

Wage Formation in Sweden

Summary 2006

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ISSN 1653–3550

ISBN 91–89226–75–5

Preface

The Swedish government has directed the National Institute of Economic Research to prepare a report each year on the economic conditions for wage formation (prop. 1999/2000:32, "Lönebildning för full sysselsättning" [Wage Formation for Full Employment]).

The purpose of the report is to provide solid factual data to assist the parties on the labour market and the National Mediation Office in reaching a consensus on the economic conditions for wage formation in general and wage negotiations in particular.

The summary of this report is translated into English. If you want further information please contact us. Who to contact can be found at page 14.

The preparation of this year's report was led by Juhana Vartiainen, Head of Division Macroeconomic Research and Simulations.

Stockholm, September 2006

Ingemar Hansson
Director General

Summary

The labour market parties are facing an important round of negotiations. In 2007, the wage contracts of 80 percent of all wage-earners covered by collective bargaining agreements, or over 2.8 million employees, will be renegotiated at the industry and local levels. Both collective and individual bargains will affect the outcome. In this Report on Wage Formation, it is assumed that most central agreements will be for three years, as was the case in the 2001 and 2004 labour negotiations.

The final result of these negotiations will have a substantial impact on the development of the Swedish economy for many years to come.

Central Role of Labour Market Parties

By assuming responsibility for the overall macroeconomy to a greater or lesser degree, the parties on the labour market and their mediators can exert considerable influence on employment and unemployment in the Swedish economy.

The increase in labour costs is determined through the interaction of productivity and price increases, cyclical adjustments and the willingness and capacity of the parties to take into account macroeconomic considerations. If the economy is in cyclical balance and unemployment reflects the ambitions and ability of the parties to take the national economy into account, the increase in labour costs will match the increases in productivity and prices.

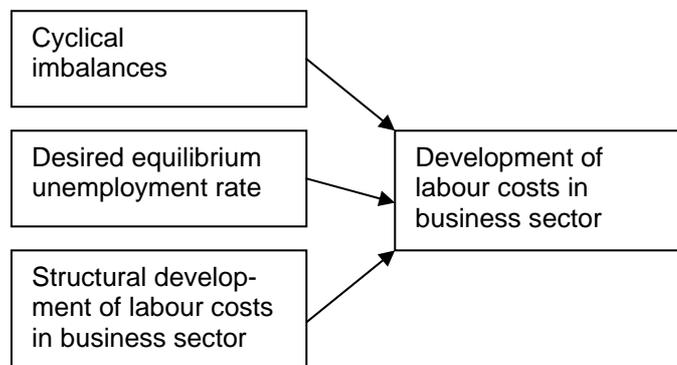
However, if the parties have higher ambitions and greater capability to consider the effect of their actions on the economy as a whole, they can push down employment permanently by designing wage agreements so that labour costs will increase more slowly for a few years. Thereafter, the cost of labour can once again increase at the same pace as productivity and prices, but thanks to the previous adjustment, employment will remain at a permanently higher level. Thus, through lower wage increases for a transitional period, the parties can affect the *equilibrium unemployment rate* of the economy, that is, the unemployment rate compatible with stable inflation of 2 percent, even though that rate also depends on other factors, such as the system of rules on the labour market.

In order to determine the increase in labour costs, it is necessary to answer three questions:

1. At the outset in 2006, is there any cyclical imbalance in need of correction?
2. Are the labour market parties willing and able to push the equilibrium unemployment rate down to a lower level, and if so, what rate of wage increases is required?
3. How high is the *structural* increase in labour costs, i. e. the increase in labour costs when in the economy is in balance?

These three driving forces of wage formation are illustrated in figure 1.

Figure 1 Conceptual Framework for the Development of Labour Costs in the Business Sector as a Whole



Cyclical Balance in 2006

In the years 2001–2005, labour costs have increased at roughly the same rate as productivity and prices. The rate of return on capital in the business sector is currently considered to be in line with the internationally required rate of return on capital. This means that the level of labour costs is judged to be in balance at the outset in 2006. Moreover, resource utilization is also regarded as nearly balanced. Thus, the labour market parties can initiate their pay bargains with a cyclically balanced economy that does not require special adjustment.

