Economic Trends

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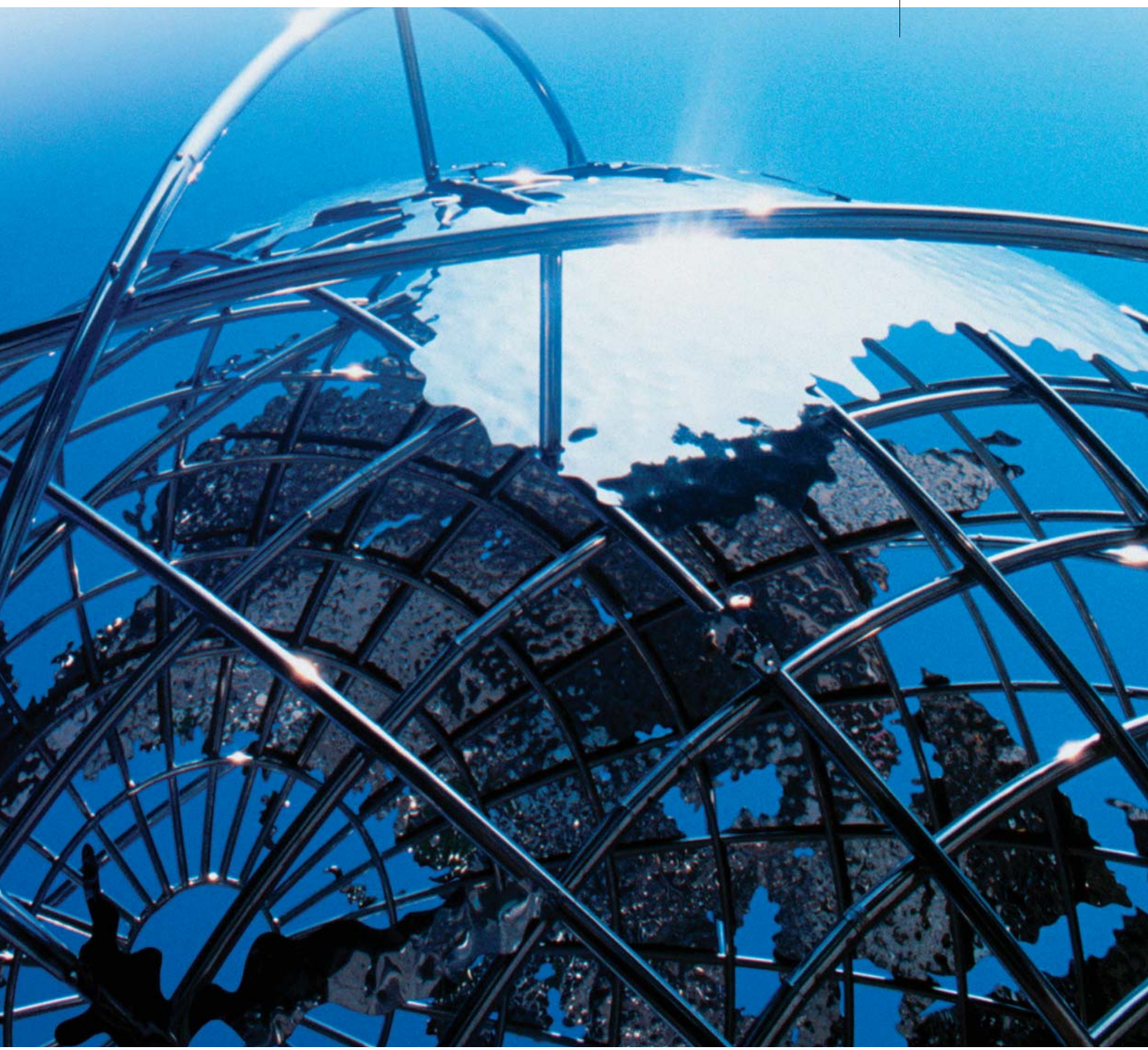

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CZECH ECONOMY IN THE MIDST OF 2008: SLOWDOWN OF GROWTH DYNAMICS

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1. Economic Growth

Economic activity in the Czech Republic registered a considerable slowdown at the beginning of 2008. After the economic dynamics reached its peak in 2007, real economic growth decelerated to 5.4% y/y in Q1 2008 and further to 4.6% y/y in Q2, which is the lowest value since Q3 2004. Overall economic growth in H1 2008 reached 5% y/y. The sluggish economic development was determined by both domestic and foreign factors. Among the foreign factors stood general deceleration in main trading partners' economies (Germany to be stated on the first place) and high prices of raw materials and crude oil. On the other hand, substantial koruna's appreciation in the first half of the year was not extensively negatively reflected in the situation in foreign trade in H1 2008. However, overall deterioration of terms of trade affected the foreign trade negatively. The deceleration of domestic demand resulted from increasing prices, falling real purchasing power of households and slowdown in production of firms. Despite the slowdown, Czech economy in Q2 exhibited the pace of growth almost threefold compared to the EU-27 average (1.6% y/y) and even higher compared to the eurozone (1.4% y/y). Among the other CEE countries, higher growth dynamics was still recorded in Slovakia (7.6% y/y) and Poland (6.1% y/y), on the other hand, Hungary rather stagnated (1.8% y/y).

The structure of economic growth shifted in H1 2008, as the dynamics of household consumer expenditure diminished and the investment activity of firms weakened. Foreign trade was the main driver of the growth, despite the strong currency prevailing in H1 2008. The global financial crisis hit Czech economy only indirectly so far. However, we can await

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Table 1: Main Macroeconomic Indicators

		2005	2006	2007	06/08	07/08	08/08	09/08	2008F	2009F
Inflation	%, y/y, eop	2.2	1.7	5.4	6.7	6.9	6.5	6.6	5.5	2.5
Inflation	%, m/m	–	–	–	0.2	0.5	-0.1	-0.2	–	–
Industrial prices	%, y/y, eop	-0.3	2.6	5.3	5.3	5.2	5.7	5.5	4.8	2.0
Industrial prices	%, m/m	–	–	–	0.8	0.1	0.4	-0.1	–	–
Unemployment rate	%, eop.	8.9	7.7	6.0	5	5.3	5.3	5.3	5.7	6.5
Industrial production	%, real	6.7	9.7	8.2	3.4	6.7	-2.6	1.5	4.0	5.0
Construction output	%, real	4.2	6.6	6.7	-3	6.9	-1.2	1.5	2.0	2.0
Retail sales	%, real	4	6.5	7.5	1.8	3.6	-3.3	1	3.0	4.5
State budget	CZK bill.	-56.4	-97.3	-66.4	-5.7	9.3	5.3	10.5	-70.0	-50.0
Trade balance	CZK bill.	38.6	39.8	85.0	15.3	7.2	3.6	4	90.0	55.0
FOREX reserves	USD bill.	29.5	31.3	34.9	38.1	37.9	37	36.4	38.5	40.0
PRIBOR 3M	% average	2.01	2.3	3.1	4.2	4.1	3.8	3.8	4.0	4.0
CZK/EUR	Average	29.78	28.3	27.8	24.3	23.5	24.3	24.5	24.9	25.0
CZK/USD	Average	23.95	22.6	20.3	15.6	14.9	16.2	17	16.8	18.9
					Q3/07	Q4/07	Q1/08	Q2/08		
GDP	%, y/y	6.4	6.4	6.5	6.5	6.3	5.4	4.6	4.3	3.8
Current account	USD bill.	-1.6	-3.8	-3.2	-1.7	-1.4	1.7	-3.8	-7.0	-8.0
	% of GDP	-1.6	-3.1	-2.5					-3.2	-4.0
Financial account	USD bill.	6.4	4.2	4.9	1.6	3.1	-0.4	4.6	7.5	7.0
	% of GDP	5.2	3.5	2.9					3.4	3.5

Source: Czech National Bank, Czech Statistical Office, Ministry of Finance of the CR, forecasts by Komercni banka

significant adverse effect of global financial crisis that has already spread to real economy. Worsening export perspectives and weakening investment activity come on the first place. The most pronounced impact is expected by the end of 2008 and beginning of 2009.

