



Wage Formation in Sweden 2014

A summary of
Lönebildningsrapporten 2014

The National Institute of Economic Research (NIER) is a Swedish government agency accountable to the Ministry of Finance. We produce forecasts to support decisions on economic policy in Sweden, analyse economic developments and conduct economic research.

Published four times a year, our report *Konjunkturläget* consists primarily of a forecast for the Swedish and global economies but also contains more in-depth analyses of relevant economic issues. *The Swedish Economy* is an English translation of that report.

Wage Formation in Sweden is a summary of the Institute's annual report *Lönebildningsrapporten* (in Swedish), analysing the economic conditions for wage formation in Sweden.

All of our reports can be downloaded from our website at www.konj.se/en. The latest statistics can be found at www.konj.se/statistics.

Summary of the report

This year's report on *Wage Formation in Sweden* focuses on structural challenges in the labour market.¹ The employment rate is high in the working-age population as a whole, but significantly lower in some groups, such as young people, those born outside Europe and those with compulsory education at most. Unemployment is also higher in these groups. The social partners can influence employment through wage formation, because minimum wages are high and the wage structure is compressed. Various forms of wage subsidy can reduce the entry barriers to the labour market. For those who are established in the labour market, there are good opportunities for a gradual increase in wages. It is therefore important to become established in the labour market even if wages are initially low.

1 Introduction

The Swedish labour market is functioning very well at an aggregate level. Labour force participation is high, and the employment rate is high among both women and men. Wage formation is responsible and generally takes account of the effects of pay settlements on the macroeconomy. The Swedish Public Employment Service is working on making it easier for the jobless to find work and on improving matching in the labour market.

Despite this, there are major structural challenges. Unemployment is high in some groups. People who initially have a weak attachment to the labour market find it difficult to become permanently established in the labour market. Those with limited education, those with disabilities, those born outside Europe and older people are groups that struggle to obtain work. Some young people also have difficulties gaining a firm foothold in the labour market.

In this way, the labour market is divided into those who are already established and those who are on the outside. Labour market institutions and active labour market policy do not seem to be fully able to counteract the difficulties facing these groups. Nor do collective agreements take full account of groups with a weak attachment to the labour market in wage formation. High minimum wages make it harder for young people without experience and other groups with a weak attachment to the labour market to find work.

¹ The NIER's appropriation directive for 2014 reads: "In its report on the economic basis for wage formation, the institute is to analyse, among others, the relationships between unemployment, employment and wages. Of particular importance is analysis of the relationships of both wage levels and the wage structure to unemployment and employment. Relevant gender equality aspects are to be considered in the preparation of the report."

ABOUT THE REPORT

The NIER's report on *Wage Formation in Sweden* looks at wage formation from an economic perspective. The aim of the report is to assist the social partners and the National Mediation Office with high-quality analysis. The NIER expresses no opinion on how wages and salaries should develop.

The report begins with a chapter looking at wage formation in Sweden relative to other countries, and how employment is affected by higher minimum wages. The chapter also presents the situation facing some of the groups that have a weak labour market attachment by international standards. This is followed by three thematic chapters analysing developments in wage mobility, wage subsidies and equilibrium unemployment in the light of economic theory and empirical evidence. Differences between men and women are considered in all chapters.

2 The influence of minimum wages on establishment in the labour market

In comparison with other countries, collectively agreed minimum wages in Sweden are high relative to other wages. Labour force participation and the employment rate are also high for the population as a whole, but much lower in some groups. For example, the employment gap between those born at home and abroad is high in comparison with other countries.

MINIMUM WAGES DETERMINED IN THREE WAYS

Minimum wages can be determined in at least three different ways. In many countries, they are laid down in law. In others, minimum wages are negotiated collectively between employer organisations and trade unions. This system is seen in Sweden and in the other Nordic countries, which also have high collective bargaining coverage. A third way of regulating minimum wages is through extension, where the minimum wage negotiated in a collective agreement applies throughout a region, industry and/or profession regardless of whether workers are organised in trade unions.

The way that minimum wages are determined has implications for their level relative to other wages in the country. One particularly relevant factor is that the average level of minimum wages tends to be higher if they are negotiated by sector rather than being laid down in law.

POSSIBLE REASONS FOR COMPRESSED WAGE DISTRIBUTION

The difference between wages in the middle of the wage distribution and those furthest down is small in Sweden by interna-

tional standards. There is also only a small difference between the lowest wages and those further up the distribution.