The economic outlook, like the potential for further growth in employment and output in the years 2007–2009, will depend to a large degree on the actions of the labour market parties.

Unemployment Affected by Degree of Responsibility Taken by the Parties

Through centrally negotiated wage adjustments, the design of collective bargaining agreements and the ensuing negotiations at the local level, the labour market parties can strongly influence

the increase in labour costs in the business sector. The parties can thereby affect how low the level of Swedish unemployment can permanently be. If the parties are able and willing to act with a substantial degree of macroeconomic responsibility, the rate of increase in labour costs will not rise until unemployment has dropped to a lower level. Then the unemployment rate can go down before the Riksbank needs to apply the brakes to the economy by raising the repo rate.

Thus, the more the labour market parties are able and willing to take responsibility for the entire economy, now and in the future, the lower the level of unemployment that leads to overheating of the labour market, with rapidly rising labour costs – in other words, the lower the rate of equilibrium unemployment.

If the parties assume responsibility for the economy to the same degree as in recent years, labour costs will increase by an estimated average of 4.5 percent per year in 2007–2009. This corresponds to equilibrium unemployment of 4.6 percent; that is, wage increases will begin to accelerate if the unemployment rate drops below 4.6 percent. The Riksbank will then have to intervene by raising the repo rate, slowing the growth of employment and thereby preventing the unemployment rate from staying below 4.6 percent.

But if the parties assume a higher degree of responsibility for the economy, the unemployment rate will be lowered permanently, a situation analyzed in the alternative of *Lower Equilibrium Unemployment*. The distinguishing feature of this alternative is that through the actions of the parties in the 2007 labour negotiations, the average annual increase in labour costs in 2007–2009 will be 3.8 percent, corresponding to an equilibrium unemployment rate of 3.6 percent.

In the alternative of *Higher Equilibrium Unemployment*, by contrast, the actions of the parties result in an average annual increase in labour costs of 5.0 percent in 2007–2009, corresponding to an equilibrium unemployment rate of 5.6 percent.

After 2009, labour costs increase by about 4.4 percent per year in both alternatives (see Diagram 1)¹

In the low alternative (*Lower Equilibrium Unemployment*) unemployment drops appreciably in 2007 as well as 2008. Thereafter, it remains close to its equilibrium level of 3.6 percent (see Diagram 2). In the high alternative (*Higher Equilibrium Unemployment*), on the other hand, unemployment goes up in 2008 and continues to rise toward a higher equilibrium level. As a result, the temporarily more modest increase in labour costs in the low alternative compared to the high one leads to a lasting difference of 2 percent in the unemployment rate, equivalent to 93 000 persons.

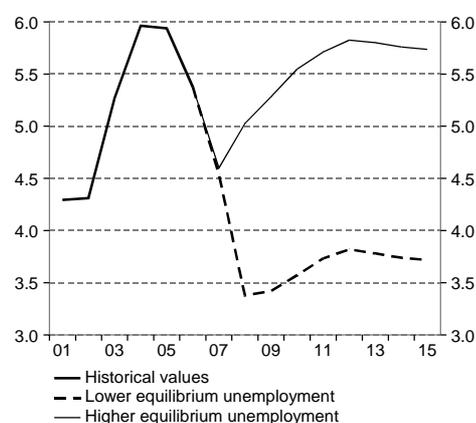
¹ In Section 2.3, "Two of Many Alternatives for Concerted Action by the Parties," these two alternatives for action are defined and analyzed in more detail.

Diagram 1 Nominal Cost of Labour
Annual percentage change



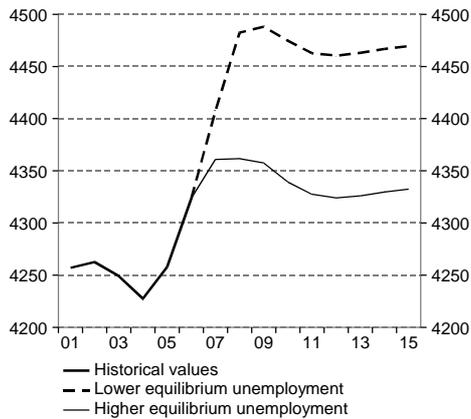
Sources: Statistics Sweden and NIER.