In Q2 2008, household consumption increased by 3.2% y/y and thus contributed to the overall GDP growth by 1.5 percentage points. Consumer spending was limited by high prices, fiscal reform measures, increasing interest rates on credits and uncertainty about the future development stemming from chilling economic conditions in the global economy. Government expenditure went up by 1.8% y/y in Q2 2008, which represents contribution of 0.4 percentage points.

Net exports became the most important growth factor in 2008 and added 4 percentage points to the total GDP growth in Q2 2008. In the period January – August 2008, exports rose by 4% and imports by 2.8% y/y. The surplus of trade balance reached CZK 76.4 bill. and was by CZK 20 bill. higher than a year before. However, certain slowdown in the export activity occurred in 2008 and its continuation was also indicated by the falling figures on foreign industrial orders.

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The investment activity of firms was driven mainly by gross fixed capital formation, which increased by 4% y/y in Q2 2008 (contribution of 1 percentage point) and represented mainly investment in dwellings, machinery and equipment and non-residential buildings. Still, investment activity significantly decelerated compared to previous year, mainly due to increasing costs (inputs, wages), tight labour market situation, strong currency and weak foreign demand. Investment was nevertheless highly stimulated by the inflow from the EU structural funds and FDI. On the contrary, a significant fall was recorded in inventories, which deducted 2.2 percentage points from the overall economic growth in Q2 2008. This slump points to the further planned reduction in production of firms and complies with the development of industrial orders. Had not been for the drop in inventories, GDP growth would reach more than 6% y/y in Q2 2008.

Investment activity significantly decelerated compared to the previous year, mainly due to increasing costs (inputs, wages), tight labour market situation, strong currency and weak foreign demand.

Significant shifts were also registered in the sources of economic growth during 2008. The value added in industry increased considerably. Manufacturing remains the main source of growth, accounting for almost 70% of the gross value added growth. Moreover, the shares of trade, hotels and restaurants, and transportation segments grew, as did financial intermediation and business services. On the other hand, the gross value added in construction and agricultural sectors declined.

Industrial production accounted for almost 30% of GDP in H1 2008; the main driver of its dynamics continued to be the manufacturing industry with a share on the GDP almost one quarter. Nevertheless, Czech industrial dynamics has weakened. The total year-on-year growth of the industrial production from January to August 2008 reached 5%. The industrial dynamics was driven predominantly by the manufacturing industry, which grew by 5.4% y/y, while mining and quarrying recorded a decline (-1.9% y/y) and electricity, gas and water supply slightly increased (0.3% y/y).

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Amongst the manufacturing industries, the greatest contribution to the growth was traditionally recorded in manufacture of electrical and optical equipment (19.2% y/y, 2.6 percentage points), transport equipment (7.6% y/y, 1.6 percentage points), machinery (8.2% y/y, 0.6 percentage point), manufacture of basic metals and fabricated metal products (3.1% y/y, 0.4 percentage point), and chemistry (7.7% y/y, 0.4 percentage point). However, despite the prevailing strong growth dynamics, there are already apparent decelerating trends. Production of transport equipments reduced its growth rates considerably and stands below the overall manufacturing average. Machinery registered a noteworthy slowdown as well. The overall industrial growth was dampened by the sustaining decline in foods industry (-5.9% y/y, -0.5 percentage point), textile industry (-11% y/y, -0.3 percentage point), and manufacture of wood (-10% y/y, -0.1 percentage point). The worst performing industries are typical by the low value added.

The sales in the industry recorded a real growth of 4.8% y/y in the period January – August 2008, while the sales of foreign-controlled companies grew relatively more. Despite the economic slowdown in main trading partners' economies, industry was predominantly driven by foreign demand, as the pace of growth of export sales reached 7.8% y/y. Nevertheless, we can expect a considerable weakening of foreign demand, as has been indicated by the figures on foreign orders, falling since June (both compared month on month and year on year). Domestic demand does not seem to be able to compensate for this drop so far. Total industrial orders recorded a fall in June, stagnated in July and dropped considerably in August (-10% y/y), which points

to further deceleration of industrial production in the future.

In H1 2008, the industry registered an ongoing increase of employment, although the dynamics have been considerably decelerating as a result of weakening industrial production growth. In August, employment in industry even fell (-0.5% y/y). The total employment growth from January to August reached 1.4% y/y, and was influenced mainly by the most expanding industries – transport, electronic and optical equipment, general machinery, and also by manufacturing of rubber. On the other hand, employment contracted in textile industry, manufacture of leather, manufacture of coke and refined petroleum products, and in electricity, gas and water supply. In the period January – August 2008, labour productivity in industry grew by 2.9%, y/y, and real wages by 2.1%, y/y. The real wage growth in the industry has decelerated, which could ease the firms' burden of increasing costs in period of economic slowdown.

Construction dynamics registered even a more pronounced slowdown than did the industry. The growth was very weak in all the months of 2008 with the exception of February, although the figures on the beginning of 2008 were negatively affected by a very strong comparable base of the previous year. May, June and August recorded even a year-on-year decline of output and a mild growth in July was rather a result of more working days compared to the previous year. Total construction dynamics in January – August 2008 reached 1.2% y/y only. The growth of Czech construction was pulled by the development in civil engineering – large transport infrastructure projects mainly. Civil engineering recorded increase of 9.8% y/y that was reflected in both new production and repair and maintenance. On the other hand, building construction decelerated compared to the strong previous year and dropped by 4.6% y/y due to a large slump in new construction.

However, the development of newly granted building permits in H1 2008 indicated a potential for future strengthening of construction output growth. New building permits exhibited a stable strong growth exceeding 10% y/y in Q2 2008. The overall increase amounted to 9% y/y and the approximate value of permits went up by 17.6% y/y. Out of that, new permits for residential buildings increased by 2.6% y/y only, which point to the effects of the hike in the VAT, decreasing purchasing power of consumers and a slowdown in growth of mortgages. On the other hand, new permits for non-residential buildings went up by 12.3%, y/y. Overall, the growth of newly granted building permits decelerated in August and even dropped compared to August 2007 in case of residential buildings and flats.

Employment in construction sector dropped by 0.6% y/y in the period January – August 2008, which confirms the trends of cutting down the production. In this period, real wages grew by 4.1% y/y, while the productivity of labour rose by 1.6% y/y only. The adverse developments of relation between the rate of growth of real wages and that of labour productivity indicate growing tensions on the labour market and lack of labour force and might endanger the future prospects of the Czech construction.

The weakening consumer demand was reflected in the developments of retail sales. Retail trade kept decelerating in the course of the year and exhibited a considerably lower dynamics compared to the record-high 2007. The situation was negatively affected by increasing prices resulting in declining purchasing power of consumers. Strong koruna in H1 2008 paradoxically did not lead to decrease of prices of imported goods, which could offset other pressures on price increases and boost the sales.

Retail trade was steadily pulled down by the development in food sales that kept decreasing and fell by 1% y/y in the period January – August 2008. On the other hand, there was registered a steady dynamics in non-food sales (with the exception of August), which recorded year-on-year growth of 3.5%. The main factor behind this development was a continuing strong demand for electronics, furnishing and other household equipments. Hence, there is a lasting positive effect of previous boom in construction of flats and credit financing of housing. The highest paces of growth were recorded in trade operated via Internet or mail-order houses; however, its effect on the total retail sales growth stays only limited because of relatively small volumes. Sales in the automotive segment witnessed fluctuating growth amounting to 2% y/y in average. Sales of fuels increased by 4.4% y/y. This indicates the low price elasticity of consumer demand for fuels that stood behind the relatively low decline of sales in reaction to dynamic price increases of H1 2008. Car sales grew relatively less, by 0.7% y/y; rapid decline in sales of cars was recorded in August (-10.4% y/y).

Industry was predominantly driven by foreign demand. Nevertheless, we can expect a considerable weakening of foreign demand, as has been indicated by the figures on foreign orders, falling since June. Domestic demand does not seem to be able to compensate for this drop so far.

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However, the development of newly granted building permits in H1 2008 indicated a potential for future strengthening of construction output growth.

