

# Wage Formation in Sweden

## Summary 2008

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# Preface

The Government has commissioned the NIER to prepare annual reports on the economic conditions for wage formation (bill 1999/2000:32, Wage Formation for Full Employment). The purpose of the report is to provide detailed factual documentation that will make it easier for the labour market parties and the National Mediation Office to reach a consensus on the economic conditions for wage formation and wage negotiations.

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

Stockholm, November 2008

Mats Dillén  
Director General



# 1 Summary

**Despite a strong labour market, pay increases after the 2007 round of collective bargaining have been lower than expected. The low rate of wage increases suggests that wage formation, from the standpoint of the national economy, has functioned better than before. The NIER has reduced its estimate of the equilibrium unemployment rate, from 6.2 percent to 5.7 percent. The margin for pay increases in the 2010 negotiations will be limited by weak structural productivity growth, high unemployment and a changed operational inflation target which leads to lower inflation. For the equilibrium unemployment rate to remain at the new lower level, the current assessment is that the 2010 round of bargaining should result in considerably smaller pay increases than the 2007 negotiations.**

## 1.1 Lower Equilibrium Unemployment after the 2007 Round of Pay Bargaining

In analyzing the functioning of wage formation and the macro-economic responsibility assumed by the labour market parties, the NIER estimates how low unemployment can get before labour costs begin to rise more rapidly than is compatible with the Riksbank's inflation target. This level of unemployment is referred to as equilibrium unemployment. The low outcomes for payroll and labour costs after the 2007 round of negotiations are an indication that equilibrium unemployment rate is lower than the NIER's previous estimate.

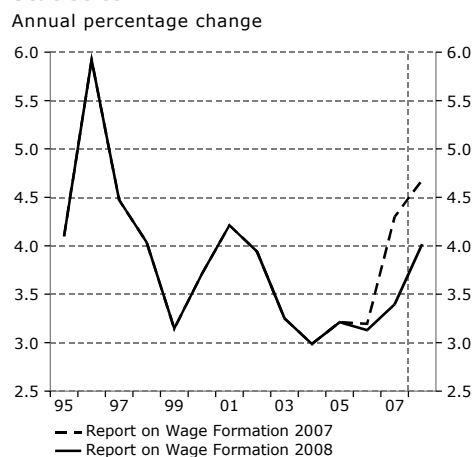
### LOWER PAY INCREASES THAN EXPECTED

Collective agreements for over 75 percent of Swedish wage earners were renegotiated in the 2007 round of bargaining. The rate of increase for wages and salaries and labour costs was modest in 2007 and the first half of 2008 and was less than in the forecasts presented in 2007 by the NIER and other forecasters (see Diagram 1)<sup>1</sup>. According to the NIER's revised forecast in October 2008, hourly earnings rose by an annual average of 3.7 percent in 2007 and 2008.<sup>2</sup> This means that the wage forecast has been lowered by an average of 0.8 percentage point per year compared to the forecast in the *Report on Wage Formation* for 2007. Above all, the pay increases for salaried personnel in addition to the ones stipulated by collective agreements have been smaller than in the two preceding contract periods.

<sup>1</sup> Throughout this section, hourly earnings are reported according to the Short-Term Wage and Salary Statistics, and unemployment according to the National Accounts excluding pension premium rebates.

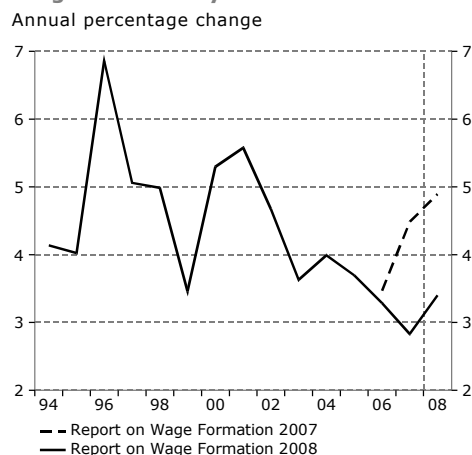
<sup>2</sup> See "Forecast Update, October 2008," 2008-10-29, at [www.konj.se](http://www.konj.se).