There are many possible explanations for this compressed wage distribution, including differences in productivity-related factors such as education and variations in experience that influence wage dispersion. Low wage dispersion can arise if productivity is evenly distributed in the labour force. Differences in productivity in the labour force have long been considered to be smaller in Sweden than in other countries. More recently, however, various tests have shown that the dispersion of knowledge levels among both pupils and adults has increased. If productivity differences have increased, this presents new challenges for wage formation and labour market policy.

SOME GROUPS FACE GREATER DIFFICULTIES BY INTERNATIONAL STANDARDS TOO

Groups with low actual or expected productivity are affected to a greater extent by minimum wages being high relative to other wages in the economy. New labour market entrants, such as immigrants and young people, often start on a minimum wage, and a relative increase in minimum wages could exacerbate the entry barriers to the labour market. Besides these two groups, others born abroad and those with compulsory education at most are overrepresented among the lowest paid.

These groups encounter greater difficulties in the labour market than others by international standards too. Chapter 4 shows that various forms of employment subsidy can to some extent help reduce the entry barriers to the labour market.

EMPLOYMENT EFFECTS OF MINIMUM WAGES DIFFER IN THE SHORT AND LONG TERM

Empirical results have not been able to demonstrate unambiguously that minimum wages have negative effects on employment, but many studies indicate such effects. If minimum wages are relatively high, as in Sweden, some of the results suggest that employment will fall. Employers replace workers with low productivity with workers with higher productivity if minimum wages are raised. Groups with a weak attachment to the labour market are probably overrepresented among those hit by negative employment effects.

The effects of reducing minimum wages, however, are not necessarily the same in the short and the long term. In the longer run, new firms and industries can spring up, and employers can adjust production methods to a changed wage structure. A growing body of research literature is focusing on the employment effects in the longer term and finding greater negative effects.

INCENTIVE TO WORK INFLUENCED BY WELFARE SYSTEM

Individuals' economic incentives also affect their efforts to seek and take work. A relatively generous welfare system such as that in Sweden affects wage dispersion by raising the reservation wage, or the lowest pay level an individual is willing to accept. If an individual takes account of the long-term earnings growth associated with employment, the reservation wage may be below the level of welfare payments.

3 Wage mobility among the lowest paid

The chances of those who are initially low paid still being low paid later in life are high. The research has focused particularly on the issue of whether it is the job itself that causes this, or whether it can be explained by differences in individuals' personal characteristics. Some professions and positions are by their very nature less productive in the sense that the market value generated by the individual per hour is low. The least productive jobs are often typical first jobs with high staff turnover. Those who stay in low-productivity jobs for a long time are unlikely to move up the wage ladder – that would require a change of job. If other employers view the low-paid job as a merit, for example relative to unemployment, it may serve as a springboard for better-paid work. If, instead, employers view the job as a sign that the individual is unproductive, and it is also difficult to observe productivity, it may instead become a low-wage trap for the person concerned. It may, of course, also be the case that that person's productivity is indeed low.

UNCERTAIN WHETHER INTERNATIONAL RESULTS CAN BE APPLIED TO SWEDISH CONDITIONS

It is uncertain to what extent the results for wage mobility among the low paid in the US, the UK and other countries can be applied to Swedish conditions. In the UK and the US, for example, minimum wages generally remain unchanged for long periods, whereas those in Sweden increase almost every year. It is also possible that the Swedish minimum wage system's differentiation by sector, experience and age may have positive effects on wage mobility.

SOME GROUPS OVERREPRESENTED AMONG THE LOWEST PAID

Women, the young, those with limited education and those born abroad are overrepresented among the lowest paid in Sweden, defined as the lowest-paid decile group. A person who has a low wage one year will often have a low wage the next year. The probability of remaining in the lowest-paid category decreases

with time. After five years, just under a third of those remaining in the sample are still in this category (see Diagram 1). However, it is not possible to follow 50–60 per cent of the sample over time, and so it is very uncertain how many remain in the lowest-paid group. Older people, those with limited education and those born abroad are most likely to remain among the lowest paid. Men and those born in Sweden tend to climb higher up the wage distribution, as do those who change job. The reason why some of the lowest paid do not work their way up the wage distribution can be explained by a combination of the above factors.

In general, it is difficult to compare studies of wage mobility in different countries due to differences in data sources and related methodological problems. A comparison of the results with international studies does, however, indicate that wage mobility does not appear to be higher in Sweden than in other countries.