2. Foreign Trade and Exchange Rate

In the first half of 2008 Czech koruna appreciated from the average 26.1 CZK/EUR in January to 23.5 CZK/EUR in July, i.e. by 10%. This development was altered after the intervention of the Czech National Bank, which cut down the 2W repo rate to 3.50% on August 8, 2008. Czech koruna has significantly depreciated since then and approached the 25 CZK/EUR level. This depreciation was promoted by the strengthening of US dollar, falling prices of crude oil and worsening general macroeconomic perspectives of the Czech Republic. Czech koruna has oscillated between 24 and 25 CZK/EUR since August and has reflected the developments on world financial markets rather than real domestic economic conditions.

Retail trade kept decelerating in the course of the year and exhibited a considerably lower dynamics compared to the record-high 2007. Retail trade was steadily pulled down by the development in food sales. On the other hand, there was registered a steady dynamics in non-food sales.

In the first half of 2008 Czech koruna appreciated by 10% towards the EUR. This development was altered after the intervention of the Czech National Bank, which cut down the 2W repo rate to 3.50% on August 8, 2008. Koruna has oscillated between 24 and 25 CZK/EUR since August and has reflected the developments on world financial markets rather than real domestic economic conditions.

Thus, appreciation of the Czech currency stands no longer an important factor attenuating the inflationary pressures in the economy. Furthermore, strong currency prevailing in the first half of the year has begun to show some adverse effects on foreign trade, with the expected lag. In the period January – August 2008, exports rose by 4% and imports by 2.8% y/y. However, significant deceleration was recorded in export activity: in August, exports even declined by 8.1% y/y, but this drop was compensated by even larger slump in imports that resulted in small trade surplus. Certain slowdown in the export activity has been also indicated by the falling figures on foreign industrial orders. The unfavourable economic development in Germany also meant worsening export perspectives. Furthermore, development in foreign trade was influenced by the worsening terms of trade that decreased by 1.6 percentage point y/y in H1 2008, i.e. the exports have become relatively cheaper than the imports.

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The surplus of trade balance reached CZK 76.4 bill. in August 2008 and was by CZK 20 bill. higher than a year before. The growth of foreign trade has been higher than the growth of GDP, indicating the increasing openness of the Czech economy, which is already one of the most opened economies in the EU–27. The share of total exports on GDP reached about 70% in 2007.

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Traditionally, machinery, mineral fuels and chemistry continued to be the key items of the trade balance in the period January – August 2008. Surplus in trade with machinery and transport products increased by CZK 37 bill. y/y to CZK 245 bill. The exports in this sector rose significantly more than imports, which, moreover, exhibited a decelerating trend. The usually strong category of road vehicles reported even a fall in exports in June, July and August that was also reflected in reduction of industrial production of domestic companies. The overall increase in trade balance was further affected by positive developments in trade with material and foods and beverages. On the other hand, total surplus of the trade balance was dampened by worsening position of the Czech Republic in trade with mineral fuels and chemicals, both of which recorded a year-on-year slump. The deficit in mineral fuels went up to CZK 108 bill. (increased by CZK 26 bill y/y) and deficit in chemistry reached CZK 69 bill. (increased by CZK 1 bill. y/y but the situation has been continually improving). However, the large plunge in mineral fuels is attributable to distinct rise in the value of imports caused by higher prices; volumes of imports grew considerably less. High fuel prices affected the trade balance also indirectly through the deficit in chemistry.

In the period January – August 2008, the trade with the EU–27 ended up in a surplus of CZK 341 bill., representing year-over-year growth of CZK 70 bill. The highest surpluses were generated in trade with Germany (CZK 76 bill.) followed by Slovakia (CZK 59 bill.). Both surpluses with Germany and Slovakia have slightly increased. However, the export dynamics with Germany has been significantly decelerating due to the economic slowdown and fall in consumer demand that has been recently indicated by a drop in retail sales in Germany. Trade deficit with the non–EU countries grew by CZK 50 bill. to CZK 265 bill. The largest trade deficits were produced by China (CZK 120 bill.), Russia (CZK 58 bill.), and Japan (CZK 47 bill.). Czech trade registered considerable deterioration of these deficits compared to the previous year mainly due to increasing value of imports of oil and fuels (Russia) and machinery imports (China and Japan).

3. Inflation and Monetary Policy

The robust economic activity, continuing strong consumer demand, increasing world prices and changes in the VAT and other regulative measures accounted for the dynamic growth in consumer prices during

H1 2008. The year-on-year rise in the consumer price index exceeded 7% in Q1 2008 and slipped only slightly below this threshold in Q2. Although the koruna appreciated simultaneously and very rapidly during this period, it could not compensate for the other inflationary pressures. The similar price development continued in July, when CPI went up by 0.5% m/m and 6.9% y/y. Main drivers of the growth in H1 2008 comprised the dynamic rise in food, alcoholic beverages and tobacco prices. There was also a rapid price increase in housing, water, energy and fuels prices and health services

However, price growth already reached its peak in H1 2008 as August and September meant a month-on-month decline of CPI by 0.1% and 0.2% respectively and deceleration of year-on-year growth dynamics to 6.5% and 6.6% respectively. The slowdown in price increases was mainly caused by the development of prices of foods and transportation. The average inflation in the last twelve months climbed up to 6.4% in September 2008. Producer prices growth also registered a decelerating trend and PPI even fell in September, as a consequence of world-wide decline of commodity prices.

In reaction to economic developments of the beginning of 2008, the CNB Bank Board initially decided to tighten monetary policy. The basic interest rates were firstly raised in February 2008 so that the 2W repo rate moved to 3.75% from 3.5% at the beginning of the year. 3M PRIBOR averaged 4.1% in the first half of 2008. The considerable appreciation of koruna not reflecting the economic fundamentals in H1 2008 and its possible unfavourable impact on the economy made the CNB Bank Board cut down the 2W repo rate back to 3.5%, effective from August 8. Basic reference interest rates stood at 4.25% in Slovakia, 6% in Poland and even 8.5% in Hungary in October 2008. The negative differential vis-à-vis the ECB refi rate expanded to 75 basis points in September and after ECB cut down its rates it contracted to 25 basis points in October. The differential between 3M PRIBOR and 3M EURIBOR has been increasing from 50 to 120 basis points between January and September 2008, as 3M PRIBOR declined to 3.8% in September.

The low rates promoted continuing credit and mortgage growth in the Czech economy, although the dynamics decelerated in comparison to the previous year. In the period January – July 2008, lending to households grew in average by 32% y/y and particularly strong growth reaching 34% y/y in average was apparent in housing loans, which totalled CZK 574 billion in July 2008. However, the volume of new mortgages decreased compared to the boom prevailing in 2007 and the structure of housing loans slightly shifted towards the credits from construction savings.

4. Labour Market

Labour market continued to develop favourably in 2008. The unemployment rate declined steadily from 6.1% in January to 5.0% in June and slightly increased back to 5.3% in July, August and September. In a year-over-year comparison, rate of unemployment fell significantly, down from the average level of 6.5% in 2007. The harmonised Czech unemployment rate published by the Eurostat stood at 4.3% in August 2008. This was significantly below the overall average for the EU–27 (6.8%).

The Czech labour market was close to a situation of full employment and exhibited a deficiency of qualified (and often even of less-qualified) workers in H1 2008. The tensions on the labour market might represent a threat to the development of wage-driven inflation. This trend will be even more pronounced by the end of the year during the wage negotiations, as has been already indicated by the trade unions' claims on 8% hike in nominal wages. While the average wage increased year on year by 9.1% in nominal terms in H1 2008, this growth was in real terms significantly offset by the high inflation and reached 1.9% only. Average inflation is expected to fall in 2009 and announced 8% hike in nominal wage might therefore endanger the competitiveness of Czech firms. However, trade unions claims should be at the end limited by the consequences of global financial crisis and directed more towards sustaining the level of employment. Latest data also reveal easing of the labour market pressures, as the number of unemployed increases and number of vacancies gradually falls.

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The price growth already reached its peak in H1 2008 as August and September meant a month-on-month decline of CPI by 0.1% and 0.2% respectively and deceleration of year-on-year growth dynamics to 6.5% and 6.6% respectively.