**Diagram 1 Hourly Earnings, Business Sector, Short Term Wage and Salary Statistics**



Sources: Statistics Sweden and National Mediation Office.

**Diagram 2 Hourly Cost of Labour**



Note. The hourly cost of labour in 2005–2008 is adjusted for temporary rebates of negotiated collective contributions.

Sources: Statistics Sweden and NIER.

The increase in labour costs has also been modest, leading the NIER to lower its forecast for growth in labour costs in 2007 and 2008 (see Diagram 2). The cost of labour is expected to rise by an average of 3.1 percent per year in 2007 and 2008.<sup>3</sup>

#### **BETTER FUNCTIONING WAGE FORMATION CENTRALLY AND LOCALLY – EQUILIBRIUM UNEMPLOYMENT REVISED DOWNWARD**

In the *Report on Wage Formation* for 2007, the NIER presented a calculation showing that labour cost increases, which were less than 4.8 percent per year in 2007-2009, would be an indication of a lower equilibrium unemployment rate and better-functioning wage formation. The modest increases in labour costs in 2007 and 2008 support the conclusion that the outcome of the 2007 pay negotiations is consistent with more responsible wage formation and lower equilibrium unemployment than in the NIER's previous assessment. Consequently, the NIER has lowered its estimate of equilibrium unemployment for the next few years from 6.2 percent to 5.7 percent.

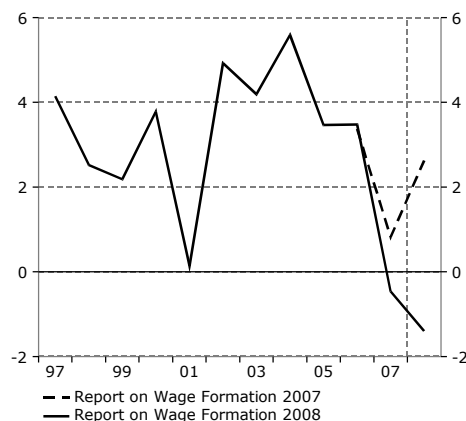
In the calculation of the rate of pay increases consistent with unchanged equilibrium unemployment, consideration is given to the cyclical phase of the economy expected by the labour market parties in the negotiations for the coming contract period. The 2007 negotiations were preceded by a vigorous economic upswing, with high economic growth, rising employment, relatively high profits in the business sector and decreasing unemployment. When the collective agreements were signed in 2007, a relatively strong economy in 2007-2009 was envisioned by the parties and by forecasters.

Since the autumn of 2007, analyses have been gradually adjusted in a less expansionary direction. The international financial crisis has led to a general downward revision of growth forecasts for the global economy. In 2008 Sweden's economy entered a contractionary phase that will become more pronounced next year. Calendar-adjusted GDP growth is now expected to be 0.9 percent in 2008 and close to zero in 2009.<sup>4</sup> Moreover, productivity growth has been surprisingly weak and is forecast to be negative in both 2007 and 2008 (see Diagram 3).

The rapid deterioration of the economic outlook and the dramatic drop in productivity growth may have contributed to some degree to the low rate of pay increases in 2007 and 2008. It is possible that in reaching local settlements the parties sensed sooner than could be seen in published statistics the approaching economic downturn and the slackness in productivity growth, and that these developments tended to constrain the rate of pay increases at firms. It is also conceivable that the par-

**Diagram 3 Productivity, Business Sector**

Annual percentage change, calendar-adjusted values



Sources: Statistics Sweden and NIER.

<sup>3</sup> The rate of increase in labour costs is less than in hourly earnings, primarily because of reduced charges for social security contributions.

