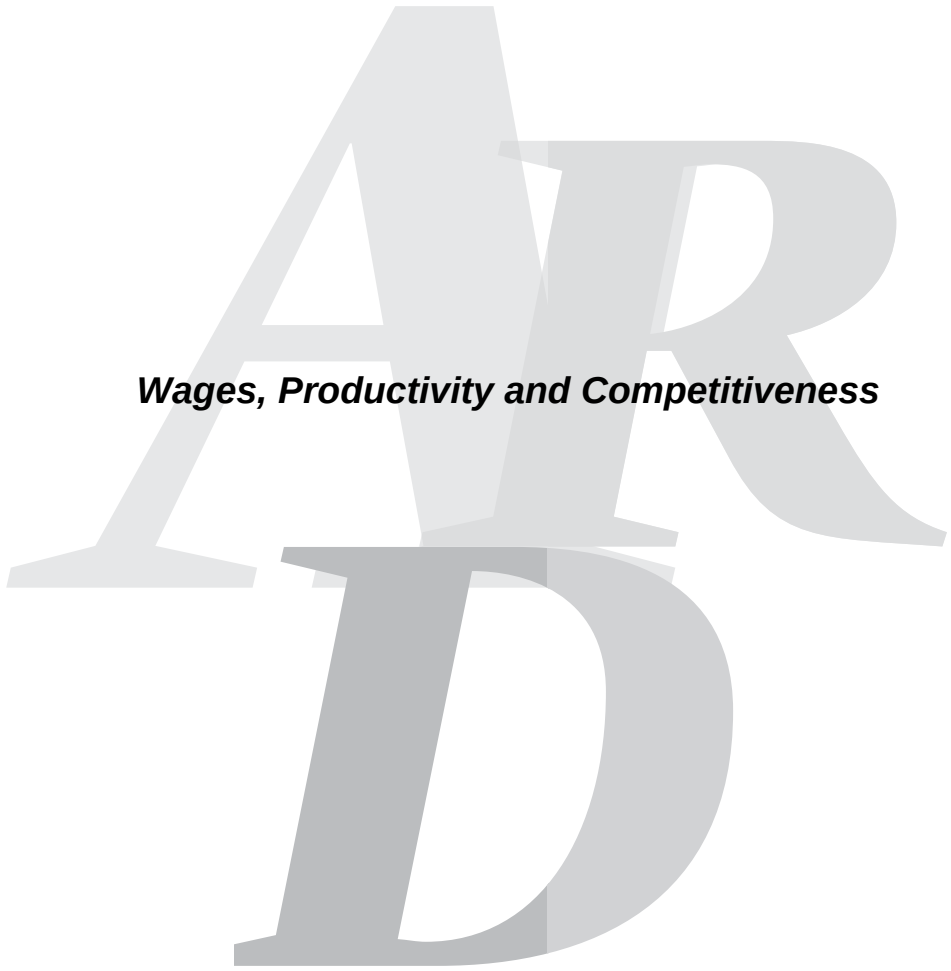


Wages, Productivity and Competitiveness

Summary

Upon Slovenia's entry to the EMU, wage policy became even more important than previously because Slovenia lost its national monetary policy. Since having joined the EMU, Slovenia has no longer been able to improve its export competitiveness by depreciating the tolar. The main mechanisms for adjusting the economy in response to potential shocks have included the labour market and the flexibility of wages. At the EU level, the integrated policy guideline aims at consistent growth of nominal labour costs and the trend in labour productivity over the medium term. Due to these changed circumstances we have decided to analyse the evolution of wages, labour productivity, and competitiveness in the last ten years from several different angles, and to assess the strengths and weaknesses of the wage policy applied thus far. A re-examination of these developments has helped us to formulate proposals for future wage policy-making.

In economic policy, the wage/productivity ratio is significant in several respects and can also be analysed from several different aspects. This ratio is important in at least four respects: (i) cost competitiveness; (ii) price stability; (iii) employment and investment; and (iv) profit and wage shares. However, the analysis of this ratio is also affected by methodological problems of measuring labour productivity and the effects of various wage deflators. These problems are best tackled by the comparison between the evolution of nominal gross wages per employee and of nominal productivity.

Over the last decade, wage policy in Slovenia aimed to keep the growth of real gross wages below productivity growth. Analyses monitored the ratio between the growth of real gross wages deflated by the CPI and the growth of productivity measured by real GDP growth per employee based on the national accounts statistics. In 1996-2006, this guideline was largely fulfilled (except in 2001). The wage adjustment mechanisms applied were mainly explicitly tied to price rises, while they were not explicitly tied to productivity growth. The frequency of wage adjustments declined. However, wage increases were not fully indexed to the inflation rate in this period, which contributed to the lowering of inflation. In 2001, the social partners agreed to index wages to the projected inflation rate. Over the last decade, wage policy supported the main goals of economic policy, i.e. to cut inflation and to raise export competitiveness and employment.

Several labour cost indicators are used to determine trends in macroeconomic developments. The most commonly used indicator in Slovenia is the monthly figure for the average gross wage per employee, which is, however, insufficient to measure cost competitiveness. Cost competitiveness is more often measured by unit labour costs, expressing the ratio between the cost of employees on one hand and the value produced by employees, i.e. productivity, on the other. This analysis mainly focuses on two indicators of cost competitiveness, i.e. real unit labour costs and the real effective exchange rate.

Like in most other EU countries, real unit labour costs declined in Slovenia over the last ten years. After the rapid decline in the second half of the 1990s, the falling of real unit labour costs slowed down considerably in Slovenia, partly due to deteriorated terms of trade. The drop in real unit labour costs in Slovenia was largely underpinned by developments in industry. Only Poland, Ireland and

Estonia recorded higher average annual drops of unit labour costs than Slovenia in this period, which indicates that Slovenia's cost competitiveness within the EU improved considerably. On the other hand, significant increases in real unit labour costs were only recorded in Portugal and the Czech Republic in this period. Slovenia's wage policy contributed to the increase in the country's competitiveness.

Although real unit labour costs dropped sharply in Slovenia over the past decade, the ratio between labour costs and gross domestic product in the Slovenian economy was still well above the euro area average in 2006 (71.8% over 63.9%). This divergence is largely attributable to: (i) the specific Slovenian agricultural sector with a high share of small farms and a relatively high share of the self-employed; (ii) the different structure of the Slovenian economy in comparison with the average structure in the euro area; and (iii) the higher labour taxation in Slovenia. If we exclude the agricultural sector the difference in the achieved ratios halves. Even so, however, Slovenia still belongs among countries with high ratios between labour costs and gross domestic product. In comparing the structure of value added of the Slovenian economy and the average structure of the euro area we see that Slovenia has a notably smaller share of value added produced by financial intermediation, real estate, and business services. In these sectors, the ratios between labour costs and gross value added are relatively lower. On the other hand, Slovenia has a much higher share of industry with an above-average share of labour-intensive industries, which raises the ratios between labour costs and gross value added in the Slovenian economy. In 2004, taxes and contributions on labour in Slovenia accounted for 54.4% of the total taxes, 3.8 p.p. more than in the EU-25 on average.

Between 1996-2002 the real effective exchange rate indicated an improvement in Slovenia's cost competitiveness. The real effective exchange rate deflated by unit labour costs shows the competitiveness of the domestic economy in comparison with its main trading partners. In 1996-2002, the improvement in the cost competitiveness was underpinned by the higher growth of Slovenian productivity and the nominal depreciation of the national currency. Subsequently, the growth of relative unit labour costs eased off, following the moderation in nominal depreciation. As the tolar's exchange rate remained stable against the euro, the increase in the relative compensation per employee came very close to the growth of relative productivity in 2005, which meant that Slovenia's cost competitiveness was maintained.

Since having adopted the euro, Slovenia has conducted as much as 60% of its external trade in the national currency. Consequently, the significance of the effect of wage and productivity developments on the Slovenian economy's cost competitiveness has increased. If wages grow faster than productivity in comparison with Slovenia's euro area trading partners, Slovenia's cost competitiveness deteriorates. Conversely, lower growth of Slovenian relative wages compared to relative productivity growth leads to its improvement.

Given the development level and structure of the Slovenian economy, the raising of competitiveness should remain an important guideline in the formulation of wage policy. The share of labour costs in the value added of the Slovenian economy is still relatively high despite its ten-year decline. Labour

costs are an important factor of cost competitiveness, but other determinants also affect economic competitiveness. We refer mainly to the policies that may contribute to a higher increase in value added. These especially include the measures and policies that would stimulate R&D and innovation potential and boost the development of entrepreneurship by speeding up the restructuring of the economy towards higher value added and faster productivity growth. Along with these measures, the lowering of the tax burden on labour should continue. In addition to moderate wage growth, tax measures can significantly help to reduce the real compensation of employees.

