

**Labour Costs, Unit Labour Costs
and the Labour's Share in Costs
in the Czech Republic
in 2000 to 2008**

Jan Vlach,
Tomáš Kozelský

RILSA, Prague
2011

The publication was approved by the RILSA Editorial Board:

doc. Ing. Ladislav Průša, CSc. (VÚPSV, v.v.i. Praha)

Ing. Martin Holub, Ph.D. (VÚPSV, v.v.i. Praha)

Mgr. Miriam Kotrusová, Ph.D. (FSV UK Praha)

Ing. Robert Jahoda, Ph.D. (MU Brno)

Ing. David Prušvic, Ph.D. (MF ČR)

Ing. Jan Mertl, Ph.D. (VŠFS Praha)

Ing. Jan Molek, CSc. (JU České Budějovice)

Published by the Research Institute
for Labour and Social Affairs
Praha 2, Palackého nám. 4
First published in 2011, p. 96
Printed in the Czech Republic by RILSA

Reviewers Ing. Miloš Brachtl
prof. Ing. Jaromír Gottvald, CSc.
Ing. David Prušvic, Ph.D.

ISBN 978-80-7416-079-0

<http://www.vupsv.cz>

Abstract

The study provides a description of labour cost development in terms of volume and structure in the Czech Republic in the period 2000 – 2008. The text deals separately with development up to 2003 and with that following the accession of the Czech Republic to the EU. The authors outline the risks associated with such development in connection with the social and economic relationships inherent in the determination of unit labour costs and the labour's share in costs.

Key words:

Labour costs, direct labour costs, indirect labour costs, unit labour costs, labour's share in costs, labour taxation.

Content

Introduction	7
1. The Content and Position of Labour Costs in Social and Economic Relations	9
2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic	13
3. Labour Cost Data Sources and the Use of Such Data for International Comparison Purposes	24
3.1 Labour Costs.....	24
3.1.1 Eurostat	26
3.1.2 OECD.....	27
3.1.3 Labour Cost Monitoring by RILSA	27
3.2 Compensation of employees.....	27
3.3 Interpretation of the Results of Transnational Statistical Surveys	28
4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics 29	
4.1 Labour Cost Monitoring Methodology	29
4.2 Labour Costs in the Czech Republic and EU Countries	32
4.2.1 Total Labour Cost Development and Structure in the Czech Republic.....	32
4.2.2 Labour Costs Development in the Czech Republic and the EU.....	41
4.3 Labour Taxation	49
5. Unit Labour Costs	52
5.1 Definition of Unit Labour Costs	52
5.2 Unit Labour Costs in the Reporting of Major Czech Institutions	56
5.3 ULC on RILSA Methodology	57
5.3.1 The ULC Level Indicator.....	57
5.3.2 ULC Expressed in Purchasing Power Parity.....	59
5.3.3 Unit Labour Cost Factor Analysis Methodology in the Czech Republic	61
5.4 ULC in the Czech Republic and in EU Countries	62
5.4.1 ULC Expressed at the National Price Level	62
5.4.2 ULC Expressed at the European Price Level	67
5.4.3 Unit Labour Cost Factors in the Czech Republic	73
6. The Labour's Share in Costs	76
6.1 Calculation of the Labour's Share in Costs	76
6.2 The Labour's Share in Costs in the Czech Republic and the EU.....	78
6.3 The Labour's Share in Costs and Labour Taxation	86
7. Summary and Conclusions	88
References	93

Introduction

Labour cost levels have a major impact on both the market and revenue positions of individual businesses and represent a significant factor in terms of overall business activity (the business climate and the substitution of capital and labour). Labour costs constitute the basis of national labour costs and total replacement costs in individual countries and they determine to a significant extent the competitive position in the global and European integrated markets through their weight and specific character. While making decisions at the supranational level, investors take into account the comparative position of labour costs. The labour cost structure, i.e. the ratio between the wage component and the social and personal cost components reflects the basic mechanisms of the distribution and re-distribution processes and exerts a major influence upon employers, employees, the state and the relationships between them.

The authors attempt in this study to define the fundamental problems of labour cost development post 2000 under the conditions of the integration of the Czech economy into the unified internal European market with the gradually weakening competitive advantage of cheap labour in the Czech Republic, resulting from price and wage convergence.

The study relates to the period 2000 to 2008, or 2009 if relevant data is available and utilises a study compiled in 2004 entitled Labour Costs¹ which related to the years 2000 - 2003 and which was prepared by RILSA in cooperation with experts from the Czech Confederation of Industry and ČMKOS (the Czech-Moravian Confederation of Trade Unions) for the Czech Government and which was the subject of negotiation between social partners at different levels including a session of the Economic and Social Council. The authors make use of research information previously gathered by RILSA entitled "The Position of Full Labour Costs in the Reproduction of Economic and Social Relations in the Czech Republic". A further significant source of information was provided by Labour Cost Analysis data for the Czech Republic and the EU post 2003, prepared by RILSA on behalf of the Czech Confederation of Industry as part of a project entitled "The Strengthening of Social Dialogue, Emphasising the Modernisation of Institutions, Human Resources Development and the Quality Development of the Services Provided by Social Partners" co-financed by the European Social Fund through the Human Resources and Employment Operation Programme and the Czech government.

Chapter one describes the basic aspects of the position of labour costs with regard to economic and social relations. Chapter two defines the basic institutional framework as well as the macroeconomic context of labour cost development in the Czech Republic. Chapter three outlines the information sources employed and their methodical limitations. The issue of labour cost development and structure is dealt with in chapter four while chapter five is concerned with unit labour costs. Chapter six deals with the Labour's Share in Costs. Labour cost movement and its efficiency, dealt with in chapters four to six, monitored by the authors in relation to other EU countries. The conclusion provides a summary of the knowledge acquired.

¹ Baštýř, I., Prušvic, D., Vlach, J.: Náklady práce, RILSA, Prague, 2004, available at: <http://Prague.vupsv.cz/>

The authors would like to express their thanks to experts from the Czech Confederation of Industry and Transportation and the Czech Statistical Office for their valuable assistance.

1. The Content and Position of Labour Costs in Social and Economic Relations

The Czech Statistical Office (CZSO) defines Total Labour Costs as "... costs expended on employees by the employer. They are the sum of direct costs (wages, including allowances), social benefits, social expenses, personnel expenses and taxes (see detailed descriptions of these variables). Subsidies received from Labour offices for public utility work and for socially beneficial job positions are deducted."²

Eurostat defines Labour costs as "... total costs expended by employers on employed staff. They include compensation of employees, namely wages and salaries in cash and in kind, social security contributions paid by the employer, professional training costs, other costs such as recruitment expenses and expenditure on work clothing and taxes on overall employment, which are considered labour costs, and minus various subsidies."³

Labour costs comprise expenses and costs expended by employers on employees. The basic (prevailing) Labour's Share in Costs consists of wages and salaries payable to employees, a further component is made up of so-called non-wage costs, in particular social costs, expenses, benefits and personnel costs, and a partial component consisting of taxes and grants related to employed persons. Labour costs express the price at which the employer purchases labour in the marketplace. Labour cost levels and development oscillate around the equilibrium between the supply side and the demand side of the labour market. Unlike price determination in the goods and services market, negotiations concerning labour costs are influenced by the position and political strength of the social partners concerned and the minimum one-year validity period of respective collective agreements. Labour cost fluctuation features the delays and rigidity which characterise the development of overall economic performance as well as additional macro- and micro-elements. Both the amount spent on purchasing labour and labour performance in a given period exert significant influence upon the national economic balance, consumption, business behaviour and government policy. Labour cost levels and dynamics mutually interact with both the level and dynamics of labour productivity as well as with the relative level of production and consumer prices. Labour costs constitute a significant factor in terms of economic competitiveness:

- at the macroeconomic level - labour cost levels in individual countries,
- at the sectoral level - labour cost levels of individual businesses within the same industry and profession.

The labour cost structure forms an interface between the economic and social spheres. Labour costs make up the primary source of the income of society's most numerous social group - employees⁴. Wage costs consist principally of compensation

² CZSO: Statistical metainformation system, Indicators, available at: <http://apl.czso.cz/ISMS/ukazdet.jsp?fnazev=pr%E1ce&fid=609>

³ Eurostat: Labour costs annual data, Reference Metadata in the Euro SDMX Metadata Structure (ESMS), available at: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/lcan_esms.htm, translation by RILSA.

⁴ In 2008, income from dependent activities accounted for 67 per cent of the gross income of the households of employees. For more information see: CZSO: Expenditures and Consumption of Households included in Household Budget Survey in 2008 Households by Status and Age of the Head of

for work, i.e. wages, salaries and bonuses paid for a person's readiness to work and/or for periods of time in which the employee does not work but for which he/she is paid. Wages and salaries paid to employees, in combination with other financial sources, provide the finance required to cover the payment of social benefits, old-age and disability pensions, sickness benefits both in cash and in kind, the health care system and a host of other societal needs⁵. Labour costs also include the personnel expenses required to both recruit and retain the employee as well as for improving his/her qualifications.

The labour cost structure influences business activity, motivates employees and influences relations between the State, employers, employees and other social groups. Changes in the structure of total labour costs have to correlate with changes in the financing of the social, health care and education systems. Labour cost analysis involves addressing a range of issues relating to labour cost levels and structure, labour productivity and social relations.

Different aspects of the cost-related and competitive position of national economies (and/or of sectors and individual businesses) are reflected:

- in the absolute level of labour costs,
- in a level relative to labour productivity, i.e. in unit labour costs (work performed on one product unit),
- in the Labour's Share in Costs.

The labour cost level, its development and relationships and a comparison of labour costs with the level, development and relationships of labour productivity and total costs provides information on the situation of and changes in the cost position of national economies; they enable fiscal and monetary policies to flexibly respond to inflationary pressure. International comparison constitutes the basis for the creation of business strategies in the EU featuring national differences in the costs and productivity of national economies.

The labour cost structure is a reflection of the influence of the various factors at work in the labour market (i.e. on the side of both employers and employees) and the social protection and healthcare systems. The influence of the position of employers and employees in the labour market is reflected in direct labour costs: the amount of earnings, both the form and various components of wages and salaries and social benefits, social payments and spending on the personal development of employees, based either on a contract or employer "generosity". The social protection system determines the level of mandatory social expenses payable to the public purse.

Those Labour's Share in Costs determined by the positions of the various social partners active in the labour market are relatively flexible. The character and intensity of the flexibility of such components depend on the formation mechanisms applied. The contractual determination of the level and terms and conditions of each individual component is decisive in the private sector; the public sector is regulated by political decisions related to state budget income and expenditure and/or to government

Household, by Municipality Size, Income Brackets. CZSO 2009, code e-3001-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3001-09>

⁵ The text deals hereinafter with the position of labour costs in the social sphere only if it is immediately related to the position of labour costs in terms of economic relationships.

consumption. As far as labour costs are concerned, both sectors are mutually connected.

Payments from centralised social protection funds (statutory social expenses) have a guaranteed long term character (income guarantee during periods of sickness, healthcare payments, disability pensions, old-age pensions etc.) which naturally requires long term stability in terms of social security and health care contributions.

The overall structure of collective centralised social protection funds determines how much can be paid out. The amount of funds required is determined by the structure of payments made from centralised funds and the extent to which needs are met through direct statutory contributions paid by employers and employees on the one hand and through indirect revenue obtained through direct and indirect taxes on the other; the wide range of combinations available results in a wide variety of systems.

International comparisons highlight the variety of different ways in which different countries accumulate centralised social protection funds as they do the wide range of statutory deductions from employees' gross pay and other tax revenue used for such funding. Aggregate rates applicable to statutory deductions and the aggregate tax burden imposed on gross pay i.e. that part of labour costs that flows into the public sector, the so-called tax gap, differ considerably from country to country, the interpretation of which must take into account the specific model of social protection employed.

Two basic types of social protection system can be identified:

1. High levels of social solidarity and redistribution processes, characterised by a high level of statutory deductions paid by employers and employees to centralised social protective funds and by a wide range and high value of payments in the form of social allowances made from such funds on the basis of the solidarity principle on the one hand and by relatively lower gross, and particularly net, pay on the other. This system is typical of Continental countries such as France (the highest level of deductions paid by employers as well as of aggregate statutory deductions), Italy, Austria, Germany and Nordic countries such as Sweden and Finland. This type of social protection system is also typical of the Czech Republic and other post-communist countries.
2. The Anglo-Saxon model, which features individual responsibility for social and health issues, is applied in Great Britain and Ireland. Low levels of statutory deductions paid by both employers and employees are reflected in low guaranteed allowances; on the other hand, gross pay and in particular net pay levels, from which employees have to ensure their own personal protection against social risks (sickness, old age, unemployment, etc.), are relatively high.

The above typology might be considered somewhat extreme; most countries feature a combination of the features of the two models. However, the Danish model of social protection, which is financed from taxes and features a high level of solidarity with significant egalitarian characteristics, is unique in this respect.

1. The Content and Position of Labour Costs in Social and Economic Relations

Most foreign analysts refer to three types of social and economic model⁶:

- the liberal model, characterised by individual responsibility for social needs, including health care, personal responsibility for asserting oneself on the market and by a low level of social policy, for example the U.S.A., Canada, Australia,
- the conservative model, characterised by paternalism within the traditional hierarchic organisational structure of society (the Christian family tradition), for example Germany and Continental European countries,
- the social democratic model, characterised by complex government social policies, that provides a protective safety net, equal opportunities and a high level of solidarity in the insurance and fiscal systems, for example the Nordic countries.

An alternative and more detailed scheme is provided by Karel Zeman in a study entitled "The Reflection of the Development of Specialisation Profiles of the Economies of EU Member Countries in the Czech Economy". The author defines the following types of social and economic model in the EU⁷ by the level of labour market regulation:

- the Nordic model (Denmark, Finland, Sweden, the Netherlands),
- the Anglo-Saxon model (Ireland, Great Britain),
- the Continental model (Belgium, Luxembourg, Austria, France, Germany),
- the Mediterranean model (Italy, Spain, Portugal and Greece),
- the new post-communist member countries.

⁶ For more information see: Esping-Anderson, G., *The Three Worlds of Welfare Capitalism*, Princeton University Press, New Jersey, 1990

⁷ Zeman K.: *Reflexe vývoje specializačních profilů ekonomik členských států EU v české ekonomice (The Reflection of the Development of Specialisation Profiles of the Economies of EU Member Countries in the Czech Economy)*, The Institute for the Integration of the Czech Republic into the European and World Economies, The Economics University, Prague 2009, p. 32

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

With the concept of cheap labour in the Czech Republic in mind, the establishment of basic relations between employees, employers and the government was of essential importance in the first years of transformation from a controlled to a market-driven economy:

- the market-based formation of wages and collective bargaining with regard to remuneration and employment terms and conditions,
- the state undertook to cover costs related to the social wellbeing of employees and their families,
- at the beginning of the transformation process, the State assumed the costs of educating the new labour force,
- the insurance structure covered the basic financing required from the social insurance and health care insurance systems.

Act No. 2/1991 Coll., the Collective Bargaining Act, and Act No. 1/1992 Coll., the Wage Act, created the institutional framework for the determination of wages and labour costs in the private business sector (about 4/5 of employees). The role of the state was limited to the determination of minimum payroll expenses (minimum wage, minimum overtime pay, guaranteed wage) the purpose of which was to prevent unfair discrimination against employees (e.g. in terms of gender, age or nationality) and to provide a basic and equal competitive environment in the market for goods and services. The determination of salaries in the non-business sector is still based on salary tables and personal bonuses governed by law (about 1/5 of employees) the reason for which was to guarantee long term, high quality standards from state institutions and to provide for the protection of tax payers' interests with regard to the efficient spending of public finances on government sector compensation of employees. The public sector salary system effectively protects employees against supply and demand fluctuations in the labour market, thereby ensuring the stable conditions necessary for the public administration, education, social insurance and health care insurance systems to function efficiently.

The particular symptoms of oscillations in wages as the basic item of labour costs are reflected in dependence on the social and economic situation through the behaviour of different corporate wage systems, the form and flexibility of which are determined by:

external factors:

- the condition of the goods and services market,
- the labour market situation
- economic and social policies,

internal factors:

- the corporate management system,
- the interests of owners,

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

- the interests of management,
- the interests of highly qualified employees,
- the interests of employees with intermediate qualifications and/or of other employees,
- the interests of a range of social groups,
- trade union policy.

The institutional framework governing wage formation in the Czech Republic is close to the liberal model found in Great Britain; wage negotiations are not held at the national level, rather they take place at the industry level with the most important decisions being made by individual companies. Furthermore, the binding nature of collective agreements is limited and minimum wage levels agreed do not in practice fully cover the respective industrial sector. When negotiating wage levels, the various social partners have no opportunity to base their proposals on recommendations provided by specialised institutions.

Neither the state nor the social partners involved systematically monitored the extent and level of collective bargaining in the 1990s due mainly to the virtual disintegration of both employers' organisations and the trade unions. Expert estimates suggest that collective agreements defined and protected the wages of a mere 1/3 of employees in the middle of the 1990s. Since 2002, the expansion of collective agreements has been monitored by the Ministry of Labour and Social Affairs in its Average Earnings Information System, data from which is subsequently provided to the CZSO. Comparable data concerning the private (non-public) sector has been available since 2004.

Table 1 Employee share, time for which remunerated and gross earnings in the private sector operating under collective agreement conditions, comparison with other organisations in %

	2004	2005	2006	2007	2008
Share of employees in the private sector	38.21	49.15	48.43	47.66	46.38
Comparison of hours remunerated per month to an average of other organisations	98.2	99.2	99.0	99.0	99.6
Comparison of average monthly earning to an average of other organisations	101.2	100.9	100.0	100.0	100.4
Comparison of the monthly earning median to that of other organisations	101.3	103.3	102.7	104.6	104.9
Comparison of the median and average monthly earnings under collective agreement conditions	85.1	86.3	86.0	86.7	85.7
Comparison of the median and average monthly earnings at other organisations	86.6	85.0	83.7	82.8	82.4

Source: a series of publications issued by the CZSO - Structure of Earnings Survey 2004 to 2008, codes 3109-05, 3109- 06, 3109- 07, 3109- 08, w 3109- 09, calculated by RILSA.

Note: "Other organisations" refers to the aggregate data of respondents who either declared in the research that they did not have a collective agreement in place or did not provide data.

The stated extent of collective bargaining in the Czech Republic is low in relation to the majority of European countries. In addition, the terms and conditions applicable to wages and to work are, to a great extent, determined by the employer by means of a unilateral decision which the employee either accepts or declines by leaving for a different organisation. An impression can be gained of the extent of

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

collective bargaining in selected EU countries by means of data concerning the proportion of employees whose minimum wage is covered by such contracts.

Table 2 The Proportion of Employees whose Minimum Wage is covered by Collective Agreements in Selected Countries in 2004 (in %)

Country	Coverage rate in %
Denmark	81 to 90
Finland	90
Italy	100
Austria	98
Germany ¹	69

Source: Funk, Lesch: *The minimum wage in Europe. Research Summary. Cologne Institute for Economic Research, 2004, p. 7.*

Note: ¹ year 2003.

In 2004, the minimum wage in the countries highlighted was not guaranteed by the government; the minimum wage was the result of agreement between the respective social partners.

The principal reason for the relatively low level of interest in collective agreements is the general reluctance of Czech employees to join trade unions (held in low regard as a result of their perceived involvement in the totalitarian regime). Trade unions are currently active in the majority of the companies in which they were active before 1990; conversely an absence of trade unions is typical of the small- and medium-sized companies that emerged after 1990. The significance of collective bargaining in determining wages and employment terms and conditions in the Czech Republic is further weakened by the limited extent to which legislation allows the extension of the validity of collective agreements signed at the supra-departmental level to cover other entities⁸. Superior collective agreements are intended to prevent unjustified competitive advantages accruing to those employers who refuse to adequately compensate their workers for their labour and to provide them with the benefits that are considered usual in the respective industrial segment and region.

In 1993, the 50 per cent payroll tax that was payable by the employer was replaced by social security and health insurance contributions (hereinafter referred to as "social security insurance") amounting to 49.5% of gross wages, 36% of which was payable by the employer and the remaining 13.5% by the employee⁹. The total statutory social security insurance contribution subsequently decreased gradually, reaching 45% in 2009.

⁸ For more information please refer to: Decision of the Constitutional Court of the Czech Republic No. 199/2003 Coll., concerning an application for the cancellation of a provision of Sect. 7 of Act No. 2/1991 Coll., the Collective Bargaining Act.

⁹ The method of financing the social security and health insurance systems through insurance premiums is regarded as safe in terms of obtaining revenue due to its "parafiscal" nature (predetermined purpose).

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

Table 3 Social Security, Health Insurance and Payroll Tax Rates Expressed as a percentage of Gross Wages

Payer	1990 to 1992	1993	1994 to 1995	1996 to 2008	2009
Employer	50.00 ¹⁾	36.00	35.25	35.00	34.00
Employee	-	13.50	13.25	12.50	11.00
Total	50.00	49.50	48.50	47.50	45.00

Source: Höhne, S., Šťastná, A., Šlapák, M., Kozelský, T.: *Bulletin No. 24, Main Economic and Social Indicators of the Czech Republic 1990 - 2008, RILSA Prague, 2009, ISBN 978-80-7416-033-2, available at: <http://www.vupsv.cz/>.*

Note: ¹⁾ payroll tax.

The transfer of a portion of social insurance payments from the employer to the employee in 1993 was accompanied by an adjustment to the level of income tax payable by private individuals; nevertheless, the total employee tax burden increased. Wage bargaining takes the tax burden into account and employees or, more specifically, the trade unions have endeavoured to increase gross earnings during periods of economic boom¹⁰, thus increasing labour costs.

Table 4 Effective Employee Taxation on Gross Earnings, Expressed in %

Year	Earnings per actual persons using methodology in use to 2008		Earnings per the full-time equivalent using 2009 methodology ¹¹	
	Tax burden	Income tax	Tax burden	Income tax
1989	18.27	18.27		
1990	18.11	18.11		
1991	18.59	18.59		
1992	20.00	20.00		
1993	20.70	7.20		
1994	21.70	8.45		
1995	22.40	9.15		
1996	22.10	9.60		
1997	21.90	9.40		
1998	21.80	9.30		
1999	21.60	9.10		
2000	21.58	9.08	22.38	9.88
2001	21.47	8.97	22.42	9.92
2002	21.87	9.37	22.98	10.48
2003	21.85	9.35	23.37	10.87
2004	22.13	9.63	23.77	11.27
2005	24.09	11.59	24.06	11.56
2006	22.51	10.01	22.43	9.93
2007	20.84	8.34	22.92	10.42
2008	23.55	11.05 ¹	23.62	11.12 ¹
2009			22.28	11.28 ¹

¹⁰ For more information see: Baštýř I., Prušvic D., Vlach J.: *Níklady práce, RILSA 2004, pp. 23 - 25, available at: <http://www.vupsv.cz/index.php?p=publikace&klasif=&kateg=&pracovnik=2&rok=2004>*

¹¹ For more information see: CZSO, *Průměrná mzda a evidenční počet zaměstnanců - Metodika, available at: http://www.czso.cz/csu/redakce.nsf/i/pmz_m*

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

Source: Department of Analyses and Statistics Ministry of Labour and Social Affairs Czech Republic: *The Development of the Basic Living Standard Indicators in the Czech Republic 1993 - 2009*, The Ministry of Labour and Social Affairs (MPSV) 2010, available at: <http://www.mpsv.cz/cs/1797>, calculated by RILSA.

Note: ¹⁾super-gross wage; the tax basis consists of gross earnings to which is added the statutory social security insurance contribution paid by the employer. Up to 2007, the statutory social security insurance contribution was deducted before income tax was calculated.

An increase in the employee tax burden of 3 percentage points in 2008, or by 0.7 percentage points using average wage monitoring methodology in place since 2009, was implemented as a result of public finance reform in the period 2007 - 2010¹² that signified a break from the principles of the tax reform process of 1993. In 2009, the double taxation of income, attained through the "tax fiction" of the super-gross wage¹³ which employs the term "equal tax" (i.e. a flat rate of tax) was partly eliminated accompanied by a decrease of 1.5 percentage points in employee social security contributions; the tax burden decreased by 1.4 percentage points overall. The employee tax burden fell below 2007 levels following the introduction of new wage reporting methodology; consequently employers need not fear trade union pressure to increase earnings due to higher income tax levels. The following table indicates how total (employer and employee) taxation has developed since 1990.

Table 5 Effective Taxation of Labour 1990 to 2008 Expressed in % (average values)

	1990 -1992	1993	1994 -1995	1996 -2007	2008	Difference 2007 - 1990 in %	Difference 2008 - 1990 in %
% of book wages	68.9	56.7	57.3	57.1	58.9	- 11.8	- 10.0
Tax gap in % of TLC	45.3	40.9	40.9	40.7	42.2	- 4.6	- 3.1

Source: Department of Analyses and Statistics Ministry of Labour and Social Affairs Czech Republic: *The Development of the Basic Living Standard Indicators in the Czech Republic 1993 - 2009*, The Ministry of Labour and Social Affairs (MPSV) 2010, available at: <http://www.mpsv.cz/cs/1797>; Höhne, S., Štátná, A., Šlapák, M., Kozelský, T.: *Bulletin No. 24, Main Economic and Social Indicators of the Czech Republic 1990 - 2008*, RILSA, Prague 2009, ISBN 978-80-7416-033-2, available at: <http://www.vupsv.cz/>, calculated by RILSA.

Note: The tax gap is the difference between the employer's labour costs and the employee's net earnings

Private businesses, particularly those newly incorporated during the extensive privatisation process gradually abandoned the social role they had assumed before 1990. Wages, defined in Czech legislation as merely financial compensation for work performed, meant that the state (i.e. the government) assumed responsibility for the social wellbeing of employees and their families at the beginning of the transformation process from a controlled to a market economy; the state even assumed the costs of

¹² For more information see: Ministry of Finance of the CR: *Reforma veřejných financí 2007 – 2010* (Public Finances Reform 2007 – 2010), available at: http://www.mfcr.cz/cps/rde/xchg/mfcr/xsl/ref_veřej_financ.html

¹³ Super-gross wage + social security, health insurance and employment policy contribution payable by the employer, for more information see: Stulík R.: *Sjednocení vyměřovacího základu pro daně a odvody* (Unification of the Assessment Basis for Taxes and Deductions), Ministry of Labour and Social Affairs 2009, available at: <http://www.mpsv.cz/cs/7011>

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

training apprentices. Businesses thus gained and made full use of an opportunity to optimise costs.

In addition to changes to the institutional framework, labour cost movement was also brought about by the creation of a "wages cushion". In the years 1990 to 1991, the gap between the price of labour and productivity widened. The value of wages, that initially accounted for roughly 70 per cent of total labour costs, fell in real terms by 1/3, with aggregate labour productivity decreasing by less than 1/10. This disproportion was finally balanced in 2002 to 2003, i.e. very near to the accession date of the Czech Republic to the EU. During the period 1992 to 2003, labour costs in the Czech Republic grew at a high rate, regardless of the development of labour productivity and inflation; indeed, wage development filled the gap between earnings and productivity.