4 Employment subsidies and employment

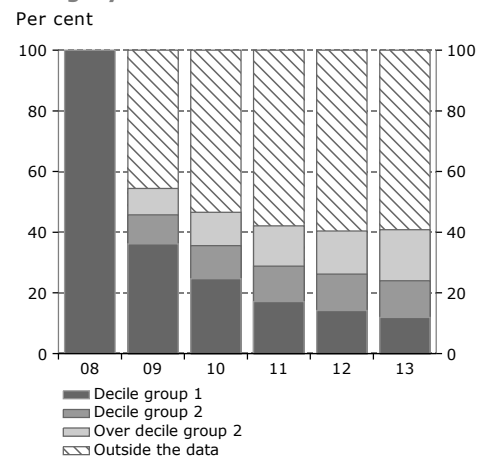
Because minimum wages in Sweden are established through collective bargaining, the government cannot influence wages directly to reduce the entry barriers to employment for those with a weak attachment to the labour market. Instead, various forms of wage subsidy can be paid to employers to bring down labour costs. Wage subsidies come in for criticism, however, because they squeeze out people who are not covered by them. Chapter 4 looks at the issue of whether wage subsidies reduce the entry barriers to the labour market and lead to more jobs in the economy as a whole.

Wage subsidies are intended to reduce labour costs for a specific group of people to the extent that employers are willing to employ them at prevailing wage rates. In this way, the government can influence wage costs and employment without intervening directly in wage formation.

SUBSIDIES USED MAINLY IN INDUSTRIES THAT EMPLOY LARGE NUMBERS ON LOW WAGES

One way of revealing whether wage subsidies reduce entry barriers to the labour market is to look at which industries receive most of these subsidies. The theoretical analysis of employment subsidies assumes a wage floor that limits employment. It appears that minimum wages play a greater role as a wage floor in some industries in the sense of limiting employment to a greater extent. Diagram 2 shows the percentage of workers in an industry covered by subsidies and the percentage on low wages (the NACE industry codes used are defined in Chapter 4). The diagram shows that employment subsidies mainly reach individuals

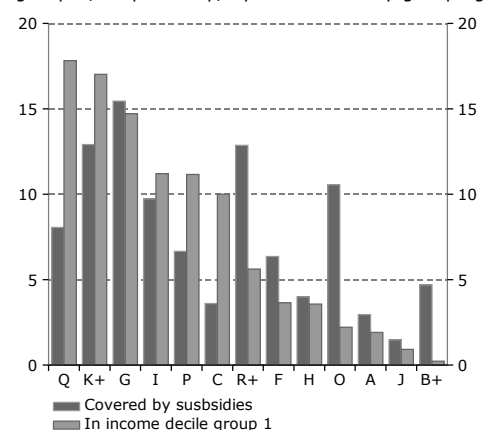
Diagram 1 Wage mobility among persons who were in the lowest-paid category 2008



Sources: Statistics Sweden and NIER.

Diagram 2 Shares of employees covered by subsidies and on low wages 2013

Percentage of employees covered by subsidies and percentage of employees in income decile group 1, respectively, by NACE industry grouping



Sources: Swedish Public Employment Service, Statistics Sweden and NIER.

in industries with low wages and so presumably also low productivity. One conclusion, therefore, is that the subsidies are finding the right individuals. These subsidies can therefore be assumed to support less productive individuals and facilitate job creation where the wage floor limits employment, while making labour in high-productivity industries relatively more expensive.

EMPLOYMENT SUBSIDIES INCREASE EMPLOYMENT

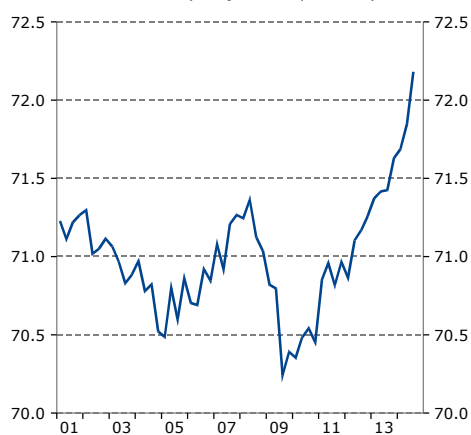
It is not always possible to generalise the results of different studies looking at the effects of different forms of subsidy. Evaluating wage subsidies is associated with a number of challenges – for example, the choice of participants may be a result of positive or negative selection. The results of these studies must therefore always be interpreted with caution. Demand for labour is influenced more by minimum wages in groups with a weak attachment to the labour market than in other groups. Lower labour costs for these groups with a weak attachment can be expected to increase employers' incentive to hire them. Swedish studies analysing the effects of wage subsidies on the flow from unemployment to employment find relatively small, but positive, effects.