Wage policy formulation in the coming years should be based on the EU's integrated economic policy guideline according to which medium-term wage rises should be consistent with the price stability goal and the trend in productivity, taking into account the specific conditions of the Slovenian economy, the international context, and methodological particularities. Therefore, it would be reasonable to determine the ratio between wage growth and productivity growth on the basis of nominal growth rates. The projected inflation rate assumed in wage formation should take into account the ECB's inflation goal and the dynamics of wages and productivity in other euro area countries.

The general rule regarding the ratio between the growth of wages and productivity should be used mainly as a guideline and a benchmark of the adequacy of wage developments. Wage adjustment mechanisms should not be tied directly to productivity growth. The automatic indexation of wages to productivity would limit the possibilities of pay rises based on individual work performance. In a period of declining economic growth, the adjustment of wages to previous growth of (higher) productivity would result in lower competitiveness. Moreover, the indexation of wages to general productivity could create excessive cost pressures on companies and industries. Wage formation should therefore take sector- and company-specific circumstances into account.

1. Introduction

Since Slovenia joined the Economic and Monetary Union and thus gave up its national monetary policy, wage policy has become an even more important element of macroeconomic policy. Adjustment mechanisms applicable in the case of asymmetric shocks in EMU member countries have become especially critical. In such circumstances the markets of production factors, notably the labour market, serve as important adjustment mechanisms. Within labour market flexibility wage flexibility is regarded as the key determinant.[1]

Due to the changed circumstances, we have decided to examine the wage policy applied thus far and assess the need for changes in this area. Over the last ten years, the aim of Slovenia's wage policy was to make real gross wages rise at a slower rate than productivity. This guideline contributed to the lowering of inflation and the increase in export competitiveness. However, as Slovenia joined the EU and the EMU the situation regarding economic policies changed. The EU's Integrated Guidelines for Growth and Jobs include a guideline that recommends consistent growth of nominal labour costs and the trend in productivity over the medium term. Since having joined the EMU, Slovenia can no longer improve its export competitiveness by way of its national monetary policy. Due to the new circumstances we have decided to make a more detailed analysis of the guidelines regarding developments in labour costs in the EU and the role of wage flexibility, and to take a look at the past developments in wages and productivity, also from other angles than before. Below we first present the role of wage flexibility in the EMU, the guidelines in the area of wage policies in the EU, and the agreements between the social partners on the wage policy in Slovenia in the last ten years. In economic policy, the wage/productivity ratio affects the growth of employment and investment. It is therefore presented from several different viewpoints. Further, we discuss the problems related to measuring labour productivity. By questioning the relevance of the indicators used to measure developments in labour costs we also examine the impact of labour costs on the competitiveness of Slovenian exporters in foreign markets. To this end, we present the dynamics and state of selected indicators of international competitiveness in Slovenia over the last ten years. We conclude by assessing the wage policy applied thus far and attempt to formulate recommendations for future wage policy-making.

[1] According to Mundell's theory of optimum currency areas, the flexibility of nominal wages is a perfect substitute for the nominal flexibility of currencies. Mundell proposes labour mobility as a second substitute.

2. The role of wage flexibility and wage policy orientations

At the macroeconomic level, various types of wage flexibility are an important instrument for counteracting shocks to the economy. The three most common types of wage flexibility usually mentioned are: (i) the responsiveness of wages to changes in price levels (inflation), i.e. the nominal flexibility of wages; (ii) the responsiveness of wages to the unemployment rate, which measures how fast an imbalance in the labour market is redressed, i.e. the real flexibility of wages; and (iii) the responsiveness of wages to the structure of supply and demand, i.e. the relative flexibility of wages, which depends on geographical and sectoral mobility and the imbalances in occupational labour markets.

The absence of a national monetary policy is believed to have an effect on the formation of wages. Erlandsson (2002, p. 2) emphasises two such effects. He maintains that: (i) wage restraints will decrease since higher wages will no longer "automatically" lead to a tighter monetary policy; and (ii) that the elasticity of labour demand will increase, since there are no longer any national monetary policy instruments to compensate for national fluctuations in productivity. The latter is supposed to act as an incentive to lower wages or make them more flexible. These two effects are supposed to work in opposite directions.[2] The entry to the EMU can therefore also enhance upward pressures on wages and hence on the unemployment rate.

2.1. Wage policy guidelines in the EU

Wage policy orientations at the EU level are presented in the Integrated Guidelines for Growth and Jobs, adopted in 2005. Guideline No. 4 recommends that the member states should encourage the right framework conditions for wage bargaining systems to promote nominal wage and labour cost developments consistent with price stability and the trend in productivity over the medium term, taking into account differences across skills and local labour market conditions. Guideline No. 22 similarly recommends that member states should ensure such evolution of labour costs and of the wage formation system that stimulates employment.

In order to ensure a non-inflationary policy in the EMU countries, member states should keep their nominal wage growth within a range between the ECB's inflation goal (around 2% annually) and country-specific productivity growth over the medium term. Based on this normative formula for wage growth, Fritsche et al. (2004) assessed the wage policies in the EMU countries and the capacity of four EMU economies to respond to shocks.[3] Adherence to the normative wage formula is supposed to ensure the process of economic convergence in the EMU. However, the wage formation systems in the EMU that are critical for the economies to counteract shocks are not suited to the application of the normative wage formula.

[2] The result of their action has not been empirically tested thus far.
[3] The study includes Germany, Spain, France, and the Netherlands.

2.2. Wage policy in Slovenia in the last ten years

With the transition to a market economy, Slovenia set up an institutional system of wage bargaining (a system of collective agreements) and established the Economic and Social Council of the Republic of Slovenia (ESS). The ESS was established in 1994 and is composed of representatives of trade unions, employers, and the Government. It is the central institution of social dialogue. The tripartite talks within the ESS have resulted in a macroeconomic wage policy framework.

In Slovenia, wage policy has been an important segment of the negotiations between the social partners. Over the last decade, the social partners have generally implicitly or explicitly agreed that real wage growth should lag behind productivity growth, measured by the real GDP growth per employee according to the System of National Accounts (SNA). Below we first present the wage policy agreements and continue by analysing the relationship between the dynamics of wages and productivity in the last ten years in Slovenia (Chapter 3.2).

2.2.1. Overview of wage policy agreements

Over the last decade, wage policy in Slovenia supported the main goals of economic policy (lowering of inflation, increasing export competitiveness and employment). The main guideline for bargaining wage adjustment agreements was that wage policy should, on one hand, support economic policy goals aimed at stable macroeconomic trends, and regulate the social position of workers through the institution of the minimum wage on the other.

Wage adjustment mechanisms were not explicitly tied to production growth. The agreements did not explicitly determine that wages should be adjusted by a certain percentage of productivity growth or that wage growth should lag behind productivity growth. The mechanisms for general wage adjustments were tied solely to inflation, since they took into account the fact that individual wages were being raised additionally for other reasons. The general guideline regarding the relationship between real wage growth and productivity growth (a lag by one percentage point) was first explicitly stated in the Social Agreement concluded in 2003. This wage policy was aimed at providing a boost to investment activity and creating new jobs to raise employment. A detailed description of the wage adjustment mechanisms applied in the last ten years is presented in the Annex to this chapter.

The concluded wage policy agreements have defined the adjustment of starting-level wages. However, in practice there is a divergence between the growth of the starting-level wages and of the actually disbursed wages (Table 1). The divergence in the growth of actual and starting-level wages occurs because wage growth does not only depend on adjustment mechanisms but also on payments based on promotions, individual performance, company performance, sectoral and company agreements, and individual work contracts.

Table 1: **Real growth of the average gross wage per employee and starting-level wages in the private and public sectors, in %**

	Gross wage per employee			Starting-level gross wages		Difference between the growth of actual and starting-level wages, in p.p.	
	Total	Private sector	Public sector	Private sector	Public sector	Private sector	Public sector
1995	5.1	3.7	8.2	2.2	2.2	1.5	6.0
1996	5.1	4.0	6.8	-0.7	1.0	4.7	5.8
1997	2.4	1.5	3.8	-3.3	-2.0	4.8	5.8
1998	1.6	2.2	-0.2	-2.4	-2.8	4.6	2.6
1999	3.3	3.2	3.7	0.4	0.8	2.8	2.9
2000	1.6	1.3	2.1	-0.3	-2.9	1.6	5.0
2001	3.2	2.3	5.1	0.0	-1.8*	2.3	6.9
2002	2.0	2.3	1.1	-0.2	-3.8	2.5	4.9
2003	1.8	2.1	1.0	0.1	-0.6	2.0	1.6
2004	2.0	3.1	-0.8	0.8	-2.0	2.3	1.2
2005	2.2	2.8	0.9	0.0	-0.7	2.8	1.6
2006	2.2	2.8	1.0	-1.2	-2.0	4.0	3.0

Source: SORS, Official Gazette of the Republic of Slovenia; calculations by IMAD.
Note: *The August 2.6% increase in the public sector was disbursed in the form of supplements. Therefore, the rise was observed in the disbursed rather than the starting-level wages.