Diagram 2 Unemployment Rate
Percent of labour force



Sources: Statistics Sweden and NIER.

Diagram 3 Employment
Thousands

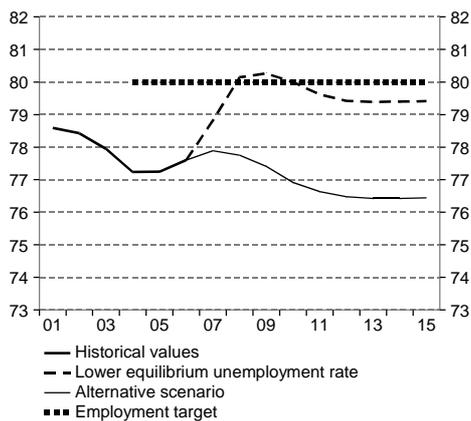


Sources: Statistics Sweden and NIER.

In the low alternative, employment rises substantially in 2007-2009; thereafter, the regular employment rate ends up just below the target of 80 percent (see Diagrams 3 and 4). In the high alternative, on the other hand, there is no further increase in employment after 2008, and the regular employment rate gradually drops to 76.4 percent. In the long run, the difference in the number employed is 140 000. The employment effect is thus greater than the unemployment effect, the reason being that more people enter the labour market when it is easier to get a job. The low alternative also means faster growth in GDP (see Diagram 5).

Consequently, it is possible to achieve lasting improvement in employment through temporarily lower increases in labour costs when the labour market parties assume greater responsibility for the overall economy.

Diagram 4 Regular Employment Ratio
Percent of population aged 20–64, yearly values

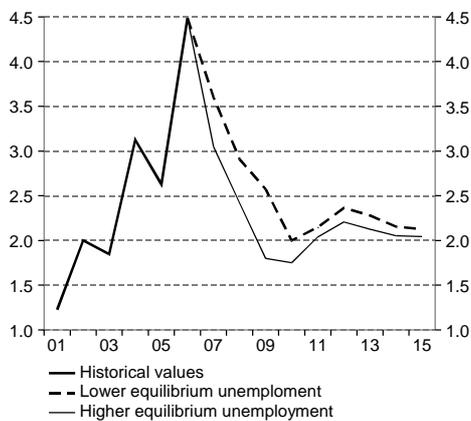


Note: Series adjusted backward in time by the NIER.
Sources: Statistics Sweden and NIER.

Restraint Well Rewarded

If wage increases are kept more modest for a transitional period, the return to wage-earners and to the rest of the economy of this sacrifice is high, particularly when indirect and long-term effects are considered. After temporarily more limited wage increases, hourly earnings in 2009 are 3.6 percent less in the low alternative than in the high alternative. But consumer prices are also lower, limiting the difference in real hourly earnings to 2.9 percent. Moreover, the low alternative results in higher employment and thus in greater tax revenue as well as less expenditure on items like unemployment compensation. For the alternatives to be comparable, this improvement in general government finances is returned to households as an offsetting tax reduction. When both the higher employment and the lower taxes are considered, the real disposable income of wage-earners as a group in 2009 is 0.6 percent *higher* in the low alternative than in the high alternative (see Diagram 6). Thus, higher employment and lower taxes more than compensate for the lower real hourly earnings. In the longer term, the indirect effects in the form of higher employment and lower taxes are even greater. Thus, in 2015 the real disposable income of wage-earners as a group will be about 2.4 percent higher in the low alternative than in the high one.

Diagram 5 GDP
Annual percentage change, constant prices



Sources: Statistics Sweden and NIER.