The negative differential vis-à-vis the ECB refi rate expanded to 75 basis points in September and after ECB cut down its rates it contracted to 25 basis points in October. The low rates promoted continuing credit and mortgage growth in the Czech economy, although the dynamics decelerated in comparison to the previous year.

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The supply of vacancies sustained a record-high level in H1 2008, moving around 150 thousands. Number of vacancies reached its peak in February and has exhibited a decreasing trend since then, more pronounced fall was registered in September. However, expanding demand for labour did not lead to a decline in unemployment, due to continuing structural mismatch on the Czech labour market.

Employment was growing during the fading economic expansion of the beginning of 2008. In Q2 2008, total employment exceeded 5 mil. The total employment rate in the Czech Republic belongs to the above-average levels in the EU. On the other hand, Czech Republic is considerably lagging behind in the situation in long-term unemployment, which is one of the highest among the EU–27.

a decreasing trend since then, a more pronounced fall was registered in September. However, expanding demand for labour did not lead to a decline in unemployment, due to continuing structural mismatch on the Czech labour market. The number of unemployed fell from 365 thousands in January to 298 thousands in June and has been increasing since then. In average, there were 2.3 unemployed people per vacancy in September. Still, there exist significant disparities among regions – some districts exhibit very low unemployment indicating the situation of full employment and the number of vacancies exceeding the number of unemployed (Prague, Plzeň, Mladá Boleslav, Pardubice). However, structural mismatch on the Czech labour market is not limited to regional nature only. There is also a qualification mismatch, reflected in a shortage of skilled labour force.

Employment was growing during the fading economic expansion of the beginning of 2008. In Q2 2008, total employment exceeded 5 mil. Employment in the primary sector continued to decline and the overall increase was attributable to the rise in secondary and tertiary sector. Secondary sector grew even more dynamically then did the tertiary, reaching 41% of total employment. The total employment rate reached 66.6%: high level of men employment rate at 75.3% compensated for very low employment rate of women standing at 57.8% only. However, total employment rate in the Czech Republic belongs to the above-average levels in the EU. On the other hand, Czech Republic is considerably lagging behind in the situation in long-term unemployment, which is one of the highest among the EU–27. The share of unemployed for a period longer than one year exceeded 50% of total stock of unemployed in Q2 2008. The highest shares were registered in low-educated groups, suggesting an important role of education, retraining schemes and other provisions of active labour market policies in solving this issue.

The positive trend in employment and unemployment in 2008 was mainly a result of seasonal trends and the weakening cyclical upswing of the Czech economy. Despite the favourable developments of unemployment, there remain considerable challenges for improving the performance and flexibility of the Czech labour market. To sum up, regional and structural mismatch, relatively high long-term unemployment, low economic participation and gender inequalities are the main weaknesses of the Czech labour market. Increase of labour market flexibility is one of the preconditions of smooth adoption of euro. Without significant improvements in this field, adjustment to adverse economic shock would be limited and economic development would be threatened.

5. Outlook

We expect a further economic slowdown during the year. Consumer demand might slightly increase in Q4 2008 due to Christmas related expenditure; however, the overall consumption dynamics in 2008 will be dampened by high prices, fiscal reform measures, worsened credit accessibility and general uncertainty about the future economic prospects, resulting from the adverse developments on global financial markets and poor economic performance in the Europe. Investment activity of firms will be further reduced due to general limitation of production stemming from weak demand, high prices of inputs, adverse effects of strong currency and consequences of financial crisis. From the same reason, export dynamics and total trade balance will decelerate, too. We can expect recurrent growth of household consumption in 2009 as the inflation will moderate and real wages grow. We expect GDP growth at 4.3% y/y in 2008 and 3.8% y/y in 2009.

Czech industrial dynamics weakens. It was negatively influenced by the economic slowdown in main trading partners' economies and partly also by the strong koruna. Total new industrial orders fell by 10% y/y in August. Foreign orders kept declining and fell by 8.5% y/y, the largest slumps were recorded in industries that have pushed up the industrial production so far, manufacture of motor vehicles registered even decline by 13.7%. Total industrial production grew by 5% y/y during first eight months of 2008; however, we can expect further deceleration. In general in 2008, the growth of industrial output will weaken compared to 2007 and will be around 4%.

The construction dynamics will weaken in 2008 compared to very strong previous year as a result of lower economic growth. However, Czech construction will be continuously stimulated by financially demanding infrastructure projects; the projects of foreign investors will be helpful, as well. Building construction has been falling and correction of future dynamics of building

construction has already started, as the figures on newly granted building permits have indicated. We can expect continuing influence of economic slowdown in this area. Certain attenuation of production will be evident in civil engineering, too, in reaction to unfavourable domestic and foreign economic development. In 2008, overall growth in construction around 2% is expected.

We also expect a general deceleration of retail sales growth in 2008. The contribution of consumption to the overall economic growth will be weaker. Household consumption is being dampened by high inflation, falling purchasing power of households and uncertainty about the future development, stemming from the global economic trends. Labour market developments associated with the economic slowdown won't give a reason for any rise of consumer optimism either. We expect the Czech National Bank will decrease the interest rates in November, which could stimulate the consumer demand. Positive development is expected by the end of the year due to Christmas shopping. In 2008, growth in retail trade is expected around 3%.

Foreign trade will decelerate in general in 2008; the exports are expected to be hit by the impact of a slowdown in eurozone economic dynamics. Among domestic factors, the tight labour market and strong currency are expected to limit the export activity, especially by the end of the year. Slowdown in trade has been already indicated by the figures on foreign industrial orders. In 2008, the trade surplus is expected around CZK 90 bill.

Data indicates that inflation has already reached its peak in H1 2008 and in the coming months, inflation will go down below 6% by the end of the year. This is confirmed by the new inflation forecast of the Czech national Bank, too. The strong exchange rate ceased to attenuate inflationary pressures. The demand pressures have been weakening as has been indicated by figures on retail trade. Czech producer prices has also begun to reflect the world-wide decline in commodity prices (although with a certain delay – for instance in prices of metals). This year's good domestic yields in agriculture will have a positive effect, too. Overall, inflation pressures in the Czech economy have been slowly diminishing, which contributes to expected decrease of domestic interest rates during next meeting of the Board of the Czech National Bank in November. In 2008, we expect further decline in producer prices in coming months and overall, we expect PPI between 4.5 and 5% at the end of 2008. We expect the year-over-year CPI growth to drop to 5.5% at the end of the year, average inflation will be above 6%.

All indicators show the slowdown of the economy. On the labour market, number of unemployed has been moderately increasing and the number of vacancies decreasing. In the development of unemployment in September, the effect of economic deceleration was fully compensated by favourable seasonal trends pushing its level down. We can expect similar trends next month, too. However, the usual autumn decline of unemployment will be more and more overweighed by the chilling economy. Unemployment has already hit its bottom level and at the end of 2008, we expect the unemployment rate approaching 6%.

We expect a further economic slowdown during the year. The overall consumption dynamics in 2008 will be dampened by high prices, fiscal reform measures, worsened credit accessibility and general uncertainty about the future economic prospects, resulting from the adverse developments on global financial markets and poor economic performance in the Europe. Investment activity of firms will be further reduced due to general limitation of production stemming from weak demand, high prices of inputs, adverse effects of strong currency and consequences of financial crisis.

Foreign trade will decelerate in general in 2008; the exports are expected to be hit by the impact of a slowdown in eurozone economic dynamics.

Overall, inflation pressures in the Czech economy have been slowly diminishing, which contributes to expected decrease of domestic interest rates during next meeting of the Board of the Czech National Bank in November.

WORLD ECONOMIC DEVELOPMENT AFTER FINANCIAL CRISIS

Kamil Janáček

History shows that financial (and banking) crises can lead to sizable output cuts, so that, for some countries or regions, moderate recessions, or substantial economic growth slowdowns, must be expected.

In 2008 and 2009, growth will be strongly differentiated in various parts of the world. Direct and indirect effects of the financial crisis will mainly hit the U.S., the euro area, and Japan.

The present world economic slowdown cannot be presented as a world-wide recession, as some analysts and commentators present it. To call a roughly 3 % growth "a recession" requires a good portion of economic fairy-tale imagination…

Among the emerging markets, those countries will be in trouble which have high current account deficits, and rely on foreign financing.