In 1995-2000, wage policy contributed significantly to the lowering of inflation since wage rises were not fully indexed to inflation. The frequency of annual adjustments declined in this period (following the slowdown in inflation). In 1995 and 1996, the adjustment was carried out quarterly. In 1995, 80% of inflation was taken into account. Subsequently, the corresponding figure was around 85% of the actual inflation. As annual inflation dipped from a two-digit to a one-digit rate, the adjustments for 1997 and 1998 were already made only once a year and equalled 85% of the actual consumer price rise. Inflation rose in 1999 and 2000 due to the introduction of value-added tax (from 6.5% in 1998 to 9% in 2000, year on year). Wages were consequently raised twice a year, taking into account 85% of actual inflation.

In 2001-2006, the gap between wage growth and productivity growth narrowed. As shown by the analysis in the following chapter, the difference between real wage growth and productivity growth stabilised at a level between one and two percentage points in this period. The only exception was 2001, when wages rose more than productivity due to the high increase in public sector wages. At the same time, a comparison of the nominal trends in wages and productivity shows that the difference between the two has almost disappeared in recent years. The percentage of annual inflation taken into account in the adjustment mechanism also rose in this period, especially in the private sector. In 2001, the social partners agreed to change the system by tying wages to the projected consumer price increases rather than past inflation rates. The mechanism also incorporated a safeguard clause for the event of higher or lower actual inflation than projected.

3. Wages and productivity

The wage/productivity ratio is one of the key issues of economic policy. It is important in at least four respects: (i) cost competitiveness; (ii) price stability; (iii) employment and investment; and (iv) profit and wages shares. From the point of view of economic theory, it seems that the general guideline of consistent growth of wages and productivity provides a satisfactory answer to all these aspects: (i) it ensures the maintenance of cost competitiveness[4] by preventing the rising of unit labour costs; (ii) since unit labour costs are not rising, wage growth creates no cost pressures on price rises (inflation); (iii) if employment increases while output remains unchanged, productivity growth decreases; the principle of consistent growth of wages and productivity therefore means that wages should be adequately adjusted to decisions regarding employment; investments are financed from the retained past and expected future returns on capital; and (iv) consistent growth of wages and productivity ensures that the share of wages in value added and hence the existing ratios of profits to wages remain stable. However, the application of this general principle to the conduct of wage policy should take a number of other factors and constraints into consideration. The international aspect, i.e. the relative dynamics of wages and productivity in competitive countries, is particularly relevant for the small economy. Other factors to be considered include those that affect either the evolution of value added (international terms of trade, intermediate consumption, the structure of the economy, business cycle) or the evolution of the total labour costs (labour costs not included in the salary, taxation of labour, economic structure). Labour cost developments in an international comparison are presented in Chapter 4.

The wage/productivity ratio can be analysed from various angles. Although the concept of measuring productivity is seemingly simple and clear, it is characterised by a number of methodological problems which are presented below. This chapter also presents the wage/productivity ratio in the last ten years in Slovenia from the point of view of various productivity measures and wage deflators.

3.1. The problem of measuring labour productivity

Productivity is commonly defined as the ratio of output to a volume of input use. The concrete application of this general rule depends on the selected purpose of measuring productivity and on the availability of data. A number of productivity measures are described in the economic literature and used in practice, since the output and the inputs can be measured in many different ways. There is a general distinction between single-factor and multi-factor productivity, depending on the input used. The former includes labour productivity and capital productivity, while the latter usually refers to the capital-labour multi factor productivity and to the KLEMS[5] productivity. In principle, output should be evaluated on the basis of gross output. At the level of industries or companies, it

[4] Assuming equal evolution of wages and productivity in other countries.
[5] It measures the joint productivity of the factors of capital (K), labour (L), energy (E), and raw materials, material, and intermediate goods (M).

is also evaluated on the basis of value added, while at the national level it is most commonly measured on the basis of GDP for practical reasons of data availability and comparability.

Labour productivity is a partial measure of the productive capacity of employees and the intensity of their work. Changes in labour productivity reflect the total effect of changes in the quality of labour and the efficiency and intensity of its use, along with changes in a series of other factors such as capital, intermediate consumption, technology, organisation, capacity utilisation, economy of scale, etc. Labour input is usually measured by: (i) total employment, which includes wage recipients and self-employed workers, including unpaid family workers; (ii) full-time equivalent employment; and (iii) the number of actual hours worked.

For the purposes of wage policy, productivity is usually measured by the increase in value added per unit of labour input, measured by actual hours worked. The reason is that value added is an easily comprehensible and comparable category. Further, the number of actual hours worked is the most appropriate measure of labour input. Nevertheless, the caveat remains in place that value added per labour input similarly does not only measure the input of labour but is the result of the joint effect of all production factors, both material and non-material (Measuring Productivity – OECD Manual, 2001). At the national level, gross domestic product, i.e. value added corrected by indirect taxes and subsidies, is the commonly used measure of productivity.

Currently in Slovenia labour productivity cannot be calculated on the basis of hours worked and it therefore uses other measures. The SORS is currently still developing the statistical sources for the calculation of actual hours worked. We will therefore use data on the number of employed persons instead, which is also a common practice in some other countries. Among the many different statistics on employment available in Slovenia, the most adequate figures are employment based on the national accounts statistics and the number of persons in employment according to the Labour Force Survey (LFS). Since the first figure in principle expresses full-time equivalent employment,[6] the difference between the two should reflect the movements of the average number of hours worked by an employed person in a given period of time. Survey-based employment figures are also relevant because they are used as the basis for the calculation of employment rates and as the benchmark for assessing the achievement of the Lisbon Strategy goals.

Table 2: **Annual growth rates of real labour productivity (in %) according to different employment statistics**

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
GDP/employee according to SNA	5.9	6.9	4.1	3.9	3.3	2.2	3.8	3.1	3.9	3.7	4.0
GDP/person in employment according to LFS	4.2	1.6	4.4	7.2	2.4	1.0	4.1	4.1	-0.7	3.4	3.9

Source: National Accounts; Labour Force Survey Results; SI-Stat data portal; calculations by IMAD.

[6] The actual estimated employment based on the SORS' national accounts statistics is merely approaching this principle due to methodological constraints.

The divergence in the evolution of the differently measured productivities can be partly explained by the differences in measuring labour input. Except in 1998-1999 and 2002-2003, the productivity growth that uses survey-based employment as a measure of labour input was slower than the productivity growth based on employment according to the national accounts statistics. The main reason for the divergence between the two statistics is the very broad definition of an employed person according to the Labour Force Survey. According to this definition, any person who performed at least one hour of work for payment in the reference week or who performs work for the family welfare as an unpaid family worker qualifies as a person in employment. As a result, the average working time of these people can vary significantly from year to year. In addition, the average number of hours worked may also be changed by overtime work performed in a given year by people who are otherwise employed full time.

Below we present the wage/productivity ratio in Slovenia. We first discuss this ratio from the point of view of the hitherto used measures of the dynamics of wages and productivity. We then proceed to analyse it from the viewpoints of other measures of productivity and growth deflators of the average gross wage per employee.

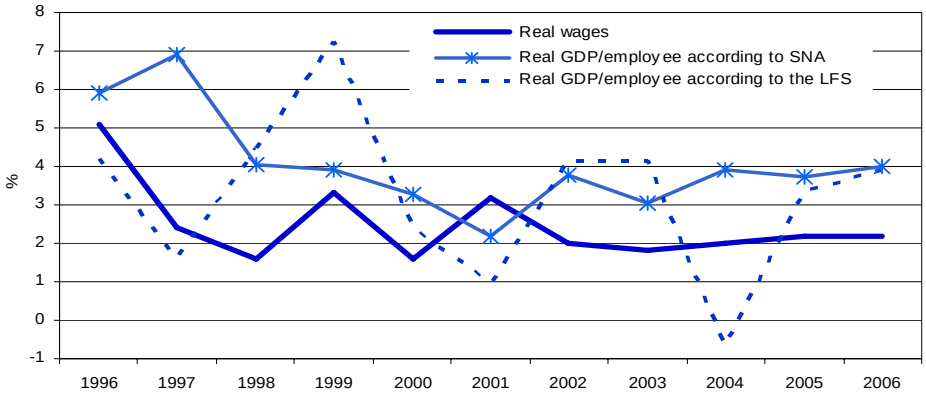
3.2. Dynamics of wages and productivity

Over the past decade, the ratio between the dynamics of wages and productivity was an important measure of evaluating wage policy in Slovenia. Social partners mainly monitored the ratio between the evolution of the real average gross wage per employee deflated by the consumer price index and labour productivity measured by GDP per employee according to the national accounts statistics. This relation is described in detail below.