In practice, the use of the "wages cushion" came to an end in 2000. In 2002 and 2003, over-estimates of inflation growth in relation to accession to the EU resulted in a relatively rapid growth in earnings. Following eventual admission in 2004, social partners succeeded in maintaining a sustainable balance between increases in labour productivity and average earnings. The period 2004 to 2008 was characterised by rapid economic growth, low inflation kept to within Euro zone levels (an average annual inflation rate of 2.3%), the strengthening of the Czech currency, the CZK (at an average annual rate of 2.9%), price and wage level convergence towards more advanced EU country levels and increases in the employment rate. 2009 however, as with many countries, proved to be the economic watershed. Measures taken as part of the public finances reform process of 2007 - 2010 resulted in fierce but, fortunately, one-off inflation growth (6.3%) accompanied by the significant strengthening of the CZK (11%). Employers, whose inaccurate growth expectations led to further increases in recruitment, were faced with lower levels of productivity growth and, subsequently, the global economic crisis. In 2009, the recession hit the secondary sector, particularly the processing industry.

Labour taxation has remained, in practice, constant since the tax reforms of 1993 with wages and salaries accounting for approximately 3/4 of total remuneration paid to employees with regard to whom the tax burden has exhibited a slightly increasing tendency (progressive income tax regime). A change in the tax base accompanied by the introduction of a flat rate of income tax in 2008 resulted in a decrease in real net earnings.

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

Diagram 1



Source: Department of Analyses and Statistics Ministry of Labour and Social Affairs Czech Republic: *The Development of the Basic Living Standard Indicators in the Czech Republic 1993 - 2009*, The Ministry of Labour and Social Affairs (MPSV) 2010, available at: <http://www.mpsv.cz/cs/1797>; Höhne, S., Štátná, A., Šlapák, M., Kozelský, T.: *Bulletin No. 24, Main Economic and Social Indicators of the Czech Republic 1990 - 2008*, RILSA, Prague 2009, ISBN 978-80-7416-033-2, available at: <http://www.vupsv.cz/>, calculated by RILSA.

The devaluation of the (then) Czechoslovak crown by roughly 2/3 in 1990 and 1991 created a “currency cushion” which was followed by a high rate of inflation. According to RILSA estimates, price levels in 1993 reached roughly 1/4 of those in Germany. The currency measures adopted at the beginning of the economic transformation process at the macro level created space for Czech businesses to benefit from their cost and wage competitive advantage in the wider European market¹⁴.

The Czech economy is one of the most open in the EU¹⁵. Although detailed statistical data on this subject is not yet available from the EU itself, CZSO estimates indicate that exports accounted for 31% of production in 2007 and 35% of market production. Industrial products account for over 90% of exports and the Czech industrial sector exports roughly 50% of its production¹⁶. In comparison, Malta similarly exported 50% of its production in 2007 and Ireland, Belgium and the Netherlands around 40%.

¹⁴ For more information see Švejcar, J. and coll.: *Česká republika a ekonomická transformace ve střední a východní Evropě* (The Czech Republic and Economic Transformation in Central and Eastern Europe), Academia 1997, ISBN 80-200-0568-4

¹⁵ The openness of the Czech economy results from its relatively large industrial sector. Generally, the greater the “weight” of industry in the national economy, the higher are imports and exports while services are mainly consumed in the domestic market.

¹⁶ For more information see Rojíček, M.: *Statistika upřesňuje představy o otevřenosti české ekonomiky* (Statistics Clarify the Concept of the Openness of the Czech Economy). Press release by the CZSO of March 5, 2009, available at: http://www.czso.cz/csu/tz.nsf/i/statistika_upresnuje_predstavy_o_otevrenosti_ceske_ekonomiky

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

Throughout the EU convergence process, Czech price levels, including that of labour, maintained their relatively low levels. The equalisation of price levels occurs through inflation or the appreciation of the national currency or a combination of the two; as part of the process, the exchange rate and purchasing power parity converge. As the result of the consistent anti-inflation policy followed by the Czech National Bank (ČNB), the Czech currency appreciated significantly post 2000 which led to a relative decrease in the cost of the imported raw materials and energy essential to the industrial sector. Most importantly, a stable economic environment had been created in which businesses operating in the internal market could base their decisions. However, exporters faced gradually weakening cost competitiveness, including in terms of labour costs, in the period 2000 to 2008 as a result of the appreciation of the CZK by 1/3 (by 1/5 after accession to the EU in 2004).

Despite the convergence process, Comparative Price Levels still differs significantly from country to country. Under such conditions, different national currencies enjoy different purchasing parities. In addition, monetary policy (the creation of monetary cushions for example) as well as developments in the financial markets often lead to a de-synchronisation of the purchasing power of a currency and the exchange rate. National labour price levels differ from those of the reference region¹⁷.

An international comparison of labour costs presumes an elimination of price level differences regarding which labour costs expressed through purchasing power parity (PPP)¹⁸ provide a solution. This index suggests the amount of goods and services of a comparable structure which can be purchased from the total income of an employee in country X at the price levels of country Y.

For the purposes of international comparison within the EU-27, Eurostat employs the Purchasing Power Standard (PPS) which is an artificial monetary unit created to more accurately express EU-wide economic indicators. With regard to the European Comparison Programme, the purchasing power of 1 PPS is equal on average to that of 1 EUR in EU countries. Data expressed in PPS is obtained using the value expressed in the national currency divided by purchasing power parity in EUR¹⁹.

¹⁷ For more information regarding the international comparison of price levels and exchange rates with respect to the price of labour and labour productivity see Fassmann, M.: An International Comparison of Wage Levels (Labour Costs) and Labour Productivity with Advanced European Countries, *Pohledy* 6/97, p. 23 – 52

¹⁸ Purchasing power parity (PPP) means the ratio of prices paid expressed in a national currency for identical goods and services in other countries.

¹⁹ For more information: OECD, Eurostat: Methodological manual on purchasing power parity, European Communities / OECD, Luxembourg: Office for Official Publications of the European Communities, 2006, ISSN 1725-0048, ISBN 92-79-01868-X, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-BE-06-002 ; CZSO: Evropský srovnávací program, CZSO 2007, available at: http://www.czso.cz/csu/redakce.nsf/i/evropsky_srovnavaci_program

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

Diagram 2



Source: CZSO: *Vývoj úplných nákladů práce v letech 1994 - 2008 (The Development of Total Labour Costs 1994 to 2008)*, CZSO, Prague 2010, code w-3113-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3113-09>; Eurostat: *Economy and finance - Exchange Rates*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/exchange_rates/data/database; February 2010, Eurostat: *Economy and finance - Purchasing power parity*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/purchasing_power_parities/data/database, February 2010, calculated by RILSA.

The convergence of the varying price and earnings levels of individual countries is a long term process. The available purchasing power of the average citizen which, in itself, reflects the level of economic development, is of key significance in terms of the Comparative Price Level movements of individual national economies. Lower price levels have an important social and economic protective function in those countries characterised by lower levels of economic performance and labour productivity; on the one hand, they increase the real purchasing power of earnings and, on the other, they enhance cost competitiveness in terms of exports. Of course, a number of other social, political, environmental and climatic factors have a significant influence on the convergence process. Consequently, a decrease in the differences in price levels and

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

structures within the EU²⁰ will most likely be a long term process ending with a range of 80 to 120% (perhaps higher in the case of Denmark with its specific fiscal and social model).

Table 6 The Comparative Price Level of GDP Related to the EU-27 and USA Average 2000 to 2008 expressed in %

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2008–2000 in %
EU 15	105.6	105.4	105.5	105.9	106.0	105.5	105.4	105.2	104.9	- 1
Bulgaria	31.8	33.4	33.4	33.8	35.1	36.6	38.1	40.3	43.3	12
Romania	36.5	36.8	37.1	37.3	38.1	46.9	49.9	55.9	54	18
Lithuania	47.2	47.5	48.0	47.0	48.4	51.4	54.0	57.3	61.8	15
Hungary	47.7	50.2	55.3	56.2	59.6	61.9	59.7	64.4	65.1	17
Slovakia	42.7	42.3	43.6	47.7	51.1	52.7	55.1	60.4	66.2	24
Poland	52.8	59.0	55.5	49.5	48.8	55.5	58.1	60.2	67.2	14
Czech Republic	45.9	48.6	54.4	52.1	53.2	57.4	60.8	1.8	70.4	25
Estonia	52.3	55.5	55.9	56.9	57.7	59.9	63.9	67.9	71	19
Latvia	51.2	51.7	50.2	47.8	48.9	51.8	57.4	66.9	71.2	20
Malta	67.9	71.0	69.6	68.3	67.4	67.7	69.0	69.9	72.3	4
Slovenia	70.9	72.3	73.0	74.6	72.6	73.0	74.6	77.6	80.6	10
Portugal	80.5	82.2	82.8	83.5	85.0	81.7	81.2	81.7	82.3	2
Greece	78.9	78.1	77.2	81.5	82.5	85.2	85.8	87.6	90.0	11
Cyprus	85.9	85.6	86.1	88.5	88.0	88.2	88.6	87.3	90.5	5
Spain	84.4	86.1	85.8	89.1	90.1	91.3	90.3	89.7	92.8	8
United Kingdom	120.0	117.3	116.8	109.6	110.6	111.1	112.9	115.4	101.7	-18
Italy	93.9	94.0	98.9	101.0	103.6	103.5	102.3	101.0	102.7	9
Germany	111.2	111.3	110.2	108.5	106.4	103.5	102.8	102.4	104.9	-6
Netherlands	102.6	105.5	105.5	109.7	107.9	107.0	106.6	105.5	107.9	5
Austria	103.5	106.8	104.8	104.6	103.8	103.8	105.8	106.5	109.2	6
Belgium	102.4	103.1	101.2	103.9	106.4	107.4	108.4	109.4	111.5	9
France	108.0	107.0	105.9	110.9	111.5	110.2	110.8	110.0	112.4	4
Luxembourg	108.1	110.4	109.3	111.4	109.5	109.5	113.6	113.9	116.2	8
Sweden	124.4	117.6	119.4	121.0	118.4	120.6	120.5	118.4	117.8	-7
Finland	114.4	117.8	117.4	119.5	115.7	115.7	116.7	115.6	118.4	4
Ireland	110.6	115.6	117.4	120.0	119.4	120.6	120.8	118.0	120.6	10
Denmark	129.7	132.3	130.7	135.9	134.0	137.6	137.0	137.7	140.9	11
USA	124.3	130.0	123.7	104.5	95.5	95.4	96.0	89.8	87.1	-37

Source: Eurostat: Economy and finance - Purchasing power parities (PPPs), price level indices and real expenditure for ESA95 aggregates, available at:

http://epp.eurostat.ec.europa.eu/portal/page/portal/purchasing_power_parities/data/database, access July 2010

Note: EU countries are ranked in ascending order based on the 2008 level

²⁰ The process of earnings level convergence in relation to the movement of Comparative Price Level s within the EU in nominal and parity terms is taken from Baštýř, I.: Srovnání úrovně a pohybu nákladů práce, nominálních a reálných mezd v ČR a vybraných státech EU (Comparison of the Level and Movement of Labour Costs, Nominal and Real Wages in the Czech Republic and Selected EU Countries), RILSA, Prague 2006, ISBN 80-87007-54-9 available at: http://Prague.vupsv.cz/Fulltext/vz_222.pdf, pp. 25 - 29

2. The Macroeconomic and Institutional Framework for Labour Cost Movement in the Czech Republic

The CZK exchange rate approached purchasing power parity relatively quickly with the ERDI²¹ coefficient reaching a level of 2.0 in 2000 from which point it fell to a value of 1.4 in 2008. The less economically developed traditional market economies of the EU, e.g. Portugal, Spain, Greece and Cyprus have ERDI index values of between 1.1 and 1.3.

The price level equalisation process is accompanied by the convergence of nominal earning levels after values have been recalculated according to the exchange rate and expressed in terms of purchasing power parity. Due to the rapid growth in labour productivity and the appreciation of the Czech currency, earnings levels in EUR exceeded those of other post-communist countries following EU accession. In other words, Czech labour became relatively more expensive for external investors in European market terms.

²¹ Exchange Rate Deviation Index, the relation between the exchange rate and purchasing power which basically indicates how many times more (or less) goods and services may be purchased in a particular country for one unit of the currency of the reference country, namely 1 EUR for the purposes of this study. A high ERDI index is typical of less developed countries that make use of a currency cushion to maintain a balanced foreign trade account.

3. Labour Cost Data Sources and the Use of Such Data for International Comparison Purposes

Two concepts can be distinguished in terms of the content of labour costs:

Firstly, total Labour Costs (TLC) as monitored annually in the labour statistics of the Czech Statistical Office (CZSO) and labour costs (LC) as monitored by Eurostat labour market statistics both of which contain all costs expended by employers on their employees, i.e. wages and salaries (considered direct labour costs) and non-wage costs including social expenses, personnel costs, taxes and benefits (indirect labour costs).

The second approach to the identification of labour costs consists of a consideration of remuneration paid to employees and includes (both in cash and in kind) wages and salaries for the work performed for the employer, remuneration for company partners and cooperative members, the salaries and uniforms of regular soldiers, the pocket money, accommodation expenses and clothing provided to soldiers on active service, commuting allowances, board and keep expenses and subsidised cultural and sports activities etc. Such payments are reported before the deduction of income tax, statutory social security and health insurance and other obligatory deductions. In addition, compensation of employees includes contributions made by employers on behalf of their employees, i.e. social security and health insurance payments and direct social grants provided by the employer (e.g. non-refundable grants paid from corporate social funds)²².

3.1 Labour Costs

For the purposes of this study, the authors propose to monitor labour costs in terms of²³:

- direct costs, i.e. wages and salaries and allowances,
- indirect costs, i.e. social benefits, social costs and expenses, personnel costs, taxes and grants.

The basic source of data on the structure and movement of labour costs in the Czech Republic consists of regular annual surveys which have been performed by the CZSO since 1994. The Office publishes the results in the Labour Costs section²⁴ in the December of the following year. Data²⁵ relates to:

²² For more information see for example: CZSO: Statistical Yearbook of the Czech Republic 2009, Prague 2009, code e-0001-09.

²³ For more information see CZSO: Vývoj úplných nákladů práce v letech 1994 až 2008 (Total Labour Cost Development 1994 to 2008), Introduction, CZSO 2010, code w-3113-09

²⁴ For example CZSO: Labour Costs in 2008, CZSO 2009, code w-3112-09, available at: http://www.czso.cz/csu/2009edicniplan.nsf/engpubl/3112-09-in_2008

²⁵ The methodology and content of monitored cost items are described for example in CZSO: Labour Costs in 2008, Introduction, CZSO 2009, code w-3112-09 and the TLC 4 - 01 Report, available at: <http://apl.czso.cz/pll/vykazy/pdf113?xvyk=1475&cd=0>

3. Labour Cost Data Sources and the Use of Such Data for International Comparison Purposes

- organisations with one or more employees,
- all industrial sectors, i.e. A - S classification CZ-NACE.

CZSO data is eminently suitable for an examination of labour cost movements in the Czech Republic; however, partial differences in Eurostat data monitoring and data processing methodology somewhat complicate an international comparison.

Eurostat monitors labour costs in organisations with 10 or more employees; moreover Eurostat methodology includes in direct (wage) costs those items that are included in CZSO methodology in so-called social benefits (for example company products purchased by employees at a discount, housing allowances, company cars used for private purposes and meal allowances). The value of these cost items, however, is relatively insignificant and can be considered as being of the order of single figure percentages. As far as the Czech Republic is concerned, direct labour costs according to Eurostat methodology are roughly 2 per cent higher than those reflected in CZSO data.

Table 7 Share of Social Benefits in Total Labour Costs in the Czech Republic 2003 to 2008

Year	2003	2004	2005	2006	2007	2008
Share of Social Benefits in TLC in %	1.94	1.89	2.09	1.94	2.16	1.54

Source: CZSO: Vývoj úplných nákladů práce v letech 1994 – 2008 (Total Labour Cost Development 1994 to 2008), CZSO 2010, code w-3113-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3113-09>

A further limitation in terms of data comparison is that Eurostat restricts their data to the 2nd and 3rd sectors only of the national economy. Unlike the CZSO, European statistics do not consistently monitor the agricultural, fishing and forestry sectors.

Table 8 Comparing the Structure of Labour Costs Expressed in CZSO and Eurostat Methodologies; Labour Costs are Expressed in %

Methodology	Item	2003	2004	2005	2006	2007	2008
CZSO, incl. agriculture, fishing and forestry	Direct costs	70.23	70.37	70.61	70.97	70.45	71.53
	Indirect costs	29.77	29.63	29.39	29.03	29.55	28.47
CZSO, industry, building sector and services (NACE C - O)	Direct costs	70.23	70.37	70.61	70.97	70.45	71.53
	Indirect costs	29.77	29.63	29.39	29.03	29.55	28.47
Eurostat (NACE C - O)	Direct costs	72.1	72.2	72.7	72.8	72.5	:
	Indirect costs	27.9	27.9	27.3	27.1	27.5	:

Source: CZSO: Vývoj úplných nákladů práce v letech 1994 – 2008 (Total Labour Cost Development 1994 to 2008), CZSO 2010, code w-3113-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3113-09>, Eurostat: Labour costs annual data, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/database, access March 2010, calculated by RILSA

3. Labour Cost Data Sources and the Use of Such Data for International Comparison Purposes

For the purposes of international comparison, the study makes use of labour cost information from three comparable sources and/or a combination of such data obtained after methodological adjustments have been made:

- Eurostat
- OECD
- Labour Cost Monitoring, RILSA

3.1.1 Eurostat

Labour Cost (LC) data produced by national statistical services applying Eurostat methodology makes up the key data source. Eurostat data is obtained from four-year all-European surveys - Labour Costs Surveys (LCS Collection)²⁶.

The updating of data between individual surveys is performed using the LCI (Labour cost Index)²⁷ method, i.e. through continuous direct and indirect labour cost indexation based on survey outputs (LCS). For indexation purposes, data on average earnings growth per full-time equivalent is used which is reflected in the growth of direct costs and statutory social contributions relevant to wage income²⁸. The LCI calculation is defined in the Annex to European Commission Directive 450/2003²⁹.

Eurostat statistics include all EU member countries and data is comparable in terms of the methodology applied if converted into EUR or PPS³⁰.

Data relates to organisations with 10 or more employees and is published as an aggregate of national economies as well as for individual member countries per one employee hour or per month. The national economies aggregate data concerns the industrial and services sectors: NACE from C to O. Eurostat publishes its data between 13 and 15 months following the year end.

²⁶ For more information: Eurostat: Labour cost surveys, Reference Metadata in Euro SDMX Metadata Structure (ESMS), available at: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/lcs_esms.htm

²⁷ For more information: Eurostat: Labour cost index, Reference Metadata in Euro SDMX Metadata Structure (ESMS), available at: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/lci_esms.htm, March 2010

²⁸ For more information see Holý, D.: Index nákladů práce v ČR a v EU (Labour Cost Index in the Czech Republic and in the EU), Statistika 6/2002, ISSN 0322-788x, pp. 199 - 205

²⁹ Annex, Regulation (EC) No. 450/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, Official Journal of the European Union, L. 69/5, translated by RILSA

³⁰ For the purposes of international comparison within the EU-27, Eurostat applies the Purchasing power standard - PPS which is an artificial currency unit invented to express the volume of the economic aggregate indices of EU countries. With regard to the European Comparison Programme, the purchasing power of 1 PPS is equal to the average purchasing power of 1 EUR in EU countries. Data expressed in PPS is obtained from the value expressed in the national currency divided by the respective purchasing power parity in EUR; for more information see OECD, Eurostat: Methodological manual on purchasing power parities, European Communities / OECD, Luxembourg: Office for Official Publications of the European Communities, 2006, ISSN 1725-0048, ISBN 92-79-01868-X, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-BE-06-002

3.1.2 OECD

The second source of labour cost information takes the form of information compiled by the OECD on wage taxation which is released annually in the organisation's Taxing Wages³¹ publication and which includes details on the proportion of labour costs made up of statutory contributions paid by employers to social funds and on the taxation rate imposed on employee wages. Labour costs contain only the wage component and statutory contributions paid by employers to social funds. The survey is limited to member countries, i.e. those EU-member countries that are not members of the OECD, such as Estonia, Lithuania, Latvia, Slovenia, Bulgaria and Romania, are not included in the data.

3.1.3 Labour Cost Monitoring by RILSA

A series of bulletins entitled Labour Cost Monitoring in the Czech Republic and in European Union countries, published annually by RILSA³² on its web site since 2006 provide a support information source for international comparison within the EU. The regular monitoring of costs results from the conclusions of the 52nd meeting of the Council for Economic and Social Agreement (tripartite) of April 2005.

The objective of labour price monitoring is to collect all the data available on labour costs, their structure and taxation, linkage to the social security and health care systems and the efficiency of the use of labour in one place over time employing methodically comparable data and in the form of an international comparison. The data includes:

- Labour costs in the Czech Republic and in EU countries expressed in terms of volume and structure,
- Labour taxation development in the Czech Republic and in EU countries,
- Insurance premiums in relation to the financing of the social security and health care systems in the Czech Republic.

The compilation of certain data is based on specific methods employed by reputable institutions abroad and internally by RILSA. The apparent non-recent nature of the data published is due to the one-year and two-year delays of the CZSO and Eurostat respectively in the processing of labour cost surveys.

3.2 Compensation of employees

Information on compensation of employees is obtained from the National Accounts system. Unlike total labour costs, compensation of employees is exclusive in particular of personnel costs, taxes and grants. The National Accounts system includes the labour costs of those economic entities that are not covered by the usual statistical surveys, e.g. the self-employed and the grey economy.

³¹ For example OECD: Taxing Wages 2007- 2008, OECD 2009, ISBN 978-92-64-04933-8

³² <http://www.vupsv.cz/>

3. Labour Cost Data Sources and the Use of Such Data for International Comparison Purposes

Eurostat provides internationally comparable data on compensation of employees the advantages of which is that comparable data on GDP exists for all countries and years and is expressed in terms of both national and European price levels, i.e. using purchasing power parity, and that comparable data on employment is available. Unit labour costs are analysed using remuneration paid to employees. However, national accounting systems do not provide the detailed structure of such remuneration; they simply define total remuneration paid to employees and the wages and salaries which make up a part thereof.

In terms of macroeconomic calculations, compensation of employees is important in terms of the overall GDP calculation and figures in statistical indices, e.g. with regard to the proportion it makes up of GDP and unit labour costs that express the price of labour per one unit of production. The unit labour costs (ULC) index is regarded as one of the most fundamental macroeconomic indices and forms a comprehensive expression of the cost pressures in a particular economy resulting from the price and volume of labour. Such indices are monitored by national banks in developed countries in order to predict the inflation rate (cost factor) and are considered to be one of the main indicators of the competitiveness of the economy. ULC reflect the utilisation of labour in the national economy (the index may also be applied to the regional level etc.). Various ULC modifications are employed to reduce the effect of inflation. In addition, the study applies compensation of employees to express the ratio of labour costs to total costs.

The delay in publishing international data to some extent complicates research; it takes up to two years for data on compensation of employees and particularly linkages to other macroeconomic factors to become available and even then further adjustments may be necessary.

3.3 Interpretation of the Results of Transnational Statistical Surveys

The interpretation and efficient use of the results of transnational statistical surveys has to take into account differences between various national interpretations of the statistical methodologies used by supranational statistical institutions; however the continuous statistical survey harmonisation process ensures that national methodologies and the statistical material monitored are on a gradually converging course.

The data base restrictions outlined above (incompleteness of the data base and the sometimes doubtful quality and level of trustworthiness of the data) require that a combination of information from the various available sources and, in some cases, a mutual permutation of data be used as the methodical basis for international comparison.

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

4.1 Labour Cost Monitoring Methodology

Eurostat and the national statistical services of EU member countries use an index made up of labour costs - LC which are regularly surveyed and include costs expended by employers on their employees. Labour costs are defined as wages and salaries (understood as direct labour costs) and non-wage costs including social costs and expenses, social benefits, personnel costs, taxes and grants (indirect labour costs).

The definition of total costs and their structure as monitored by the CZSO is based on Eurostat methodology. Partial differences are outlined in the chapter entitled Labour Cost Data Sources and the Use of Such Data for International Comparison Purposes (Chapter 3).

Total Labour Cost Structure as Monitored by the CZSO

I. Direct (wage) labour costs	1. Wages and salaries paid for work performed (for the time worked)	1.1 Tariff wages and salaries 1.2 Regular (direct) bonuses and premiums (e.g. earnings from piece work and similar performance-based income) 1.3 Overtime pay, night work, holiday work (Sundays, bank holidays) and shift work 1.4 Other supplements and wage allowances (for work performed in difficult conditions and in environments potentially hazardous to health, for special qualifications and professional knowledge enhancement etc.) 1.5 Bonuses paid for achieving pre-determined results 1.6 Bonuses paid from net profit 1.7 Extraordinary pay (13 th and 14 th payments) 1.8 Wages in kind (expressed in monetary terms) 1.9 Bonuses for readiness to work 1.10 Other income
	2. Wage reimbursements (payment for hours not worked but payable)	2.1 Wage reimbursements for holidays 2.2 Wage reimbursements paid due to work obstacles on the part of the employer 2.3 Wage reimbursements paid due to work obstacles on the part of the employee

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

		2.4 Wage reimbursements for public holidays
II. Indirect (non-wage) labour costs	3. Social benefits	3.1 Company products sold at a discount 3.2 Housing allowances 3.3 Company car used for private purposes 3.4 Accommodation allowance 3.5 Allowances in the form of savings schemes, sale of shares 3.6 Social fund payments
	4. Social costs and expenses	4.1 Statutory contributions to social security 4.2 Above-standard social security schemes 4.3 Sickness reimbursement paid by the employer 4.4 Severance pay 4.5 Other social allowances
	5. Personnel costs	5.1. Recruitment costs 5.2. Costs of education and initial training of apprentices 5.3. Costs of education of employees 5.4. Costs of overalls, uniforms etc. 5.5. Other personnel costs
	6. Taxes and grants	6.1. Taxes and penalties related to the employment of staff 6.2. Grants for the labour force

Source: Kozelský, T., Prušvic, D., Vlach, J.: Monitoring nákladů práce (Labour Cost Monitoring), RILSA 2006, ISBN 80-87007-16-6, p. 6 -7

Total Labour Costs are monitored as costs calculated per one hour actually worked (including overtime) or per one employee per month. For the purposes of calculation, the number of employees as per records is used, re-counted to the full-time equivalent. Data is stated in CZK.

The CZSO identifies total labour costs in organisations employing one or more employees in the CZ-NACE sectors A to S (i.e. for all economic sectors, including sector 1 - agriculture, forestry and fishing).