The world economic slowdown will have a substantial impact on basic commodity prices, which have already started on a downward trend.

The global money market crisis has intensified substantially in recent weeks. This development has extensive negative implications for economic growth, both in developed and emerging market countries. History shows that financial (and banking) crises can lead to sizable output cuts, so that, for some countries or regions, moderate recessions, or substantial economic growth slowdowns, must be expected. The U.S., the euro area, and Japan will show a period of very slow growth (and, in some quarters, moderate recessions) – whether the rest of the world will undergo an unpleasant growth slowdown from the almost 5 % reached, world-wide, still in 2007 (see Table 1).

The table shows that in 2008 and 2009, growth will be strongly differentiated in various parts of the world. Direct and indirect effects of the financial crisis will mainly hit the U.S., the euro area, and Japan. Latin America (with the exception of Mexico whose economy is strongly connected with the U.S.) will be less affected: first, this region is a big commodity exporter; second, and more important, its rapidly growing internal market will partly compensate for the fallouts of export demand, as well as for the lower export incomes due to falling commodity prices. This is even more true of China and India – where the two and half billion consumers represent a big potential for domestic demand growth. Moreover, these two countries (and other countries of South-East Asia, and of the Middle East) have a high level of domestic savings, and have hoarded massive foreign currency reserves. Under the present credit squeeze in the world financial markets, their banks will not suffer from lack of liquidity – as do banks in the U.S. or in Europe. To conclude, the present world economic slowdown cannot be presented as a world-wide recession, as some analysts and commentators present it. To call a roughly 3 % growth "a recession" requires a good portion of economic fairy-tale imagination…

Among the emerging markets, those countries will be in trouble which have high current account deficits, and rely on foreign financing – in dollars, or euros. In their case, the scenario of the 1994 Mexican crisis, or the 1997-98 South-Asian one, may be repeated – with very serious consequences for their banking and financial sectors and their growth performance. They will have to undergo a painful restructuring, strengthen their macroeconomic policies and fiscal discipline, and stop relying on external, especially short-term, financing.

The world economic slowdown will have a substantial impact on basic commodity prices, which have already started on a downward trend. The price of oil has decreased by forty percent over the last two months, prices of metals and agricultural commodities go down, too. That will on the one hand put an end to the revenue-spree of commodity exporters, and, on the other, make life easier for commodity-importing countries – mainly with respect to oil and foodstuffs (India, Pakistan, Bangladesh, Africa etc.). The pressure on their payments balances will diminish.

Table 1: GDP Growth (in %)

	2007	2008f	2009f
USA	2.0	1.4	0.2
Euro area	2.6	1.2	0.5
Japan	2.0	0.4	0.5
China	11.9	11.0	9.9
India	9.3	7.6	6.5
Latin America	5.4	4.3	3.4
Emerging Europe	6.7	6.2	5.6
World	4.9	3.8	2.9

Source: IMF, Komerční banka

Risks of this scenario are undoubtedly on the downward side. World economic outlook for the last quarter of 2008 and for 2009 depends cardinally on the success of government rescue programs for financial institutions, as adopted in the U.S., Europe, Australia and other countries. If financial market intermediation can be restored, banks´ capital can be refurbished, and if the market can be cleaned of non-functional and weak institutions – then one may expect a return of world economic growth toward the level around 4 % within two or three years. If, however, this program proves insufficient, or systemically wrong, the natural market cleaning process will take longer, and the return to higher growth will be postponed.

Central Europe

Three of the Cetnral-European countries – Poland, Slovakia, and Czech Republic – will not be much hit directly by the financial crisis. Their banks did not trade with "toxic" products, they have a solid capital base, and sufficient liquidity. Corporations and consumers in these countries take credit in national currencies, so that neither the clients, nor the financial institutions, will feel direct impacts of the financial crisis.

In Hungary the situation is different. Almost half of the mortgage credits of Hungarian households, and more than forty per cent of corporate credit, are in foreign currencies (euros, swiss francs). The present financial situation connected with a weak forint, and enhanced by bad macroeconomic imbalances (high budget and current-account deficits) makes Hungary a potential victim of the financial crisis. Hungarian government has already officially asked the ECB for help.

Indirect impacts of the financial crises will be more serious for all four countries. Weak West-European, especially euro-area growth, will hit their exports. All four countries have open economies, highly dependent on exports. The euro area has a two-third share in exports of Hungary and the Czech Republic, and as much as a three quarters in Slovakia´s exports. Only in Poland, its share is just slightly over one third.

In none of the four Central-European countries can one speak about "decoupling" from the trends in advanced and emerging economies. All four countries are strongly influenced by economic climate in the euro area, and within short or medium time they are not able to shift their exports to other territories. Also, effective household demand is not strong enough to compensate for fallouts in exports.

Inflation, on the other hand, will be positively influenced by slower world-wide and domestic GDP growth. After a relatively strong increase in the first half of 2008, inflation in this region started to diminish and will continue on that trend in 2009. Decrease of inflation will be further supported by the decline of world prices of oil, gas and some other commodities.

Last remark: the present financial crisis will undoubtedly postpone the adoption of euro in three of the Central-European countries. Both European Union Commission, and European Central Bank, will concentrate on rescuing and restoring the banking and financial markets, on improving regulation, etc. Their preparedness – and ability – to negotiate the entry of additional countries into the euro area will, in the next years, approach zero.

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Table 2: Economic Growth in 4CE Countries (GDP in %)

	2007	2008f	2009f
Poland	6.5	5.0	3.8
Hungary	1.3	2.3	1.9
Slovakia	10.4	7.2	5.0
Czech Republic	6.6	4.3	3.8

Source: Komerční banka

MINIMUM WAGE AND ITS CONSEQUENCES IN THE CZECH REPUBLIC: CURSE OR BLESSING?

Kamila Fialová

1. What are the main goals of minimum wage?

Institution of minimum wage and its economic consequences have been traditionally in the centre of both academic and political discussions and subject to many controversies. On the one hand, there stand advocates of minimum wage, arguing by its beneficial effect on raising the income of poor households, decreasing income inequality and making work pay. On the other hand, there are its critics, stressing the possible adverse impact on raising labour costs and increasing unemployment among the least productive workers.

Minimum wage might be either statutory, established by the government, or set as an extension of collective bargaining agreements.[1)] Downward limitation of labour incomes is nowadays a common practice in almost all the developed countries in the world and its utilization is recommended by several conventions of International Labour Office as an instrument of workers' protection (Czech Republic ratified two out of three conventions recommending the introduction of minimum wage). On the other hand, OECD in its Jobs Strategy (1994) emphasises the allocation function of wages in providing essential information regarding the employment opportunities. In this sense, wage flexibility is of particular importance. However, flexibility might be reduced if the minimum wage level is set too high, resulting in adverse effects on employment.

The proponents of the minimum wage mostly seek arguments in social area. The main goal of the minimum wage is usually put as reduction (or prevention) of poverty and improvement of living conditions of low-paid workers. However, the potential of the minimum wage in a fight against general poverty is rather limited. Burkhauser et al. (1996) state that mainly higher-income households profit from the minimum wage. As was indicated by OECD (1998) in its study on nine developed countries in 1993, the major part (60-90%) of low-paid workers paid below two thirds of wage median lived in medium- or high-income households. On the other hand, the proportion of low-paid workers living in the poorest households was around 10% only. Thus, minimum wage doesn't seem to be an efficient instrument in preventing poverty. Identically, minimum wage has only limited influence on decreasing the income inequality, as it increases the incomes of employed, but also can have adverse effects on income of those low-productive workers, who lose their jobs as a result of minimum wage introduction. Moreover, the pecuniary remuneration comprises only a part of the overall remuneration. Increases in minimum wage might lead to reduction in non-pecuniary benefits without any effects on workers well-being or motivation.

Motivation effect, on the other hand, is highly determined by the relation between the minimum wage and the social system and system of low-wage taxation. The key determinant is the difference between the potential labour income and social income available without being employed, a factor influencing the basic decision making between leisure and work, i.e. the supply of labour. Introduction of minimum wage, without any interconnection to other social and tax policies doesn't necessarily have to represent a motivation device.