<sup>4</sup> See "Forecast Update, October 2008," 2008-10-29, at [www.konj.se](http://www.konj.se).

ties at the local level realized early on that the soft tendency of demand would also considerably weaken resource utilization on the labour market later on in the contract period.

The strong tendency of the labour market through the first half of 2008, however, tends to disprove the hypothesis that a weakening economy accounts for the low pay outcomes to a high degree. As an annual average, unemployment will decrease somewhat in 2008 (see Diagram 4), and the development of employment has roughly matched the strong upturn anticipated in the autumn of 2007 (see Diagram 5). Through the first half of 2008, the increase in the number of hours worked was even a little above the forecasts on which the *Report on Wage Formation* for 2007 was based (see Diagram 6).

Thus, the rate of pay increases has been low in 2007 and 2008 in relation to the state of the labour market, although pay increases may to some extent have been dampened as the economy entered the initial stages of the coming downturn. This warrants the assessment that wage formation is functioning somewhat better than before and that the labour market parties in the 2007 negotiations, at the central and local levels on the whole assumed greater macroeconomic responsibility than in the two previous rounds of bargaining in 2001 and 2004. Assuming greater responsibility also makes it possible to achieve better longer-term growth in the expected disposable income of wage earners and the unemployed.

## 1.2 Normative Effect of Industrial Agreement on Wages and Salaries Has Contributed to Lower Unemployment

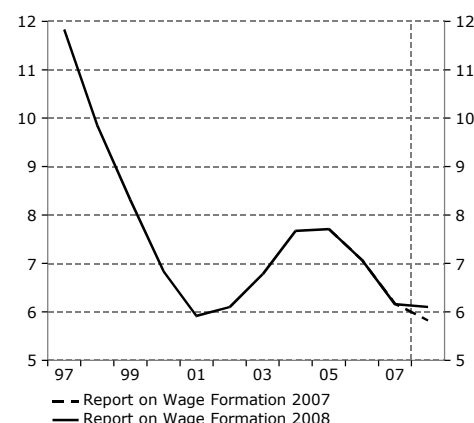
There are signs of gradual improvement in wage formation in Sweden. The improvement may be connected with the Industrial Agreement (Agreement on Industrial Development and Wage Formation) reached in 1997 and has probably been reinforced by the establishment of the National Mediation Office and the setting of a credible inflation target by the Riksbank. In addition, the change in the effective compensation rate for the unemployed may have contributed to lower equilibrium unemployment by enhancing the incentive for the labour market parties to take unemployment into account.

The labour market parties agreed during 2004–2007 on smaller average increases in labour costs than in 1995–1998 (see Diagram 7), even though unemployment was clearly lower from 2004 on than in the latter half of the 1990's.

The normative role of the Industrial Agreement in wage determination has probably helped to hold down the level of wage claims. There are strong arguments that wage formation is conducive to low unemployment if the sector setting the norm is large. It is then probable that those who determine wages in this

**Diagram 4 Unemployment**

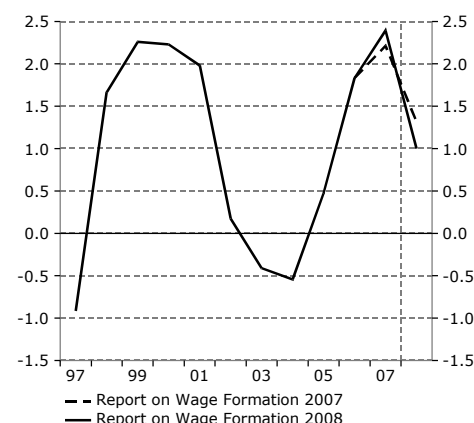
Percent of labour force



Sources: Statistics Sweden and NIER.