The real growth of the average gross wage per employee, deflated by the consumer price index, for the most part lagged behind productivity growth over the last ten years. This lagging was supported by the agreed wage adjustment mechanisms described in Chapter 2.1.1. At the national level, wages only rose faster than productivity in 2001 due to exceptional wage increases in the public sector that year (Figure 1 and Table 3).

In 1996-2000, the lagging of wage growth behind productivity growth was underpinned by the slower wage growth in the private sector. The real gross wage per employee rose at an average annual rate of 2.8% in this period and lagged two percentage points behind productivity growth. Except in 1998, the lagging in the public sector was slower than in the private sector. The faster growth of wages in the public sector in this period mainly reflected the process of introducing supplements in several collective agreements.

Figure 1: **Annual growth rates of average real gross wages and productivity in 1996-2006**



Source: National Accounts; Labour Force Survey Results; SI-Stat data portal; calculations by IMAD.

The growth of the real gross wage per employee also lagged behind the growth of labour productivity in 2001-2006, except in 2001. In 2001, wages rose faster than productivity due to the rapid growth of wages in the public sector resulting from the concentration of the disbursement of supplements in various collective agreements. From 2001 onwards, the lagging of wage growth behind productivity growth was smaller than in 1996-2000 on average. The 2001-2006 period was characterised by the modest growth of real gross wages per employee in the public sector (average annual growth was 0.6%) due to the adjustment mechanism, and by the prevention of wage growth in individual sectoral collective agreements.

Table 3: **Real growth of labour productivity and gross wages per employee, total and by sector, and divergence in their growth in 1996-2006**

	Real growth of GDP per employee – labour productivity	Real growth of the gross wage per employee			Difference between the growth of productivity and wages, in p.p.		
		Total	Private sector*	Public sector**			
	(1)	(2)	(3)	(4)	(1)-(2)	(1)-(3)	(1)-(4)
1996	5.9	5.1	4.0	6.8	0.8	1.9	-0.9
1997	6.9	2.4	1.5	3.8	4.5	5.4	3.1
1998	4.1	1.6	2.2	-0.2	2.5	1.9	4.3
1999	3.9	3.3	3.2	3.7	0.6	0.7	0.2
2000	3.3	1.6	1.3	2.1	1.7	2.0	1.2
1996-2000	4.8	2.8	2.4	3.2	2.0	2.4	1.6
2001	2.2	3.2	2.3	5.1	-1.0	-0.1	-2.9
2002	3.8	2.0	2.3	1.1	1.8	1.5	2.7
2003	3.1	1.8	2.1	1.0	1.3	1.0	2.1
2004	3.9	2.0	3.1	-0.8	1.9	0.8	4.7
2005	3.7	2.2	2.8	0.9	1.5	0.9	2.8
2006	4.0	2.2	2.8	1.0	1.8	1.2	3.0
2001-2006	3.5	2.2	2.6	1.4	1.2	0.9	2.1
1996-2006	4.1	2.5	2.5	2.3	1.6	1.6	1.8

Source: SORS; calculations by IMAD.
Notes: *The calculation of the gross wage per employee for the private sector is the sum of activities A to K according to the Standard Classification of Activities (SCA). ** The calculation of the gross wage per employee for the public sector is the sum of activities L to O according to the SCA.

The wage/productivity ratio may vary depending on the different productivity measures as well as the use of different wage deflators. We proceed to analyse the wage/productivity ratio from the viewpoint of other wage deflators and productivity measures.

The deflation of wages by CPI is relevant when estimating the purchasing power of wages, but it is less relevant for economic competitiveness. The use of different deflators for the deflation of output and wages can distort the wage/productivity ratio. Thus far, the consumer price index has been used as the common wage deflator. The CPI is useful for evaluating the dynamics of the purchasing power of wages, with the caveat that real net wages should be used in the analysis. However, from the viewpoint of competitiveness, the GDP deflator[7] and the producer price index[8] are more relevant.

The problem of different deflators can be avoided by using nominal deflators. In this case, we compare the movements of the nominal average gross wage per employee with those of nominal productivity. Such a comparison shows that the growth of the average gross wage exceeded the growth of productivity not only in 2001 but also in 2000, whereas in 2005 it was roughly even with productivity growth (Figure 2 and Table 4).

Table 4: **Growth of nominal labour productivity and nominal gross wages per employee, total and by sector, in %**

	Nominal growth of labour productivity	Nominal growth of the gross wage per employee		
		Total	Private sector	Public sector
1996	17.6	15.3	14.1	17.2
1997	15.9	11.7	10.7	13.2
1998	11.2	9.6	10.3	7.7
1999	10.5	9.6	9.5	10.1
2000	8.9	10.6	10.3	11.2
1995–2000	12.8	11.4	11.0	11.8
2001	11.1	11.9	10.9	13.9
2002	11.9	9.7	10.0	8.7
2003	9.0	7.5	7.8	6.7
2004	7.3	5.7	6.8	2.8
2005	5.2	4.8	5.4	3.4
2006	6.4	4.8	5.4	3.5
2000–2006	8.5	7.4	7.7	6.4
1995–2006	10.4	9.2	9.2	8.9

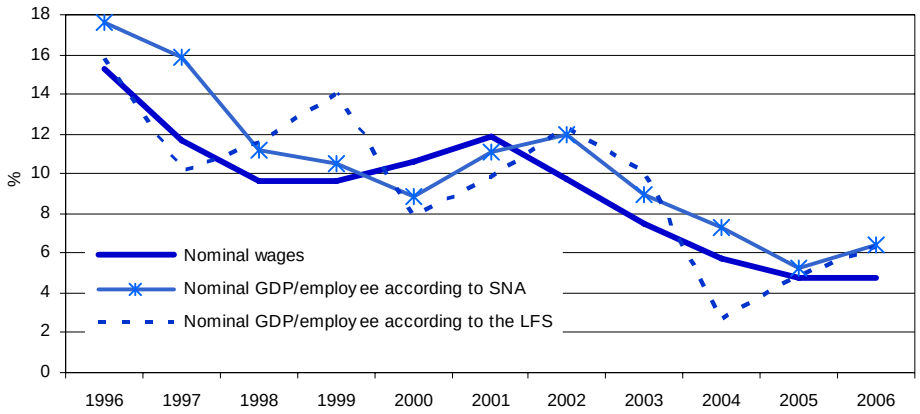
Source: SORS; calculations by IMAD.
Note: Labour productivity is measured by the nominal growth of GDP per employee according to the Statistics of National Accounts (SNA).

The wage/productivity ratio can also be influenced by the various measures of productivity. The ratio between wage growth and the various productivity measures proves to be most problematic if the labour input is measured by the number of persons in employment according to the LFS (Figures 1 and 2). However, this measure is irrelevant for wage policy-making in Slovenia due to the high proportion of informal work and other methodological reasons that

[7] Wage growth deflated by the GDP deflator exceeded productivity growth in 2000 and 2001.
[8] In the last decade, the producer price index diverged sharply from movements of the GDP deflator and the CPI in 1999 and 2003 due to the dynamics of the prices of raw materials. As a result, wages deflated by the producer price index rose faster than productivity in those two years.

strongly affect the fluctuations in productivity measured in this way (also see Chapter 3.1).

Figure 2: **Annual nominal growth rates of the average gross wage per employee and nominal labour productivity**



Source: National Accounts; Labour Force Survey Results, Wages and Labour Costs, SI-Stat data portal; calculations by IMAD.

The competitiveness of an economy in foreign markets also depends on the trends in labour costs and productivity in other countries. In the next chapter we therefore present the indicators of labour costs and productivity and their evolution in the period 1996-2006.

4. Labour costs and competitiveness

4.1. Available labour cost indicators in Slovenia and the EU

Several labour cost indicators are used in Slovenia and the EU to evaluate trends in macroeconomic developments. The appropriateness of the use of a given indicator depends on the purpose of the analysis and the relevance of timeliness, data coverage, the level of harmonisation with the EU statistics, and the availability of a detailed breakdown. In this chapter we present the available labour cost indicators and assess their usefulness.