Table 1 Economic Effects of Actions by the Parties

Percentage change, average per year

	2007–2009		2007–2015	
	Lower equil. unem-employment	Higher equil. unem-employment	Lower equil. unem-employment	Higher equil. unem-employment
Actions of the parties				
Cost of labour ¹	3.8	5.0	4.2	4.6
Hourly earnings ²	3.5	4.7	3.9	4.3
Economic effects				
Unemployment rate ³	3.8	5.0	3.7	5.5
Regular employment rate ⁴	79.7	77.7	79.6	76.9
Real disposable income ⁵	2.5	2.4	2.4	2.2
GDP, constant prices	3.0	2.4	2.5	2.2

¹ Cost of labour according to National Accounts, excluding the pension-premium rebate.

² Hourly earnings according to Short-Term Wage and Salary Statistics.

³ In percent of the labour force.

⁴ Proportion of population aged 20–64 with employment, excluding participants in labour market programmes.

⁵ Refers to wage earners as a group. Deflated by the household consumption deflator.

Source: NIER.

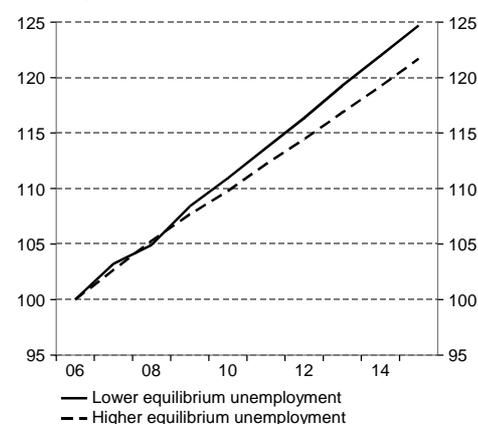
The actions of the parties and the economic effects in 2007–2015 in the two alternative courses of action are summarised in Table 1. The principal finding is that the increase in labour costs of 3.8 percent per year in 2007–2009 leads to an unemployment rate permanently below 4 percent.

Responsibility, Collective Bargaining Agreements and Increases in Labour Costs

In the low alternative, the annual increase in labour costs, according to the Short-Term Wage and Salary Statistics, is equivalent to annual wage increases of 3.5 percent in 2007–2009 (see table 1). After the wage negotiations in 2001, the corresponding average annual wage increase was 3.8 percent 2001–2003. The increase of 3.5 percent in the low alternative reflects the greater responsibility assumed for the general economy, particularly as unemployment in 2007–2009 is lower in this alternative than in 2001–2003.

After the 2004 labour negotiations, the corresponding average annual wage increase in 2004–2006 is estimated at 3.2 percent. The assumed rate of wage increase in 2007–2009 of the low alternative compatible to the Short-Term Wage and Salary Statistics is thus somewhat higher, but it nevertheless reflects the greater responsibility taken for the general economy, as unemployment is considerably lower than in 2004–2006.

Diagram 6 Real Disposable Income for Wage Earners as a Group
Index 2006=100. Deflated by household consumption deflator



Source: NIER.

In light of past experience, the cost increases implied by the collective agreements, such as the normative settlement of 7.5 percent over three years resulting from the 2004 negotiations, are substantially lower than the final increases in labour costs. In the 2001 and 2004 negotiations, the average cost increases in the collective agreements were estimated by the National Mediation Office at 2.6 and 2.1 percent, respectively, equivalent to just more than half of the subsequent increase in labour costs. This limited ratio between collectively agreed increases and the final outcome is a natural consequence of the new design of labour contracts, where default rates of wage increases (“stupstockar,”), applicable if the parties cannot agree locally, or minimum increases only indirectly affect wage formation at the local level. The averages estimated by the National Mediation Office thus represent a diversity of settlements, including so-called zero-increase agreements (“nollavtal”).

The NIER expresses no opinion as to the level of collectively agreed cost increases required in order to produce the labour-cost increase in the low alternative, since the result depends heavily on the design of the collective agreements. For that reason, among others, the answer to this question is best left to the labour market parties and mediators.

The annual labour cost increase of 5.0 percent in 2007–2009 in the high alternative corresponds to annual wage increases of 4.7 percent according to the Short-Term Wage and Salary Statistics. This rate is substantially higher than the actual increases, both in 2001–2003 and in 2004–2006, reflecting a lesser degree of responsibility assumed for the general economy.