**Diagram 5 Number Employed**

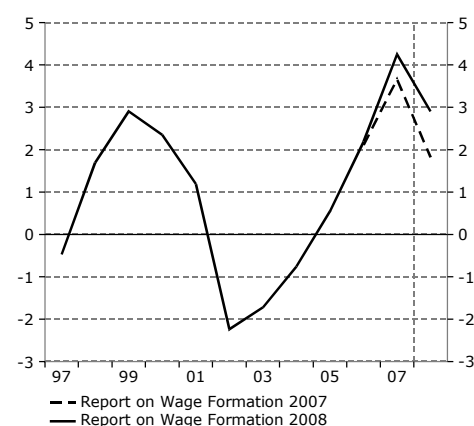
Annual percentage change



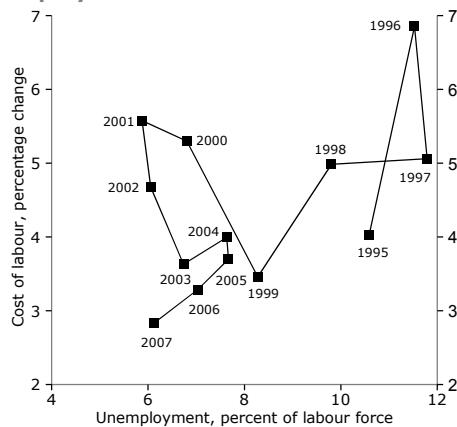
Sources: Statistics Sweden and NIER.

**Diagram 6 Hours Worked, Business Sector**

Annual percentage change, calendar-adjusted values



Statistics Sweden and NIER.

**Diagram 7 Hourly Cost of Labour, Unemployment**

Sources: Statistics Sweden and NIER.

sector will consider the consequences for the macroeconomy, including high interest rates, if wage increases are excessive. The normative role also implies that the parties in the manufacturing sector, where pay negotiations are initiated, will recognize that the wage increases on which they agree will also apply in other industries; this realization will further reduce the incentive to call for excessive pay increases. Under such conditions, high wage increases in manufacturing will lead to correspondingly high wage hikes in other industries, pushing up inflation and forcing the Riksbank to raise its policy interest rate (the repo rate). The sector with the normative role thus has strong reasons to take substantial macroeconomic responsibility, as the primary consequence of high wage increases in that sector will not be higher relative wages in those industries, but a tighter monetary policy.

It is likely that other factors have also contributed to this gradual improvement in wage formation. One significant factor has probably been that the Riksbank has been able to establish a credible inflation target, as the major labour unions and bargaining cartels are quite aware that excessive wage demands will be met by higher policy interest rates.

The reason why the parties in the manufacturing sector have taken the lead in pay negotiations, thus providing a norm for others who follow in setting wages and salaries, may be related to the previous economic policy regime with a fixed exchange rate. The current arrangement for monetary policy does not depend on the particular role of manufacturing in setting the norm for wage formation. Yet since the end of the 1990's, the parties in manufacturing have established a smoothly functioning collaboration, and their normative role in determining wages and salaries is widely accepted today. It would therefore be risky for Sweden, in the absence of a well-considered and generally accepted alternative, to jeopardize this reservoir of confidence by not following the usual negotiating procedure.

### 1.3 The 2010–2012 Contract Period – Tougher Conditions

The latest round of pay bargaining justifies a positive view of the development of wage formation and the willingness and ability of the parties to take macroeconomic responsibility. Whether future developments confirm this assessment will depend heavily on the outcome of the 2010 negotiations. Several factors will tend to restrict the margin for labour cost increases at that time.

#### **DOWNWARD REVISION OF THE STRUCTURAL RATE OF INCREASE IN THE COST OF LABOUR**

The labour market parties can not affect the long-term level or rate of increase of labour costs to any substantial degree. The structural increase in labour costs, i. e. the rate of increase when



the economy is in cyclical balance, is determined by productivity growth and the development of value-added prices in the business sector. The long-term development of value-added prices is limited by the Riksbank's inflation target.