The quarterly figure on labour costs per actual hour worked (the labour cost index) is harmonised at the EU level but it still has some methodological flaws. The national statistical offices in the EU conduct a labour cost survey every four years.[9] These quadrennial surveys are the basis for the quarterly estimates of labour costs per actual hour worked. In Slovenia there is no special quarterly statistical survey to evaluate labour costs. The existing statistical sources are used instead: the figure from the Monthly Report on Earnings (SORS) is used to evaluate the dynamics of gross wages, while the figure on the payments of general government revenue (Public Payments Administration) and the figures from the Labour Force Survey and the Labour Costs Survey (SORS) are used to evaluate employers' social security contributions and the payroll tax. The main problem regarding this indicator is the estimate of the actual hours worked, for which the SORS is still developing the appropriate methodology. Another consideration is that this indicator follows payments on a monthly basis, which means that more than three payments may be covered in a given quarter. Therefore, this indicator is mainly used to determine the ratio of the cost of wages to other labour costs (especially employers' social security contributions; in Slovenia also the payroll tax), which allows countries to monitor the results of their labour market reforms.

The gross wage per employee, which is based on national statistics, is the most common indicator used to monitor wage developments. The indicator is not harmonised at the EU level and therefore reflects country-specific situation. It is typically available with a short time-lag. In Slovenia, it is similarly used to monitor wage developments and the effects of wage policy. The figure on the payments of the monthly gross wage per employee covers almost all wage recipients in Slovenia. It allows a detailed breakdown by SCA levels down to the 4-digit level, which makes it possible to calculate the gross wage per employee for the private and the public sectors and for individual production and service groups. The time series is available for a period of 16 years. For a more detailed analysis, data on employees by level of gross earnings are available once a year, which allows the calculation of wage distribution indicators. In addition, statistical breakdowns of gross earnings by gender and professional qualifications as well as by SCA activity are also available once a year. Since net figures are also available, it is possible to assess the effects of the changes in taxation.

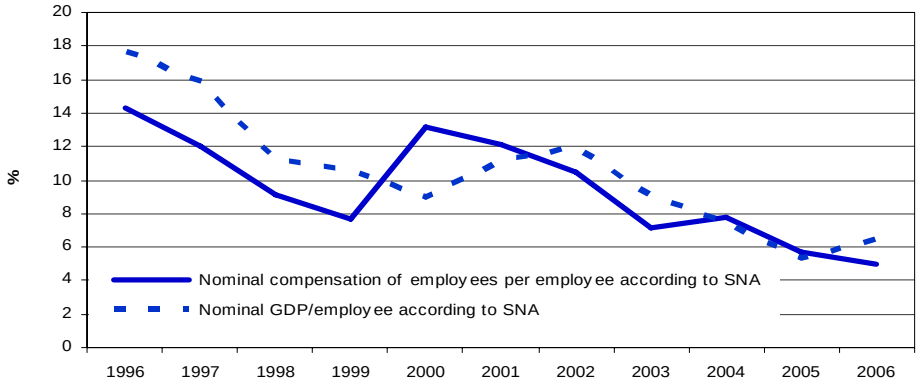
Some EU countries and the ECB use negotiated gross wages as the indicator to

[9] For Slovenia, the survey was first conducted in 2000 and subsequently in 2004. Data from both surveys cannot be compared due to methodological changes. The largest methodological change was the transfer of sickness benefits from employers' social security contribution to gross earnings.

monitor wage developments. The indicator is not harmonised at the EU level. It is mostly used to evaluate the 'wage drift', i.e. the difference between the negotiated and actual growth of the gross wage per employee. The wage drift for Slovenia can be assessed on the basis of Table 1, presented in Chapter 2.2.1.

The indicator 'compensation of employees per employee' is based on national accounts data and is methodologically harmonised at the EU level. It also allows a breakdown by activity according to the standard classification of activities. The main problems of this indicator are the frequent data revisions and the availability of data for its calculations, which are available only at the annual level. For these reasons, the indicator is not suitable to monitor wage policy but it is useful to compare the movements of labour costs relative to the dynamics of labour productivity (Figure 3) and for the calculation of unit labour costs.

Figure 3: **Evolution of the nominal compensation of employees per employee and nominal productivity in Slovenia, 1996-2006**



Source: National Accounts, SI-Stat data portal; calculations by IMAD.

The ratio between the growth of productivity and the growth of the compensation of employees per employee is relevant in view of economic competitiveness. Over the past decade, the nominal growth of the compensation of employees per employee was considerably faster than nominal productivity growth in 2000 and 2001, and somewhat faster than nominal productivity growth in 2004 and 2005. Next, we proceed to present the indicators of cost competitiveness and their evolution in 1996-2006.

4.2. Unit labour costs and competitiveness

Unit labour costs are one of the indicators of cost competitiveness. They show the relationship between the labour costs on one hand and the value produced by person employed, i.e. productivity, on the other. At the same time, they are an indicator of the distribution of income between labour and capital and hence an indicator of profitability. Cost competitiveness is commonly analysed on the basis of real unit labour costs and real effective exchange rates deflated by relative unit labour costs.

The Eurostat defines real unit labour costs as the ratio of the nominal compensation of employees per employee to the nominal gross domestic product per employment.[10] Real unit labour costs are a structural indicator since they measure changes in the compensation of employees as a share of GDP. They are referred to as *real* unit labour costs because they are equivalent to the nominal unit labour costs[11] deflated by the implicit GDP deflator. Expressed as a percentage of gross domestic product,[12] they are often referred to simply as 'wage shares' as a non-technical term. For purposes of greater clarity, we will hereinafter use the term 'the ratio of labour costs to GDP' instead.

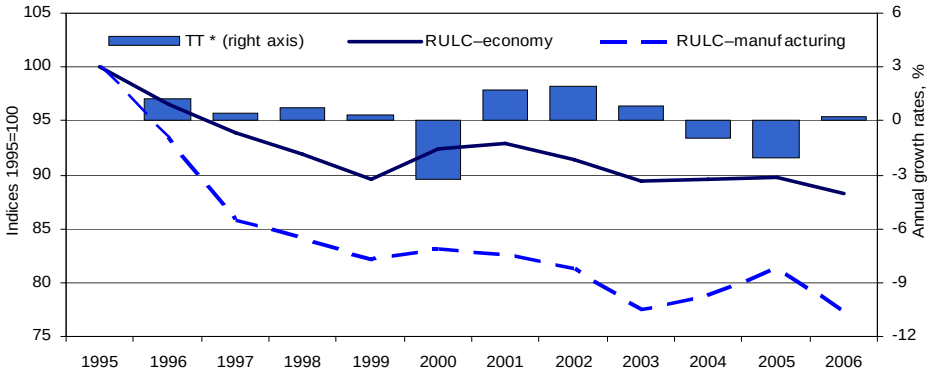
The real effective exchange rate deflated by unit labour costs shows the cost competitiveness of the domestic economy in comparison with its main trading partners. It is an indicator of international cost competitiveness. Apart from domestic and foreign costs and productivity, this indicator is also determined by the dynamics of the nominal exchange rate. Therefore, the domestic nominal unit labour cost index divided by the foreign unit labour cost index is further divided by the nominal exchange rate index.

4.2.1. Real unit labour costs

As in most EU-25 countries, real unit labour costs declined in Slovenia in 1996-2006. The decline was faster in the second half of the 1990s; in 2000 and subsequent years it slowed down considerably, partly due to the deteriorated terms of trade (Figure 4). Particularly in 2000, but also in 2004 and 2005, the lower growth of export than import prices translated into lower nominal GDP growth on one hand and higher growth of the cost of intermediate consumption on the other. As a result, real unit labour costs rose somewhat more appreciably in 2000 but only slightly in 2004 and 2005. This led to a lower profitability. The terms of trade in manufacturing, the most export-oriented sector, tightened even more than in the total economy in those years. In the other years of this period, the effects of the improved terms of trade on the dynamics of real unit labour costs were just the opposite. The drop in real unit labour costs was somewhat more pronounced, and the profitability of the economy was consequently higher.

[10] In market prices.
[11] Nominal unit labour costs are defined as the ratio of the nominal compensation of employees per employee to the real gross domestic product per employment.
[12] In factor prices.

Figure 4: **Real unit labour costs (RULC) and the terms of trade in goods and services (TT)**



Source: National Accounts, SI-Stat data portal; calculations by IMAD.

Being small the Slovenian economy is more open to changes in terms of trade, and therefore relatively more vulnerable than bigger economies. Changes in the terms of trade affect the GDP deflator, i.e. the difference between the nominal and the real GDP growth rates. In circumstances of deteriorated terms of trade, the cost competitiveness of the economy may deteriorate despite restrictive wage policy. Conversely, in circumstances of improved terms of trade, a less restrictive wage policy does not necessarily lead to a deterioration of the economy's cost competitiveness.