These studies also estimate the cost per job created. Such estimates may be useful when comparing different forms of subsidy, but are not suitable for determining whether active labour market policy should be pursued or not, because the aim of this policy is to get people firmly attached to the labour market. The subsidies may be economically justified even if they result in substantial public costs.

If wage subsidies reach the right individuals, they can be expected to increase overall employment permanently by giving these people a firmer attachment to the labour market. Thus these subsidies reduce the entry barriers to the labour market even though the effects are small and clearly not sufficient to prevent higher levels of unemployment in some groups than in others.

Diagram 3 Labour force participation, age 15–74

Per cent, seasonally adjusted quarterly values



Source: Statistics Sweden.

5 Equilibrium unemployment and its explanatory factors

An assessment of equilibrium unemployment in the coming years is important for both stabilisation policy and structural policy. Chapter 5 presents the NIER's analysis.

STRUCTURAL FACTORS CHANGE WITH TIME, SO EQUILIBRIUM UNEMPLOYMENT WILL VARY

The NIER's analysis of equilibrium unemployment is based on a number of structural factors that impact on its level and devel-

opment. The theoretical framework stresses that there are search and matching frictions in the labour market. Key factors are efficiency in matching job seekers with vacancies, the rate of structural change in industry, variations in the size and composition of the labour force, the rules on social insurance, and the social partners' wage formation behaviour. As these factors have varied historically and are expected to continue to do so, equilibrium unemployment will vary over time. The NIER believes that, on average, unemployment was close to equilibrium in 2006 and 2007.

POSITIVE DEVELOPMENTS IN THE LABOUR MARKET

Developments in the labour market are a key issue for both the social partners and political decision-makers. The labour force has grown rapidly in recent years. Labour force participation is now higher than before the financial crisis in 2008–2009 despite a higher proportion of elderly in the population (see Diagram 3). An increase in the labour supply provides a basis for higher employment in the longer term. The employment rate has also rallied since the financial crisis, but has not quite returned to the levels prevailing before the crisis (see Diagram 4). The employment rate in Sweden is high by international standards, however, especially among women. Similar rates of growth in the labour supply and employment have meant that unemployment has nevertheless held around 8 per cent in recent years (see Diagram 5).

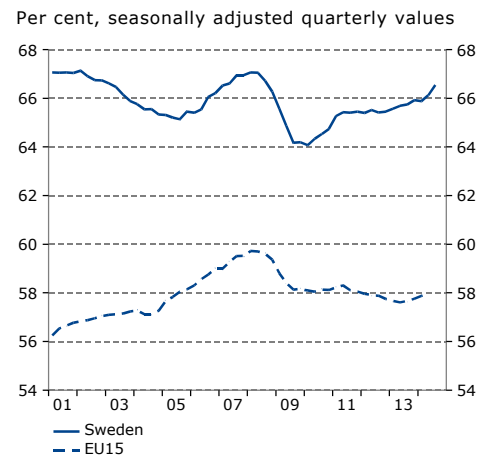
EQUILIBRIUM UNEMPLOYMENT SOMEWHAT HIGHER IN THE NEAR TERM THAN IN THE LONGER TERM

The NIER believes that equilibrium unemployment is currently somewhat higher in 2013–2015 than in the equilibrium years of 2006 and 2007, but will fall somewhat through to 2023. The higher level of equilibrium unemployment today than in 2006 and 2007 can be explained to a great extent by the lingering effects of the deep economic slump, but also by a higher separation probability and a strong influx into the labour force of people with a weak attachment to the labour market who have been hard to match with vacancies. This is being counteracted by the effects of the economic policy pursued since 2006 and 2007, which is contributing to lower equilibrium unemployment today and will continue to do so through to 2023.

HIGHER SEPARATION RATE THAN BEFORE

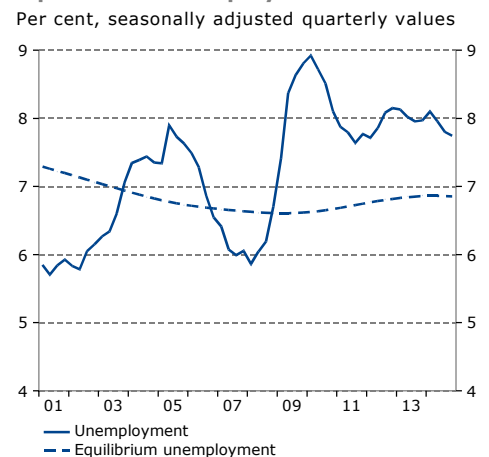
The separation rate (the percentage of workers leaving their employment) is somewhat higher today than it was before 2006, due partly to a higher proportion of fixed-term employment contracts (see Diagram 6). There are also signs that the rate of