Labour Cost Structure as Monitored by Eurostat:

D1	Compensation of employees
D11	Wages and salaries (total)
D111	Wages and salaries (excluding apprentices)
D1111	Direct remuneration, bonuses and allowances (excluding apprentices)
D11111	Direct remuneration
D11112	Bonuses
D1112	Payments to employee savings schemes
D1113	Payment for days not worked (excluding apprentices)
D1114	Wages and salaries in kind (excluding apprentices)
D11141	Company products (optional)
D11142	Staff housing (optional)
D11143	Company cars (optional)
D11144	Other (optional)
D112	Wages and salaries of apprentices
D12	Employer social contributions (total)
D121	Employer actual social contributions (excluding apprentices)
D1211	Statutory social security contributions
D1212	Collectively agreed, contractual and voluntary social security contributions
D122	Employer imputed social contributions (excluding apprentices)
D1221	Guaranteed remuneration in the event of sickness
D1222	Guaranteed remuneration in the event of short-time working
D1223	Payments to employees who leave the organisation
D1224	Employer imputed social benefits
D123	Employer social contributions for apprentices
D2	Vocational training costs
D3	Other expenditure
D4	Taxes
D5	Grants Subsidies

Source: Eurostat: Labour costs annual data, Reference Metadata in Euro SDMX Metadata Structure (ESMS), available at: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/lcan_esms.htm, modified by RILSA

Eurostat publishes the labour cost structure in member countries (EU-27) in four-year intervals in its Labour Cost Survey (LCS). The last available report is for 2004 for organisations operating in the industry and services sectors (NACE branches from C to O). Data is collected by national statistics services on the basis of the stratified random selection of organisations with at least 10 employees. The data structure takes into account the economic activity of the organisation and size. Data is expressed in EUR, in the national currency and in purchasing power parity (PPS)³³.

During interim periods, data is interpolated annually in relation to wage development trends and the development of other cost components and according to the relevant administrative sources. The results are published for each individual country and for different groups of countries (EU-27, EU-25, Eurozone) and are classified according to sector on an annual, monthly and hourly basis.

³³ For more information see Eurostat: Labour cost surveys, Reference Metadata in Euro SDMX Metadata Structure (ESMS), available at: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/lcs_esms.htm

In order to maintain international comparability, the authors propose to utilise Eurostat data unless otherwise stated. It is necessary that the interpretation of Eurostat data related to the Czech Republic takes into account variations with total labour cost statistics published by the CZSO.

Table 9 Quantification of Index Differences at the Macro Level (differences vary from year to year - this summary estimates the basic proportions)

Aggregates	Eurostat/CZSO in percentage points	Note
Total labour costs per employee in the Czech Republic in EUR	0	Eurostat does not include the agriculture, fishing and forestry sectors; the CZSO monitors all organisations with 1 or more employees
Proportion of direct labour costs (wages) in total labour costs in %	+ 2	Eurostat includes social benefits in direct costs
Proportion of indirect labour costs in total labour costs in %	- 2	CZSO includes social benefits in indirect costs

Source: Calculation by RILSA

4.2 Labour Costs in the Czech Republic and EU Countries

An evaluation of the development of labour costs in the period 2000 to 2008 in terms of qualitative impacts can be divided into two distinct time periods:

- up to 2003; a trend to balance the disproportion between labour productivity and the price of labour that originated during the first years of transformation as a result of a significant fall in real earnings (by 1/3 in 1991 compared to 1989) compared with a decline in productivity (6.5% in 1991 compared to 1989, with employment dropping by 5.5%)³⁴; wage increases in 2002 and 2003 were amplified by perceived high inflation expectations as a consequence of EU accession,
- post 2004; the acceleration of economic growth and the stabilisation of the ratio between movements in productivity and the price of labour.

4.2.1 Total Labour Cost Development and Structure in the Czech Republic

At the beginning of the economic transformation in the early 1990s, Czech economic policy focused on the creation of space for newly emerging businesses as well as on changing the orientation of foreign trade (from Council for Mutual Economic Cooperation countries to EU and global markets). This was achieved by decreasing total labour costs through the elimination of the social role played by employers and the consequent transfer of social responsibility to the state and through the state's assuming responsibility for the training of apprentices. This particular institutional

³⁴ Wage cushion (the difference between contractual and actual wages)

environment, which differs from that of most other EU countries, continues to the present and is reflected in the Czech Republic's specific labour cost structure.

Table 10 Comparison of the Structure of Average Labour Costs in the EU and in the Czech Republic in 2004 using Eurostat Data in %

	Czech Republic	EU	Difference between the Czech Republic and EU in percentage points
Wages and salaries, excluding apprentices	70.31	65.73	4.58
Wages and salaries of apprentices	0	0.74	-0.74
Social benefits	1.75	7.99	-6.24
Wages and salaries, total	72.06	74.46	-2.4
Statutory social security contributions, excluding apprentices	25.64	15.78	9.87
Other social contributions	1.14	7.8	-6.66
Employers' social contributions for apprentices	0	0.11	-0.11
Total social contributions	26.79	23.69	3.1
Personnel costs	1.25	1.43	-0.18
Taxes and grants	-0.09	0.42	-0.51

Source: Eurostat: Labour costs survey 2004, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/database, calculated by RILSA.

Czech employers pay only mandatory costs as set out in legislation, i.e. wages and salaries and statutory social insurances. The elimination of the training costs of apprentices resulted in savings for employers of roughly 1% in 2004³⁵ and savings in non-mandatory expenses and social benefits amounted to approximately 13% of labour costs. As a result, the nominal earnings level in the Czech Republic was higher in relation to the EU than the proportion of labour costs (in 2004, average earnings were close to 1/3 of those of EU-15 countries; labour costs, however, slightly exceeded 1/4). Similar reduced labour cost structures in favour of statutory payments were reported by a mere six other EU countries according to a survey carried out in 2004: Estonia, Latvia, Poland, Greece, Spain and Malta.

³⁵ The results of the 2008 all-European survey were not available at the time of writing.

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

Table 11 Labour Cost Structures in EU Countries Using the Eurostat Method in 2004 in %

	Direct labour costs (D11)					Indirect labour costs (D12 + D2 + D3 + D4 + D5)					
	Wages and salaries, excluding apprentices (D 1111)	Wages and salaries of apprentices (D 112)	Social benefits (D1112 ... D 1114)	Direct labour costs, total (D11)	Statutory social security contributions (D1211)	Other social contributions (D1212 + D122)	Employers' social contributions for apprentices (D 123)	Total social contributions (D12)	Personnel costs (D2 + D3)	Taxes and grants (D4+D5)	Indirect labour costs total (D12 ... D5)
EU-27	65.7	0.7	8.0	74.5	15.8	7.8	0.1	23.7	1.4	0.4	25.5
Hungary	58.9	0.0	10.5	69.4	24.5	3.3	0.0	27.8	2.9	-0.1	30.6
France	63.8	0.4	2.6	66.7	24.4	4.2	0.1	28.6	1.7	2.9	33.3
Slovenia	65.0	:	15.7	80.6	11.4	3.3	:	14.6	1.0	3.7	19.4
Sweden	65.7	0.0	1.0	66.7	21.9	8.5	0.0	30.5	1.6	1.2	33.3
Bulgaria	68.1	:	4.9	73.0	23.3	2.1	:	25.4	1.4	0.2	27.0
Belgium	68.3	0.0	2.2	70.5	25.8	4.3	0.0	30.1	0.5	-1.1	29.5
Italy	68.5	0.7	0.2	69.4	25.9	3.4	0.0	29.3	1.4	-0.2	30.6
Czech Republic	70.3	0.0	1.8	72.1	25.7	1.1	0.0	26.8	1.3	-0.1	28.0
Slovakia	71.0	0.0	2.6	73.6	23.0	2.3	0.0	25.3	1.1	0.0	26.4
Austria	71.7	0.8	0.7	73.2	17.6	6.4	0.2	24.2	0.9	1.8	26.8
Lithuania	72.3	0.0	0.1	72.4	23.0	4.4	0.0	27.3	0.3	-0.1	27.6
Estonia	72.6	0.0	0.8	73.4	24.7	0.6	0.0	25.4	1.4	-0.1	26.7
Romania	72.7	0.0	6.0	78.7	24.0	0.5	0.0	24.5	1.5	-0.1	26.0
Spain	73.3	0.1	0.6	74.0	21.8	2.8	0.0	24.6	1.5	-0.1	26.0
Germany	73.6	1.0	1.2	75.8	14.5	9.1	0.3	23.9	0.6	-0.3	24.2
Greece	73.9	0.1	0.6	74.5	14.8	1.8	0.0	16.6	0.3	8.6	25.5
Netherlands	74.9	:	1.4	76.3	8.1	13.3	:	21.3	3.1	0.0	24.4
United Kingdom	76.0	1.3	1.7	79.0	6.1	13.1	0.1	19.2	1.8	0.0	21.1
Finland	76.6	0.1	1.3	78.1	19.2	2.1	0.0	21.4	1.0	-0.4	22.0
Latvia	78.6	0.0	0.1	78.8	18.5	2.0	0.0	20.6	0.6	0.1	21.2
Portugal	78.8	0.3	0.8	79.8	15.0	4.1	0.1	19.2	1.0	0.0	20.2
Poland	80.0	0.0		80.0	14.8	2.5	0.0	17.3	2.8	0.0	20.0
Luxembourg	82.7	0.1	1.5	84.3	9.7	5.4	0.0	15.1	0.9	-0.3	15.7

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

	Direct labour costs (D11)				Indirect labour costs (D12 + D2 + D3 + D4 + D5)						
	Wages and salaries, excluding apprentices (D 1111)	Wages and salaries of apprentices (D 112)	Social benefits (D1112 ... D 1114)	Direct labour costs, total (D11)	Statutory social security contributions (D1211)	Other social contributions (D1212 + D122)	Employers' social contributions for apprentices (D 123)	Total social contributions (D12)	Personnel costs (D2 + D3)	Taxes and grants (D4+D5)	Indirect labour costs total (D12 ... D5)
Cyprus	83.4	0.0	1.2	84.5		15.0	0.0	15.0	0.6	-0.1	15.5
Ireland	85.7	0.6	0.6	86.9	7.2	4.9	0.1	12.2	1.0	-0.1	13.1
Denmark	88.2	1.1	0.5	89.8	1.1	9.7	0.1	10.9	1.8	-2.4	10.2
Malta	92.7	0.2	0.8	93.7	6.4	1.8	0.0	8.2	0.5	-2.4	6.3

Source: Eurostat: Labour costs survey 2004, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/database, calculated by RILSA.

Note: countries are listed in order of share of wages and salaries.

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

Direct costs, i.e. wages and salaries, make up the major labour cost item, accounting for over 70% of total labour costs in the Czech Republic. Unlike in previous years when wage development balanced the disproportion which originated as a result of the drop in real earnings in 1990 and 1991, the determining factor for wage development after 2003 consisted of labour productivity at national prices.

The movement in total labour costs in the period 2000 to 2008 was a consequence of wage development the dynamism of which was accompanied by the situation in the labour market which was reflected in the momentary dynamism of indirect labour costs (social expenses and benefits, personnel costs, taxes and subsidies).

Table 12 The Volume and Structure of Average Monthly Total Labour Costs 2000 to 2003 expressed in CZK per Employee in the Czech Republic

Labour cost item	2000	2001	2002	2003	2003/2000 in %
Wages for work performed	12 744	13 791	14 655	15 528	121.8
Wage reimbursements	1 344	1 539	1 643	1 727	128.5
Direct costs	14 088	15 330	16 298	17 255	122.5
Social benefits	334	419	450	475	142.2
- housing allowances	11	13	26	55	500.0
- company cars used for private purposes	46	91	89	95	85.3
- accommodation allowances	191	221	237	228	119.4
- social fund expenses	79	87	94	93	117.7
- others	7	7	4	4	57.1
Social costs and expenses	5 240	5 741	6 165	6 522	124.5
- statutory contributions to social security	5 075	5 557	5 943	6 247	123.1
- above-standard social security schemes (including sickness pay paid by the employer)	53	77	98	121	238.3
- severance pay	73	84	101	132	180.8
- other social allowances	39	23	23	22	56.4
Personnel costs	262	299	303	347	132.4
Taxes and grants	-19	-12	-26	-32	- 168.4
Indirect costs	5 817	6 447	6 892	7 312	125.7
Total labour costs	19 905	21 777	23 190	24 567	123.4

Source: CZSO: Total Labour Cost Development 1994 to 2008, CZSO 2009, code: w-3113-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3113-09>, pp. 13 and 14

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

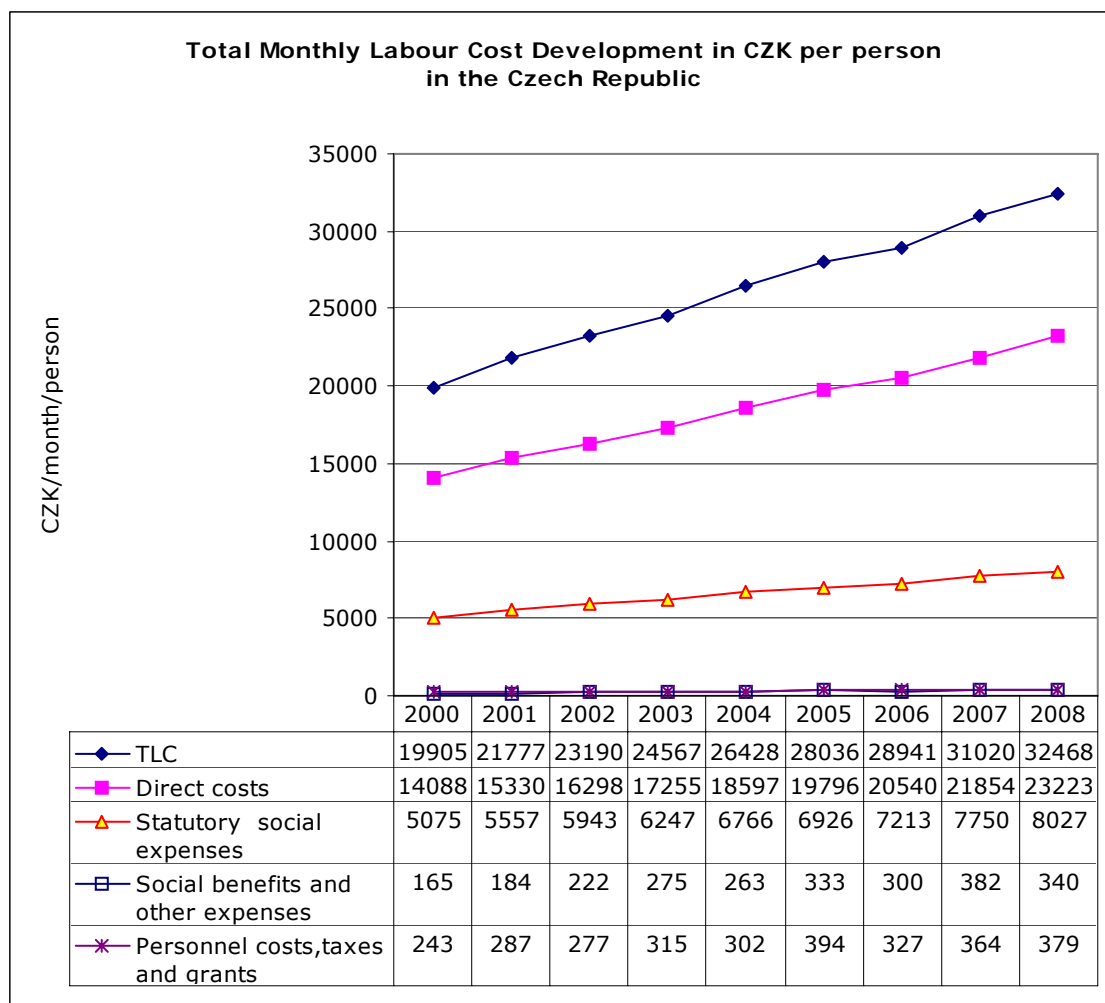
Table 13 The Volume and Structure of Average Monthly Total Labour Costs 2003 to 2008 expressed in CZK per Employee in the Czech Republic

Labour costs item	2003	2004	2005	2006	2007	2008	2008/2003 in %	2008/2000 in %
Wages for work performed	15 528	16 722	17 886	18 560	19 594	20 778	133.8	163.0
Wage reimbursements	1 727	1 875	1 910	1 980	2 260	2 445	141.5	181.9
Direct costs	17 255	18 597	19 796	20 540	21 854	23 223	134.6	164.8
Social benefits	475	500	587	561	670	499	105.1	149.4
- housing allowances	55	59	77	78	84	74	134.5	672.7
- company cars used for private purposes	95	111	173	129	136	81	85.3	176.9
- accommodation allowances	228	234	245	258	328	271	118.9	141.9
- social fund expenses	93	87	85	86	91	67	72.4	84.8
- others	4	9	7	10	31	6	150.0	85.7
Social costs and expenses	6 522	7 029	7 259	7 513	8 132	8 367	128.3	159.7
- statutory contributions to social security	6 247	6 766	6 926	7 213	7 750	8 027	128.5	158.2
- above-standard social security schemes (including sickness pay paid by the employer)	121	136	166	170	208	170	140.5	320.8
-severance pay	132	107	141	100	148	150	113.6	232.9
-other social allowances	22	20	26	30	26	20	90.9	51.3
Personnel costs	347	338	424	385	413	421	121.3	160.7
Taxes and grants	-32	-36	-30	-58	-49	-42	131.3	221.1
Indirect costs	7 312	7 831	8 240	8 401	9 166	9 245	126.4	158.9
Total labour costs	24 567	26 428	28 036	28 941	31 020	32 468	132.2	163.1

Source: CZSO: Total Labour Cost Development 1994 to 2008, CZSO 2009, code: w-3113-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3113-09>, p. 14.

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

Diagram 3



Source: CZSO: Development of Total Labour Costs 1994 to 2008, CZSO 2009, code: w-3113-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3113-09>, calculated by RILSA.

Note: Data relating to natural persons not registered in the Companies Register and employing 10 and more employees is included in the 2008 data.

In addition to wages carried to accounts, the movement of labour costs was influenced by statutory social expenses that accounted for roughly 25% of total labour costs. Despite the stability of contribution rates defined by legislation, actual social security contributions developed unevenly as a consequence of payment deadlines and settlement dates, e.g. high levels of payment in 2003 and 2004. Statutory social payments in fact oscillate around the total volume of wages and salaries.

Table 14 **Basic Characteristics of Average Monthly Total Labour Cost Development and their Structure in the Czech Republic 2000 to 2003**

Cost	Increment	Structure		
	2003/2000	Share in %		Increment in percentage points
	in %	2000	2003	2003-2000
Direct costs (wages and salaries)	22.5	70.78	70.24	-0.54
Total indirect costs:	25.7	29.22	29.76	0.54
Social benefits	42.2	2.39	1.93	- 0.46
Total social contributions	24.5	26.33	26.55	0.22
of which statutory social security contributions	23.1	25.50	25.43	- 0.07
other social contributions	66.7	0.83	1.12	0.29
Personnel costs	32.4	1.32	1.41	0.17
Taxes and grants	68.4	-0.10	-0.13	-0.03
Total labour costs	23.4	100.00	100.00	0.00

Source: CZSO: *Development of Total Labour Costs 1994 to 2008, CZSO 2009, code: w-3113-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3113-09>, calculated by RILSA*

The structure of labour costs changed in the period after 2004. The trend for faster growth in indirect labour costs came to an end which resulted in a decrease in the proportion of direct labour costs in total labour costs that typified preceding years.

Following the high level of total contributions to statutory social insurance in 2003 and 2004, their influence on the dynamism of total labour costs declined thereafter. Statutory social expenses increased by 28% between 2003 and 2008 while wage levels grew by 35% in the same period. An at least temporary increase in the dynamics of statutory insurance contributions can be expected in the future that will respect set rates and will, at least partly, make up for the shortfall in revenues of previous years, particularly 2008.

Table 15 **The Dynamism of Total Labour Cost Items in %**

Item	Year-on-year increments in %					Increment 2008/2003 in %
	2004	2005	2006	2007	2008	
Direct costs (wages and salaries)	7.8	6.5	3.8	6.4	6.3	34.6
Total indirect costs:	7.1	5.2	2.0	9.1	-2.9	21.8
Social benefits	5.3	17.4	-4.4	19.4	-25.5	5.1
Total social contributions	7.8	3.3	3.5	8.2	-1.3	23.1
of which statutory social security contributions	8.3	2.4	4.2	7.4	3.6	28.6
other social contributions	-4.4	26.6	-9.9	27.3	-11.0	23.6
Personnel costs	-2.6	25.4	-9.2	7.3	1.9	21.3
Taxes and grants	12.5	-16.7	93.3	-15.5	-14.3	31.3
Total labour costs	7.6	6.1	3.2	7.2	4.7	32.2

Source: CZSO: *Development of Total Labour Costs 1994 to 2008, CZSO 2009, code: w-3113-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3113-09>, calculated by RILSA*

Note: Data relating to natural persons not registered in the Companies Register and employing 10 and more employees is included in the 2008 data.

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

Other, non-statutory, payments to employees such as additional social contributions and benefits accounted for 2.6% of total labour costs in 2008 a decrease of 0.5% on 2003 rendering them relatively insignificant in terms of aggregate labour costs and, despite considerable oscillation, they were not reflected in the overall movement of labour costs. Employers use such contributions and benefits to balance sudden variations between supply and demand in the labour market since it takes approximately a year for wages to respond to such changes due to their relative rigidity.

Similarly, personnel costs and taxes and grants are of relatively low importance, accounting for roughly 1.3% of total labour costs. The share of personnel costs in total labour costs decreased over the period 2003 to 2008.

Table 16 Total Labour Costs Structure 2003 To 2008

Cost	Share in %						Increment 2003 – 2008 in percentage points
	2003	2004	2005	2006	2007	2008	
Direct costs (wages and salaries)	70.24	70.37	70.61	70.97	70.45	71.53	1.29
Total indirect costs:	29.76	29.63	29.39	29.03	29.55	28.47	-1.29
Social benefits	1.93	1.89	2.09	1.94	2.16	1.54	-0.40
Total social contributions	26.55	26.60	25.89	25.96	26.22	25.77	-0.78
of which statutory social security contributions	25.43	25.60	24.70	24.92	24.98	24.72	-0.71
Other social contributions	1.12	1.00	1.19	1.04	1.23	1.05	-0.07
Personnel costs	1.41	1.28	1.51	1.33	1.33	1.30	-0.11
Taxes and grants	-0.13	-0.14	-0.11	-0.20	-0.16	-0.13	0.00
Total labour costs	100.00	100.00	100.00	100.00	100.00	100.00	0.00

Source: CZSO: Vývoj úplných nákladů práce v letech 1994 – 2009 (Development of Total Labour Costs 1994 to 2008, CZSO 2009), code: w-3113-09, available at:

<http://www.czso.cz/csu/2009edicniplan.nsf/p/3113-09>, calculated by RILSA.

Note: Data relating to natural persons not registered in the Companies Register and employing 10 and more employees is included in the 2008 data.

The stagnation of the share of non-statutory non-wage payments to employees at 2003 levels seems in contradiction to the friendly fiscal conditions governing wages. Due to the low weight of social benefits and other social contributions in employers' costs and the income of the majority of employees and due to the poor selection of insurance products in particular and related tax allowances, the various social partners are showing an ever decreasing level of interest in this motivation tool. The employment structure has adapted in terms of qualification parameters in particular to the needs of the private (non-public) sector. With the exception of wages, the balance between the factors of production, capital and labour, in the period 2003 to 2006 did not require the use of any additional tools to influence labour force movement. In 2007, expectations of growth increased the demand for labour which led employers to increase compensation of employees in the form of social benefits and other social payments. Nevertheless, the apparent decrease in the significance of indirect labour costs is in part fictitious; in practice employee benefit schemes are often not monitored in labour statistics.

More significant changes in the structure of total labour costs came about in 2008 when the first signs of a major economic crisis appeared. Employers began to reduce non-statutory non-wage remuneration, i.e. social benefits (a reduction of 25% in 2008 compared to 2007), above-standard social security schemes (25%) and other social contributions (25%). However, due to the low overall weight of such payments, the dynamism of total labour costs decreased by a mere 1 percentage point or so.

4.2.2 Labour Costs Development in the Czech Republic and the EU

Labour costs surveys for the period 2000 to 2003 reveal that Czech monthly labour costs, when converted to EUR, were some of the lowest in the EU. In 2000, they stood at roughly 1/6 of the level of more economically advanced EU³⁶ countries, while by 2004, the ratio had increased to 1/4 and in 2007 approached 1/3; nevertheless, they were still the highest in the post-communist group of EU countries. Price level convergence within the EU was also naturally reflected in labour cost trends and after the ending of the wage cushion in the Czech Republic, the convergence process was fuelled by rapidly growing labour productivity and the appreciation of the CZK that gradually balanced the disproportions which resulted from the so-called currency cushion. From the EU market perspective, Czech labour costs were growing significantly.

³⁶ For more information see Kozelský, T., Prušvic, D., Vlach, J.: Labour Costs Monitoring, RILSA 2006, ISBN 80-87007-16-6, p. 23

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

Table 17 Monthly Labour Costs in the Industrial and Commercial Services Sectors in Selected EU Countries 2000 - 2008 in EUR

	2000	2001	2002	2003	2004	2005	2006	2007	2008	Index 2007/2000 in %
EU	:	:	:	:	2573.6	2699.6	2450.2	:	:	
Bulgaria	173.1	186.5	196.1	205.7	218.6	234.7	249.0	287.4	:	166.0
Romania	213.1	220.1	245.6	244.2	273.4	365.1	434.2	549.1	:	257.7
Latvia	340.4	353.6	370.6	370.2	402.8	448.5	552.4	719.4	865.3	211.3
Lithuania	381.3	412	446.9	466.9	495	545.1	636.6	759.7	:	199.2
Slovakia	398.5	416.4	481.8	517.8	583.2	619.9	711.4	842.3	:	211.4
Poland	655.4	769.4	760.7	686.8	687.9	808.4	878.4	983.2	:	150.0
Estonia	425.9	486.7	547.2	596.0	644.0	711.8	827.1	994.5	1134.2	233.5
Hungary	:	:	:	814.4	875.3	1018.5	994.8	1104.3	:	:
Czech Republic	562.7	641.5	753.8	780.9	837.3	948.8	1030.6	1126.2	:	200.1
Malta	:	:	1250.7	1253.5	1271.1	1302.1	1353.7	1390.9	:	:
Portugal	:	:	:	:	1603.4	1669.4	1734.6	1788.4	1853.7	:
Slovenia	1358.2	1452.3	1542.4	1603.3	1618.0	1699.0	1772.5	1871.0	:	137.8
Spain	2019.8	1857.9	1930.2	2007.6	2069.8	2125.2	2196.7	2283.8	:	113.1
Cyprus	1665.7	1734.7	1833.8	1950.0	2058.9	2189.6	2276.9	2368.4	2516.2	142.2
Finland	:	:	3159.0	3289.0	3358.0	3531.0	3598.0	3687.0	3885.0	:
Germany	3422.0	3510.0	3594.0	3692.0	3750.0	3768.0	3819.0	3853.0	:	112.6
Austria	3361	3430	3485	3603	3660	3745	3840	3925	:	116.8
Belgium	:	:	:	:	3659.2	3706.0	3814.0	3965.7	4103.3	:
United Kingdom	3517.8	3618.1	3719.6	3525.8	3727.6	4026	4190.8	4237.7	:	120.5
Sweden	:	:	:	:	4072.1	4133.5	4242	4337.5	:	:
Denmark	:	:	:	:	:	4059.8	4221.2	4381	:	:
Luxembourg	:	:	:	:	4386.0	4517.0	4658.0	4817.0	4918.0	:

Source: Eurostat: *Monthly Labour Costs - Nace Rev. 1.1*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/database, July 2010, Calculated by RILSA.