Further, minimum wage is sometimes also considered a device to maintain the even conditions of economic competition and limit the potential dumping. However, as the wages reflect productivity of workers, artificial rising of the wage floor might rather result in reduction of the stock of low-productive labour force in firms. Some theorists also stress the positive effect of minimum wage on increasing the productivity of labour via

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[1)] Many "old" European countries don't have legally binding minimum wage, but usually there exist an effective minimum wage determined by collective bargaining (Austria, Italy, Germany, Denmark, Sweden).

investment into human capital of least-productive workers. Nevertheless, there exist more efficient and targeted instruments of social policy to achieve these goals without any adverse effects on employment (direct support of education, retraining, active labour market policies etc.). Minimum wage might be then considered the second best solution. Therefore, despite the incontestable virtues of the intended goals of minimum wage, many of them are rather questionable in sense of their real possible achievement via this policy. Moreover, there might be present significant adverse effects, making minimum wage an inappropriate and sub-optimal instrument for fighting poverty and making work pay. What does the economic theory say about its potential positive and negative impacts?

2. What does economic research say about its economic consequences?

Minimum wage is a controversial instrument of labour market policies. Economic theorists have not reached a broad consensus regarding its consequences so far. The traditional neoclassical model based on assumption of competitive markets and homogeneous labour force predicts that introduction and further rising of the minimum wage above the market equilibrium level will result in a fall of employment. Firms will not hire or employ workers whose productivity doesn't exceed the minimum pay, involuntary unemployment will arise and total economic output will fall. The higher the minimum wage tariff is set, the more pronounced adverse effects can be expected.

However, the assumptions of the theory are rather restrictive and do not fully reflect the reality. Firstly, labour force is not homogeneous. Larger adverse effects might be expected among the lower-productive groups of workers – young or handicapped, part-time employees and also women. Therefore, often sub-minimum wage tariffs exist to protect these mostly endangered groups. Further, the extent of the elasticity of labour demand might also influence the overall minimum wage effect in different groups of workers. According to Hicks-Marshall laws of derived demand, the own elasticity of labour will be relatively higher when:

1. the price elasticity of demand for the final product is relatively higher;
2. the substitution of this category of labour is relatively easy;
3. the supply of other factors of production is relatively elastic, and
4. this category of labour accounts for relatively large share of total cost.

The sectors with higher labour demand elasticity will be more affected by the minimum wage. Thus, we can expect larger adverse effects in the labour-intensive sectors, where labour is, however, easily substitutable for capital, where the total labour costs amount for large part of total costs and in sectors with prevailing competitive relationships. Such sectors are typically retail trade, restaurants, textile industry etc. These are also the sectors characteristic by greater share of low-paid workers and thus extremely vulnerable to the burden represented by the minimum wage. We can also expect heavier impact of the minimum wage in more opened economies, such as the Czech Republic.

A modification of the traditional neoclassical theory describes the effect of minimum wage in case of two sectors – the covered and uncovered (this might be also interpreted in sense of official and shadow economy). In case that minimum wage is a binding limitation in one sector only, the labour force not hired in this sector due to lower labour demand moves to the uncovered sector where it pulls the equilibrium market wage down. Thus, the workers who maintain the employment in the covered sector get better off, while the workers in the uncovered sector (both workers fired from the covered sector and workers originally employed in uncovered) get worse off. Although minimum wage does not give a rise to involuntary unemployment in this framework, it blocks the efficient flow of labour between sectors and reduce the total output of the economy.

Theory of monopsony gives a prediction of the minimum wage impact after we release the second key assumption of the neoclassical theory – competitive markets. Monopsonistic labour market is characterised by one employer only, who has a market power over wage setting. Such a firm faces the whole total labour supply on a given market and, thus, can choose the particular employment level. However, the optimal employment and wage level of a profit-maximizing firm is lower than the level prevailing in a perfectly competitive market. In this framework,

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The sectors with higher labour demand elasticity will be more affected by the minimum wage. Such sectors are typically retail trade, restaurants, textile industry etc. These are also the sectors characteristic by greater share of low-paid workers and thus extremely vulnerable to the burden represented by the minimum wage. We can also expect heavier impact of the minimum wage in more opened economies, such as the Czech Republic.

introduction of minimum wage above the monopsonistic wage can increase total employment, however, not above the level that would otherwise prevail in a competitive environment. Nevertheless, the resulting growth of employment is based on assumption that the firm can afford wage increases without cutting down the production. Yet, firm can be a monopsonist on the labour market (e.g. geographically), but at the same time may operate in a perfectly competitive environment on the market for its final production, and thus reach zero economic profit. Should the introduction of minimum wage lead to fall in profit, firm might decide to move production to other sector/country etc. Thus, minimum wage would have a completely negative effect on employment. However, the industries exhibiting a higher share of low-paid workers (comprise for instance foods, textile, and wood-processing industry, transportation and agriculture) are usually highly competitive in the Czech Republic (Buchtíková, 1995). Moreover, according to the Hicks-Marshall laws we can expect rather large effects of minimum wage hikes in these sectors. Therefore, the concept of monopsony seems to be rather theoretical and not reflecting the Czech reality.

Positive effects of the minimum wage may also result from the pressure on increasing productivity and quality of human capital of low-productive workers. This effort might come both from the side of employers or employees themselves. By increasing the price of non-qualified labour, minimum wage shifts the labour demand towards more qualified labour and increases the unemployment of non-qualified. This motivates low-productive workers to increase their qualification. This higher level of human capital accumulation positively influences employment, productivity and economic growth (see for instance Acemoglu and Pischke, 1998; or Cahuc and Michell, 1995). Minimum wage might be also considered a motivation device in efficient wages framework (see Rebitzer and Taylor, 1995, or Manning, 1995) – workers motivation not to shirk is increasing function of their wage, as higher wage increases their costs in case of being fired.

Despite the lack of consensus concerning the minimum wage effects, it is usually generally accepted that although it might have some positive impacts on motivation or productivity increases among low-paid workers or in case of monopsony, there still exists a threshold, over which the negative effects of minimum wage prevail. Minimum wage increases the unemployment and causes economic losses in terms of economic efficiency then. The effect is stronger for particular groups of workers with the lowest productivity, especially the youngest workers. This situation is to certain extent confirmed by existing empirical research. For a summary of empirical research results on this issue see e.g. Brown et al. (1982) or OECD (1998).

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Figure 1: Minimum wage and average wage in the CR, 1991–2007, CZK

Source: Ministry of Labour and Social Affairs of the CR, Czech Statistical Office

3. Minimum wage grew rapidly since 1999 in the Czech Republic

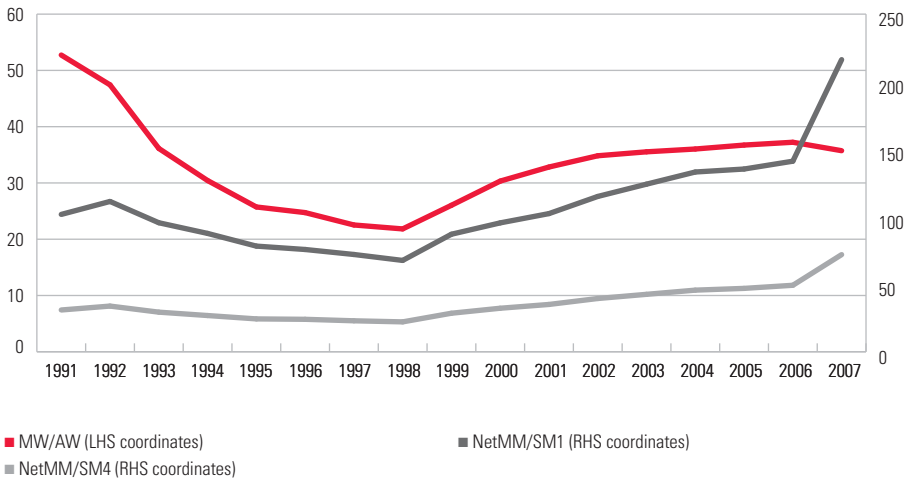
Minimum wage in the Czech Republic was introduced in 1991 together with a system of twelve minimum wage tariffs, fixing the minimum wage rates for particular occupations.[2] Minimum wage rate was firstly set relatively high, on more than 50% of average wage in the economy. However, minimum wage was not significantly adjusted until late 1990s. Consequently, its real value was continually falling to the historical minimum in 1998, 63% of the real 1991–value. The development is depicted in figure 1.