The result – an average labour cost increase of 3.8 percent leading to unemployment permanently below 4 percent – is of course uncertain and is based in turn on a number of uncertain assumptions. For example, if the increase in productivity is less than assumed, the increase in labour costs must be more limited if unemployment is to be less than 4 percent. Moreover, the results shown are based on the assumption that the Riksbank acts symmetrically in its efforts to achieve the inflation target of 2.0 percent. This means that the Riksbank will respond to the restraint of the parties by reducing the repo rate more than otherwise in order to speed the process of adjustment to the lower level of equilibrium unemployment. Otherwise, employment will drop more slowly toward its equilibrium level, which is not affected by the actions of the Riksbank.

The overall uncertainty, in the NIER’s assessment, is roughly symmetrical. In other words, the specified increase in labour costs may just as well lead to lower unemployment as to higher unemployment compared to the rate shown in Table 1. By contrast, the effects of deviations on income are asymmetrical. An excessive increase in labour costs based on an overestimate of productivity growth will lead to higher unemployment and lower disposable income, whereas an underestimate of productivity growth will promote employment without the

necessity of lower disposable income. This asymmetry, in combination with the substantial degree of uncertainty, is a further reason for restraint.

The increase in labour costs specified here includes not only the change in monthly compensation, but also such items as reductions in work hours, increases in negotiated employer contributions on future benefits, or higher costs of existing benefits, as well as all increases in legislated employer contributions. In other words, all elements of labour costs are counted.

Structural Increase in Labour Costs

In both alternatives for action, labour costs in the longer run develop at a rate corresponding to the increases in productivity and prices. This structural increase, which is based on the assumption of an economy in cyclical balance, is determined primarily by economic factors that the labour market parties have little means of influencing. The increase in productivity is not easily affected, and the increase in the business sector's value-added price is determined primarily by the Riksbank's inflation target and the development of prices of exports in relation to prices of imports. The internationally required rate of return on capital is also beyond the reach of the parties. These three factors set the structural limits on the increase in labour costs that the business sector can sustain when the economy is in cyclical balance. By contrast, even in the long run the parties can affect the level of unemployment, employment and GDP.

Powerful forces in the economy ensure that labour costs follow the development of productivity and the value-added price (see Diagram 7). For example, if the labour unions decide to seek a faster rate of increase in wages, such efforts will sooner or later drive up unemployment to an unbearable level where the increase in labour costs will be slowed, bringing the cost level back into balance.

It is estimated that the average structural increase in the labour costs of the business sector will lie within the interval of 4.0-4.6 percent in 2006-2015. In the NIER's assessment, the most probable value will be 4.4 percent, calculated as the sum of annual average productivity growth of 2.7 percent and an average annual increase of 1.7 percent in the value-added price of the business sector in 2006-2015. Diagram 8 shows the NIER's forecast of labour productivity for the years through 2015. The forecast growth in productivity is somewhat lower than in 2001-2005 but nevertheless higher than elsewhere in Europe.

The assessment is of course uncertain. The interval of 4.0-4.6 percent results from alternative assumptions for the development of factors like productivity growth, inflation, the

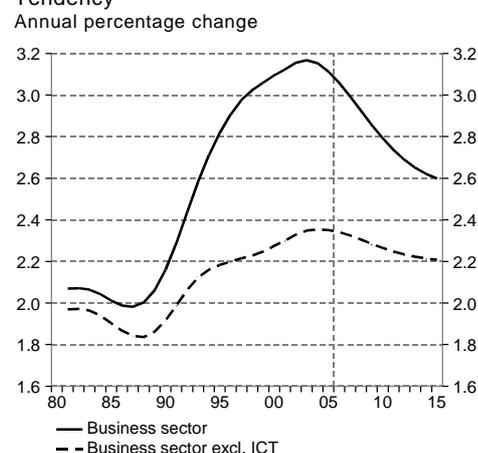
Diagram 7 Cost of Labour and Nominal Value Added per Hour Worked
Index, average 1980-2006=100



Note: Nominal value added per hour worked is equivalent to labour productivity multiplied by value-added deflator.