Note: Eurostat did not publish data for the EU as a whole, Ireland, Greece, France, Italy or the Netherlands. Higher labour costs may be presumed in these countries compared to the Czech Republic.

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

Table 18 Comparison of Labour Costs in Selected EU Countries Expressed at the National Price Level in the Industry and Trade Sectors in %, Germany = 100%

	2000	2001	2002	2003	2004	2005	2006	2007	2007-2000 In percentage points
EU	:	:	:	:	68.6	71.6	64.2	:	:
Bulgaria	5.1	5.3	5.5	5.6	5.8	6.2	6.5	7.5	2.4
Romania	6.2	6.3	6.8	6.6	7.3	9.7	11.4	14.3	8.0
Latvia	9.9	10.1	10.3	10.0	10.7	11.9	14.5	18.7	8.7
Lithuania	11.1	11.7	12.4	12.6	13.2	14.5	16.7	19.7	8.6
Slovakia	11.6	11.9	13.4	14.0	15.6	16.5	18.6	21.9	10.2
Poland	19.2	21.9	21.2	18.6	18.3	21.5	23.0	25.5	6.4
Estonia	12.4	13.9	15.2	16.1	17.2	18.9	21.7	25.8	13.4
Hungary	:	:	:	22.1	23.3	27.0	26.0	28.7	:
Czech Republic	16.4	18.3	21.0	21.2	22.3	25.2	27.0	29.2	12.8
Malta	:	:	34.8	34.0	33.9	34.6	35.4	36.1	:
Portugal	:	:	:	:	42.8	44.3	45.4	46.4	:
Slovenia	39.7	41.4	42.9	43.4	43.1	45.1	46.4	48.6	8.9
Spain	59.0	52.9	53.7	54.4	55.2	56.4	57.5	59.3	0.2
Cyprus	48.7	49.4	51.0	52.8	54.9	58.1	59.6	61.5	12.8
Finland	:	:	87.9	89.1	89.5	93.7	94.2	95.7	:
Germany	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Austria	98.2	97.7	97.0	97.6	97.6	99.4	100.5	101.9	3.7
Belgium	:	:	:	:	97.6	98.4	99.9	102.9	:
United Kingdom	102.8	103.1	103.5	95.5	99.4	106.8	109.7	110.0	7.2
Sweden	:	:	:	:	108.6	109.7	111.1	112.6	:
Denmark	:	:	:	:	:	107.7	110.5	113.7	:
Luxembourg	:	:	:	:	117.0	119.9	122.0	125.0	:

Source: Eurostat: *Monthly Labour Costs - Nace Rev. 1.1*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/database, April 2010, calculated by RILSA.

Note: Eurostat did not publish data for the EU as a whole, Ireland, Greece, France, Italy or the Netherlands. Higher labour costs may be presumed in these countries. Germany was selected as the basis of comparison since it was close to the EU-15 average in 2005.

The below-average level of Czech labour costs, even if converted into EUR, reflects low Comparative Price Level s. In the course of the time period assessed, the Czech Republic, together with the other post-communist countries reported the lowest prices in the EU (with the exception of Slovenia since its open economy had, for a long time, been connected with global markets and Comparative Price Level s corresponded to the European level). As a consequence of preparation for adopting the Euro, Estonia, Latvia and Lithuania experienced sudden increases in price levels since, before entering the European Exchange Rate Mechanism II (ERM II)³⁷ they had to rapidly harmonise their macroeconomic indicators with Eurozone norms (Slovakia underwent a similar transformation). The Maastricht criteria presume comparable economic levels, including basic macroeconomic proportions. Should there be significant variations from other Eurozone countries, there is a significant risk of

³⁷ European Exchange Rate Mechanism II

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

inflation growth, speculative capital spillover, an increase in indebtedness, restrictive budget policies and economic cycle de-synchronisation.

From 2000 to 2008, Czech Comparative Price Level s advanced towards those of the EU-27 by as much as 25 percentage points (by 16 percentage points in the period 2000 to 2007). Along with inflation rates that reflected the dynamism of the Eurozone post 2001, price level increases were further fuelled by the strengthening of the CZK (30% in the period 2000 to 2008). The extraordinarily high dynamics of 2008 were caused by a combination of public finance reform that resulted in a one-off increase in inflation of 6.3% and the rapid appreciation of the CZK (11%³⁸ year-on-year).

Table 19 Monthly Labour Costs in the Industrial and Commercial Services sectors in Selected EU Countries, Expressed in PPS, 2000 to 2008

	2000	2001	2002	2003	2004	2005	2006	2007	2008	Index 07/00 in %
Bulgaria	459.5	471.6	483.8	621.2	508.5	542.8	556.1	624.6	:	135.9
Romania	529.3	543.8	597.0	588.1	632.8	687.7	762.1	848.6	:	160.3
Latvia	641.2	686.2	734.6	837.7	714.5	790.4	912.0	1106.0	1158.2	172.5
Lithuania	814.6	864.4	884.1	1053.3	907.0	997.3	1124.8	1272.3	:	156.2
Slovakia	988.2	1006.5	1108.3	1132.0	1062.5	1076.5	1220.4	1336.5	:	135.2
Estonia	932.4	964.3	1044.6	1144.7	1023.9	1109.4	1244.3	1394.0	1478.1	149.5
Poland	1215.3	1275.9	1286.5	1460.8	1312.4	1356.9	1414.7	1550.5	:	127.6
Hungary	:	:	:	1502.1	1413.6	1601.1	1657.5	1680.7	:	:
Czech Republic	1248.6	1384.8	1458.1	1627.7	1521.8	1642.6	1676.4	1799.2	:	144.1
Malta	:	:	1677.5	1741.2	1736.8	1784.5	1810.4	1841.2	:	:
Portugal	:	:	:	:	1870.5	1958.5	2023.4	2114.6	2139.3	:
Slovenia	1864.7	1965.0	2072.6	2102.8	2143.3	2235.3	2311.6	2367.7	:	127.0
Spain	2442.0	2259.6	2264.7	2335.2	2368.8	2361.6	2354.3	2455.9	:	100.6
Cyprus	1892.4	1951.8	2058.2	2144.9	2257.4	2423.7	2521.4	2687.2	2780.0	142.0
Finland	:	:	2539.7	2612.7	2733.4	2866.3	2955.3	3036.6	3119.2	:
Denmark	:	:	:	:	:	2936.4	3033.1	3199.8	:	:
Sweden	:	:	:	:	3366.3	3524.7	3610.3	3727.3	:	:
Germany	3240.3	3278.8	3342.0	3521.3	3610.2	3654.7	3698.0	3731.7	:	115.2
Belgium	:	:	:	:	3491.3	3541.3	3591.9	3764.0	3707.4	:
Great Britain	2978.6	3144.2	3239.2	3479.3	3528.6	3837.2	3780.6	3774.0	:	126.7
Austria	3293.6	3343.8	3311.3	3512.7	3580.9	3668	3793.3	3924.3	:	119.1
Luxembourg	:	:	:	:	4134.4	4220.1	4515.5	4584.7	4233.6	:

Source: Eurostat: *Monthly Labour Costs - Nace Rev. 1.1*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/database, July 2010, calculated by RILSA

Note: Eurostat did not publish data for the EU as a whole, Ireland, Greece, France, Italy or the Netherlands. Higher labour costs may be presumed in these countries as compared with the Czech Republic.

³⁸ As a result of the global economic crisis and a consequent fall in the Czech currency of 6%, which flexibly responded to the worsening economic conditions of 2008, Czech price levels fell overall by 1.6% in 2009 with respect to the EU-27 average.

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

Table 20 Comparison of Labour Costs in Selected EU Countries in PPS in the Industrial and Commercial Services sectors in %, Germany = 100%

	2000	2001	2002	2003	2004	2005	2006	2007	2007-2000 in per. points
Bulgaria	14.2	14.4	14.5	17.6	14.1	14.9	15.0	16.7	2.6
Romania	16.3	16.6	17.9	16.7	17.5	18.8	20.6	22.7	6.4
Latvia	19.8	20.9	22.0	23.8	19.8	21.6	24.7	29.6	9.8
Lithuania	25.1	26.4	26.5	29.9	25.1	27.3	30.4	34.1	9.0
Slovakia	30.5	30.7	33.2	32.1	29.4	29.5	33.0	35.8	5.3
Estonia	28.8	29.4	31.3	32.5	28.4	30.4	33.6	37.4	8.6
Poland	37.5	38.9	38.5	41.5	36.4	37.1	38.3	41.5	4.0
Hungary	:	:	:	42.7	39.2	43.8	44.8	45.0	:
Czech Republic	38.5	42.2	43.6	46.2	42.2	44.9	45.3	48.2	9.7
Malta	:	:	50.2	49.4	48.1	48.8	49.0	49.3	:
Portugal	:	:	:	:	51.8	53.6	54.7	56.7	:
Slovenia	57.5	59.9	62.0	59.7	59.4	61.2	62.5	63.4	5.9
Spain	75.4	68.9	67.8	66.3	65.6	64.6	63.7	65.8	-9.6
Cyprus	58.4	59.5	61.6	60.9	62.5	66.3	68.2	72.0	13.6
Finland	:	:	76.0	74.2	75.7	78.4	79.9	81.4	:
Denmark	:	:	:	:	:	80.3	82.0	85.7	:
Sweden	:	:	:	:	93.2	96.4	97.6	99.9	:
Germany	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Belgium	:	:	:	:	96.7	96.9	97.1	100.9	:
United Kingdom	91.9	95.9	96.9	98.8	97.7	105.0	102.2	101.1	9.2
Austria	101.6	102.0	99.1	99.8	99.2	100.4	102.6	105.2	3.5
Luxembourg	:	:	:	:	114.5	115.5	122.1	122.9	:

Source: Eurostat: Monthly Labour Costs - Nace Rev. 1.1, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/database, April 2010, calculated by RILSA

Note: Eurostat did not publish data for the EU as a whole, Ireland, Greece, France, Italy or the Netherlands. Higher labour costs may be presumed in these countries. Germany was selected as the basis of comparison since it was close to the EU-15 average in 2005.

The high level of dynamism of Czech labour costs when converted into EUR (a 100% increment between 2000 and 2007) was eliminated by price level convergence. Parity labour cost movement was significantly slower during the period monitored (an increment of 44%). Converting labour costs to EU price levels provides a comprehensive linkage between the labour price and its various social functions within the unified internal European market. The movement of the difference between levels expressed at the national price level and the European price level reflects the development of the convergence process and the level of parity labour costs in the process of equalising values to European standards and indicates both the direction and limits of nominal labour cost development.

The process by which price levels approached realistic values was accompanied by a decreasing difference between the nominal exchange rate and the purchasing power parity of the CZK, a process which is still ongoing. The less economically developed traditional market economies of the EU such as Portugal, Spain, Greece and Cyprus report ERDI index levels of 1.1 to 1.3 which implies price levels of at least 10

percentage points more than the 70% value of the Czech Republic³⁹. It would seem therefore that, from this point of view, the gradual approach of nominal labour costs expressed in EUR to European levels will continue.

Czech exporters are clearly adversely affected by price level convergence which reduces their profits and/or the opportunity for price undercutting in European markets. During the period 2000 to 2007, labour productivity expressed in terms of purchasing power parity grew significantly slower (an index value of 141%) than labour costs converted into EUR (index value 200%). However, the Czech economy was unable to absorb such a large disproportion which was seen as a consequence of the use of the currency cushion.

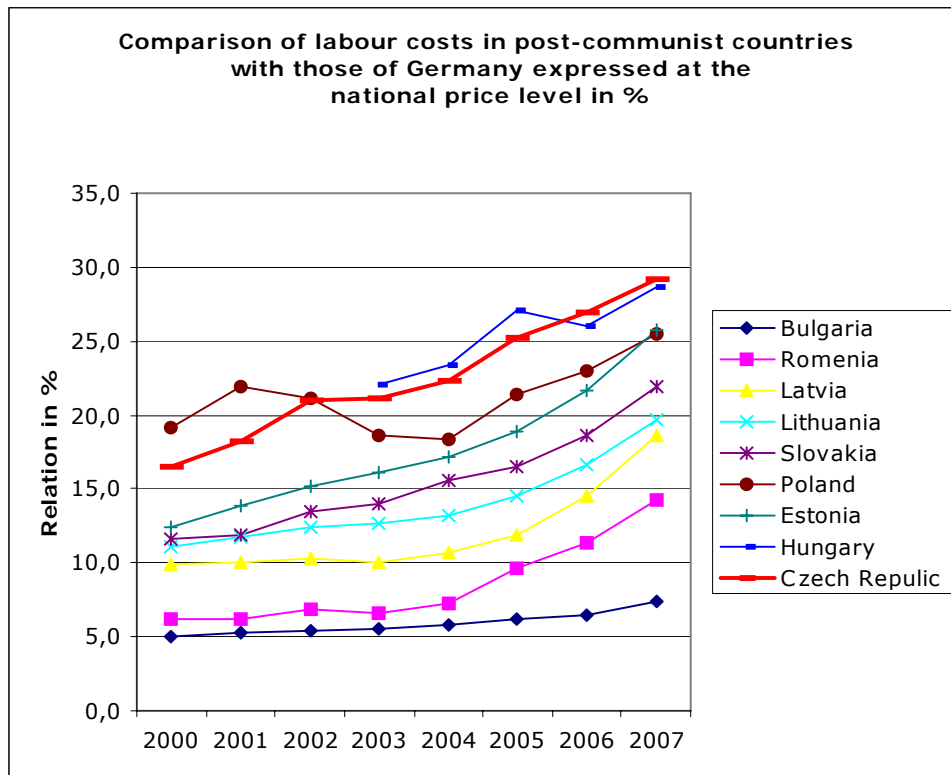
The difference between labour costs in advanced EU countries and the Czech Republic is still so significant that it is likely that the Czech economy will enjoy a competitive advantage for some time into the future; the process of the approximation of price and earnings levels to those of the internal unified European market and the appreciation of the CZK compared with the EUR which will inevitably lead to increases in parity labour costs will be a long term process.

The process of labour cost convergence does not apply solely to the Czech Republic; it is characteristic of all the EU transitory economies. Just as the wage levels of the traditional market economies of the EU are converging, a convergence in labour cost levels is also evident despite changes in the ratios of indirect costs resulting from changes in labour taxation. The lower the level of labour costs, the faster is convergence towards the levels of more advanced economies.

³⁹ Malta is an exception in this comparison with an ERDI of 1.4 in 2008 (1.5 in 2007) and a price level of 73% of that of the EU-27.

4. Labour Costs in the Czech Republic and EU Countries in Labour Statistics

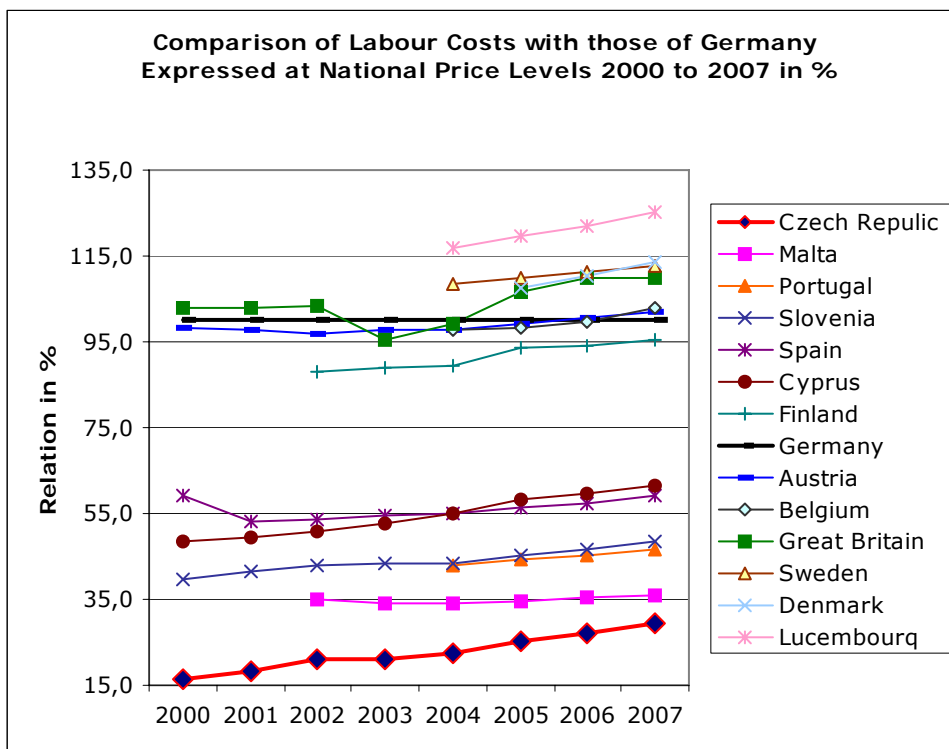
Diagram 4



Source: Eurostat: Monthly labour costs - Nace Rev. 1.1, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/database, July 2010, Calculated by RILSA

Note: Eurostat did not publish data for the EU as a whole. Germany was selected as the basis of comparison since it was close to the EU-15 average in 2005.

Diagram 5



Source: Eurostat: Monthly labour costs - Nace Rev. 1.1, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/database, July 2010, calculated by RILSA.

Note: Eurostat did not publish data for the EU as a whole. Germany was selected as the basis of comparison since it was close to the EU-15 average in 2005.

Significantly lower labour cost levels compared with most developed EU countries enables Czech exporters to benefit from price competition and/or achieve higher profit margins. In addition, low labour costs remain a motivating factor for the inflow of foreign investment capital. The concept of maintaining low labour costs in the Czech Republic has not led to the suppression of material- and energy-demanding industrial production and tends to reduce the tendency to replace labour with fixed capital means of production. It may, on the other hand, gradually lead to a lowering of the qualification levels of the labour force. Despite the relatively high employment rate, the below-average price of labour has resulted in a relatively low level of domestic GDP consumption (around 49%). With final government consumption standing at 20%, the Czech economy is unusually sensitive to export fluctuations and raw material and energy price changes. Low labour costs can create macroeconomic imbalance thus raising the spectre of future economic instability and even social conflict.

4.3 Labour Taxation

Historically, the Czech Republic has enjoyed a relatively high level of social solidarity, i.e. high levels of social expenditure requiring higher than average statutory contributions on the part both of employers and employees to centralised social funds, namely for old age pensions, sick pay insurance, employment policy costs (unemployment benefits, re-training courses etc.)⁴⁰ and health care. Unlike most other European countries, Czech legislation defines the wage as compensation for work and the gross wage does not include payments related to the social situation of the employee and his/her family since such contributions are paid from the state budget. "Labour taxation" in the Czech Republic reflects a high standard of social security and health care at a low level of earnings. With the exception of social security and health insurance contributions, wages are not taxed on the side of the employer. Income tax payable by the employee on a substantial portion of his/her income from dependent activities (employment)⁴¹ and which therefore makes up a part of the gross wage is low compared with other countries accounting for a range of between 6% of labour costs in 2007 and 8.5% in 2005. By way of comparison, in most countries income tax accounts for 10% or more of labour costs.

⁴⁰ Pension and sickness insurance and employment policy costs make up part of the Czech state budget.

⁴¹ In addition to income from dependent activities, income tax is payable on income earned from the ownership of property and from self-employed income (i.e. on a combination of income sources).

Table 21 The Tax Gap in EU Countries - OECD Members - 2000, 2003 and 2008 Expressed in %

Country	2000			2003			2008			2008 - 2000 in percentage points		
	Social security	Income tax	Tax gap	Social security	Income tax	Tax gap	Social security	Income tax	Tax gap	Social security	Income tax	Tax gap
Belgium	36	21	56	34	20	54	34	22	56	-2	1	0
Hungary	38	14	52	36	10	46	38	16	54	0	2	2
Germany	34	18	52	34	17	51	33	19	52	-1	1	0
France	38	9	48	39	9	48	39	10	49	1	1	1
Austria	38	7	45	37	8	45	37	12	49	-1	5	4
Italy	32	14	47	32	14	46	32	15	47	0	1	0
the Netherlands	39	7	45	36	7	43	31	14	45	-8	7	0
Sweden	30	19	50	30	18	48	30	15	45	0	-4	-5
Finland	27	21	47	24	20	44	24	19	43	-3	-2	-4
Czech Republic	35	8	43	35	8	43	35	8	43	0	0	0
Greece	34	2	36	34	0	34	34	8	42	0	6	6
Denmark	12	32	44	12	32	44	11	30	41	-1	-2	-3
Poland	38	5	43	38	5	43	34	6	40	-4	1	-3
Slovakia	37	5	42	37	5	42	31	8	39	-6	3	-3
Spain	28	9	38	28	9	37	28	10	38	0	1	0
Portugal	28	5	34	28	5	33	28	10	38	0	5	4
Luxembourg	24	11	35	24	8	32	23	13	36	-1	2	1
Great Britain	14	17	31	17	14	31	18	15	33	4	-2	2
Ireland	16	14	29	15	10	25	14	9	23	-2	-5	-6

Source: OECD: Taxing Wages 2000 - 2001, OECD 2001, ISBN 92-64-09684-1, p. 16, OECD: Taxing Wages 2002 - 2003, OECD 2004, ISBN 92-64-01523-X, p. 5, OECD Taxing Wages 2007 - 2008, OECD 2009, ISBN 978-92-64-04933-8, p.15.

Note: Data refers to an unmarried and childless employee. Year 2003, before the Czech Republic's accession to the EU. Summation differences in the Tax gap column result from the rounding up/down of individual items.

Countries applying the Anglo-Saxon model generally report low tax gaps. Continental countries have tended to adopt the solidarity system of social security and health care and have tax gaps ranging from 1/3 (Luxembourg and Portugal) to more than 1/2 (Belgium, Hungary, Germany) of labour costs. While wage taxation decreased generally in the 1990s, particularly in terms of social security contributions, it increased throughout the period 2000 to 2008 as a result of higher employee income tax rates in the majority of the countries monitored. With the exception of Great Britain and Hungary, no increases in social protection contributions were reported in the period 2003 to 2008 and any decrease was accompanied by the natural growth of income tax revenue. The high costs of social protection in those countries that reported historically low income from dependent activities in the 1990s and the first half of the following decade (the Czech Republic, Slovakia, Poland and Greece) were compensated for by lower earnings taxation. The proportion of Czech social security insurance in labour costs is one of the highest in the EU; in terms of the tax gap, however, the country enjoys one of the lowest total rates of wage taxation thanks to low income tax levels.

A decrease in labour taxation in the form of a decrease in contributions to social security and health insurance and personal income tax would require significant intervention in the financing of the social security and health insurance systems⁴².

⁴² Despite the centralisation of the collection and subsequent re-distribution of contributions, health insurance companies have had to be subsidised from the state budget on a number of occasions.

5. Unit Labour Costs

5.1 Definition of Unit Labour Costs

Unit Labour Costs are generally defined as the Labour's Share in Costs in one unit of production⁴³. A number of definitions from respected international institutions that take into account the purpose of monitoring and the data available are provided in the following summary.

Wiener Institut für Internationale Wirtschaftsvergleiche (WIIW)

Unit Labour Costs are defined as labour costs per one unit of output. As a ratio of two quantities, they are influenced by each of the two components. Ideally, labour costs include all the costs related to the labour production factor which means wages and salaries (including taxes) paid by employees plus all the indirect labour costs paid by employers such as statutory contributions to social security.

Source: HAVLIK, P.: *Unit Labour Costs in the New EU Member States*. Vienna, WIIW 2005, January, *Statistical Reports*, No. 1, p. 3.

The above definition was formalised in more detail by Peter Havlik of the Vienna Institute for International Economic Studies in the journal *Statistika* No. 4/2005⁴⁴

$$ULC = LC/LP = LC / (OUT / EMP),$$

Where:

- ULC* Unit labour costs
- LC* Labour costs per one employed person
- LP* Labour productivity per one employed person
- OUT* Output
- EMP* Employed person

Changes in unit labour costs can be analysed using the formula:

$$\Delta ULC = \Delta LC - \Delta LP = \Delta LC - \Delta OUT + \Delta EMP$$

Institut der deutschen Wirtschaft, Köln

Adjusted unit wage costs⁴⁵ (JMN_b) are equal to the quotient of labour costs (NP) per one unit (AVz) per employee or per one hour worked by the employee and of the GDP per unit (AVp) per employee or per one hour worked by the employee.

⁴³ For more information see Hinze, J., Brück, C., Danckwerts, R. F., Wohlers, E.: *Aussagefähigkeit internationaler Arbeitskostenvergleiche. Methodische Grundlagen, empirische Ergebnisse und wirtschaftspolitische Schlußfolgerungen*, HWWA Studies No. 42, Hamburg Institute of International Economics (HWWA), Hamburg, 1998

⁴⁴ Havlik P.: *Unit labour costs in the new EU member states*, *Statistika* No. 4/2005, ISSN 0322-788x p. 288

⁴⁵ Die bereinigten Lohnstückkosten

$$JNM_b = \frac{\frac{NP}{AVz}}{\frac{HDP}{AVp}}$$

This method eliminates changes in the employment structure or, more precisely, the fluctuation between employees and the self-employed. It is presumed that the productivity of employees is as high as the productivity of self-employed persons.

In addition to the said indicator, IDW applies unit wage costs (*JMN*) which is the quotient of the volume of wages (*M*) and GDP or, with concern to a partial sector, the gross value added; it expresses the value as a nominal value which, after recalculation taking into account the price index, becomes the real value and the following formula applies:

$$JMN_{nom} = JMN_{real} * p = \frac{M}{HDP_{nom}} * p = \frac{M}{HDP_{real}}$$

Source: IDW: Produktivität und Lohnstückkosten im internationalen Vergleich, Berlin, IW-trends 3/2004

Key Indicators of the Labour Market (KILM project)

Groningen University (Holland) KILM project databases contain a comparison of the economic data and methodologies of a total of 31 countries and information on the industrial sectors of 23 countries. These databases are used by the OECD, ILO and Eurostat.