The structural rate of increase in the cost of labour is estimated in the main scenario of this report at 3.5 percent per year for 2010–2012 and roughly 3.8 percent per year for 2010–2020. This represents a clear downward revision of the structural rate of increase presented in last year's report, the *Report on Wage Formation* for 2007, where the structural rate of increase in the cost of labour was forecast to average 4.4 percent per year for 2006–2015. The downward revision is partly a reflection of deterioration in real terms of the conditions for pay increases, and partly a consequence of nominal factors that do not affect real growth in the pay of wage earners.

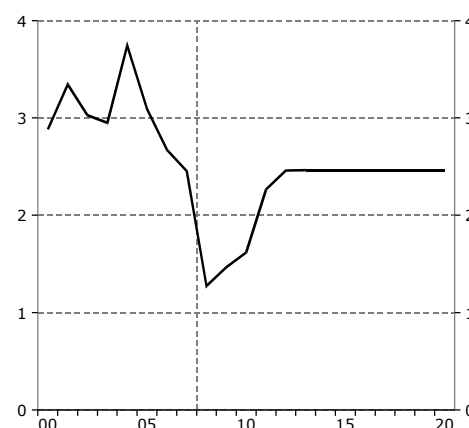
The principal factor that affects the room for real wage growth negatively is a downward revision of structural productivity growth<sup>5</sup> by 0.3 percentage point to 2.4 percent per year.<sup>6</sup> The downward revision is due partly to the low productivity outcomes for 2007–2008 and partly to a downward revision of productivity growth in service industries and some goods industries. The productivity forecast is based on the projected composition of the labour force as presented in an appendix to the *Report of the Long-Term Planning Commission* for 2008.<sup>7</sup> Structural productivity growth in the business sector is expected to recover after slumping in 2007–2008 (see Diagram 8), but it is deemed unlikely that productivity growth in the ICT sector will return to the extremely high levels noted in 2002–2005 (see Diagram 9). Structural productivity growth in the business sector is forecast to be 2.5 per year from 2012 on.

The assessment of structural productivity growth is of course uncertain.

### THE RIKSBANK'S CLARIFICATION OF THE INFLATION TARGET CONSTRAINS THE ROOM FOR PAY INCREASES

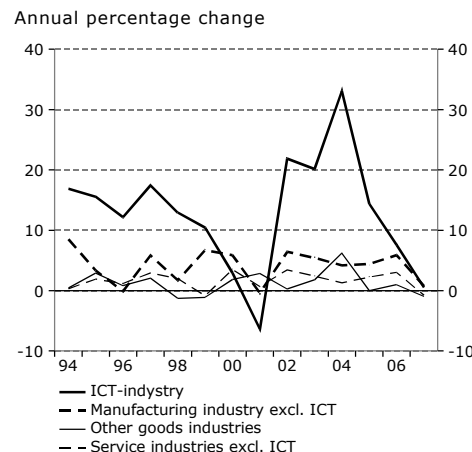
The structural increase in the cost of labour is also affected by the fact that beginning in July 2008 the Riksbank as a practical matter has lowered the operative target for monetary policy; as a consequence, CPI inflation can be expected in the future to be roughly 0.3 percentage point lower than it would have been with the inflation target as previously applied. This policy revision implies that there has been a downward shift of about 0.3 percentage point per year in the structural nominal rate of increase

**Diagram 8 Structural Growth in Productivity, Business Sector**  
Percent



Sources: Statistics Sweden and NIER.

**Diagram 9 Actual productivity, Four Industry Subsectors of the Business Sector**  
Annual percentage change



Note. Since there are no outcome data from the National Accounts on hours worked in the telecommunications industry (SNI 64.2) in 2006 and 2007, hours worked have been projected based on the development of hours worked in the industry of post and telecommunications (SNI 64).

Sources: Statistics Sweden and NIER.