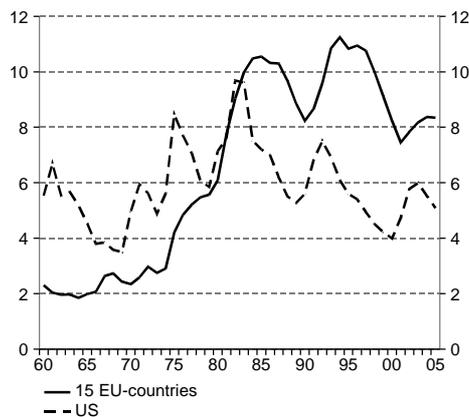
Sources: Statistics Sweden and NIER.

Diagram 8 Labour Productivity, Structural Tendency



Sources: Statistics Sweden and NIER.

Diagram 9 Unemployed
Percent of labour force



Note: Luxembourg not included in 1960–1973.
Source: OECD.

price of oil and the internationally required return on capital during the period 2006–2015.

Structural Causes of Unemployment

As the coming round of labour negotiations approaches, the most critical question is that of the appropriate rate of wage increases and the equilibrium unemployment rate associated with it. But equilibrium unemployment is affected not only by wage formation, but also by many other factors.

Unemployment was lower in Europe than in the United States up until the 1970's (see Diagram 9). Thereafter, unemployment increased on both sides of the Atlantic, for reasons that included slower productivity growth, oil crises and a generally lower level of inflation. Since the early 1980's unemployment has decreased in the US but has remained persistently high in a number of other countries, including Germany, France, Spain and Italy. Many scholars have sought to explain the permanently higher unemployment in Europe. They have advanced reasons like high unemployment compensation, rigidity of nominal and real wages, employment security, lack of competition on the goods market, absence of co-ordinated wage negotiations and an unfavourable composition of the labour force. In comparative studies of different countries, a high degree of union membership appears to correlate positively with high unemployment, but that effect is offset by lower average unemployment in countries with co-ordinated wage negotiations.

In Sweden, equilibrium unemployment is higher than before the severe recession of the 1990's. Swedish institutional conditions have both strengths and weaknesses in regard to factors which according to scholars determine equilibrium unemployment. From 1997 on, the labour market parties have developed a negotiation procedure characterized by mutual understanding and implicit co-ordination, but one that also permits decentralization and individualization. These institutional conditions favour low equilibrium unemployment. The lack of integration of persons born abroad is a force in the opposite direction. Moreover, the lowest wages appear to be relatively high by international comparison. As is the case with many other countries, it is important to achieve high employment and low unemployment; this goal applies particularly to groups and individuals whose current connection with the labour market is weaker. With higher labour force participation and lower equilibrium unemployment, Sweden would be better prepared for the demographic challenges to come.

Structural Transformation, Global and Local

The analysis above applies to the average cost of labour in the Swedish business sector. The reality that Sweden is part of an increasingly globalized world economy affects the factors that determine the development of labour costs according to this analysis, but it does not make the analysis any less relevant. For example, globalization is probably stimulates productivity growth in the Swedish economy. It also leads to more rigorous competition, which tends to reduce equilibrium unemployment. In addition, the required rate of return on capital is set on the global capital market.

Furthermore, globalization entails technological and structural changes that can lead to greater wage dispersion in the OECD countries. In most OECD countries, wage dispersion has increased in recent decades, including the last few years. Part of the explanation is that globalization has exposed the less skilled labour force in the OECD countries to heavier competition from the same kind of labour elsewhere, including China and India. Moreover, research on the causes of wage dispersion has emphasized that developments like computerization and new digital production methods have favoured skilled labour and individuals capable of rapidly adapting to new production technologies.

These global driving forces are also at work in Sweden, where the increase in wage dispersion has nevertheless been modest. By most international comparisons, Sweden stands out as a country with low wage dispersion. Wage dispersion increased somewhat in the latter half of the 1990's, primarily through a widening compensation differential between the most highly paid employees and other salaried personnel. However, this change is limited in comparison to the extreme levelling of wages and salaries that occurred in the 1970's.

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The preparation of this year's report was led by Juhana Vartiainen, Head of Division Macroeconomic Research and Simulations.

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