Table 5: **Real unit labour costs by sectors of the Slovenian economy**

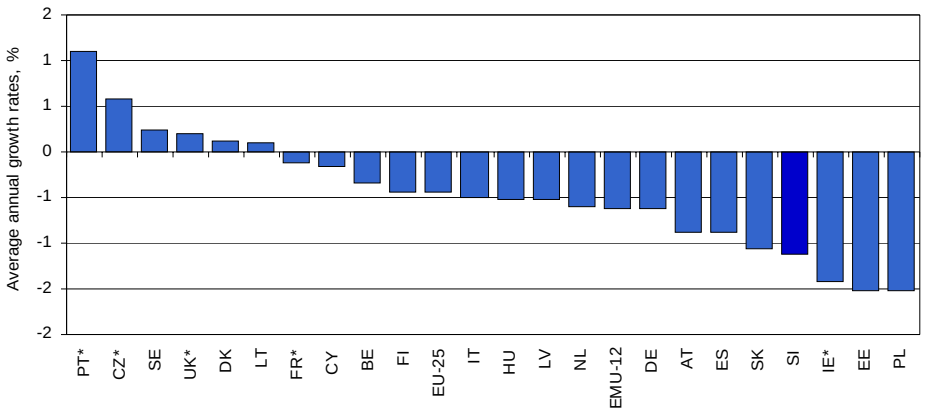
Sector		**Growth rate in 1996–2005, in %**
Total	Total economy	-12.4
Total less A, B	Total economy excluding agriculture	-9.7
A, B	Agriculture, hunting and fishing	-16.1
C, D, E	Industry, excluding construction	-20.1
D	Manufacturing	-18.6
F	Construction	-5.2
G, H, I	Trade, transport and communication services	-12.7
J, K	Financial services and business activities	14.9
J	Financial intermediation	31.0
K	Real estate, renting and business activities	11.5
L to P	Other services	-4.7

Source: National Accounts, Eurostat; National Accounts, SI-Stat data portal; calculations by IMAD.

The decline in the real unit labour costs of the total economy observed in 1996-2005 mainly reflected the drop in the real unit labour costs in industry (Table 5). Trade, transport and communication services also contributed considerably to the decline, whereas the decreases in construction and other services were much smaller. On the other hand, real unit labour costs in financial services and business activities increased, which had a negative effect on the cost competitiveness of the Slovenian economy.

The wage policy and competitiveness of the Slovenian economy are also affected by the trends in real unit labour costs in other countries. Data for 1996-2006 show that real unit labour costs fell in most member states as well as in the EU-25 and euro area on average.

Figure 5: **Real unit labour costs in the EU countries in 1996-2006**



Source: National Accounts, Eurostat; calculations by IMAD.
Note: *Data for the period 1996-2005.

Only Poland, Ireland, and Estonia recorded higher average decreases than Slovenia (Figure 5 and Table 6), which shows that Slovenia's cost competitiveness in the EU has improved considerably. Given the trends in other countries, the Slovenian wage policy was appropriate and supported the objective of increasing the competitiveness of the economy.

Table 6: **Components of real unit labour costs (in current EUR)**

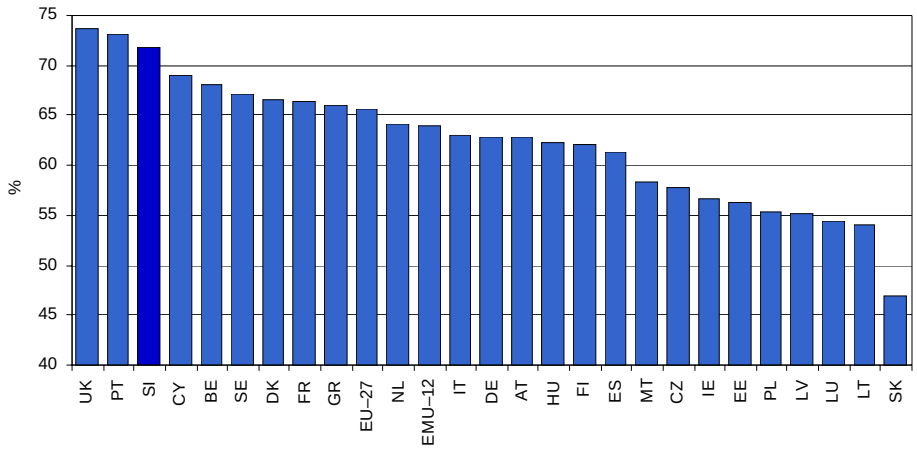
	Average annual growth rates in 1996-2006, in %	
	Labour productivity	Compensation of employees per employee
EU-25	3.6	3.1
EMU-12	2.6	2.0
Belgium	2.5	2.2
Czech Republic	9.6	10.2
Denmark	3.6	3.7
Germany	1.3	0.7
Estonia	14.9	13.0
Ireland	7.3	6.0
Spain	3.5	2.6
France	2.6	2.5
Italy	3.9	3.4
Cyprus	4.6	4.4
Latvia	13.3	12.8
Lithuania	15.6	15.8
Hungary	8.5	8.0
Netherlands	3.2	2.6
Austria	2.5	1.6
Poland	9.2	7.7
Portugal	4.1	5.3
Slovenia	6.1	4.9
Slovakia	10.2	9.1
Finland	3.2	2.8
Sweden	3.8	4.1
United Kingdom	6.4	6.6

Source: National Accounts, Eurostat; calculations by IMAD.

4.2.1.1. Ratios of labour costs to gross domestic product / gross value added (wage shares)

Despite the considerable decrease in the real unit labour costs seen over the past decade, the ratio of labour costs to GDP in the Slovenian economy in 2006 (71.8%) was still much higher than the average share of the euro area (63.9%). Among the EU-25 member states, only the UK (73.7%) and Portugal (73.1%) had higher labour cost to GDP ratios than Slovenia in 2006[13].

Figure 6: **Rations of labour costs to GDP in factor prices ('wage shares') in 2006**

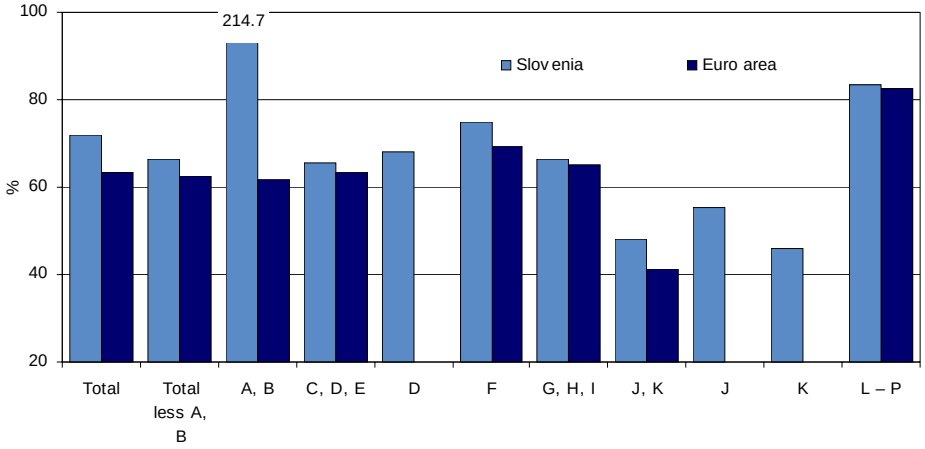


Source: Statistical Annex of European Economy, European Commission.

The divergences from the euro area average were largely caused by the specificity of the Slovenian agricultural sector.[14] If we exclude the agricultural sector, the differences in the achieved ratios in comparison with the euro area more than halve (the ratio for the Slovenian economy is 66.4%, for the euro area 62.7%; Figure 7). Nevertheless, among the 20 EU countries for which data are available, only Belgium and Sweden had higher labour cost to GDP ratios than Slovenia in the economy excluding the agricultural sector in 2005.[15] Looking at other sectors, the Slovenian industry, trade, transport and communication services and other services came fairly close to the euro area average according to the achieved ratios in 2005. However, a considerable divergence from the euro area average was still observed in the construction sector and even more in the financial services and business activities sector.

[13] According to European Commission estimates, Statistical Annex of European Economy (Spring 2007).
[14] With a high number of small farms and a much greater share of the self-employed.
[15] Data for the UK and Portugal are unavailable.

Figure 7: **Ratios of labour costs to gross value added ('wage shares') in the Slovenian economy and the euro area (12) by sector in 2005**



Source: National Accounts, Eurostat; National Accounts, SI-Stat data portal; calculations by IMAD.

The divergences are partly attributable to the different structure of the Slovenian economy compared with the average structure in the euro area. Slovenia notably has a smaller share of gross value added of the financial services and business activities sector in the gross value added of the total economy (11.2% over 15% in 2005). Moreover, the ratios of labour costs to gross value added are relatively lower in this sector, regardless of the already mentioned considerable divergence from the euro area. The share of trade, transport and communication services is similarly relatively lower (21.7% over 24.9%). On the other hand, the Slovenian economy has a much higher share of industry (28.4% over 17.7%) characterised by a large proportion of labour-intensive industries, which is, however, raising the ratios of labour costs to gross value added in the Slovenian economy.