Unit Labour Costs consist of the nominal compensation for work paid to the employee divided by the real value added. Employee compensation includes wages and other costs paid by the employer and the labour costs of self-employed persons regarding which the same labour costs as employees is presumed. The data source consists of the USD series (after conversion using the exchange rate) established in 1990. Productivity is measured in USD using the exchange rate and relative prices expressed in Purchasing Power Parity (PPP). The database utilises data from the National Accounts of the countries monitored.

For the purposes of international comparison, Unit Labour Costs are expressed as follows:

$$ULC^{x(u)} = \frac{LCH^{x(x)} / ER^{xu}}{OH^{x(x)} / PPP^{xu}}$$

Where:

- ULC* Unit labour cost (ULC),
- LCH* Labour costs per hour (hourly compensation),
- ER* Exchange rate - national currency/USD,
- OH* Hourly output value,
- U* USD,
- x* Country compared

Source: Bart van Ark, Erik Monnikhof: Productivity and unit labour cost comparisons: database, International Labour Office, Geneva 2000, ISBN 92-2-112176-3, pp 3. - 5

ILO/KILM: Key Indicators of the Labour Market, KILM indicators 1-20, available at: <http://www.ilo.org/public/english/employment/strat/kilm/index.htm>, May 2009

5. Unit Labour Costs

OECD

The most simple expression defines Unit Labour Costs as the ratio of nominal compensation paid to employees in current prices and output and added value or gross production expressed in terms of fixed prices. If the unit of time - the number of hours - is reflected, Unit Labour Costs are interpreted as the quotient of compensation paid per hour and hourly productivity:

$$ULC = (C/H)/(Q/H)$$

Where:

ULC Unit Labour Costs ,
C Employee compensation,
Q Output,
H Hour.

A comparison of the Unit Labour Price between countries can be made using the formula:

$$ULC \text{ of country A} = \frac{\text{hourly labour costs of country A}}{\text{exchange rate between countries A and B}}$$

$$\frac{\text{Hourly output in country A}}{\text{PPP between countries A and B}}$$

Where:

ULC Unit Labour Costs,
PPP Purchasing power parity

The data required is provided by National Accounts. The equation assumes that the labour income of employees and the self-employed is the same.

Source: MEI Comparative Methodological Analysis, Supplement 3, Wage Related Statistics, OECD 2003

European Central Bank

Unit Labour Costs are considered total labour costs per one unit of output, calculated for the Eurozone as the ratio of total compensation paid to employees of gross domestic product expressed in fixed prices.

Source: ECB: Monthly Bulletin. ECB 2004, No. 9. Access from the internet, September 2005:
<http://www.ecb.int/pub/pdf/mobu/mb200409en.pdf>.

Eurostat

Eurostat defines Unit Labour Costs as an incremental quantity:

“Unit Labour Costs - the percentage of growth of the following ratio: compensation per employee expressed in current prices and GDP per employee expressed in current prices”

Source: EUROSTAT: Unit labour cost growth, access from the internet [6th May 2005]:
http://europa.eu.int/comm/eurostat/newcronos/reference/display.do?screen=detailref&language=en&product=EU_MAIN_TREE&root=EU_MAIN_TREE/economy/main/strind/ecobac/eb050

"...compares compensation per employee and productivity (gross domestic product per employee) to express how compensation per employee is related to his/her productivity, i.e. the relationship between the compensation paid to each worker and the amount each worker produces through his/her work."

Source: EUROSTAT: Real unit labour cost growth, access from the internet [6th May 2005]: http://epp.eurostat.ec.eu.int/portal/page?_pageid=1996,39140985&_dad=portal&_schema=PORTAL&s .

European Commission, Directorate - General for Employment

In compliance with the findings of the EU KLEMS project⁴⁶, the Directorate - General for Employment applies the concept of labour income share, the calculation of which presumes the labour income of the self-employed and employees is the same and divides total employee compensation by the total number of employees. The labour income share calculation algorithm is as follows:

$$\frac{\frac{NZ}{zam} * prac}{HDP_{tc}} * 100$$

Where:

- NZ* Employee compensation,
- zam* Total number of employees,
- prac* Total employment rate,
- HDP_{tc}* GDP expressed in market prices.

It follows from this formula that the result is the same as calculating absolute values of Unit Labour Costs.

Source: Directorate - General for Employment, Social Affairs and Equal Opportunities: Employment in Europe 2007, European Commission. Luxembourg 2007. ISBN 978-92-79-06669-6

The application of ULC definitions in practice is different for individual institutions, in particular in terms of the content of total employee compensation (hourly, monthly or annual), in terms of the inclusion of employees only in the labour productivity calculation or in terms of expressing GDP in fixed or current prices - for the purposes of international comparison, it is preferable to use GDP expressed in purchasing power parity (PPP). The expression of labour productivity as the share of gross value added in the number of employees is also sometimes used; this approach, however, is only used in connection with the consideration of industrial sectors.

In practice, with regard to major international institutions as well as domestic national statistics offices, ULC is expressed in the form of indices, often termed "boom indices"⁴⁷, which means that they are provided only with regard to the growth/decline

⁴⁶ www.euklems.net

⁴⁷ Boom indices capture changes in economic proportions and enable the influence of partial factors to be quantified. However, they do not characterise relationships between individual entities, i.e. between

rates of particular quantities rather than in absolute values. The European Central Bank (ECB), for example, in its monthly bulletins provides a Unit Labour Costs index in incremental form and the statistical office of the European Commission - Eurostat - publishes Unit Labour Cost Growth (ULCG) data similar to DG ECFIN⁴⁸ data in the AMECO and ALCDO databases. The CZSO and the Czech Ministry of Finance follow a similar procedure. Analysts suggest that this approach is less time-consuming and is sufficient in terms of expressing cost and inflation pressures, if any, and changes in competitiveness.

5.2 Unit Labour Costs in the Reporting of Major Czech Institutions

The Czech Statistical Office

The Czech Statistical Office monitors unit labour costs in the form of a boom index, i.e. as the "ratio of the index of compensation paid to employees and the mixed income of households per 1 worker and the index of aggregate labour productivity"⁴⁹.

Such an index would be more predictive were the category of mixed income to include contributions to social security and health insurance paid by the self-employed. Moreover, the inclusion of total mixed income in the calculation would seem questionable. A survey carried out by RILSA confirmed the equity of legal regulations related to the social and health insurance payments of the self-employed; over the long-term, self-employed persons use roughly 1/2 the difference between income and costs for personal consumption (the "entrepreneur's wage") while the rest is allocated to maintaining and developing the business⁵⁰.

The Ministry of Finance

The Ministry of Finance applies unit labour costs in its macroeconomic predictions which means the "Share of the indices of nominal compensation per 1 employee and real labour productivity"⁵¹. At the same time, the Ministry monitors the share of compensation paid to employees of GDP.

national economies for the purposes of this study. The main advantage of boom indices is that they can be compiled significantly more quickly than absolute value statistics.

⁴⁸ DG ECFIN = European Commission Directorate General for Economic and Financial Affairs.

⁴⁹ CZSO: Statistical Yearbook of the Czech Republic 2008, CZSO, Prague 2008, code 0001-08. available at: <http://www.czso.cz/csu/2008edicniplan.nsf/p/0001-08>, Table 1-1, Key national economy indicators.

⁵⁰ The "entrepreneur's wage" refers to that part of mixed income used by the self-employed for personal consumption. Social security legislation assumes that a self-employed person uses 50% of mixed income for further business development and 50% for personal consumption. Analysis of a self-employed person's household income and expenses has confirmed the respective proportions over the long term and has also shown that the average "entrepreneur's wage" corresponds to employee earnings, or, more precisely, higher labour cost values are cancelled out by the low voluntary sickness insurance contributions paid by the self-employed. For more information, see Baštýř, I.: Příjmy osob samostatně výdělečně činných in: Průša, L. and others: Sociálně ekonomické postavení osob samostatně výdělečně činných ve společnosti (The Social and Economic Position of Self-Employed Persons in Society). RILSA, Prague 2006, ISBN 80-87007-33-6, p. 110 - 138, available at: <http://www.vupsv.cz/>

⁵¹ Source: Ministry of Finance of the Czech Republic: Makroekonomická predice České republiky (Macroeconomic Predictions for the Czech Republic). January 2010, p. 35. Available at: <http://www.mfcr.cz/cps/rde/xchg/mfcr/xsl/makro-pre.html>

The Research Institute for Labour and Social Affairs

Since 2004, the Research Institute for Labour and Social Affairs (RILSA) has worked with unit labour costs defined as the share of the average labour price expressed as compensation paid to employees of GDP per one worker expressed in current prices at the point at which goods and services are realised. The procedure presumes that the labour price and labour productivity are identical for employees and the self-employed⁵². Calculations are made on the basis of a level index in the national price level and in that of the EU. Data is obtained from the National Accounts system. The selected methodology enables an international comparison to be made on the basis of comparable data produced by Eurostat and the OECD.

5.3 ULC on RILSA Methodology

The methodology and algorithm used in the monitoring of ULC were defined in the 2004 Labour Costs study⁵³; further details can be found in a RILSA monograph entitled Unit Labour Costs - An Analysis of Levels and Development⁵⁴. The potential for the application used by RILSA, which depends on price levels, is described in a publication entitled Labour Costs Monitoring (proposal, pilot verification)⁵⁵.

5.3.1 The ULC Level Indicator

This expression is used at the national economy level with regard to which ULC are defined as the share of unit compensation paid to employees (i.e. the share of total compensation per one employee where compensation is understood in National Account terms⁵⁶) of labour productivity (i.e. gross domestic product divided by the

⁵² In fact, the labour productivity of employees and self-employed persons is different; that of the self-employed attains roughly 60 per cent of the productivity of corporations. Higher productivity is impeded principally by low capital availability, the high volume of manual, non-qualified or low-qualified work at lower price levels and a focus on personal consumption that is limited by low income levels in the Czech Republic. In cases where self-employed persons work as subcontractors (mainly in the processing and building industries), they perform work that would not be profitable for larger enterprises and report lower productivity. According to RILSA, significant differences exist with regards to specific aspects in individual countries. For more information, see: Průša, L., Baštýř, I., Brachtl, M., Vlach, J.: Sociálně ekonomické postavení osob samostatně výdělečně činných v české společnosti (The Social and Economic Position of Self-Employed Persons in Czech Society). RILSA, Prague 2008, ISBN 978-80-7416-011-0, p. 52

⁵³ Baštýř, I., Prušvic, D., Vlach, J.: Náklady práce (Labour Costs), RILSA, Prague 2004, pp. 12 - 16

⁵⁴ Prušvic, D., Vlach, J.: Jednotkové náklady práce - analýza vývoje a úrovně (Unit Labour Costs - An Analysis of Development and Levels). RILSA Prague 2006, ISBN 80-87007-11-5, p. 7

⁵⁵ Kozelský, T., Prušvic, D., Vlach, J.: Monitoring nákladů práce - návrh, pilotní ověření (Labour Costs Monitoring - proposal, pilot verification). RILSA Prague 2006. ISBN 80-87007-16-6, pp. 14 - 16

⁵⁶ Employee compensation - in cash and in kind, including wages and salaries and social contributions paid by the employer:

- Wages and salaries - income for work performed in conformity with the Labour Code and other special regulations. They include wages and salaries paid for work performed on behalf of the employer, payment made to partners in the company and/or to members of cooperatives, the salaries and uniforms of regular soldiers, allowances provided to employees for travel expenses to and from work, board, cultural and sports events etc. They are reported before the deduction of income tax, statutory (obligatory) contributions to social security and health insurance and other deductions;

5. Unit Labour Costs

total number of workers). The ULC indicator provides information on what amount of "obligatory" labour costs is attributed to the product created:

$$ULC = \frac{\frac{NZ}{HDP}}{\frac{zam}{prac}} * 100$$

Where:

- ULC* Unit Labour Costs,
- NZ* Volume of compensation paid to employees in current prices from National Accounts,
- zam* Average number of employees in a given period, taken from National Accounts,
- HDP* Gross domestic product expressed in current prices,
- prac* Average number of workers in the national economy in a given period of time, taken from National Accounts.

In accordance with foreign institution practice, RILSA does not use the labour costs and employment data monitored by labour statistics in order to calculate ULC. Employee compensation and employment data taken from National Accounts is methodically comparable to GDP level calculations and to the purchasing power standard.

Productivity means GDP per one worker. The calculation presumes equal productivity in terms of employees and the self-employed; in reality, self-employed persons in the Czech Republic on average report half the level of labour productivity⁵⁷. Moreover, the labour price of self-employed persons is lower thanks to the favourable tax conditions they enjoy. In normal practice, however, the economic characteristics of corporations and self-employed persons are not monitored separately. Estimates suggest, however, that the relationship between the labour productivity of the self-employed and employees in individual EU countries differs significantly⁵⁸ depending on the structures of both the national economy⁵⁹ and employment⁶⁰.

-
- Social security contributions paid by employers on behalf of their employees for general social security and health insurance (i.e. on the volume of basic wages for social insurance, including employment policy costs, and health insurance), pension schemes, additional health insurance and direct social subsidies provided by the employer (e.g. non-returnable financial assistance paid from the social fund).

For more information see: Statistical Yearbook of the Czech Republic 2008, National Accounts, CZSO, Prague 2008 available at: <http://www.czso.cz/csu/2008edicniplan.nsf/kapitola/10n1-08-2008-0500>

⁵⁷ For more information see: Průša, L., Baštýř, I., Brachtl, M., Vlach, J.: Sociálně ekonomické postavení osob samostatně výdělečně činných v české společnosti (The Social and Economic Position of Self-Employed Persons in Czech Society). RILSA. Prague 2008, ISBN 978-80-7416-011-0, pp. 49 - 52

⁵⁸ For example the labour productivity (GDP per person) of self-employed persons is roughly 50% of the labour productivity of employees in Estonia, whereas in France it stands at 70%, in Italy 55%, in Latvia 40%, in Hungary 80%, in Poland 90% and in Finland 30%; calculations by RILSA.

⁵⁹ For example self-employed persons account for roughly 12% of GDP in the Czech Republic whereas in Estonia they account for 4%, in France 7%, in Italy 15%, in Latvia 10%, in Hungary 10%, in Poland 23% and in Finland 4%: calculations by RILSA.

Productivity expresses the co-occurrence of various factors of which labour and capital are considered the most important in economic theory; however, other factors should also be included here such as business activity and management efficiency. Productivity movement depends on labour volume development and long term asset investment (machinery, buildings, know-how). The dependence of the labour price on productivity is not explicit from this point of view; it merely provides orientation. With a higher rate of replacement of labour by machinery, employee compensation may grow more slowly than labour productivity and ULC may therefore fall. However, the growing need for qualified and therefore more expensive labour goes against this trend which is one of the reasons that analysts justify higher ULC in advanced economies.

The problems involved in expressing the incidence of individual factors in practice and/or by means of the data available have led to the utilisation of indices which express the productivity of all factors, i.e. aggregate productivity; the following text uses the term productivity as an aggregate of all factors.

5.3.2 ULC Expressed in Purchasing Power Parity

ULC movement reflects the development of the price and productivity of labour. However, specific aspects of national economic and social policies can be clearly seen in international comparisons. Labour taxation corresponds to the selected social model and the labour price corresponds not only to national productivity but also to national price levels. Despite the convergence of prices under the single price principle, price levels in individual countries exhibit significant differences. Under such conditions therefore national currencies do not have the same purchasing power. In addition, monetary policy (the creation of currency cushions) and financial market developments often have the effect of desynchronising currency purchasing power and the exchange rate. Unit Labour Costs expressed at the national price level and at the price level of the state of reference are different⁶¹.

The use of ULC as one of the basic indicators of competitiveness presumes the elimination of price level differences. In international comparisons of national economies, labour productivity is therefore mostly expressed as GDP in purchasing power parity (PPP)⁶² per one worker. The unit labour costs indicator then suggests what labour costs are expended in country X to produce one unit of output sold in country Y at a price level Y. Other performance indicators are applied in the analysis according to the respective industrial sector, e.g. value added.

In terms of domestic market significance, RILSA monitors ULC for the purposes of international comparison separately at the domestic price level after conversion to

⁶⁰ For the purposes of macroeconomic international comparison, only data related to corporations is used (such as IDW) or the same productivity and labour price levels are presumed in corporations and in self-employed businesses (such as WIIW, European Commission).

⁶¹ For more information regarding the issue of price levels and exchange rates in relation to the labour price and labour productivity in the form of an international comparison, see Fassmann, M.: Mezinárodní srovnání úrovně mezd (nákladů práce) a produktivity práce s vyspělými evropskými zeměmi (International Comparison of Wage Levels (Labour Costs) and Labour Productivity with Advanced European Countries), Pohledy 6/97, pp. 23 - 52

⁶² Purchasing power parity (PPP) is the ratio of prices in national currencies for the same products and services in different countries.

5. Unit Labour Costs

EUR and at the European price level after conversion to the purchasing power parity standard (PPS⁶³) EU-25⁶⁴:

$$ULC_{eur} = \frac{\frac{NZ_{eur}}{zam}}{\frac{HDP_{eur}}{prac}} * 100 \quad \text{and respectively:} \quad ULC_{PPS} = \frac{\frac{NZ_{eur}}{zam}}{\frac{HDP_{PPS}}{prac}} * 100$$

Where:

<i>ULC</i>	Unit Labour Costs,
<i>NZ</i>	Volume of compensation paid to employees
<i>zam</i>	Average number of employees in a given period
<i>HDP</i>	Gross domestic product expressed in current prices,
<i>prac</i>	Average number of workers in the national economy in a given period of time
<i>eur</i>	Indicator expressed in EUR,
<i>PPS</i>	Indicator expressed in EU purchasing power standard.

In order to ensure comparability, RILSA uses data published by Eurostat via the National Accounts system and the European Comparison Programme.

The conversion of productivity to the EU price level is merely informative. Should a specific comparison between two countries be required, it is necessary to select their respective price levels.

The level, development and relationships pertaining to labour costs and the comparison of these characteristics with those of labour productivity provide information on the status of and changes in the costs and competitive positions of national economies which is used in the design of business strategies within the EU. A comparison of ULC at the national price level compared with the average EU price level enables an understanding of the various cost pressures within the national economy compared with neighbouring countries and the ability of businesses to cope with productivity growth and with the process of integrating national markets into a single internal European market accompanied by price and wage convergence.

The time delay inherent in reporting the relevant data is a marked disadvantage of this procedure. National statistical services and Eurostat publish comparable data with a two-year delay and often harmonise the data retrospectively.

⁶³ Purchasing power standard (PPS) is an artificial currency unit used in international comparisons to express economic aggregate indicators within the EU. Data in PPS is obtained from the value expressed in the national currency divided by the respective purchasing power parity in EUR. With regard to the European Comparison Programme, the purchasing power of 1 PPS corresponds to the average purchasing power of 1 EUR in EU countries.

⁶⁴ ULC expressed in purchasing power parity eliminates differences in national price levels which, in post-communist countries (with the exception of Slovenia), stand at around 65% of the EU average. In 2008, Czech, Estonian and Latvian price levels exceeded 70% of the EU-27 average; in 2004, the price levels of these countries was below 60% of the European level. ULC expressed in PPS inform the exporter how much labour costs are per unit of production in the country of realisation at the EU price level.

5.3.3 Unit Labour Cost Factor Analysis Methodology in the Czech Republic

The non-uniformity of the methods used for analysing ULC movement factors has resulted from the comparison of international sources. As far as the analysis of these factors is concerned, monitoring performed by RILSA is based upon an index breakdown into the directly proportional relationship of ULC to the growth in employee compensation, the Comparative Price Level (in relation to the EU) and labour consumption, or to the indirectly proportional relationship to labour productivity growth.

$$I_{PPS}^{JNP} = I^{JNP} * I^{CPL} = I^N * I^{PRA} * I^{CPL} = \frac{N_t}{N_0} * \frac{PRA_t}{PRA_0} * \frac{CPL_t}{CPL_0}$$

When:

$$PRA = \frac{P}{HDP} = \frac{1}{PRO} = \frac{1}{\frac{HDP}{P}}$$

Where:

I_{PPS}^{JNP}	ULC index at a price level in PPS,
I^{JNP}	ULC index at the national price level,
I^N	Index of average compensation per employee,
I^{PRA}	Labour consumption index,
I^{CPL}	Index of the change of the comparable price level with respect to the EU,
O	The starting year,
T	The current year,
N	Average compensation per employee = employee compensation (National Accounts) /employees (National Accounts),
PRA	Labour consumption for a unit of GDP,
PRO	Productivity,
P	Number of employees taken from National Accounts,
HDP	Gross domestic product,
CPL	Comparative Price Level in PPS,
PPP	Purchasing Power Parity in PPS,
ER	Exchange rate.

In order to express the influence of CZK/EUR exchange rate movements, the said formula can be extended by means of the exchange rate index:

$$I_{PPS}^{JNP} = I^{JNP} * I^{CPL} = I^N * I^{PRA} * I^{CPL} = \frac{I_{K\check{c}}^N}{I^{ER}} * I^{ER} * I_{K\check{c}}^{PRA} * I^{CPL} = \frac{I_{K\check{c}}^N}{I^{ER}} * \frac{I^{ER}}{I_{K\check{c}}^{PRO}} * I^{CPL}$$

Where:

$I_{K\check{c}}^N$	Index of average compensation per employee in CZK,
$I_{K\check{c}}^{PRA}$	Index of Labour Consumption in CZK,
$I_{K\check{c}}^{PRO}$	Index of productivity in CZK,
I^{ER}	CZK/EUR exchange rate index

5.4 ULC in the Czech Republic and in EU Countries

5.4.1 ULC Expressed at the National Price Level

The labour price in the Czech Republic compared with western European countries is traditionally low, as is that of other former post-communist members of the EU, and reflects differences in the development of price levels and structures and, therefore, of earnings levels in global and western European markets and those of the former Soviet bloc. The convergence of price and earnings levels and structures is ongoing via a range of mutually connected processes, i.e. inflation, the appreciation of national currencies and changing price structures; however the process is slow and disproportions remain.

The price of the same labour in the “old countries” of the EU is significantly higher than in more recent EU member countries. The use of wage and currency cushions allowed the “trouble-free” connection of post-communist economies to the unified European market in the 1990s. In this regard, however, the low cost of labour should not be viewed as being the result of the non-qualified nature of Czech industry and services with low levels of labour productivity.

Unit labour cost movement in the 1990s was influenced by the elastic balancing out of the rapid decrease in the labour price which occurred during the first years of transformation. In 1990 and 1991, real earnings fell by 1/3, productivity dropped by around 1/10 and, according to RILSA estimates, unit labour costs dropped by 5 percentage points concerning which the creation of a wage cushion is often mentioned. The withdrawal of this cushion has led to faster growth in real earnings than in labour productivity.

Czech ULC expressed at the national price level are no different from the ratios of other European countries. The Czech Republic is one of Europe’s less developed economies, which benefits traditionally from cheap labour. The relatively low level of Czech productivity compared to the price of labour evident from recent data appears to present a serious future challenge. Ireland and Greece, both countries with several times higher labour prices than the Czech Republic, report lower ULC (Ireland historically and Greece since 2006).

Table 22 ULC in the EU 2000 - 2003 Expressed at the National Price Level

	ULC expressed at the national price level				Increment in perc. pts.
	2000	2001	2002	2003	2003-2000
EU-27	60.39	60.52	60.19	59.84	-0.55
EU-15	59.35	59.50	59.22	58.89	-0.46
Slovakia	42.74	41.63	41.65	41.09	-1.65
Latvia	48.38	46.29	44.39	45.07	-3.31
Ireland	49.05	48.74	46.75	46.99	-2.07
Estonia	49.40	48.28	47.80	48.24	-1.15
Lithuania	48.93	47.06	47.60	48.42	-0.52
Bulgaria	47.01	48.47	46.97	48.69	1.69
Poland	55.37	56.95	54.42	52.47	-2.90
Malta	49.68	52.49	51.36	52.83	3.16
Hungary	57.08	57.12	57.31	53.04	-4.05
Italy	54.76	55.22	54.49	54.10	-0.66
Finland	53.64	53.93	53.73	54.66	1.02
Greece	54.52	52.68	56.13	54.82	0.30
Czech Republic	52.21	52.82	54.41	55.80	3.59
Spain	58.89	58.32	57.63	56.87	-2.03
France	57.11	57.30	57.63	57.57	0.46
Denmark	56.90	58.03	58.61	58.46	1.56
Germany	59.53	59.27	58.89	58.68	-0.85
Romania	70.63	74.02	61.40	58.82	-11.80
Cyprus	55.61	54.80	56.76	59.21	3.60
Sweden	58.56	60.15	59.50	59.22	0.67
the Netherlands	58.88	58.90	59.50	59.69	0.81
Belgium	60.28	61.59	61.73	61.11	0.83
Slovenia	63.10	63.43	62.60	61.95	-1.15
United Kingdom	62.47	63.27	62.53	62.46	-0.01
Portugal	59.54	59.71	59.48	62.58	3.05
Luxembourg	73.35	80.52	81.58	78.74	5.39

Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order by ULC value in 2003. Data for Austria is not available.

5. Unit Labour Costs

Table 23 ULC in the EU 2003 - 2008 Expressed at the National Price Level

	ULC expressed at the national price level						Increment in perc. pts.	
	2003	2004	2005	2006	2007	2008	2008-2003	2008-2000
EU-27	59.84	59.03	58.65	58.01	57.80	:	:	:
EU-15	58.89	58.36	58.11	57.59	57.39	:	:	:
Slovakia	41.09	39.81	40.24	39.11	38.64	38.35	-2.74	-4.39
Poland	52.47	49.30	48.10	46.80	46.23	48.00	-4.47	-7.37
Bulgaria	48.69	46.76	46.14	44.41	47.03	49.07	0.38	2.06
Malta	52.83	51.92	50.48	49.58	48.79	49.56	-3.27	-0.12
Lithuania	48.42	48.85	48.52	50.25	49.60	49.73	1.31	0.79
Cyprus	59.21	58.21	57.69	56.35	54.45	53.34	-5.87	-2.27
Greece	54.82	54.10	54.18	52.93	53.18	53.36	-1.46	-1.16
Estonia	48.24	48.55	47.61	47.96	50.67	54.31	6.07	4.91
Ireland	46.99	47.84	49.00	49.03	50.16	54.79	7.80	5.74
Germany	58.68	57.87	56.96	55.81	54.83	55.20	-3.48	-4.33
Italy	54.10	53.90	54.47	54.84	54.48	55.20	1.10	0.44
Czech Republic	55.80	54.45	53.69	53.25	53.20	55.32	-0.48	3.11
Latvia	45.07	44.82	46.87	49.04	52.20	55.84	10.77	7.46
Romania	58.82	53.66	57.27	54.69	54.89	:	:	:
Spain	56.87	56.06	55.56	55.08	55.33	56.32	-0.55	-2.58
Hungary	53.04	57.03	57.81	56.22	56.03	56.45	3.41	-0.63
France	57.57	57.27	57.14	56.95	56.54	56.70	-0.87	-0.41
Finland	54.66	54.47	55.52	54.65	53.80	57.06	2.40	3.42
the Netherlands	59.69	59.39	57.72	57.08	57.29	57.40	-2.29	-1.48
Sweden	59.22	58.59	58.13	56.93	57.89	57.67	-1.55	-0.89
Belgium	61.11	59.44	58.90	58.61	58.55	59.71	-1.40	-0.57
Portugal	62.58	61.64	62.03	60.94	59.84	60.64	-1.94	1.10
Slovenia	61.95	62.13	61.68	61.06	60.11	61.50	-0.44	-1.60
Denmark	58.46	57.41	57.32	57.76	60.09	61.62	3.16	4.72
United Kingdom	62.46	62.11	62.37	61.80	61.87	61.72	-0.74	-0.75
Luxembourg	78.74	79.31	78.75	76.23	76.61	79.43	0.69	6.08

Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order by ULC value in 2008. Data for Austria is not available.

