity and pace of development depends in many cases on how the municipality cooperates with its local and regional partners. A municipality's main mission in the growth policy is to create good basic social institutions and to take on the leader's jersey for local development.

5. Private and public entrepreneurship

Increasing entrepreneurship provides a more robust foundation for local employment which is less sensitive to cyclical fluctuations and makes opportunities for rising employment in the long term. A local labour market with a strong culture of entrepreneurship and innovation is better able to meet rapid market adjustments. Municipal organizations also need to have an increased capacity for adaptation that helps them to cope with the competitive situation for inhabitants, businesses and visitors. An important part of the strategy for local growth will be measures to promote private and public entrepreneurship.

Entrepreneurship for economic growth has been studied by several researchers. At a national level, the relationship between economic growth and entrepreneurship has been studied by country data for a number of OECD countries in 1990. In that study where the amounts of physical and human capital were held constant, countries with a higher level of entrepreneurship also turned out to have higher growth. A positive relationship was also identified between entrepreneurship and economic growth at the regional level in several countries, as well as in a panel of OECD countries. The empirical results are consistent with the assumption that entrepreneurship, by facilitating the dissemination of knowledge, strengthens economic growth.

There is a clear correlation between economic expansion and a region / municipality's ability to attract the skills that are required for good economic development. Some of the factors that create attractiveness may be influenced by individual municipalities, while others require action at the regional or national level. Creating a good business environment is something that all municipalities are working on today. However there are major differences in the degree of activism pursued by individual municipalities in Sweden.

There are a variety of factors that are important for each company which chooses to set up a new business. Moreover these factors are linked in a complex fashion. Terms and conditions, such as wage rates, laws and regulations, fiscal and monetary policy and tax levels are some of the important factors that influence foreign companies locating in a particular country. However these factors play a lesser role in relation to the choice of location within a country. The ability to keep companies within a region is at least as important as the ability to attract businesses since it is usually much easier to meet the needs of established businesses than to attract new businesses.

The factors that are most critical to a company's choice of location are of course dependent on the industry within which the company operates. A company that manufactures products in the form of goods is dependent on access to an efficient transport system while knowledge-intensive service companies are more reliant on proximity to other businesses that use these services.

Accessibility is a key word when it comes to creating attractiveness for business. In addition to the access provided by an efficient transport system to customers and/or to other businesses in the vicinity, companies also require access to a range of services and a workforce that has the right skills. In this context, a well-functioning public transport infrastructure is crucial. The service that companies demand from authorities and municipalities must also be accessible and function in a smooth manner. These factors provide a fundamental base for what companies expect.

Companies and industries that are innovative and knowledge-intensive derive particularly great ad-vantages from a central location that offers good access to both customers and suppliers. Research shows that there are three contributory mechanisms. These are sharing, matching and learning. In short, this means that geographic concentration facilitates and stimulates processes that enhance specialization.

Companies, especially knowledge-intensive companies, are entirely dependent on the availability of skilled labour. Human capital is the most important resource and will be even more valuable in the future. Questions about skills and recruiting appropriate labour are therefore important factors for business start-ups. The ability to recruit people with high education and special skills will be an important part of attracting more companies and also allowing existing firms to grow. This can either be done by attracting expertise relevant to a particular region/municipality or by creating favorable conditions for commuting from other regions / municipalities.

It is of great importance to encourage and facilitate a good business climate for economic development, nationally, regionally and locally. One important characteristic that emerges from the two case studies is that the tourist industry plays an important role in relation to growth potential. The sector is multifaceted and it is therefore essential to have a clear strategy on how it can best be developed in each region.

The potential for long-term development is also evident in several other industries in the studied regions, for example in historically traditional industries such as mining, manufacturing, construction and forestry. Labour supply represents a central long term issue in all those industries as a result of the increasing number of retiring people in these local labour markets. Can the regions attract persons with suitable skills, well qualified specialists that all employers need to recruit?

6. Immigration of labour

A central approach to increasing labour supply in local labour markets is to raise net migration in the long term. One of the possibilities is to increase labour immigration. This possibility has been expanded since employers have been given extended opportunities to recruit labour abroad[15]. On the one hand, the European Union constitutes a common market, on the other; the employers themselves determine whether there is a shortage within a profession. Thus, they are able to look for labour outside the European Union. However, this is not a universal cure that will solve all of the labour needs that will occur in the coming decade. However it will provide assistance to sectors suffering from a domestic shortage of skilled professionals. There will also be increased labour competition within the European Union since many other countries are struggling with demographic problems brought on by an ageing population.