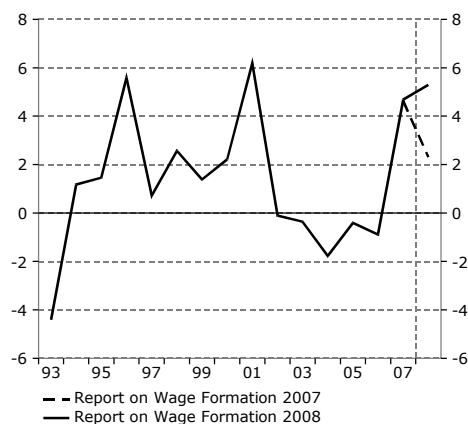
<sup>5</sup> In macroeconomics the concept of potential productivity growth is also used.

<sup>6</sup> The assessment of the structural productivity increase in the *Report on Wage Formation 2007* referred to the period 2006–2015, whereas the analysis in this report applies to the ten-year period 2010–2020. Thus, the figures are not entirely comparable.

<sup>7</sup> Appendix 6 of the *Report of the Long-Term Planning Commission 2008*, "Hours, Capital and Technology – What Matters Most?". SOU 2008:14.

**Diagram 10 Unit Cost of Labour**

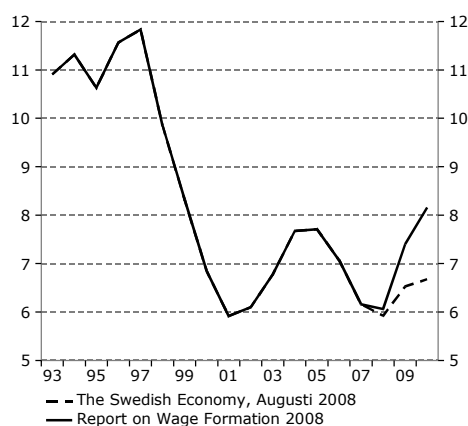
Annual percentage change



Sources: Statistics Sweden and NIER.

**Diagram 11 Unemployment**

Percent of labour force



Sources: Statistics Sweden and NIER.

in the cost of labour. The Riksbank's clarification of the inflation target will not affect increases in real wages, as the lower implied rate of wage increases will be offset by an equally large downward adjustment in the rate of increase in consumer prices.

However, it will limit the nominal rate of increase in wages and salaries and in labour costs. If the labour market parties do not take into account this redefinition of the inflation target, higher unemployment may result.

#### THE 2010 ROUND OF PAY NEGOTIATIONS TO TAKE PLACE IN A CONTRACTIONARY ECONOMY

The 2010 pay negotiations will pose an exacting challenge to the labour market parties. Several factors will then limit the margin for pay increases compared to conditions in 2007, when the latest round of negotiations was held. The negative growth of productivity in 2007 and 2008 will contribute to a substantial increase in cost per unit of output (see Diagram 10), negatively affecting the development of profits. The international financial crisis will drag both the global and Swedish economies into a more severe slump in 2009 and 2010. GDP growth in Sweden is forecast to be close to zero in 2009.<sup>8</sup> Further, taking into account the current economic downturn, unemployment is expected to be considerably above its equilibrium rate in 2010 (see Diagram 11).

High unemployment and lower profits will limit the rate of pay increases compatible with unchanged equilibrium unemployment. In addition to these elements of cyclical imbalance, the structural, cyclically balanced rate of increase in labour costs in the main scenario is forecast, as noted above, to average only about 3.5 percent per year during the period 2010–2012. An average structural growth rate of 3.5 percent per year for labour costs is considered compatible with an increase in hourly earnings of approximately 3.3 percent. Lower profits and high unemployment in 2010 will mean, however, that the actual annual rate of wage increases must be well below this figure if a higher level of equilibrium unemployment is to be avoided.

In the *Report on Wage Formation* for 2009, the NIER will present updated calculations of economic conditions at the time of the 2010 pay negotiations.

<sup>8</sup> See "Forecast Update, October 2008," 2008-10-29, at [www.konj.se](http://www.konj.se)

## Contacts

The summary of this report is translated into English. If you want further information please contact us.

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