Up to 2003, the trend for the levelling out of the disproportions caused by the significant decrease in the real labour price compared with productivity which occurred at the beginning of the transformation process was weakening. During the boom period post 2004, Czech Unit Labour Costs expressed in Czech Republic prices stabilised at a rate of 53 to 55 cents per 1 EUR of GDP, i.e. at around 92%⁶⁵ of the EU average. The stabilisation of ULC at the national price level marked the starting point of the proportional movement between labour productivity and price in the European context. The crisis period of post 2007 saw a significant decrease in productivity, typical of economically weaker EU countries that resulted in a ULC increase of 3

⁶⁵ In this sense the Czech Republic in the period after 2000 can be compared to Greece, Finland and Italy. Within the internal Czech market, value proportions are close to those of advanced EU countries.

percentage points in 2009 compared with 2007 based on preliminary calculations. It is thought that only an "extraordinary event" that will be mitigated by a reduction in the volume and structure of employment thus leading to efficiency improvements and subsequent recovery is likely to break the trend.

Table 24 Comparison of Unit Labour Costs in the EU 2000 - 2003 Expressed at the National Price Level and Compared with the EU-27

	Comparison of ULC expressed at the national price level compared to the EU-27 in %				Increment in percentage points
	2000	2001	2002	2003	2003-2000
EU-27	100.0	100.0	100.0	100.0	0.0
EU-15	98.3	98.3	98.4	98.4	0.1
Slovakia	70.8	68.8	69.2	68.7	-2.1
Latvia	80.1	76.5	73.7	75.3	-4.8
Ireland	81.2	80.5	77.7	78.5	-2.7
Estonia	81.8	79.8	79.4	80.6	-1.2
Lithuania	81.0	77.8	79.1	80.9	-0.1
Bulgaria	77.8	80.1	78.0	81.4	3.5
Poland	91.7	94.1	90.4	87.7	-4.0
Malta	82.3	86.7	85.3	88.3	6.0
Hungary	94.5	94.4	95.2	88.6	-5.9
Italy	90.7	91.2	90.5	90.4	-0.3
Finland	88.8	89.1	89.3	91.3	2.5
Greece	90.3	87.0	93.3	91.6	1.3
Czech Republic	86.5	87.3	90.4	93.3	6.8
Spain	97.5	96.4	95.7	95.0	-2.5
France	94.6	94.7	95.7	96.2	1.6
Denmark	94.2	95.9	97.4	97.7	3.5
Germany	98.6	97.9	97.8	98.1	-0.5
Romania	116.9	122.3	102.0	98.3	-18.6
Cyprus	92.1	90.5	94.3	99.0	6.9
Sweden	97.0	99.4	98.9	99.0	2.0
The Netherlands	97.5	97.3	98.8	99.7	2.3
Belgium	99.8	101.8	102.6	102.1	2.3
Slovenia	104.5	104.8	104.0	103.5	-1.0
United Kingdom	103.4	104.5	103.9	104.4	0.9
Portugal	98.6	98.6	98.8	104.6	6.0
Luxembourg	121.5	133.0	135.5	131.6	10.1

Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order by ULC value in 2003. Data for Austria is not available.

5. Unit Labour Costs

Table 25 Comparison of Unit Labour Costs in the EU 2003 - 2007 Expressed at the National Price Level and Compared with the EU-27

	Comparison of ULC expressed at the national price level compared to the EU-27 in %						Increment in percentage points	
	2003	2004	2005	2006	2007	2007-2003	2007 -2000	
EU-27	100.0	100.0	100.0	100.0	100.0	2.0	0.0	
EU-15	98.4	98.9	99.1	99.3	99.3	0.9	1.0	
Slovakia	68.7	67.4	68.6	67.4	66.9	-1.8	-3.9	
Poland	87.7	83.5	82.0	80.7	80.0	-7.7	-11.7	
Bulgaria	81.4	79.2	78.7	76.6	81.4	0.0	3.5	
Malta	88.3	87.9	86.1	85.5	84.4	-3.9	2.2	
Lithuania	80.9	82.8	82.7	86.6	85.8	4.9	4.8	
Ireland	78.5	81.0	83.5	84.5	86.8	8.3	5.6	
Estonia	80.6	82.2	81.2	82.7	87.7	7.0	5.9	
Latvia	75.3	75.9	79.9	84.5	90.3	15.0	10.2	
Greece	91.6	91.6	92.4	91.2	92.0	0.4	1.7	
Czech Republic	93.3	92.2	91.5	91.8	92.1	-1.2	5.6	
Finland	91.3	92.3	94.7	94.2	93.1	1.7	4.3	
Cyprus	99.0	98.6	98.4	97.1	94.2	-4.7	2.1	
Italy	90.4	91.3	92.9	94.5	94.3	3.8	3.6	
Germany	98.1	98.0	97.1	96.2	94.9	-3.2	-3.7	
Romania	98.3	90.9	97.6	94.3	95.0	-3.3	-22.0	
Spain	95.0	95.0	94.7	94.9	95.7	0.7	-1.8	
Hungary	88.6	96.6	98.6	96.9	96.9	8.3	2.4	
France	96.2	97.0	97.4	98.2	97.8	1.6	3.3	
the Netherlands	99.7	100.6	98.4	98.4	99.1	-0.6	1.6	
Sweden	99.0	99.3	99.1	98.1	100.1	1.2	3.2	
Belgium	102.1	100.7	100.4	101.0	101.3	-0.8	1.5	
Portugal	104.6	104.4	105.8	105.0	103.5	-1.0	5.0	
Denmark	97.7	97.3	97.7	99.6	104.0	6.3	9.7	
Slovenia	103.5	105.2	105.2	105.2	104.0	0.5	-0.5	
United Kingdom	104.4	105.2	106.3	106.5	107.0	2.7	3.6	
Luxembourg	131.6	134.3	134.3	131.4	132.5	1.0	11.1	

Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order by ULC value in 2007. Data for Austria is not available.

The development of Czech ULC during the period 2003 - 2008, which was characterised by a gradual decrease up to 2007, was influenced by the effects of the delayed restructuring of the economy at the end of the nineties which had already overcome the under-capitalisation of the first years of transformation and which boasted a stable ownership structure. Under favourable global economic conditions, Czech businesses joined the general European trend of decreasing ULC brought about by higher rates of aggregate labour productivity. Optimistic growth expectations at the beginning of 2008, which assumed that the boom of previous years would continue, resulted in further increases in the employment rate, regardless of market capacity and opportunities for productivity growth. Companies failed to respond adequately to

the economic crisis in the second half of the year and crisis measures were only implemented at the beginning of 2009. In fairness, similar company behaviour was witnessed in other European countries. In fact, all EU countries reported an increase in ULC in 2008; labour was no longer being used efficiently. The basic records required for calculating labour utilisation throughout the EU in 2008 and 2009 will not be available until the beginning of 2011.

Table 26 ULC Development in the Czech Republic and EU-27 Expressed at the National Price Level

	2001	2002	2003	2004	2005	2006	2007	2008	2009
ULC in the CZECH REPUBLIC	52.8	54.4	55.8	54.5	53.7	53.3	53.2	55.3	56.1
Increment in %	+ 1.2	+ 3.0	+ 2.6	- 2.4	- 1.4	- 0.8	- 0.1	+ 3.4	+1.4
ULC in EU-27	60.5	60.2	59.8	59.0	58.7	58.0	57.8	:	:
Increment in %	+0.2	- 0.5	- 0.6	- 1.3	- 0.6	- 1.1	- 0.4	:	:

Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Preliminary estimates are used for 2008 and 2009

5.4.2 ULC Expressed at the European Price Level

As far as the European market is concerned, Czech businesses are, at least for the present, protected by an undervalued currency and low national price levels which create structural deformations particularly with regard to the price of labour. The current situation is favourable in that low-cost Czech goods are more easily able to compete in the more expensive European and, in particular, German markets.

5. Unit Labour Costs

Table 27 ULC in the EU 2000 - 2003 Expressed in PPS

	ULC Expressed at the European Price Level				Increment
	2000	2001	2002	2003	2003-2000 in perc. pts.
EU-27	60.39	60.52	60.19	59.84	-0.55
EU-15	62.67	62.68	62.45	62.35	-0.32
Bulgaria	14.91	16.19	15.69	16.47	1.56
Slovakia	18.27	17.60	18.15	19.59	1.32
Latvia	24.77	23.92	22.30	21.53	-3.24
Romania	25.79	27.24	22.76	21.92	-3.86
Lithuania	23.10	22.37	22.87	22.73	-0.37
Poland	29.24	33.60	30.19	25.98	-3.27
Estonia	25.85	26.81	26.70	27.43	1.58
Czech Republic	23.97	25.68	29.59	29.09	5.12
Hungary	27.23	28.68	31.70	29.82	2.58
Malta	33.75	37.28	35.77	36.09	2.34
Greece	43.01	41.16	43.34	44.67	1.66
Slovenia	44.75	45.89	45.70	46.18	1.44
Spain	49.71	50.24	49.45	50.64	0.93
Portugal	47.90	49.06	49.27	52.27	4.37
Cyprus	47.77	46.94	48.85	52.38	4.61
Italy	51.45	51.94	53.89	54.65	3.20
Ireland	54.25	56.36	54.91	56.37	2.12
Belgium	61.76	63.52	62.49	63.52	1.76
Germany	66.18	65.95	64.90	63.69	-2.49
France	61.66	61.29	61.01	63.87	2.21
Finland	61.36	63.53	63.07	65.34	3.98
The Netherlands	60.42	62.16	62.79	65.45	5.03
United Kingdom	74.95	74.24	73.02	68.43	-6.52
Sweden	72.83	70.75	71.06	71.68	-1.15
Denmark	73.81	76.79	76.62	79.46	5.65
Luxembourg	79.26	88.91	89.18	87.73	8.47

Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order by ULC value in 2003. Data for Austria is not available.

Table 28 ULC in the EU 2003 - 2008 Expressed in PPS

	ULC Expressed at the European Price Level						Increment in percentage points	
	2003	2004	2005	2006	2007	2008	2008-2003	2008-2000
EU-27	59.84	59.03	58.65	58.01	57.80	:	:	:
EU-15	62.35	61.87	61.30	60.70	60.40	:	:	:
Bulgaria	16.47	16.39	16.87	16.93	18.93	21.24	4.77	6.33
Slovakia	19.59	20.36	21.22	21.56	23.33	25.37	5.78	7.10
Poland	25.98	24.05	26.68	27.20	27.81	32.26	6.29	3.02
Lithuania	22.73	23.63	24.94	27.15	28.43	30.73	7.99	7.63
Romania	21.92	20.46	26.87	27.30	30.64	:	:	:
Czech Republic	29.09	28.96	30.82	32.37	32.90	38.93	9.84	14.96
Malta	36.09	34.99	34.16	34.21	34.09	35.82	-0.27	2.07
Estonia	27.43	27.99	28.53	30.63	34.41	38.54	11.10	12.69
Latvia	21.53	21.91	24.27	28.17	34.90	39.72	18.19	14.95
Hungary	29.82	33.96	35.78	33.56	36.11	36.77	6.95	9.53
Greece	44.67	44.65	46.18	45.43	46.56	48.04	3.37	5.02
Slovenia	46.18	45.13	45.05	45.57	46.62	49.55	3.37	4.81
Cyprus	52.38	51.21	50.87	49.92	47.53	48.27	-4.11	0.50
Portugal	52.27	52.38	50.68	49.51	48.87	49.88	-2.39	1.99
Spain	50.64	50.50	50.74	49.74	49.61	52.25	1.60	2.54
Italy	54.65	55.82	56.36	56.11	55.02	56.68	2.03	5.23
Germany	63.69	61.57	58.95	57.38	56.13	57.88	-5.82	-8.31
Ireland	56.37	57.11	59.10	59.24	59.20	66.05	9.68	11.80
The Netherlands	65.45	64.06	61.76	60.83	60.43	61.93	-3.52	1.51
Finland	65.34	63.04	64.77	63.73	62.19	67.51	2.17	6.15
France	63.87	63.88	62.99	63.12	62.20	63.70	-0.17	2.04
Belgium	63.52	63.24	63.26	63.53	64.06	66.58	3.06	4.82
Sweden	71.68	69.38	70.12	68.60	68.52	67.92	-3.77	-4.91
United Kingdom	68.43	68.69	69.27	69.75	71.37	62.77	-5.67	-12.19
Denmark	79.46	76.95	78.89	79.15	82.73	86.82	7.37	13.01
Luxembourg	87.73	86.84	89.59	85.57	87.22	92.30	4.57	13.04

Source: Eurostat: Economy and finance - National Accounts, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order by ULC value in 2008. Data for Austria is not available.

5. Unit Labour Costs

Table 29 Comparison of Unit Labour Costs in the EU 2000 - 2003 Expressed at the European Price Level and Compared with the EU-27

	Comparison of ULC expressed at the European Price Level and compared with the EU-27 in %				Increment in perc. pts.
	2000	2001	2002	2003	2003 - 2000
EU-27	100.00	100.00	100.00	100.00	0.00
EU-15	103.76	103.56	103.75	104.19	0.43
Bulgaria	24.70	26.75	26.07	27.53	2.83
Slovakia	30.25	29.07	30.15	32.73	2.48
Latvia	41.02	39.52	37.06	35.99	-5.03
Romania	42.70	45.01	37.81	36.64	-6.06
Lithuania	38.25	36.96	37.99	37.99	-0.26
Poland	48.42	55.52	50.16	43.41	-5.01
Estonia	42.81	44.29	44.35	45.85	3.04
Czech Republic	39.69	42.42	49.16	48.62	8.93
Hungary	45.09	47.39	52.67	49.83	4.74
Malta	55.89	61.60	59.42	60.31	4.43
Greece	71.22	68.00	72.00	74.65	3.43
Slovenia	74.09	75.82	75.92	77.18	3.09
Spain	82.31	83.01	82.15	84.64	2.32
Portugal	79.31	81.06	81.86	87.35	8.04
Cyprus	79.10	77.56	81.16	87.54	8.44
Italy	85.20	85.82	89.54	91.33	6.13
Ireland	89.83	93.13	91.23	94.20	4.38
Belgium	102.26	104.94	103.82	106.15	3.88
Germany	109.59	108.96	107.81	106.44	-3.15
France	102.10	101.26	101.37	106.74	4.64
Finland	101.60	104.97	104.78	109.19	7.59
The Netherlands	100.05	102.70	104.31	109.38	9.33
United Kingdom	124.11	122.67	121.31	114.36	-9.75
Sweden	120.60	116.90	118.06	119.80	-0.80
Denmark	122.22	126.87	127.29	132.79	10.57
Luxembourg	131.24	146.90	148.16	146.61	15.37

Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order by ULC value in 2003. Data for Austria is not available.

Table 30 Comparison of Unit Labour Costs in the EU 2003 - 2007 Expressed at the European Price Level and Compared with the EU-27

	Comparison of ULC expressed at the European price level and compared with the EU-27 in %					Increment in in perc. pts.	
	2003	2004	2005	2006	2007	2007-2003	2007-2000
EU-27	100.00	100.00	100.00	100.00	100.00	0.00	0.00
EU-15	104.19	104.81	104.52	104.64	104.50	0.30	0.73
Bulgaria	27.53	27.77	28.77	29.18	32.76	5.23	8.06
Slovakia	32.73	34.49	36.18	37.17	40.36	7.63	10.11
Poland	43.41	40.75	45.49	46.88	48.12	4.71	-0.30
Lithuania	37.99	40.03	42.52	46.81	49.19	11.20	10.94
Romania	36.64	34.65	45.82	47.06	53.02	16.38	10.32
Czech Republic	48.62	49.05	52.54	55.81	56.92	8.30	17.23
Malta	60.31	59.27	58.24	58.96	58.98	-1.33	3.09
Estonia	45.85	47.42	48.65	52.80	59.53	13.68	16.72
Latvia	35.99	37.11	41.38	48.56	60.39	24.40	19.37
Hungary	49.83	57.53	61.01	57.85	62.47	12.64	17.38
Greece	74.65	75.64	78.75	78.32	80.55	5.90	9.33
Slovenia	77.18	76.46	76.82	78.55	80.65	3.47	6.56
Cyprus	87.54	86.75	86.73	86.05	82.23	-5.31	3.13
Portugal	87.35	88.73	86.41	85.34	84.55	-2.80	5.24
Spain	84.64	85.55	86.51	85.75	85.84	1.20	3.53
Italy	91.33	94.56	96.10	96.73	95.19	3.86	9.99
Germany	106.44	104.30	100.51	98.92	97.11	-9.33	-12.48
Ireland	94.20	96.74	100.77	102.11	102.43	8.22	12.60
The Netherlands	109.38	108.53	105.30	104.86	104.56	-4.83	4.50
Finland	109.19	106.79	110.44	109.86	107.60	-1.59	6.00
France	106.74	108.21	107.40	108.80	107.61	0.87	5.51
Belgium	106.15	107.13	107.85	109.52	110.84	4.69	8.58
Sweden	119.80	117.53	119.55	118.26	118.54	-1.26	-2.06
United Kingdom	114.36	116.37	118.11	120.23	123.48	9.12	-0.64
Denmark	132.79	130.36	134.51	136.44	143.14	10.35	20.92
Luxembourg	146.61	147.10	152.75	147.51	150.91	4.30	19.67

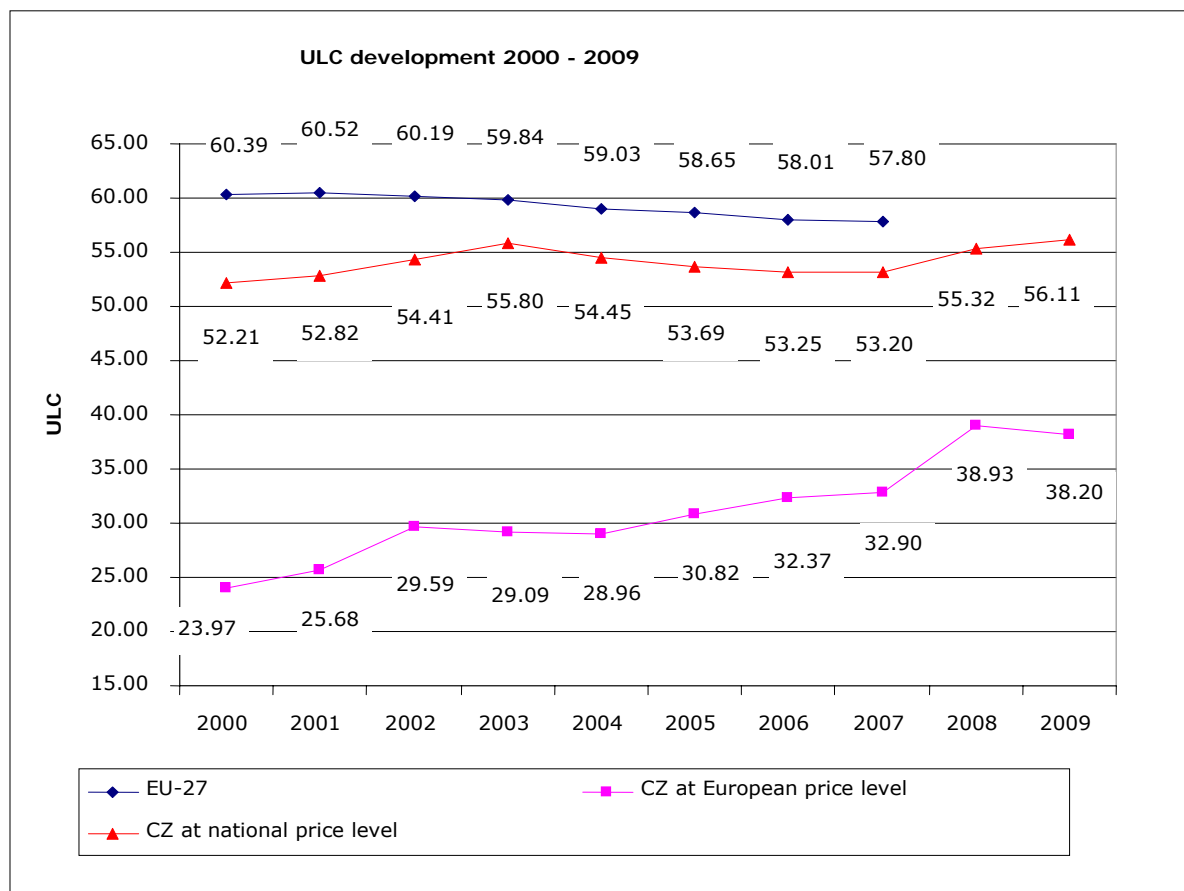
Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order by ULC value in 2007. Data for Austria is not available.

The gradual withdrawal of the currency cushion in the Czech Republic and in the other post-communist countries is reflected in the relatively fast growth of ULC expressed in PPS and in their convergence with the level expressed at the national price level. The optimum situation would be the mutual convergence of both characteristics in terms of both national and European price levels, i.e. a growth in ULC expressed in PPS in parallel with a decrease in national price levels and at a lower level than those of more advanced EU countries; from this point of view, developments since 2003 should be seen in a positive light. The starting point for falling ULC in the period 2003 to 2008 took the form of productivity increments measured in current prices (70% in EUR, 33% in CZK) which just outpaced the growth in average remuneration, i.e. the labour price (69% in EUR, 32% in CZK).

5. Unit Labour Costs

Diagram 6



Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: The necessary national account data for the EU-27 as a whole for the purposes of ULC calculation in 2008 and 2009 was not available at the time of writing.

Despite increasing price levels and the appreciation of the CZK, Czech ULC, converted into PPS, are still amongst the lowest in the EU; in 2007 only Bulgaria, Slovakia, Lithuania, Poland and Romania had lower levels. Hungary consistently reported a higher level throughout the period monitored. The economic crisis which began in 2008 has improved the position of the Czech Republic in comparison with Estonia. On the other hand, Czech ULC exceeded those of the traditionally market economy of Malta with its higher and relatively stable price levels (around 69%; 71% in 2008). The high employment rate in the Czech Republic in 2008, despite signs of an approaching economic crisis and the resultant decrease in economic performance and substantial growth in Comparative Price Levels, led to an extraordinarily rapid increase in ULC (18%). The decline in the Czech comparable price level of 1.4 percentage points from 70.4% in 2008 to 69% in 2009⁶⁶) was reflected in an

⁶⁶ Preliminary calculation by Eurostat from October 2010, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/purchasing_power_parities/data/database

extraordinary decrease in parity ULC despite an increase in terms of the national price level.

Preparation of the Baltic countries for entry to the Eurozone, namely the imposition of a fixed exchange rate between national currencies and the EUR, is associated with rapidly growing Comparative Price Levels, the starting point for which was the high dynamics of originally low parity ULC levels which were approaching those of the Czech Republic. Slovakia was in a unique position since it reported above-average labour productivity increments prior to Eurozone entry; in the period 2000 – 2008, productivity expressed at the national price level grew more than 2.5 times, i.e. by 2/3 if expressed in PPS, which represented the second highest growth rate in the EU (after less developed Romania) which eliminated the balancing of Slovak price levels both before and after the adoption of the EUR.

5.4.3 Unit Labour Cost Factors in the Czech Republic

The comparison of international sources above highlights the non-uniform nature of methods used for analysing ULC movement factors. RILSA, when analysing such factors, breaks down the index into its basic components, i.e. the growth in employee compensation, the Comparative Price Level and labour consumption, and the indirectly proportional relationship to labour productivity growth.

The analysis of ULC movement factors has revealed the importance of the convergence of Czech price levels towards those of the classic market economies of the European Economic Area. The significant difference between price levels in the Czech Republic and those of more economically advanced countries is the result of development over the past several decades which was noted for its price stricture due to the economic integration of the communist bloc and the decrease in the CZK exchange rate in 1990 and 1991⁶⁷. The 1990s saw a gradual balancing out process as a result of the high inflation rate, while after 2000, the process continued through a strengthening exchange rate. In the period 2000 to 2009, the Czech crown appreciated against the EUR by 35%. Parity and the exchange rate between the Czech crown and the EUR are converging; the Exchange Rate Deviation Index - ERDI decreased from 2.0 in 2000 to 1.4 in 2008. It is reasonable therefore to assume that average compensation per employee expressed in EUR and therefore ULC will continue to approach European levels.

⁶⁷ Creation of a wage cushion

5. Unit Labour Costs

Table 31 ULC Development Factors in the Czech Republic 2000 - 2008 in EUR

l.	Item	Index			
		2003/2000	2008/2003	2008/2000	2008/2007
1	Average compensation per employee in CZK	1.263	1.321	1.668	1.072
2	Labour consumption (workers/GDP at the national price level in CZK)	0.846	0.751	0.635	0.971
3	CZK/EUR exchange rate	0.895	0.783	0.701	0.898
4	Average employee compensation in EUR, line 1/line 3	1.411	1.687	2.380	1.193
5	Labour consumption (workers/GDP at the national price level in EUR), line 2 x line 3	0.757	0.588	0.445	0.872
6	ULC at the national price level, line 1 x line 2, or line 4 x line 5	1.068	0.992	1.059	1.040
7	Comparative Price Level (CPL) CZECH REPUBLIC/EU	1.136	1.351	1.534	1.139
8	ULC in PPS EU-25, line 6 x line 7	1.214	1.340	1.624	1.184
	Additional indicators:				
9	Productivity per worker in CZK	1.181	1.332	1.575	1.030
10	Productivity per worker in EUR	1.321	1.701	2.247	1.147

Source: Eurostat: Economy and finance - National Accounts, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, Eurostat: Economy and finance - Exchange rates, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/exchange_rates/introduction, October 2010, Eurostat: Economy and finance - Purchasing power parities, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/purchasing_power_parities/data/database, October 2010, calculated by RILSA

Following EU accession, Czech businesses and social partners maintained the proportional development of the labour price and productivity which enabled them to stabilise ULC at the national price level. After 2003, the Czech economy began to stagnate and there was even a slight decrease in unit labour costs typical of more advanced EU-member countries.