Diagram 4 Employment rate in Sweden and EU15



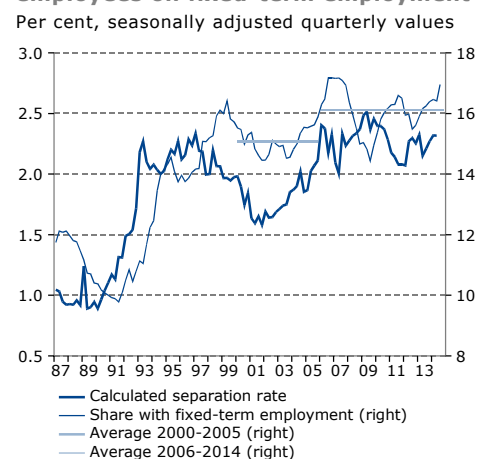
Sources: Statistics Sweden and Eurostat.

Diagram 5 Unemployment and equilibrium unemployment



Source: Statistics Sweden.

Diagram 6 Separation rate and share of employees on fixed-term employment



Sources: Statistics Sweden and NIER.

structural change has increased somewhat. This has pushed up equilibrium unemployment relative to the period before 2006.

LARGE INFLOWS INTO LABOUR FORCE INCREASE EQUILIBRIUM UNEMPLOYMENT

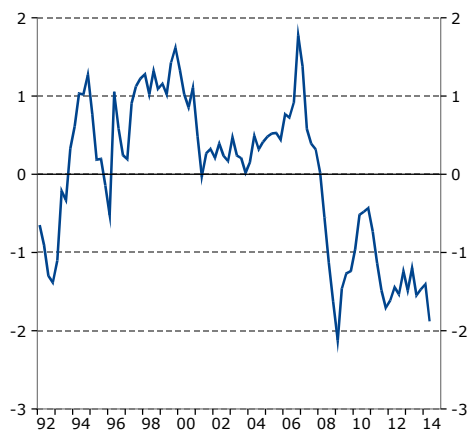
Recent years' large inflows into the labour force have been pushing up equilibrium unemployment for a period. It takes time for new entrants to find work. Inflows into the labour force are not, however, expected to grow as quickly in 2015–2023 as in 2006–2014. This will help bring down equilibrium unemployment.

MATCHING EFFICIENCY HAS DETERIORATED

Matching efficiency has deteriorated as a result of increased structural imbalances between labour supply and demand and a change in the composition of the unemployed (see Diagram 7).² This has led to higher equilibrium unemployment. Matching efficiency is expected to improve gradually going forward. The effects of the protracted economic slump are expected to fade, while the labour market is expected to adjust to the new conditions brought on by the change in the composition of the labour force. It is, however, possible that further measures to improve matching in the labour market will be needed for equilibrium unemployment to come down.

Diagram 7 Matching efficiency

Standardised deviations from mean, quarterly values



Source: NIER.

ECONOMIC POLICY AFFECTS EQUILIBRIUM UNEMPLOYMENT

Economic policy measures since 2006 have increased the incentive to work, partly through reforms making it more rewarding to work than not to work, amendments to the rules for sickness insurance, and changes to labour market policy.³ This has increased search intensity among job seekers. Wage formation is expected to take greater account of the lower replacement rate in future, which will pull down equilibrium unemployment.

² The NIER has updated its estimate of the matching function based on panel data for different counties with data for the period 1992–2014 as described in *Wage Formation in Sweden 2012*. In this model, the number of matches is explained by the inflow and stocks of unemployed and vacancies and fixed region and time effects. The estimated time effects are assumed to measure aggregate matching efficiency in the labour market.

³ The NIER believes that these economic policy reforms (the earned-income tax allowance, unemployment and sickness insurance, labour market policy, the tax allowances for home improvements and household services, and the reduced rate of value-added tax on restaurant and catering services) will together reduce equilibrium unemployment by around 1 percentage point through to 2023. See the special analysis "Updated assessment of equilibrium unemployment" in *The Swedish Economy*, December 2013.

**ASSESSMENT OF THE LEVEL OF EQUILIBRIUM
UNEMPLOYMENT**

On balance, equilibrium unemployment is forecast to fall slightly to 6.3 per cent in 2023. This forecast is associated with considerable uncertainty.

The budget bill for 2015 includes measures that are expected to have lasting effects on both the labour supply and equilibrium unemployment. These are not taken into account in the present assessment but are expected to increase equilibrium unemployment slightly in the longer term.