The divergence from the euro area average is also linked to the higher tax wedge in Slovenia. Slovenia has an above-average ratio of taxes and contributions on labour to the total taxes and contributions. In 2004 (the latest available internationally comparable data) it totalled 54.4%, which is 3.8 p.p. above the EU-25 average (50.6%). Only Sweden, Germany, and Austria recorded even higher tax shares. On the other hand, the share of taxes on capital in Slovenia is low (10.6% in 2004), totalling only a good half of the average percentage recorded in the EU-25 (19.8%). Only Estonia had lower taxes on capital, Latvia and Lithuania had roughly the same shares as Slovenia, while Sweden, Germany, Finland, and Austria have only slightly higher taxes on capital than Slovenia. The calculation and comparison of implicit tax rates also shows that the tax burden on labour in Slovenia is above the average. In 2004, the implicit tax rate on labour in Slovenia was 37.8%, 1.9 p.p. more than the EU-25 average (35.9%). Ten member states had higher implicit tax rates (for more details see Development Report 2007).[16]

[16] Although labour taxation in Slovenia started to decrease gradually in 2004, a similar process has also taken place in other countries for which data for the period since 2004 are still unavailable. It is therefore still too early to assess the recent situation.

4.2.2. Real effective exchange rate

In 1996-2002, the improvement in Slovenia's cost competitiveness in comparison with its main trading partners was underpinned by the higher growth of Slovenia's productivity and the nominal depreciation of the Slovenian currency. The increase in Slovenian relative compensation of employees per employee, i.e. Slovenian compensation per employee in comparison with the trading partners, adjusted for exchange rate movements, was approximately three-quarters lower in this period.

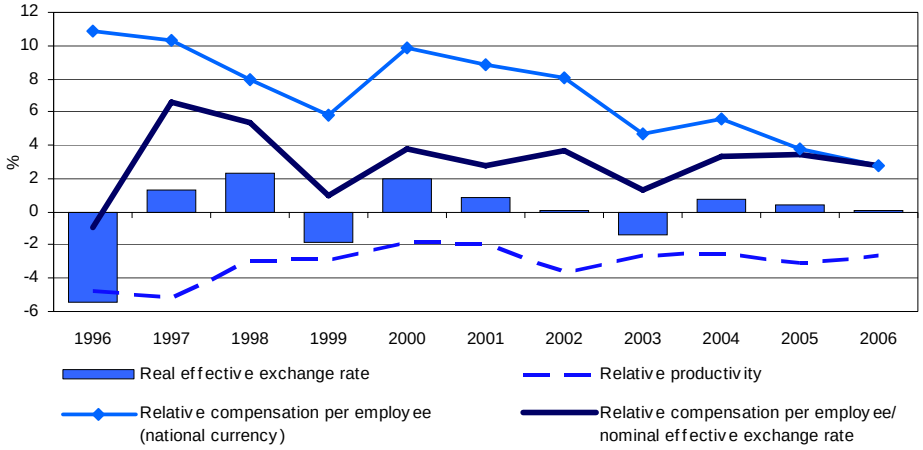
Table 7: **Real effective exchange rate against 17 trading partners*; deflator: unit labour costs (ULC); annual growth rates in %**

	1996-2000	2001	2002	2003	2004	2005	2006 estimate
Nominal effective exchange rate	-6.1	-5.7	-3.6	-0.5	-1.3	-0.7	0.2
Real effective exchange rate, ULC deflator – economy and components							
Real effective exchange rate	-2.0	-0.3	0.7	1.5	1.6	-0.2	-0.1
Relative unit labour costs in national currency**	4.4	5.8	4.5	1.9	3.0	0.6	-0.2
Relative compensation per employee in national currency***	7.7	7.5	7.6	4.0	4.9	3.2	2.2
Relative labour productivity****	3.2	1.6	3.1	2.1	1.9	2.6	2.4
Real effective exchange rate, ULC deflator – manufacturing and components							
Real effective exchange rate	-3.4	-1.6	-2.4	0.0	2.9	1.9	-1.7
Relative unit labour costs in national currency	2.8	4.4	1.3	0.5	4.3	2.7	-1.8

Source: BS; Main Economic Indicators, OECD; National Accounts, Eurostat; National Accounts, SI-Stat data portal; calculations by IMAD.
Notes: 'Relative' means 'in comparison with trading partners'. *Austria, Belgium, Germany, Italy, France, Netherlands, Spain, UK, Denmark, Sweden, Czech Republic, Hungary, Poland, Slovakia, USA, Switzerland, Japan. ***Nominal compensation of employees per employee relative to gross domestic product (value added) per employee. ***Nominal compensation of employees per employee. ****Real GDP per employee.

Following the slowdown in the nominal depreciation of the tolar against the euro on one hand and of inflation on the other, the growth of relative unit labour costs in the national currency also gradually eased off. As the tolar's exchange rate remained stable against the euro ever since entering the ERM II, the growth of the relative compensation per employee came very close to the growth of relative productivity in 2005 (at the aggregate level), whereas it is estimated to have lagged slightly behind it in 2006. Consequently, the cost competitiveness of the Slovenian economy in comparison with the main trading partners also remained stable. In 2005 and 2006, the tolar's real effective exchange rate measured by relative unit labour costs depreciated slightly against the 17 main trading partners (Table 7) and appreciated slightly against the main trading partners in the euro area (Figure 8).

Figure 8: **Real effective exchange rate against 7 euro trading partners*; deflator: ULC of the economy and components; annual growth rates in %**



Source: BS; National Accounts, Eurostat; National Accounts, SI-Stat data portal; calculations by IMAD.
Note: A decrease indicates improved competitiveness and vice versa. *Austria, Belgium, Germany, Italy, France, Netherlands, Spain.

Since having adopted the euro, Slovenia has conducted as much as 60% of its external trade in national currency. If wages grow faster than productivity in comparison with Slovenia's trading partners within the euro area, Slovenia's cost competitiveness deteriorates. Conversely, lower growth of Slovenian relative wages compared with relative productivity growth leads to its improvement. The euro fluctuates in international markets, and Slovenia's cost competitiveness against its trading partners outside euro area deteriorates in the event of the euro's nominal appreciation while it improves in the event of euro's depreciation.

5. Conclusion and recommendations

Wage policy in the past decade followed the guideline that real wage growth should lag behind productivity growth. Over the last ten years, real wage growth mostly lagged behind the growth of productivity measured by real GDP growth per employee according to the SNA. However, the gap has narrowed somewhat in recent years. The wage policy pursued in the past decade thus contributed to the lowering of inflation and an improvement of the Slovenian economy's competitiveness.

It is sensible that wage policy-making in the coming years should be based on the EU's integrated economic policy guideline. However, its application should also take into consideration the specific situation in the Slovenian economy, the international context, and methodological particularities. The general guideline, according to which wage growth should be consistent with the price stability goal and the trend in productivity over the medium term, is an appropriate basis for wage policy-making in the future. That said, its application should also take into account the following specific aspects:

- *The ratio between the growth of wages and productivity must be evaluated on the basis of nominal growth rates.* The analysis shows that measuring the nominal movements of wages and productivity is reasonable for two reasons: (i) to avoid the problem of using different deflators for the growth of wages and output, which distorts the actual ratio between the dynamics of productivity and wages; and (ii) to take account of all the changes in the terms of trade that affect the distribution of income between labour and capital and cost competitiveness. This means that the formulation and monitoring of wage policy must take into consideration nominal wage growth and the increase in the productivity trend, measured by nominal GDP growth per employee according to the national accounts statistics.

- *The application of price stability principles means that the inflationary goal of the European Central Bank must be taken into account as the projected inflation rate in wage policy-making.* Indexing wages to past inflation or to short-term price developments may cause one-off inflationary impulses to turn into a more persistent divergence of inflation from the equilibrium level. This may reduce competitiveness and therefore call for a more substantial downward adjustment of wages in the subsequent period in order to re-establish competitiveness. Since inflation in the medium term largely depends on monetary categories and monetary policy, and since monetary policy in the euro area aims at achieving the target 2% inflation, this is also the most probable assumption regarding the projected inflation in the coming years. This also means that the nominal growth of the trend in productivity should be calculated on the basis of the 2% target inflation in order to avoid the pitfall of indexing wages directly to short-term inflation swings through the calculated higher nominal productivity growth. Since the equilibrium inflation in the Slovenian economy is somewhat higher (estimated at around 2.5%) than in the euro area due to higher economic growth, it would be reasonable to carry out the changeover to the application of the ECB's inflationary goal gradually, over a period of several years.

- *Wage policy-making should also take the developments in other euro area countries into consideration.* Since the adoption of the euro, the growth of relative wages and relative labour productivity, i.e. Slovenian wages and productivity relative to those of its main trading partners, has become even more relevant for the cost competitiveness of the Slovenian economy. Since having joined the euro area, Slovenia has conducted as much as 60% of its external trade in the national currency. It would therefore be advisable to also take into account the past and projected wage and productivity movements in other euro area countries when conducting wage policy.