However, the gradual exhaustion of the currency cushion created problems and was reflected in equalisation in terms of both price levels and structure with the European market. Those Czech exporters that did not compensate through increases in productivity suffered from decreased profits from trade with more advanced countries or at least from a narrowing of the margin for manoeuvre in terms of price competitiveness. The Czech Republic was becoming less attractive for foreign investors. On the other hand, it was probably unrealistic to hope to fully eliminate the substantial and artificially created differences between price levels in the Czech Republic and more advanced European countries⁶⁸ solely through increased productivity.

To level out the increase in Comparative Price Level s of 53% in the period 2000 to 2008, during which time the CZK strengthened against the EUR by 30%, the Czech economy would, at a given labour price growth, expressed through employee average compensation in EUR, of 138% (67% in CZK), have to have increased productivity per worker in EUR nearly three times, i.e. by 266% (155% in CZK), or, in

⁶⁸ In 1990, the (then) Czechoslovak crown was devalued by more than 70%. Despite high price growth, with prices in 1993 reaching double those of 1989, Czech price levels were only 27% of those of Germany (in 2007, the level had reached 61%).

terms of actually reported productivity, the labour price could only have grown by 47% (in CZK 3%) from 2000 to 2008 reflected in a real earnings decrease of 18% and a gross wage purchasing power (parity) decrease of 6% as compared with the EU. Decreases in real earnings could have been partly offset through a decrease in social security, health insurance and employment policy contributions paid by the employer in favour of net earnings; however, this alternative was unrealistic due to the consequent under-financing of the social security and health systems.

Hypothetically the exchange rate could have been maintained at 2000 levels with a more than three times higher inflation rate (76%, i.e. 6.5% per year to 2008). Clearly, however, this was completely unrealistic given the independence of the Czech National Bank, the duty of care for price level stability in the Czech Republic imposed on the Bank by legislation, the floating exchange rate of the Czech crown and the demand for the Czech currency from foreign investors. In fact, the inflation followed a downward trend from 2000 to 2009 which was influenced to the contrary only by the periodic termination of price regulation.

Between 2000 and 2008 prices in the Czech Republic grew by 23%⁶⁹. A similar rate of increase was reported by the EU, at 20%. To all intents and purposes, inflation has played only a very minor role in the relatively rapid convergence of Czech prices with those of the EU since 2001.

The growth of ULC in terms of purchasing power parity with the rapid appreciation of the Czech crown and a rate of inflation identical to that of the EU has been the norm over the past decade. Should the convergence of Czech price levels with those of the EU continue under such conditions, Czech businesses will be unable to prevent an increase in parity ULC.

The approximation of labour prices in the Czech Republic to those of the EU will occur in terms of the convergence of the price structure and Comparative Price Level s with those of the EU should the current proportions of labour productivity and average earnings development be maintained. The gradually decreasing difference between the exchange rate and the purchasing power of the Czech crown will, in terms of the global market, result in relative and absolute increases in the labour price in the Czech Republic. With the 70% price level reached to date, social partners, when negotiating wages, should take into account not only domestic inflation and productivity development, but also the movement of earnings which form the basis for the labour price expressed as compensation paid to employees in competing economies and the development of the Czech macroeconomic framework in relation to the EU (the inflation differential and changes in the exchange rate). General agreements in Denmark, the Netherlands, Ireland and Norway take a similar approach when agreeing upon wage dynamism with regard to foreign competitors. In Belgium, the relationship between domestic wage movement and that of her main competitors has been covered since 1996 by the Competitiveness Act. To date, no institution has been established in the Czech Republic to facilitate coordinated action by social partners and/or the state in readiness for the inevitable harmonisation of domestic labour cost proportions with the external competitive environment in terms of the single price principle.

⁶⁹ In the period 2000 to 2007, the total inflation rate was 16%. The public finance reforms of 2008 resulted in a one-off jump in annual inflation to 6.3%.

6. The Labour's Share in Costs

The Labour's Share in Costs is determined by the amount of labour (hours or number of employees), the price of labour, fixed capital assets (machinery and equipment, including buildings) and the demand for materials, energy, services and disposable product consumption (consumption of input). Lower values of the labour share of costs (LSC), i.e. the Labour's Share in Costs, per one worker are reported in the secondary sector. Thanks to the traditionally low price of labour, capital equipment, high ratio of industry in GDP and capital-intensive agricultural mass production, LSC in the national price level of the Czech Republic (around 23% in 2008) is one of the lowest in the EU. In 2008, lower values were reported only by Slovakia and presumably Bulgaria for which no recent data is available. Historically, with earnings level growth⁷⁰, LSC followed a downward trend (-1.4 percentage points in 2003 to 2008) following increases up to 2003 (+1.1 percentage points on 2000).

6.1 Calculation of the Labour's Share in Costs

The calculation of the labour component in total costs per one worker provides a partial indication of the importance of labour as a factor of production. Accordingly, the authors have designed methodology that is based on National Accounts data the results of which are comparable with other EU countries.

At the national economy level, an expression can be used that defines LSC as the share of employee compensation in costs expressed in current price per person. Costs can be expressed as the sum of the Intermediate consumption, compensation of employees and depreciation.

Intermediate consumption is monitored in the National Accounts and can be defined as the value of services consumed during the labour process⁷¹. The consumption of input is simply equal to the difference between production and value added.

⁷⁰ From 2000 to 2008, average nominal compensation of employees in EUR, counted per one person, increased almost 2.5 times (the 2008/2000 index is 238%); in 2000, this value was 1/5 the level of the EU-27, in 2003, the value reached 1/4 (before accession to the EU) and in 2007, the value stood at 2/5. In addition to the appreciation of the CZK, the reason for this movement consisted of average earnings growth, i.e. 2008/2003 at 245% in EUR and 172% in CZK.

⁷¹ "Intermediate consumption (P.2) means the value of products (other than fixed assets) consumed during the monitored period as production process inputs (by both market and non-market manufacturers). Products and services may be consumed or transformed in the production process. The Intermediate consumption value includes products and services used for main, indirect or auxiliary activities (such as marketing and bookkeeping). Intermediate consumption means expenses for materials, fuel, energy, long-term consumption items the price of which does not exceed 500 ECU (in 1995 prices), expenses for the ordinary regular maintenance of fixed assets applied during production, for military weaponry intended for destruction and for equipment used for the transportation of the same, the costs of use of fixed assets (operative leasing, other than financial), fees payable for the use of non-tangible, non-produced assets (patents, for example, but with the exception of the purchase of such ownership rights) and others." See CZSO: Metainformation on the Intermediate consumption indicator, available at: http://vdb.czso.cz/vdbvo/mi/mi_ukazatel.jsp?kodukaz=2356

The depreciation cost component is also monitored in the National Accounts as the indicator of fixed capital consumption; however, the absence of this indicator in international statistics for all EU countries creates a problem in terms of comparison.

The calculation presumes equality between average compensation of employees and the "entrepreneur's wage" plus statutory social security and health insurance contributions. Under such conditions, the Labour's Share in Costs represents the structure of inputs, regardless of the structure of employment. The formalisation of the structural relationships of labour costs and the LSC calculation algorithm is as follows:

$$PPN = \frac{\frac{NZ}{zam}}{\frac{N}{prac}} * 100 = \frac{\frac{NZ}{zam}}{\frac{MS}{prac} + \frac{NZ}{zam} + \frac{O}{P}} * 100$$

Where:

- PPN* Labour's Share in Costs,
- NZ* Compensation of employees,
- zam* Number of employees,
- N* Costs in current prices,
- MS* Intermediate consumption in current prices,
- prac* Total employment rate,
- O* Depreciation in current prices, consumption of fixed capital.

Significant differences between the earnings levels of individual countries and the purchase of inputs at European or world prices complicates the international comparison of LSC. Disproportions can, at least partially, be dealt with through expressing compensation of employees in purchasing power parity, i.e. through the PPS unit used by the EU:

$$PPN_{PPS} = \frac{\frac{NZ_{PPS}}{zam}}{\frac{N_{EUR}}{prac}} * 100 = \frac{\frac{NZ_{PPS}}{zam}}{\frac{MS_{EUR}}{prac} + \frac{NZ_{PPS}}{zam} + \frac{O_{EUR}}{prac}} * 100$$

Where:

- PPN* Labour's Share in Costs,
- NZ* Compensation of employees,
- zam* Number of employees,
- N* Costs in current prices,

<i>MS</i>	Intermediate consumption in current prices,
<i>prac</i>	Total employment rate,
<i>O</i>	Depreciation in current prices, consumption of fixed capital,
<i>EUR</i>	Indicator expressed in EUR,
<i>PPS</i>	Indicator expressed in PPS.

The conversion of compensation of employees to the EU price level is informative only. If two particular countries are being compared, their respective price levels must be selected.

The authors apply a similar calculation to express the weights of other factors and/or cost profitability.

6.2 The Labour's Share in Costs in the Czech Republic and the EU

As a consequence of high earnings levels, advanced EU countries generally report higher LSCs per worker. The higher the ratio of agriculture in the economy, the higher the LSC in less economically developed countries such as Poland and Baltic and Balkan countries. High LSC levels are also influenced by the range of services provided, in particular by tourism in the Mediterranean countries (Greece, Cyprus, Malta, and Spain) with a significant proportion of self-employed persons⁷².

LSC development in the Czech Republic and other post-communist countries in the period 2000 to 2008 was influenced by earnings convergence in both nominal and parity terms, i.e. the convergence of their labour prices towards the European average. In the Czech Republic, this process was accelerated by the appreciation of the CZK. The increase in LSC in Czech businesses at the beginning of the decade (23% in 2000 rising to 24% in 2003) was followed by a decrease to 22% in 2007. The economic crisis that hit the Czech economy in the second half of 2008 and to which the employment rate did not adapt itself, was reflected in a slight increase in LSC to 23%.

⁷² Limited financial resources lead the self-employed to focus on less capital-intensive activities; lower labour productivity is a disadvantage, high flexibility an advantage. For more information see Baštyř I.: Sociálně ekonomické charakteristiky osob samostatně výdělečně činných v mezinárodním kontextu. In: Průša, L. and others.: Sociálně ekonomické postavení osob samostatně výdělečně činných ve společnosti (The Social and Economic Position of Self-Employed Persons in Society). RILSA, Prague 2006, ISBN 80-87007-33-6, available at: http://www.vupsv.cz/index.php?p=publikace_proj&projekt=124&search=no&site=default, pp. 18 - 19

Table 32 The Labour's Share in Costs in the EU at National Price Levels 2000 to 2003 in %

	Labour's Share in Costs (LSC) in %				Increment in perc. pts.
	2000	2001	2002	2003	2003 - 2000
Slovakia	19.91	19.61	19.70	19.61	-0.30
Czech Republic	22.91	22.75	23.84	24.01	1.10
Ireland	:	:	25.78	25.70	:
Estonia	25.20	24.53	24.57	25.93	0.73
Bulgaria	27.68	28.05	27.97	27.23	-0.45
Hungary	27.25	27.93	29.64	28.19	0.94
Poland	31.61	31.98	31.39	30.23	-1.38
Italy	31.40	31.53	31.38	31.30	-0.10
Belgium	30.47	30.62	31.67	31.95	1.48
Latvia	28.25	37.87	35.06	32.48	4.23
Malta	29.11	32.07	32.45	32.55	3.44
Spain	34.32	34.03	33.28	32.98	-1.33
Finland	30.66	31.81	32.05	33.12	2.47
Slovenia	33.15	33.56	33.62	33.87	0.73
Lithuania	33.64	32.52	32.98	33.99	0.35
The Netherlands	33.25	33.58	34.50	34.96	1.71
Luxembourg	30.98	32.68	34.67	35.20	4.22
Portugal	33.95	34.01	34.64	35.39	1.44
Sweden	34.12	34.36	34.87	35.62	1.50
France	35.40	35.28	35.86	36.26	0.87
Germany	36.53	36.50	37.24	36.94	0.40
Denmark	36.82	36.54	36.95	37.17	0.35
Greece	40.05	39.32	40.72	41.12	1.08

Source: Eurostat: Economy and finance - National Accounts, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order in 2003. The basic records required to make such calculations for Romania, Cyprus, Austria and Great Britain were not available.

6. The Labour's Share in Costs

Table 33 The Labour's Share in Costs per Worker in the EU at National Price Levels 2003 to 2008 in %

	Labour's Share in Costs (LSC) in %						Increment in perc. pts.	
	2003	2004	2005	2006	2007	2008	2008-2003	2008-2000
Slovakia	19.61	20.34	20.61	19.65	19.70	19.27	-0.34	-0.64
Bulgaria	27.23	25.24	23.40	21.97	:	:	:	:
Czech Republic	24.01	23.22	23.16	22.27	22.00	22.60	-1.41	-0.31
Ireland	25.70	26.18	25.65	25.24	:	:	:	:
Poland	30.23	28.30	28.05	26.73	25.97	26.71	-3.52	-4.90
Hungary	28.19	30.18	29.82	28.25	28.47	28.22	0.03	0.97
Luxembourg	35.20	32.77	31.53	28.68	27.37	28.84	-6.36	-2.14
Belgium	31.95	30.97	30.24	29.40	29.28	29.72	-2.23	-0.75
Estonia	25.93	25.71	25.32	26.50	27.79	29.81	3.88	4.61
Italy	31.30	31.14	31.04	30.68	30.30	30.42	-0.89	-0.99
Malta	32.55	31.68	31.58	29.39	29.67	30.44	-2.11	1.32
Latvia	32.48	29.06	28.64	27.30	29.07	30.56	-1.93	2.31
Finland	33.12	32.63	32.24	31.09	30.59	30.97	-2.15	0.31
Slovenia	33.87	33.55	33.14	32.28	31.18	31.56	-2.31	-1.59
Lithuania	33.99	33.87	32.98	33.39	33.58	32.30	-1.69	-1.34
Spain	32.98	32.38	31.58	30.84	31.10	32.50	-0.48	-1.81
The Netherlands	34.96	34.64	33.76	33.17	33.08	32.59	-2.37	-0.66
Sweden	35.62	35.07	34.25	33.47	:	:	:	:
Germany	36.94	36.29	35.13	34.05	33.21	33.20	-3.74	-3.34
Portugal	35.39	34.70	38.03	34.21	:	:	:	:
France	36.26	35.89	35.51	34.99	34.77	34.47	-1.79	-0.93
Denmark	37.17	36.83	35.70	35.19	35.46	35.43	-1.75	-1.40
Romania	36.03	33.54	36.12	34.86	35.46	:	:	:
Greece	41.12	41.25	41.25	41.24	41.01	41.72	0.60	1.67

Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order in 2003. The basic records required to make such calculations for Romania, Cyprus, Austria and Great Britain were not available.

However, the position of labour in the cost structure at the national price level does not objectively reflect cost ratios and cost development due to changes in the price of labour. In the Czech Republic, in most cases the price valorises inputs priced at global prices. The resulting disproportion is rectified through the expression of compensation of employees at the European price level, i.e. in EU purchasing power parity. The expression of LSC in purchasing power parity eliminates the influence of a rapid increase in the labour price resulting from the convergence of price and earnings levels with those of other EU countries. In this case, the Czech economy can be considered developed in that the proportion of labour in total costs ranges from 27% to 32%; the Czech economy has a high level of material and energy demand which is reflected in a high ratio of Intermediate consumption to depreciation costs. Less developed EU countries reported higher LSC levels at the European price level at over 35% in 2008.

In the period 2000 to 2008 LSC in PPS showed a more significant decline overall than when expressed at the national price level, i.e. a difference of 10

percentage points; however, a downward tendency was recorded between 2000 and 2003. A similar significant deceleration occurred in Slovakia and in countries with a high level of labour consumption (LSC of around 50% in 2003), i.e. Poland, Latvia and Lithuania. Conversely, these countries reported a high rate of growth in Intermediate consumption.

Table 34 The Labour's Share in Costs in PPS per Worker in the EU 2000 – 2003 in %

	Labour's Share in Costs (LSC) in PPS in %				Increment in perc. pts.
	2000	2001	2002	2003	2003 - 2000
Ireland	:	:	22.81	22.37	:
Finland	27.87	28.36	28.66	29.30	1.43
Denmark	31.00	30.33	30.96	30.33	-0.67
Italy	32.75	32.85	31.62	31.09	-1.66
Belgium	29.97	29.98	31.41	31.12	1.15
Sweden	29.39	30.80	30.96	31.38	1.98
Luxembourg	29.34	30.55	32.69	32.78	3.44
The Netherlands	32.68	32.40	33.30	32.88	0.20
Slovakia	36.80	36.57	36.01	33.83	-2.96
France	33.66	33.75	34.55	33.91	0.25
Germany	34.11	34.06	35.00	35.06	0.95
Spain	38.24	37.46	36.76	35.58	-2.65
Czech Republic	39.30	37.73	36.52	37.75	-1.54
Estonia	39.18	36.94	36.82	38.09	-1.09
Portugal	38.97	38.54	39.02	39.61	0.64
Slovenia	41.15	41.10	40.97	40.71	-0.44
Hungary	43.99	43.57	43.24	41.12	-2.86
Malta	37.69	39.94	40.84	41.40	3.71
Greece	45.85	45.34	47.09	46.15	0.30
Poland	46.68	44.35	45.18	46.68	0.00
Latvia	43.47	54.11	51.82	50.16	6.69
Lithuania	51.79	50.36	50.62	52.29	0.50
Bulgaria	54.62	53.86	53.75	52.54	-2.08

Source: Eurostat: Economy and finance - National Accounts, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order in 2003. The basic records required to make such calculations for Romania, Cyprus, Austria and Great Britain were not available.

6. The Labour's Share in Costs

Table 35 The Labour's Share in Costs in PPS per Worker in the EU 2003 – 2008 in %

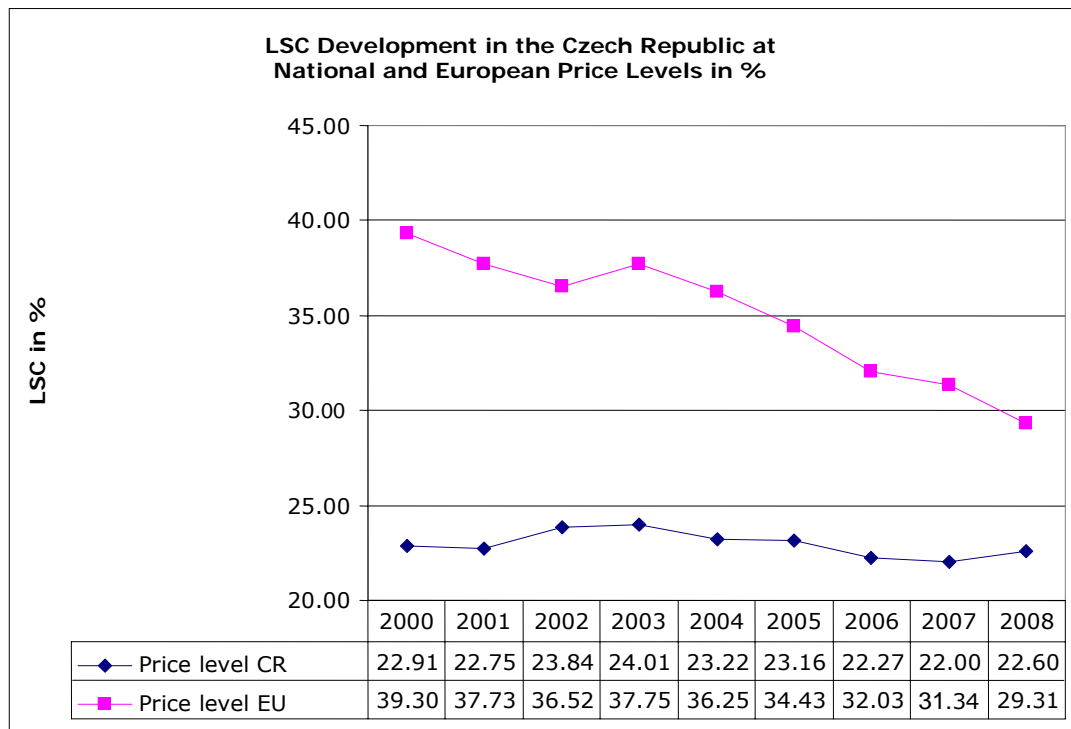
	Labour's Share in Costs in PPS in %						Increment in perc. pts.	
	2003	2004	2005	2006	2007	2008	2008-2003	2008 - 2000
Ireland	22.37	22.90	22.24	21.84	:	:	:	:
Luxembourg	32.78	30.80	28.81	26.37	24.86	25.86	-6.92	-3.48
Sweden	31.38	31.33	30.17	29.45	:	:	:	:
Slovakia	33.83	33.32	33.01	30.75	28.88	26.50	-7.33	-10.29
Belgium	31.12	29.66	28.75	27.76	27.46	27.50	-3.62	-2.47
Finland	29.30	29.51	28.96	27.90	27.60	27.50	-1.80	-0.38
Denmark	30.33	30.32	28.75	28.38	28.52	28.02	-2.31	-2.98
Czech Republic	37.75	36.25	34.43	32.03	31.34	29.31	-8.44	-9.98
Italy	31.09	30.39	30.31	30.20	30.09	29.85	-1.24	-2.90
The Netherlands	32.88	32.94	32.26	31.76	31.90	30.94	-1.94	-1.74
France	33.91	33.42	33.32	32.69	32.64	31.90	-2.01	-1.76
Germany	35.06	34.87	34.35	33.43	32.69	32.16	-2.89	-1.94
Spain	35.58	34.71	33.58	33.06	33.47	34.16	-1.42	-4.07
Poland	46.68	44.72	41.26	38.57	36.81	35.16	-11.52	-11.52
Slovenia	40.71	41.02	40.44	38.99	36.86	36.39	-4.32	-4.76
Estonia	38.09	37.49	36.14	36.07	36.18	37.43	-0.66	-1.75
Hungary	41.12	42.04	40.70	39.74	38.20	37.66	-3.47	-6.33
Malta	41.40	40.76	40.54	37.63	37.63	37.70	-3.70	0.01
Latvia	50.16	45.59	43.66	39.54	37.98	38.23	-11.93	-5.24
Portugal	39.61	38.47	42.90	39.04	:	:	:	:
Bulgaria	52.54	49.03	45.49	42.50	:	:	:	:
Lithuania	52.29	51.42	48.91	48.14	46.87	43.57	-8.72	-8.22
Greece	46.15	45.98	45.18	44.99	44.25	44.30	-1.85	-1.55

Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction, October 2010, calculated by RILSA

Note: Countries are ranked in ascending order in 2003. The basic records required to make such calculations for Romania, Cyprus, Austria and Great Britain were not available.

The significant difference between the Czech and the European price level is reflected in the difference between the LSC expressed in Czech and European prices. The situation in the other post-communist countries is similar. If LSC at the national price level indicates a competitive wage advantage in global markets, then LSC expressed in PPS signals the proportion by which LSC is converging. The relative stagnation of or gradual decrease in LSC at the Czech price level reflects an increase in the nominal labour price. LSC in the Czech Republic is decreasing rapidly as a result of LSC movement at the European price level.

Diagram 7



Source: Eurostat: *Economy and finance - National Accounts*, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/data/database, October 2010, calculated by RILSA

LSC are decreasing in favour of Intermediate consumption which is traditionally extremely high in the Czech Republic and Slovakia (the highest in the EU) the rapid growth of which (around 10 percentage points⁷³ between 2000 and 2008) increases demand for materials and energy and therefore dependence on imports. Together with Hungary, the Czech Republic reported the lowest share of depreciation (fixed capital consumption) in costs per worker in the same period. However, it is important to note that the volume of fixed capital consumption (depreciation) captured in National Accounts is influenced by national fiscal policy.

⁷³ Similar developments can be seen in the relatively closed and independent Polish economy.

Table 36 The Structure of Costs in 2008 per Worker at the European Price Level in % and the Change as Compared with 2000 in Percentage Points in Selected EU Countries

	2000			2008			Difference 2008 on 2000 in perc. points		
	Compen- sation	Intermediate consumption	Depreciation	Compen- sation	Intermediate consumption	Depreciation	Compen- sation	Intermediate consumption	Depreciation
Luxembourg	29.34	64.96	5.70	25.86	69.81	4.33	-3.48	4.85	-1.37
Slovakia	36.80	55.61	7.60	26.50	65.40	8.10	-10.29	9.79	0.51
Belgium	29.97	62.32	7.72	27.50	64.00	8.51	-2.47	1.68	0.79
Finland	27.87	62.91	9.21	27.50	63.41	9.09	-0.38	0.50	-0.12
Sweden	29.39	62.48	8.13	:	:	:	:	:	:
Denmark	31.00	57.83	11.16	28.02	61.54	10.44	-2.98	3.71	-0.73
Czech Republic	39.30	53.58	7.12	29.31	64.23	6.46	-9.98	10.64	-0.66
Italy	32.75	59.02	8.23	29.85	61.15	8.99	-2.90	2.13	0.76
The Netherlands	32.68	58.97	8.35	30.94	60.68	8.38	-1.74	1.71	0.03
France	33.66	58.46	7.88	31.90	59.38	8.72	-1.76	0.92	0.84
Germany	34.11	56.36	9.53	32.16	58.85	8.98	-1.94	2.49	-0.55
Spain	38.24	54.28	7.48	34.16	56.93	8.90	-4.07	2.65	1.42
Portugal	38.97	51.59	9.44	:	:	:	:	:	:
Poland	46.68	47.40	5.92	35.16	59.20	5.64	-11.52	11.81	-0.29
Slovenia	41.15	50.90	7.95	36.39	56.56	7.05	-4.76	5.66	-0.90
Estonia	39.18	55.96	4.86	37.43	56.19	6.38	-1.75	0.23	1.52
Hungary	43.99	49.42	6.59	37.66	55.89	6.46	-6.33	6.47	-0.13
Malta	37.69	54.96	7.35	37.70	54.76	7.53	0.01	-0.20	0.18
Latvia	43.47	46.51	10.02	38.23	54.63	7.14	-5.24	8.12	-2.88
Lithuania	51.79	39.75	8.47	43.57	49.68	6.75	-8.22	9.93	-1.71
Greece	45.85	46.58	7.57	44.30	46.57	9.13	-1.55	-0.01	1.56
Bulgaria	54.62	41.44	3.94	:	:	:	:	:	:

Source: Eurostat: Economy and finance - National Accounts, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/data/database, October 2010, calculated by RILSA

Note: The calculation of data per worker allows the self-employed sector to be included. Countries are ranked by the proportion of compensation in costs in 2008. The table only contains countries for which data is available.

The relatively low proportion of labour in overall costs in the Czech Republic is not the result of high productivity and fixed capital automation, but rather of high and increasing input demand, i.e. raw-materials, semi-finished products and energy. The decreasing proportion of labour in costs in the Czech Republic, with increasing levels of Intermediate consumption, is accompanied by stagnation in low cost profitability per worker⁷⁴ or in the return on capital employed. Czech cost profitability is one of the lowest in Europe and is the lowest in the post-communist countries. As a result of convergence in the price structures of national economies in most of the post-communist countries, a decrease in cost profitability could be expected. However, the stagnation in profitability in the Czech economy is an isolated instance with regard to neighbouring countries. Even transitory Poland, Slovakia and Hungary reported positive increments in cost profitability with convergent price movements during the 2000 to 2008 period.