There were several reasons for such stagnation: low strength of trade unions in early 1990s; restrictive government's income policy introduced in 1991 by a system of wage regulation; and last but not least, interconnection between the minimum wage and social system. In this framework, increasing minimum wage pushed up the state's social expenditure, which made the hikes in minimum wage politically unacceptable. The real slump in the minimum wage value during 1990s was

Figure 2: Minimum wage (MW) and average wage (AW), CPI and labour productivity growth in the CR, 1991–2007, y/y %

Source: Ministry of Labour and Social Affairs of the CR, Czech Statistical Office

Figure 3: Minimum wage (MW) as a share of average wage (AW) and subsistence minimum (SM) of one- and four-member household in the CR, 1991–2007, %



Source: Ministry of Labour and Social Affairs of the CR, Czech Statistical Office, own calculations

Minimum wage in the Czech Republic was introduced in 1991and its rate was firstly set relatively high, on more than 50% of average wage in the economy. However, minimum wage was not significantly adjusted until late 1990s.

[2] After the collapse of central administration of wages at the beginning of 1990s, the system of minimum wage tariffs was firstly intended as temporary and was designed to protect workers, until the system of collective bargaining over wages would develop to take over this function. The tariffs are binding for firms without a collective agreement. The number of tariff classes was diminished in 1996, but fully re-introduced in 2000 again. However, even the highest, twelfth tariff reaches about 80% of average wage only, which makes the tariffs for more human capital intensive occupations a completely ineffective limitation.

subject to critiques of many international organizations. The connection with the social system was thus unbound in 1998 and a way towards the minimum wage growth was opened. Minimum wage started to grow substantially and was increased by 29% in 1999 and by 24% in 2000. Consequently, it reached its real 1991–value finally in 2001. However, the pace of nominal growth gradually decelerated (hovered around 8% in 2003–2006 period) and finally stopped in 2008, when minimum wage was not increased at all.

The real growth of minimum wage was in red numbers until 1998 (with an exception of 1996), as its increments didn't exceed the high annual inflation (see figure 2). Situation changed in 1999 when real gains in minimum wage values markedly overstepped inflation, which tempered (these two figures were roughly equal in 2007). It is clear that minimum wage doesn't follow the development of consumer prices in the CR, despite its intended interconnection stated by the law. Data also doesn't reflect any relation to the developments in average wage or productivity of labour, as minimum wage rose relatively faster in periods with lower productivity gains. Thus, it seems that minimum wage development in examined period pursued rather political goals in social area, not reflecting for the developments in real economy.

However, the absolute level doesn't reflect the real importance and economic consequences of the minimum wage. As for the economic impact, its position in the overall wage distribution is of key importance. This relationship is indicated by the Kaitz index, stating the share of the statutory minimum wage on the average wage in the economy (see figure 3).[3] This ratio was rather high when the minimum wage was firstly introduced: it reached 52% of the economy-wide average in 1991. However, during the 1990s it drastically dropped to its minimum in 1998, amounting to 22% only. The development since 1999 meant a recurrent growth in this proportion that roughly stabilised around 36% since 2003. Moreover, according to the Czech Statistical Office (2008), minimum wage reaches more than two thirds of the value of the first wage decile. This might represent a considerable burden for employment of the least-productive and least-paid workers.

On the other hand, effects on motivation of low-paid workers or not working persons to accept a paid job is indicated by the relation between the net minimum wage and subsistence minimum level, as depicted in figure 3. Net minimum wage didn't exceed the subsistence level of one-member household during the whole 1990s.[4] We can hardly expect that minimum wage would meet its goals in motivation of low-paid worker groups in the environment where social income in non-activity exceeds the potential minimum labour income. Minimum wage overgrew the subsistence minimum of one-member household only in 2000 and kept

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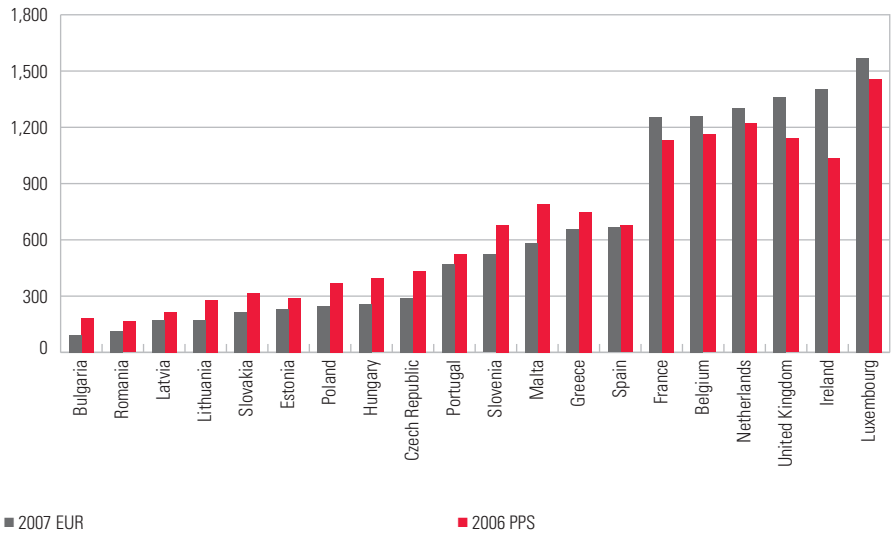
Figure 4: Minimum wage in EU member states, 2007 in EUR, 2006 in PPS



Source: Eurostat

[3] This index might understate the overall impact of minimum wages due to progressivity of tax systems. Also, average wage might be highly distorted by the shifts in the highest level of wage distribution, without any change in the lowest deciles mostly influenced by the minimum wage. Thus, median and net wage might be a better choice for evaluating the development of the economic impact of minimum wage in time or comparison across countries (OECD, 1998). However, comparable data sources are rather limited.

[4] The institution of subsistence minimum was introduced later than the minimum wage, as late as by the end of 1991. Developments of these two policy instruments were completely independent until late 1990s.

increasing moderately since then. There was a large upward jump of the ratio of minimum wage to subsistence minimum in 2007 related to the social reform measures and cut in social expenditure. Thus, the motivation role of the minimum wage might be in place. However, its real potential to meet its goals might be limited due to the adverse effects on motivation of employers to hire the low-productive workers for a pay over their productivity.

Despite the substantial increases of minimum wage since 1999, its level in the Czech Republic still remains rather low in an international comparison – see figure 4. Statutory national minimum wage has been introduced in twenty European Union member states and ranged from EUR 92 (Bulgaria) to EUR 1570 (Luxembourg) in 2007. Czech Republic with its EUR 288 founds itself in the low part of the spectrum, together with most of the other new member countries.[5] The situation doesn't change much after adjusting for the differences in price levels and the differentiation of countries narrows. Minimum wage expressed in PPS in the EU varied from 204 (Bulgaria) to 1503 (Luxembourg) in 2006, while the Czech minimum wage relatively went up to 465, but kept the same relative position among the countries as when expressed in EUR.[6]

If we compare the real economic burden represented by the minimum wage when reflecting for the different labour productivity and average wage level in the economy, minimum wage reached about 40% of average wage in industry and services in 2006 in the Czech Republic (Eurostat, 2007). Most of the new member states attained lower shares (the lowest, slightly over 30%, were recorded in the Baltic States), while most of the former members reached higher values (the highest, Ireland and Luxembourg hovered around 50%). Consequently, proportion of full-time workers with earnings on the minimum wage was rather low in the Czech Republic: 2.3% in 2006, while in many countries the proportion exceeded 8% (e.g. France, Luxembourg, Latvia, and Bulgaria). However, proportion of women paid on minimum wage in the Czech Republic was more than double compared to the men's share (3.5% and 1.4% respectively).