- *In view of the development level and structure of the Slovenian economy, the raising of competitiveness should remain an important guideline in wage policy-making.* The analysis of cost competitiveness indicators, which still shows a high share of labour costs in value added despite their ten-year decline (see Chapter 4.2.1.1.), and the analysis of the ratio between the movements of the compensation of employees per employee and of productivity in other EU countries (see Table 6) indicate that the guideline regarding the consistent growth of wages and productivity should be applied gradually over a period of several years.

- *In addition to wage policy, competitiveness can be significantly improved by measures aimed at raising value added and reducing other labour costs.* Although labour costs are an important factor of cost competitiveness, several other determinants also affect economic competitiveness. We refer mainly to the policies that may contribute to a faster increase in value added. These especially include the measures and policies that would stimulate R&D and innovation potential and boost the development of entrepreneurship by speeding up the restructuring of the economy towards higher value added and faster productivity growth. Along with these measures, the lowering of the tax wedge on labour should continue as well. In addition to moderate wage growth, tax measures can significantly help to reduce the real labour costs per employee.

It is sensible to use the general rule regarding the ratio between the growth of wages and productivity mainly as a guideline and a benchmark of the adequacy of wage developments rather than incorporating it directly into the wage adjustment mechanism. The automatic indexation of wages to productivity at the level of the total economy would limit the room for pay rises based on individual work performance or, if the difference between the negotiated and actual wages remained the same, would cause total wages to rise above productivity growth. In a period of declining economic growth, the adjustment of wages to previous growth of (higher) productivity would result in lower competitiveness. The adjustment of all earnings to general productivity would also cause excessive cost pressures on those enterprises or sectors that do not achieve average productivity growth. Therefore, the actual wage formation must also take into account the specific situation in individual sectors and companies which differ considerably both in terms of their past developments and structure and in terms of their projected productivity growth. In other words, the manner and extent to which productivity growth should be taken into account in wage formation should be agreed in a decentralised way rather than by means of a general adjustment formula.

Appendix: A more detailed overview of wage agreements concluded in Slovenia between 1996 and 2006

The first social agreement was concluded in 1995. It was agreed that the gross wage per employee should retain its real level from the previous year, assuming a 3%-4% increase in labour productivity.[17] The minimum wage was instituted to guarantee the minimum payment for work. Its amount was determined at a level of at least 40% of the average gross wage. In order to achieve these goals and ensure macroeconomic stability, wages were not fully indexed to inflation. The adjustment mechanism in both sectors provided for a quarterly adjustment based on previous actual consumer price rises. However, only around 85% of the price rise was taken into account (the percentages varied depending on the inflation rate). 1996 saw the adoption of a second social agreement, which did not significantly change the wage adjustment mechanism.

In 1997, wage policy was defined in the Act Regulating the Minimum Wage and the Method of Wages Adjustment, initially for two years. As inflation declined, the quarterly wage adjustments were replaced by annual adjustments. In January 1997 and 1998, gross wages in the public and private sectors were adjusted by 85% of the actual consumer price rise in the previous year.

The wage policy agreement for 1999-2001 defined a similar adjustment mechanism. It provided for a wage adjustment by 85% of the actual consumer price rise in the previous year in January. An extra adjustment was carried out in the middle of 1999 due to the introduction of VAT.[18] Wages were also additionally adjusted in the middle of 2000 in accordance with the safeguard clause incorporated in the adjustment mechanism for the event of high inflation. The agreement did not apply in 2001 due to changes in the adjustment mechanism.

2001 saw the gradual changeover to the adjustment of wages to projected inflation and the introduction of different wage adjustment mechanisms for the private and public sectors. Biannual adjustments were preserved in the adjustment mechanism up to and including 2003. In 2001, pursuant to the Wage Adjustment Agreement for the Public Sector, the adjustment mechanism accounted for 90% of the projected consumer price rise for the current year. The adjustments were made in January and August.[19] The August adjustment was disbursed selectively in order to reduce the wage disparities in the public sector. It was determined in sectoral collective agreements in the form of supplements, which did not affect the level of starting-level wages. The social partners for the private sector also agreed on a slightly different adjustment mechanism in 2001. In 2001, wages were adjusted by 92.5% of the inflation achieved in the first half of the year (backward-looking indexation) in accordance with the Wage Policy

[17] The specific adjustment mechanism was agreed in the Agreement on Wages and Other Remuneration in the Market Sector, which applied to the private sector.
[18] The agreement also determined the payment of a supplement for lower wages, but no contributions were paid for it because it was not part of the salary. The disbursement of this supplement was abolished at the end of 1999.
[19] In the case of inflation being higher or lower than projected, the difference would be covered in January's wages of the following year.

Agreement for 1999-2001. The agreed wage adjustment for January 2002 was 2.7%, which accounted for 90% of the inflation projected in the second half of 2001. This was the beginning of the changeover to a forward-looking wage adjustment mechanism based on projected inflation. The agreed mechanism was initially more favourable for the private than for the public sector. Even if the increase in the public sector's base wages for the second (August) adjustment were taken into account, such an 'amended' adjustment mechanism would still be more favourable for the private sector. For the first time, the mechanism also incorporated a safeguard clause for higher than projected inflation, which was also retained in all the subsequent adjustment mechanisms negotiated by the social partners.

The differences in the adjustment mechanisms for the private and public sectors continued in 2002 and 2003. The Annex to the Collective Agreement for the Public Sector defined an adjustment mechanism that accounted for approximately 90% of the estimated consumer price rise. The adjustment was agreed to be carried out twice a year, in January and August. The August 2.4% adjustment for 2003 was not carried out; instead, it was channelled to the collective supplementary pension insurance of public sector employees. In the private sector, the Wage Policy Agreement for 2002-2004 provided for an adjustment mechanism that also specified two adjustments a year (in January and August), taking into account the estimated consumer price rises for 2002 and 2003. For these two years, the agreed mechanism was again more favourable for the private sector.

2003 saw the adoption of the Social Agreement for 2003-2005. In the area of wages, it was agreed that the wage adjustment mechanism should also take into account the estimated consumer price rise for the EU and the EUR/SIT exchange rate, in addition to the estimated consumer price rise for Slovenia. The social partners also explicitly included the guideline that wage growth should lag behind productivity growth.

The adjustment mechanisms for 2004 and 2005 for both the private and public sectors maintained the guideline from the Social Agreement for 2003-2005 and retained annual wage adjustments. In the private sector, the adopted Private Sector Wage Policy Agreement for 2004-2005 provided for an adjustment by a uniform amount in August. The purpose of the uniform adjustment in amount was to reduce the range between the highest and lowest gross wages defined in collective agreements, and to ensure that all workers received this supplement. In these two years, the adjustment mechanism was more favourable in the private than in the public sector. The Agreement on the Level and Adjustment of Base Wages and the Amount of Holiday Allowances for 2004-2005, adopted in the public sector, already anticipated that the Collective Agreement for the Public Sector, together with all sectoral collective agreements and other regulations required for wages to start being disbursed according to the Salary System in the Public Sector Act, would also be adopted in 2004. While starting-level wages were adjusted previously, the new Agreement, pursuant to the law, determined the adjustment of base wages. The adjustment mechanism determined a splitting of the adjustment percentage into two parts; the first half was to be earmarked for the general wage adjustment while the other half would be set aside for the elimination of wage disparities in the public sector. The general wage adjustment

was carried out in July. The amended Salary System in the Public Sector Act for 2004-2005 also provided for a slightly higher percentage of the general wage adjustment (taking into account 87% of inflation in 2004 and 87% of inflation in 2005) and a correspondingly lower percentage for the elimination of wage disparities in the public sector. In this period, wages were not paid in accordance with the new wage system yet, and wage disparities could therefore not be redressed on a continuous basis. The release of funds set aside for the elimination of wage disparities in the public sector will be enabled when salaries are disbursed in accordance with the Salary System in the Public Sector Act.

The adjustment mechanism for 2006, set out in the Act Amending the Salary System in the Public Sector Act, determined a 2.35% adjustment of public sector wages in July. The actual adjustment in July totalled 1.35%, while the remaining fraction of the adjustment percentage was set aside for the elimination of wage disparities.

In the private sector, the adjustment mechanism for 2006 and 2007 was defined in the Collective Agreement on the Wage Adjustment Mechanism, Reimbursement of Work-Related Costs, and Holiday Allowances. According to this mechanism, wages are adjusted by 2% in August in both years. While the collective agreement applies to all workers in the private sector, employers and employees could also negotiate a higher adjustment percentage in sectoral agreements.

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