Table 37 Cost Profitability per Employee in %

	Cost profitability in %				Increment in perc. pts.	
	2000	2003	2007	2008	2007-2000	2008-2000
Denmark	11.3	9.3	8.0	7.0	-3.3	-4.3
Belgium	11.0	10.9	11.4	10.7	0.4	-0.3
Slovenia	9.1	10.7	11.9	11.4	2.8	2.3
Portugal	12.1	11.8	:	:	:	:
Sweden	10.4	10.1	:	:	:	:
Czech Republic	12.7	12.0	12.7	12.0	0.0	-0.7
Hungary	11.3	12.0	12.8	12.6	1.6	1.4
Luxembourg	11.9	13.6	12.5	12.7	0.5	0.7
Finland	14.6	14.5	14.6	12.7	0.0	-1.9
France	13.7	13.6	13.5	13.0	-0.2	-0.7
Estonia	16.3	17.4	16.1	13.7	-0.2	-2.6
Bulgaria	25.5	20.9	:	:	:	:
Ireland	:	21.7	:	:	:	:
Latvia	14.9	:	14.7	13.8	-0.2	-1.1
The Netherlands	13.5	13.2	14.5	14.1	1.1	0.6
Germany	13.0	14.0	15.3	14.6	2.3	1.7
Spain	15.7	15.8	14.8	15.4	-0.9	-0.3
Italy	18.7	18.5	16.5	16.0	-2.1	-2.7
Malta	18.0	17.0	18.6	18.6	0.6	0.6
Slovakia	13.3	14.5	18.9	19.0	5.6	5.7
Poland	19.6	20.3	22.0	21.2	2.4	1.6
Lithuania	21.9	25.1	23.3	21.2	1.4	-0.7
Greece	31.9	31.7	31.5	30.9	-0.4	-1.0
Romania	28.7	31.6	32.2	:	3.5	:

Source: Eurostat: Economy and finance - National Accounts, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/data/database, October 2010, calculated by RILSA

Note: The calculation of data per worker allows the self-employed sector to be included. Countries are ranked in ascending order by the proportion of compensation in costs in 2008. The table only contains countries for which data is available.

⁷⁴ The calculation of cost profitability is based on the quotient of net operating surplus per worker and costs per worker.

The extensive trend of a reduction in the Labour's Share in Costs and growth in the demand for materials and energy in the economy, accompanied by a stagnation in cost profitability is disadvantageous for the position of Czech businesses in the global markets over the long term. After Czech price levels and structure even out with those of Europe, or, more likely, after it reaches 80% of the European level, Czech companies will begin to lose the significant advantage resulting from cheap and efficient labour. ULC at the national price level may, with a decrease in profitability due to an increase in the prices of material and energy inputs, even start to exceed those of the EU.

6.3 The Labour's Share in Costs and Labour Taxation

The chapter entitled the Institutional and Macroeconomic Framework for Price Development and Labour Utilisation in the Czech Republic mentions the high volume of labour taxation on the side of the employer, on the other hand, however, it states that the tax gap⁷⁵ is one of the lowest in those countries which use the Continental model of the social state⁷⁶. High levels of social security insurance paid in the Czech Republic are offset by low income tax levels.

The question is what influence a decrease in the tax burden would have on businesses. With low LSC, the problem of high labour taxation is not so serious particularly in the secondary sector and a modification of the labour tax burden is not a significant factor in terms of profit movement; services however are more sensitive to labour volume.

The calculation by RILSA is based on the fact that the gross wage or salary, which makes up part of the labour costs paid by the employer, comprises income tax and social security contributions paid by the employee. Labour costs, i.e. the price of labour, include social security contributions paid by the employer on behalf of the employee (statutory social expenses)⁷⁷. The present architecture of labour taxation in the Czech Republic which is based on the so-called super-gross wage transfers the effect of the low contribution to social and health insurance paid by the employer to the employee via the tax base. The decrease in labour costs created by a decrease in the tax burden is reflected in two ways:

- a decrease in total labour costs on the side of the employer,
- an increase in employee net earnings.

⁷⁵ The tax gap is the difference between labour costs payable by the employer (on earnings plus employer social insurance contributions) and net earnings received by the employee, i.e. the sum of income tax, contributions to social security paid by the employer and the employee (and other taxes, if applicable) as a percentage of total labour costs. For more information see: Kadeřábková, A.: *Základy makroekonomické analýzy (Essentials of Macroeconomic Analysis)*. LINDE, Prague 2003, ISBN 80-86131-36-X, pp. 164 - 165

⁷⁶ The high level of social solidarity and re-distribution processes which feature a high level of statutory contributions by employers and employees to centralised social protection funds and the considerable extent and amount of payments (allowances) made from these funds and paid on the basis of the solidarity principle.

⁷⁷ From this point of view, though the redirection of statutory contributions to social security from the public budget to commercial funds will nominally lead to lower labour taxation, it will in fact be reflected in an increase in gross earnings through the market institution of collective bargaining. Labour costs will remain at least unchanged or they may even increase by the profit generated by commercial insurance companies.

It is probable that agreement will be reached between social partners during wage negotiations that will eliminate the higher dynamics of net earnings and which will be reflected by the employer in lower employee expenses, i.e. business expenses. Similar behaviour can also be presumed in the event of a reduction in the employee's tax burden.

Total costs have been reduced by 1% by means of cuts in gross earnings taxation in the following proportions:

Table 38 Reduction in Total Costs Resulting from a Decrease in Labour Taxation by 1% of the Gross Wage in the Czech Republic and in Selected Commercial Sectors in %

	LSC	Employer	Employee	
		Decrease in insurance	Decrease in insurance	Decrease in individual income tax
CZECH REPUBLIC	22.6	0.2	0.3	0.4
Raw material extraction	27.9	0.3	0.4	0.5
Processing industry	13.7	0.1	0.2	0.3
Electricity, gas, water	11.2	0.1	0.2	0.3
Building industry	19.7	0.2	0.3	0.4
Trade and repairs	37.1	0.4	0.5	0.7
Accommodation and boarding	36.0	0.4	0.5	0.7
Transportation and communications	20.6	0.2	0.3	0.4

Source: Calculation by RILSA

7. Summary and Conclusions

Post 2000, labour price movement was influenced by:

- stable institutional conditions and economic environment,
- admission of the Czech Republic to the EU,
- economic boom,
- withdrawal of the wage cushion,
- withdrawal from the currency cushion, rapid appreciation of the CZK,
- low inflation rate,
- convergence of price and earnings levels towards those of the EU,
- the movement of labour productivity and real average earnings at the national price level after 2004,
- the economic crisis that has lasted since mid 2008.

The high level of growth of total labour costs in the Czech Republic in the period 2000 to 2008, i.e. by 63% was the result of an increase in direct labour costs, namely earnings, of 65%. The labour cost structure was made up of a dominant, indeed almost three-quarter, share of wages and salaries in total labour costs and a high amount payable from wages in social security and health insurance contributions, i.e. the remaining quarter of total labour costs.

Czech legislation regards wages and salaries as compensation for work. Any social problems faced by the employee and his/her household is covered by the social security system financed from the public purse (in most European countries, the earnings and labour cost structure takes the social situation of an employee's family into account). At the very beginning of the transformation process, the State assumed responsibility for the education of a new manual labour force (the education of apprentices). In the Czech Republic, labour costs in practice only cover the motivation of the worker to perform his/her work. Consequently, the basic proportions of the labour cost structure in the Czech Republic are relatively stable:

- the share of direct labour costs of total labour costs is roughly 71%,
- the share of statutory insurance paid by the employer of labour costs is between 25 and 26%,
- other, non-mandatory, costs account for around 3% of labour costs.

Over the long term, the ratio between direct and indirect labour costs has fluctuated by ± 1 percentage point.

The Czech Republic, historically, has always had a relatively high level of social solidarity, i.e. a high share of social expenses and therefore higher statutory contributions payable by both employers and employees to centralised social funds, principally for pensions, sickness insurance, employment policy expenses and health care. Labour "taxation" in the Czech Republic reflects the high standard of the social and health care systems at a low income level. After the payment of social security and health care contributions, wages are subject to no further taxes on the part of the

employer. Income tax payable by the employee on a significant portion of his income from employment which therefore makes up part of the gross wage, i.e. of the employer's costs, is low compared with other countries. According to OECD data, income tax accounted for roughly 8% of labour costs during the period 2000 to 2008; consequently, the tax gap reached 42% of labour costs in 2008. In most other European countries, income tax accounts for 10% or more of labour costs, therefore, it is reasonable to conclude that the Czech Republic imposes a relatively low tax burden on labour.

Compared with 2000 when lower labour costs than those in the Czech Republic were reported only by Slovakia and the Baltic and Balkan countries (of the present-day EU), labour costs in the Czech Republic had grown above those in Hungary and Poland by 2008. Together with price level growth, labour costs are quickly converging with levels reported by traditional market economies. When expressed in Euro, Czech labour costs increased from some 1/6 in 2000 to almost 1/3 the level of Germany in 2007.

Labour cost movement during the first decade, under economic boom conditions, can be divided into two stages. Up to 2004, labour cost dynamism was higher than that of labour productivity. This period was characterised by the withdrawal of the wage cushion that originated in 1990 to 1991 when real earnings dropped by 1/3 with only a 1/10 fall in productivity. In the period 2000 to 2003, real total labour costs grew by 16% and direct labour costs, i.e. wages and salaries grew by 15% with a growth in aggregate labour productivity of 6%. The accelerating growth of wages and therefore of total labour costs was supported by high inflation expectations before the accession of the Czech Republic to the EU. After the country joined in 2004, which was followed by an acceleration in economic growth, social partners succeeded in maintaining labour cost movement in proportion with labour productivity which grew by 20% if stated in fixed prices in CZK in the period 2003 to 2008, with an increase in real total labour costs of 13%. The basis for growth consisted of an increment in direct labour costs of 15%.

Non-statutory employer labour costs (around 3% of the total in the Czech Republic) flexibly respond to labour market supply and demand unlike wages that have a "rigidity period" of roughly one year. A significant increase in the real labour price will therefore manifest itself one year later through a one-off real increment in the employer's non-statutory labour costs. On the other hand, a significant drop leads to a decrease in the real wage growth rate in the following year.

A significantly lower level of labour costs compared with the most advanced EU countries enables Czech exporters to benefit from price competition or to achieve higher profit margins. And, moreover, low labour costs encourage the inflow of foreign capital. The concept of a low labour price in the Czech Republic, i.e. the maintaining of low labour costs does not lead to the suppression of material- and energy-intensive production, nor does it stimulate the substitution of labour with fixed capital machinery. It may, however, lead to a gradual decrease in the qualification level of the labour force. The below-average labour price, even when accompanied by a relatively high employment rate, leads to a low proportion of household final consumption of GDP, i.e. in the Czech case roughly 50%. With a 20% share of final government consumption, the Czech economy is sensitive to export conditions and to the development of material and energy input prices. Low labour costs can deform the macroeconomic balance which could lead to future economic instability and social conflict.

7. Summary and Conclusions

Even before accession to the EU and the end of the wage cushion, unit labour costs (ULC) in the Czech Republic at the national price level were approaching the European average value, notwithstanding that the Czech Republic can be considered a less developed economy in terms of the use of cheap labour. At this time, labour accounted for roughly 53% of one GDP unit in the Czech Republic while in the EU, labour accounted for around 58%. In 2008, at the beginning of the economic crisis, Czech ULC grew to around 55%. Similar development can be expected in other EU countries (data for the EU as a whole was not available at the time of writing).

The exhaustion of the extensive reserves in terms of the proportion of labour of GDP in national prices complicates the elimination of the consequences of the process of convergence of Czech price levels and those in the rest of Europe. Czech enterprises have, to date, not coped well with the appreciation of the CZK that resulted from the withdrawal of the currency cushion and is one of the consequences of the convergence process. Post 2000, unit labour costs in purchasing power parity had a growth tendency - in 2000 they attained 40% of the EU average whereas this figure had increased to 55% by 2008. Analysis shows that the lead enjoyed by productivity growth over the labour price at Czech price levels has been eliminated through the rapid convergence of Comparative Price Levels with those of other EU countries. Compared to relatively stable European price levels, labour input in the Czech Republic grew quickly as a result of the appreciation of the CZK. Czech costs and prices were fast approaching those of foreign markets. The process is objective and Czech businesses are unable to influence it given price equalisation and currency movements following the withdrawal of the currency cushion.

Due to high earnings levels, the majority of economically developed EU countries generally report a higher proportion of labour in costs than the Czech Republic. A relatively large agricultural sector in the economy is reflected in higher LSC in less economically developed countries such as Poland and the Baltic and Balkan countries. High LSC levels are also influenced by the range of services provided, particularly by tourism in the Mediterranean countries (Greece, Cyprus, Malta and Spain), with a significant self-employed sector, with lower levels of investment in fixed capital equipment, making up GDP.

Thanks to traditionally low labour prices accompanied by a growing demand for materials and energy, a significant share of industry in GDP and relatively capital intensive agricultural mass production, LSC at the national price level in the Czech Republic, at 23%, is one of the lowest in the EU. Even if converted to the European price level, Czech LSC is lower than that of the majority of member countries. The proportion of Intermediate consumption during the boom period grew by 10 percentage points (to 64%) in 2008 at the expense of labour and fixed capital consumption. Such a structural change in costs has been accompanied by a stagnation in cost profitability. The low labour price in the Czech Republic creates space for businesses to focus on material- and energy-intensive production which has been moved by developed EU countries eastwards, i.e. to "new" member countries. The Czech Republic is, however, gradually losing its advantage of having qualified and relatively cheap labour.

Low LSC results in their having only a small degree of sensitivity to changes in the price of labour or labour taxation. The present labour taxation structure, which is based on the super-gross wage, transfers the effect of low employer social and health insurance contributions to the employee via the tax base. A decrease in labour costs caused by a decrease in the tax burden is reflected in two ways:

- a decrease in the employer's total labour costs,

- an increase in employee net earnings.

Collective bargaining on wages and labour conditions creates the opportunity for smaller increases in gross earnings while the dynamism of net wages and salaries is maintained.

Consequently, if the "tax fiction" consisting of the super-gross wage is imposed, it is more favourable for businesses to reduce the tax burden imposed on employee wages since such a reduction is reflected in labour costs to double the extent it would be if imposed on the employer. If the tax burden imposed on gross earnings is reduced by 1% on the employer's side, total costs will be reduced by 0.2% while if the same reduction in the tax burden is applied on the employee's side, costs will be reduced by 0.3 – 0.4% while the net earnings growth rate will be maintained.

A low level of total costs flexibility per labour share can be seen in those industrial sectors employing a large amount of fixed capital equipment such as the production (industrial), building, transportation and communications sectors. Conversely, the services sector, with lower labour productivity and capital equipment, is significantly more sensitive .

To date, Czech businesses as well as foreign investors have enjoyed cheap labour conditions in the Czech Republic, however, the convergence of price levels, including wage levels is leading to a gradual reduction in the price differences between the Czech Republic and global markets. Exporters (particularly industrial companies) and foreign investors are gradually losing the cost-competitive advantages resulting from low labour cost levels.

Therefore, the key factor, as far as the Czech Republic is concerned, is not increasing or simply maintaining competitiveness, nor is it concerned with wage compensation and taxation, but the high demand for materials and energy. Czech businesses are currently facing the challenge of switching from cost-competitiveness to quality-competitiveness, i.e. the need to reduce the level of "heavy" material and energy intensive, as well as ecologically questionable, production in favour of more sophisticated production which will benefit from the qualified, but more expensive, potential of the domestic labour force. The experience of more developed countries shows that labour productivity can be increased if knowledge obtained through research and development is fully utilised, i.e. the production of more sophisticated products and services; increasing labour prices can only be offset by productivity increases at world prices.

The convergence of the labour price in the Czech Republic with EU levels will occur just as it has in terms of the price structure and Comparative Price Level s. Once a level of 80% of the EU Comparative Price Level is achieved, which is probable within the next decade, labour price movement will become synchronised with that of developed economies. With a current price level of 70%, social partners, when negotiating wage and labour conditions, should take into account not only domestic inflation and productivity development, but also labour price movement expressed in terms of labour costs or employee compensation, including labour taxation in European and other competing economies, and the development of the Czech macroeconomic framework in relation to that of the EU (the inflation differential and exchange rate changes). The approach taken by social partners in countries such as Denmark, the Netherlands, Ireland, Norway and Belgium is similar when agreeing upon wage dynamism with respect to foreign competitors; social partners proceed similarly with respect to industry-wide bargaining. Unit labour costs, as the indicator that comprehensively reflects proportions of labour productivity movement and the

7. Summary and Conclusions

labour price, should be used as the criteria and limits of agreed wage levels and labour performance conditions. However, no formal framework has yet been established in the Czech Republic to define a coordinated approach to be adopted by social partners and/or by the state in terms of harmonising labour cost proportions with the external competitive environment in the future.

References

Bart van Ark, Erik Monnikhof: Productivity and unit labour cost comparisons: a data base, International Labour Office, Geneva 2000, ISBN 92-2-112176-3

Bartošová M. Mzdová koordinácia na makroúrovni v jednotlivých krajinách EÚ a v Nórsku, Výzkumný ústav práce, sociálních věcí a rodiny, VÚPSVR, Bratislava 2000

Baštýř, I., Prušvic, D., Vlach, J. Náklady práce, VÚPSV, Prague 2004, available at <http://www.vupsv.cz/>

Baštýř I. Srovnání úrovně a pohybu nákladů práce, nominálních a reálných mezd v ČR a vybraných státech EU, RILSA, Prague 2006, ISBN 80-87007-54-9 available at: http://Prague.vupsv.cz/Fulltext/vz_222.pdf

CZSO: Roční národní účty, dostupné na <http://apl.czso.cz/pll/rocenka/rocenka.indexnu>

CZSO: Statistical metainformation system, Indicators, available at: <http://apl.czso.cz/iSMS/ukazdet.jsp?fnazev=pr%E1ce&fid=609>

CZSO: Statistical Yearbook of the Czech Republic 2008, CZSO, Prague 2008, code 0001-08. available at: <http://www.czso.cz/csu/2008edicniplan.nsf/p/0001-08>

CZSO: Statistical Yearbook of the Czech Republic 2009, CZSO, Prague 2009, code e-0001-09. available at: <http://www.czso.cz/csu/2010edicniplan.nsf/engpubl/0001-10->

CZSO: a series of publications - Structure of Earnings Survey 2004 to 2008, codes 3109-05, 3109- 06, 3109- 07, 3109- 08, w 3109- 09, available at <http://www.czso.cz/csu/2009edicniplan.nsf/p/3109-09>

CZSO: Labour Costs in 2008, CZSO 2009, code w-3112-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3112-09>

CZSO, Průměrná mzda a evidenční počet zaměstnanců - Metodika, available at: http://www.czso.cz/csu/redakce.nsf/i/pmz_m

CZSO: Vývoj úplných nákladů práce v letech 1994 - 2008, CZSO, Prague 2010, code w-3113-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3113-09>

CZSO: Expenditures and Consumption of Households included in Household Budget Survey in 2008 Households by Status and Age of the Head of Household, by Municipality Size, Income Brackets. CZSO 2009, code e-3001-09, available at: <http://www.czso.cz/csu/2009edicniplan.nsf/p/3001-09>

Department of Analyses and Statistics Ministry of Labour and Social Affairs Czech Republic: The Development of the Basic Living Standard Indicators in the Czech Republic 1993 - 2008, The Ministry of Labour and Social Affairs (MPSV) 2009, available at: <http://www.mpsv.cz/cs/1797>

Directorate - General for Employment, Social Affairs and Equal Opportunities: Employment in Europe 2007, European Commission. Luxembourg 2007. ISBN 978-92-79-06669-6

ECB: Monthly Bulletin. ECB 2004, č. 9. available at <http://www.ecb.int/pub/pdf/mobu/mb200409en.pdf>.

References

Esping-Anderson, G., *The Three Worlds of Welfare Capitalism*, Princeton University Press, New Jersey, 1990

Eurostat: Economy and finance - National accounts, available at http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction

Eurostat: Economy and finance – Exchange rates, available at http://epp.eurostat.ec.europa.eu/portal/page/portal/exchange_rates/introduction

Eurostat: Economy and finance - Purchasing power parities, available at http://epp.eurostat.ec.europa.eu/portal/page/portal/purchasing_power_parities/data/database

Eurostat: Labour costs annual data, available at http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/data_base

Eurostat: Labour costs annual data, Reference Metadata in Euro SDMX Metadata Structure (ESMS), available at http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/lcan_esms.htm

Eurostat: Labour cost index, Reference Metadata in Euro SDMX Metadata Structure (ESMS), available at http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/lci_esms.htm

Eurostat: Labour costs survey 2004, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/data_base,

Eurostat: Labour cost surveys, Reference Metadata in Euro SDMX Metadata Structure (ESMS), available at http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/lcs_esms.htm

Eurostat: National accounts (including GDP), available at http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/data/database

Eurostat: Monthly labour costs - Nace Rev. 1.1, available at http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_costs/data_base

EUROSTAT: Real unit labour cost growth, available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,39140985&_dad=portal&_schema=PORTAL&_s

Eurostat: Unit labour cost growth. Available at http://europa.eu.int/comm/eurostat/newcronos/reference/display.do?screen=detailref&language=en&product=EU_MAIN_TREE&root=EU_MAIN_TREE/economy/main/strind/ecobac/eb050

Evropská Komise: Regulation (EC) No 450/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, Official Journal of the European Union

Fassmann, M. Mezinárodní srovnání úrovně mezd (nákladů práce) a produktivity práce s vyspělými evropskými zeměmi, Pohledy 6/97

Funk, Lesch. Minimum wage in Europe. Research summary. Cologne Institute for Economic research, 2005

Havlik P. Unit Labour Costs in the New EU Member States. Vienna, WIIW 2005, January, Statistical Reports, No. 1

- Havlik P. Unit labour costs in the new EU member states, Statistika č. 4/2005, ISSN 0322-788x
- Holý D. Index nákladů práce v ČR a v EU, Statistika 6/2002, ISSN 0322-788x,
- Hinze, J., Brück, C., Danckwerts, R. F., Wohlers, E. Aussagefähigkeit internationaler Arbeitskostenvergleiche. Methodische Grundlagen, empirische Ergebnisse und wirtschaftspolitische Schlußfolgerungen, HWWA Studies No. 42, Hamburg Institute of International Economics (HWWA), Hamburg, 1998
- Höhne, S., Šťastná, A., Šlapák, M., Kozelský, T. Bulletin No. 24, Main Economic and Social Indicators of the Czech Republic 1990 - 2008, RILSA Prague, 2009, ISBN 978-80-7416-033-2, available at: <http://www.vupsv.cz/>
- IDW: Produktivität und Lohnstückkosten im internationalen Vergleich, Berlin, IW-trends 3/2004
- ILO/KILM: Key Indicators of the Labour Market, KILM indicators 1-20, available at <http://www.ilo.org/public/english/employment/strat/kilm/index.htm>
- Jílek, J., Vojta, M. Vypovídací vlastnosti změn jednotkových pracovních nákladů a souvisejících ukazatelů, Statistika č. 4/2001, ISSN 0322-788x
- Kadeřábková, A. Základy makroekonomické analýzy, Růst, konkurenceschopnost, rovnováha. Prague, LINDE 2003, ISBN 80-86131-36-X.
- Kozelský, T. Monitoring nákladů práce v ČR a ve státech Evropské unie, bulletin No. 1-3, VÚPSV, v.v.i., 2007 - 2009, available at <http://www.vupsv.cz/>
- Kozelský, T., Prušvic, D., Vlach, J. Monitoring nákladů práce, VÚPSV 2006, ISBN 80-87007-16-6
- MEI Comparative Methodological Analysis, Supplement 3, Wage Related Statistics, OECD 2003
- Ministry of Finance of the Czech Republic: Makroekonomická predice České republiky. Available at: <http://www.mfcr.cz/cps/rde/xchg/mfcr/xsl/makro-pre.html>
- Ministry of Finance of the CR: Reforma veřejných financí 2007 – 2010, available at: http://www.mfcr.cz/cps/rde/xchg/mfcr/xsl/ref_veřej_financ.html
- MF ČR: Věcný záměr nového zákona o daních z příjmů („NZDP“), MF ČR 2008, available at http://www.mfcr.cz/cps/rde/xbcr/mfcr/NZDP_03042008_ppt.ppt#2
- OECD: Taxing Wages 2007 – 2008, OECD 2009, ISBN 978-92-64-04933-8
- OECD, Eurostat: Methodological manual on purchasing power parities, European Communities / OECD, Luxembourg: Office for Official Publications of the European Communities, 2006, ISSN 1725-0048, ISBN 92-79-01868-X, available at http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-BE-06-002
- OECD: MEI Comparative Methodological Analysis, Supplement 3, Wage Related Statistics, OECD 2003
- Průša, L. a kol. Sociálně ekonomické postavení osob samostatně výdělečně činných ve společnosti. VÚPSV, Prague 2006, ISBN 80-87007-33-6, available at http://www.vupsv.cz/index.php?p=publikace_proj&projekt=124&search=no&site=default
- Průša, L. a kol.: Sociálně ekonomické postavení osob samostatně výdělečně činných ve společnosti II. VÚPSV, v.v.i., Prague 2008, ISBN 978-80-7416-000-4

- Průša, L., Baštýř, I., Brachtl, M, Vlach J. Sociálně ekonomické postavení osob samostatně výdělečně činných v české společnosti. VÚPSV, v.v.i., Prague 2008, ISBN 978-80-7416-011-0, available at: <http://www.vupsv.cz/>
- Prušvic, D. a kol. Porovnání výběru daní a pojistného, VÚPSV 2008, ISBN 978-80-87007-99-0, available at <http://www.vupsv.cz/>
- Prušvic, D., Vlach J. Jednotkové náklady práce - analýza vývoje a úrovně, VÚPSV Prague 2006, ISBN 80-87007-11-5, available at <http://www.vupsv.cz/>
- Rojíček, M. Statistika upřesňuje představy o otevřenosti české ekonomiky. Press release by the CZSO of March 5, 2009, available at: http://www.czso.cz/csu/tz.nsf/i/statistika_upresnuje_predstavy_o_otevrenosti_ceske_ekonomiky
- Stulík, R. Sjednocení vyměřovacího základu pro daně a odvody, MPSV 2009, available at <http://www.mpsv.cz/cs/7011>
- Švejcar, J. and coll. Česká republika a ekonomická transformace ve střední a východní Evropě, Academia 1997, ISBN 80-200-0568-4
- Zeman K. Reflexe vývoje specializačních profilů ekonomik členských států EU v české ekonomice. The Institute for the Integration of the Czech Republic into the European and World Economies, The Economics University, Prague 2009