The results of our analysis show that net migration needs to be at least maintained at current levels at a national level in order to ensure continued growth of labour and employment in Sweden as a nation. However it is clearly evident from our case studies that a lot more can be done at regional and local levels. The two case studies show that the inflow of foreign labour is weak and the local labour market needs at least to double the inflow of new labour to maintain current levels of employment. The analysis also shows that the inflow of youth into the labour market is just sufficient to fill retirements in the public sector. It is obvious from our study that all of the studied regions need to increase the amount of foreign labour on quite a large scale and at the same time work even harder to raise the activity rate among groups that have low labour force participation.

The two case studies show very clearly that the regions need to focus a lot more on measures that will attract labour from other countries. The inflow of foreign labour is limited in these two case study regions, particularly in Kiruna and Pajala. Given the large number of elderly workers leaving the labour force, labour resources will be very limited in the long term. It will be a hard challenge to increase employment and economic growth, which is a main goal in all regions. In the first place, it will be a very difficult challenge to find enough labour in each region to fill all the vacancies that arise when people retire, particularly in certain sectors. Secondly, it will be an even harder challenge to increase employment and economic growth.

There is an on-going debate about the level of immigration, especially in certain regions, where some voices argue that immigration has become too extensive. The inevitable conclusion from our analysis is that net immigration and foreign-born participation rates will play a significant role in changes to the Swedish labour market over the coming decades. The question therefore, is not whether regions in Sweden should have immigration, but how extensive it should be and how we can harness the important labour resource that immigrants represent.

7. Increasing labour supply with higher education - certain professions

An important factor affecting regional growth is the availability of labour and in particular the availability of high skilled workers[16]. In Sweden, access to higher education has increased in recent decades and there is good access to higher education in all 21 counties. The planning of education takes mainly place at the regional level and in this context it is important that regional and local actors are working together to achieve good solutions to meet an upcoming demand of labour. The municipalities in the case studies mentioned the long term importance of reaching a sufficient inflow of graduates into the local labour markets.

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[15] In year 2008.

[16] Important factors for local economic growth in Sweden, Swedish Institute for Growth Policy Studies, ITPS, 2008.
Lidström, A. (1998) Education and local economic growth, Local economy and politics.

In order to counteract the looming shortages in different professions, more people had to choose educational programmes – in both upper secondary school and adult education – that focus on health and social care, construction as well as manufacturing and high technology. Social and elderly care is one example where it is unreasonable to expect that upper secondary schools can provide the whole labour market with labour. There is however an insufficient interest in these programmes among young people. In the long term, the need for labour in these fields is considerable. To meet this demand of labour, the municipalities must provide a higher level of adult education but also consider other forms of actions for increasing labour supply, not only in this sector.

In order to make it possible to implement the changes that are essential for upper secondary school programmes, stakeholders need to provide more information about professions and labour market needs to both parents and students as well as to people in adult education. This information is necessary to influence people's attitudes and to provide students with an opportunity to gain a better idea of the content and prospects for various professions. As early as in elementary/upper secondary school, municipalities need to provide pupils with knowledge about professional and labour market prospects. All involved parties must take their share of responsibility, not only the municipality but also labour unions and employers' organisations. Surveys show that, to a great extent, pupils choose their education based on media information concerning the prospects for different fields and professions.

8. Collaboration between stakeholders

It is essential that municipalities take a broad approach to issues surrounding future labour supply. Contacts and collaboration between regional/local actors are at the heart of this effort. It involves extended collaboration between education coordinators, private industries, labour unions, the Swedish Public Employment Service and municipalities. The Swedish Public Employment Service's Industry Forums comprising different actors concerning labour market issues play an important part in the efforts to develop strategies for tackling labour needs in a future labour market.

It is important that different stakeholders collaborate and participate in the process during the planning of (new) educational programmes in order that a growing number of individuals will find educational opportunities in areas where labour needs are greatest, shifting the emphasis away from educational programmes where we have a more or less steady surplus of job-seekers. The shortage of graduates will gradually increase in certain professional fields due to the retirement of a growing number of elderly skilled professionals as well as to meet the need to increase the overall number of employees in particular sectors. More extensive efforts are necessary to strengthen the supply of skilled labour within professions that have large retirement rates. If nothing is done to change the trend, there will be a shortage of skilled labour within certain professions, something that will inevitably impact on recruitment, work environment as well as production and services in both private industries and the public service sectors, especially in certain regions.

9. Future inflow of labour – attracting labour to the regions

There are many factors which affect the attractiveness of a region in relation to recruiting labour. Some classic factors include high wages and good employment conditions. More recently, attention has increasingly begun to be paid to other – softer values such as access to housing, good recreational and cultural activities, good access to childcare and schools. At the same time, the conclusion is that humans are relatively reluctant to move, at least after they have finished studying or started a family.

Attracting labour is a long term and multifaceted task and consists of efforts on many levels. These include strategies to attract and retain graduates and skilled labour in the region. It also involves strategies to reach foreign labour in other countries that are willing to move to Sweden and to a specific region, increasing labour market immigration into a local labour market. Regions and municipalities have had to have long-term strategies for increasing the supply of skilled labour, including measures to influence future labour potential, as well as the educational system (Trendle, 2009).

One advantage that has been highlighted in order to attract foreign labour is the argument that Swedish business culture is generally characterized by a non-hierarchical approach. This is of great importance for employees of a company who will in many respects be given the opportunity to develop their own ideas and thereby contribute to the company's success. In many other countries, the business environment is far more hierarchical which does not allow the same scope for employees to contribute to innovation and renewal. To attract foreign expertise, the opportunity for both persons in a relationship to find a job that matches all their requirements in a new location may well be of crucial importance. It is also important to create social spaces for people who may not already have a network of friends and family.

The provision of good vocational guidance and counselling to schoolchildren and other potential future labour is a vitally important measure. The inflow of new labour to the local labour markets will not be sufficient to make up for all the elderly retirements in our case studies. Hence it is important that people entering the labour market have an education that makes them employable. All of the municipalities foresee difficulties in recruiting labour within certain sectors that require university degrees.

The municipalities in the case studies are actively working with the university in the region in order to influence both the contents and the directions of their programmes in order to provide the local labour markets with suitable labour for future needs. In order to attract people to the region, the municipalities are marketing themselves and the future needs of labour, for example at trade fairs and conventions. All these activities need further attention.

10. Attractiveness, services and infrastructure

Recent attention has been focused on the need to provide access to good municipal environments and service. It is considered to be an important factor in attracting population and labour resources. This is partly borne out by the case studies as well as by other studies. The municipalities strive to maintain high levels of quality in their core areas of health, social care and education. It is considered essential to offer the inhabitants high standards in those areas in order to make it attractive stay in the region. In addition, it is an appealing factor when they are trying to attract people to move here. Culture and leisure are also important factors for attracting people to the regions. The municipalities are investing in areas as theatre, music, literature, nature and a series of sporting facilities (Rönnblom and Hudson, 2007).

One problem that small municipalities are facing, especially in relation to rapid economic development, is that the demand for housing far outstrips the supply. As a result, housing queues become very long in those cases. Municipalities make investments in new housing and plan to continue investments in housing. These plans however may often be limited by a lack of resources in municipal budgets. This may in turn raise obstacles in the path of increasing employment and improving economic welfare in the region.

Summary of measures for population, labour supply and employment:

The following comprises a list of some important examples regarding how municipalities can facilitate the generation shift in different regions. In all probability, there is more that can be done to counteract the negative impact of the generation shift. However the examples below are the most important:

- Higher level of immigration in order to increase working age population, particular in professions that have a deficit of skilled labour.
- Effective integration of foreign-born citizens. This may differ between regions.
- Measures to facilitate future industrial and business development.
- Attracting young people to programmes aimed at professions where there is a labour shortage, and particularly in professions subject to skill shortages that attract little interest among young people.
- Shortening the periods of study in the educational system **-** increasing the share of young people who have upper secondary leaving certificates.
- Extensive efforts by stakeholders, authorities, industries, labour unions and employer’s organisations etc., to disseminate information about professions. The target audience comprises both adolescents and adults, i.e. pupils, students, parents, teachers, guidance counsellors, etc.
- Adult vocational education for foreign-born, new immigrants as well as other foreign-born residents who have a weak educational background (manufacturing, construction, health and social care).
- Developing the attractiveness, infrastructure and services of regions.
- Increasing the opportunities to raise the supply of housing in areas of high housing shortage.
- Collaborating between municipalities concerning municipal services – IT, salaries, water, waste, skill supply.
- Improving collaboration between different stakeholders to find strategies for attracting new labour, in both Sweden and abroad.

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