4. Does minimum wage in the CR reduce poverty or rather hinders economy?

Empirical evidence on the economic consequences of minimum wage in the Czech Republic is limited. The first analysis was conducted by Buchtíková (1995) on the early 1990s data. The author constructed an econometric simulation to manifest the effects of wage growth driven by the minimum wage hikes on employment in firms. The results indicate that increasing

Figure 5: Growth rates of labour income of minimum- and average-income households and minimum wage growth, 1990–2005, % y/y

Source: Ministry of Labour and Social Affairs of the CR, Czech Statistical Office, own calculations

Despite the substantial increases of minimum wage since 1999, its level in the Czech Republic still remains low in an international comparison. Consequently, proportion of full-time workers with earnings on the minimum wage was rather low in the Czech Republic: 2.3% in 2006.

[5] All three remaining Visegrad countries were below the CR level with even lower minimum wages.

[6] However, as mentions e.g. Dolado et al. (1996), a relatively higher minimum wage level does not necessarily have to represent larger economic burden. The existence of special sub-minimum wage tariffs for more threatened groups can mitigate the adverse effects of higher minimum wage.

minimum wage doesn't necessarily have to result in higher unemployment. The negative effect will be more apparent in particular industries (textile, machinery, wood-processing, foods) and groups of workers (young, women and part-time workers). However, the data covered state-owned enterprises only and thus the interpretation power of the results is rather limited.

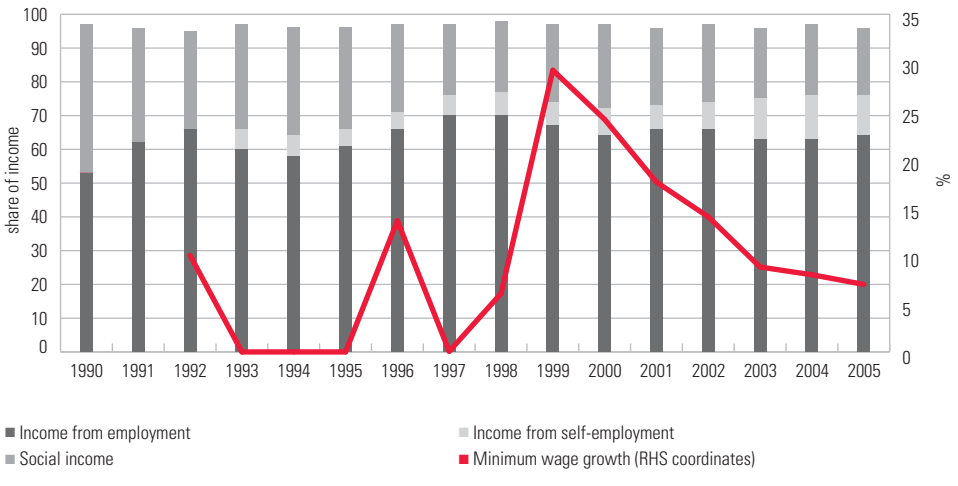
Gottvald et al. (2002) examined the effects of minimum wage on employment and wage distribution in period 1998–2002. The authors prove a significant positive effect of minimum wage on wages in given period, whereas the magnitude of the effect diminishes as one moves up on the wage scale. The effect on unemployment proved to be rather low and was not statistically significant, as in the previous study. Similar results were reported by Ericsson and Pytlikova (2004) in their study on data for the same period. They evaluate the effect of minimum wage on wages as positive in general, while the impact on employment as ambiguous. The employment effect was even positive in case of large companies employing a large share of low-paid workers (the authors attribute this result to increased motivation stemming from growing minimum wage and its distance from the subsistence minimum); on the other hand, minimum wage hikes had negative consequences in small businesses.

Thus, based on the results of previous economic research in the Czech environment, we can expect significant positive effects of minimum wage on increasing the wages of workers (i.e. those, who sustain their job even after a minimum wage hike) and, consequently, probably also on increasing the motivation of unemployed/inactive people to find a job. However, their chance to be hired might be reduced as a result of increased costs of firms in employing low-productive workers. In existing research, there is no clear consensus as what the effects of minimum wage on employment/unemployment in the Czech Republic would be.

To see whether the minimum wage in the Czech Republic serves its goals in sense of fighting poverty, we now turn to basic analysis of household income data from the Household Budget Survey conducted by the Czech Statistical Office. The data covers period 1990–2005[7] and describe, besides other, the situation of the minimum-income households defined as the first income decile; data concern the average per household member. To assess the impact of minimum wage on incomes of the poor households, we compare the development of labour income (income from employment and self-employment) in this group with the development in average-income household. Figure 5 depicts the year-on-year growth rates of labour income of poor and average households and the respective minimum wage growth in given year. The labour income of poor households went dramatically up in 1991, i.e. the year when minimum wage was introduced. However, the pace of growth was below or close to average since then (with significant exceptions in 1996 and 1997). One

Based on the results of previous economic research in the Czech environment, we can expect significant positive effects of minimum wage on increasing the wages of workers and, consequently, probably also on increasing the motivation of unemployed/inactive people to find a job. However, their chance to be hired might be reduced as a result of increased costs of firms in employing low-productive workers. In existing research, there is no clear consensus as what the effects of minimum wage on employment/unemployment in the Czech Republic would be.

Figure 6: Shares of labour and social income on total income of minimum-income households and y/y minimum wage growth, 1990–2005, %



Source: Ministry of Labour and Social Affairs of the CR, Czech Statistical Office, own calculations

[7] There was a change in methodology in 2006 that restricts the potential comparability of data with subsequent periods.

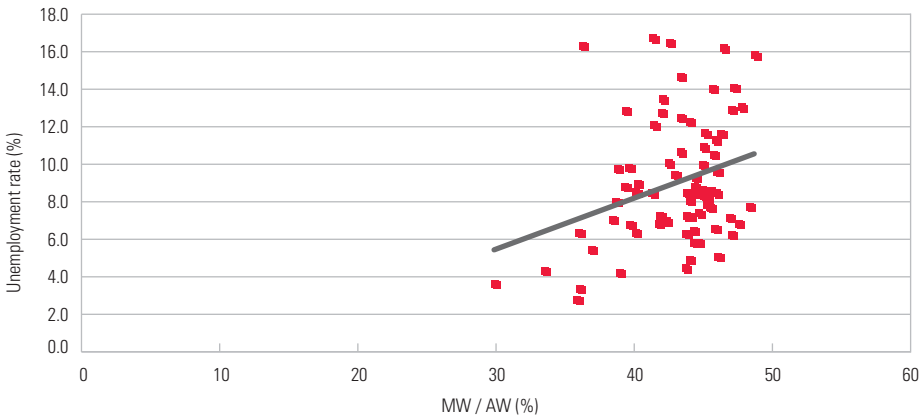
would expect a rapid growth of labour income of poor households after the minimum wage started to grow dynamically in 1999. However, opposite is true: labour income of poor households declined in 1999 and stagnated in 2000. Thereafter, the growth rates of labour income of poor households were close to the average.

The development of labour income of poor household did not reflect the hikes in minimum wage, not even compared to the dynamics of labour income of average household. The correlation between the shifts in minimum wage and labour income of minimum-income households was even negative in examined period (amounted to –0.53). Similarly, the share of labour income on total income of poor households did not reflect the changes in minimum wage tariff, as shows figure 6. In period of dynamic minimum wage growth after 1999, labour income share rather contracted; it grew more rapidly in previous period when minimum wage stagnated. Total income of minimum-income households seems to rather reflect the trend in development of subsistence minimum. Labour income is then evened up by social income to the level of subsistence minimum. Correlation of total income with subsistence minimum of one-member household is significant, positive and amounts to 0.70 (it is only 0.41 for social income).

We can conclude that minimum wage in the Czech Republic did not bring any significant changes in labour incomes of poor households in period 1991–2005: the development of these two variables was rather independent. This might be caused by a relatively low share of working household members. In absolute terms, the number of working household members was higher in poor households, but as these are considerably larger than average, working part is lower. There were in average 1.23 working members of poor households, which represents one third of the whole household only. In average household, there were in average 1.19 working members, which is almost one half of the whole household. In this sense, minimum wage has only limited power to improve the income situation of poor households, as large proportion of their members do not work. It might have power to improve the situation of individuals, but only if they are able to sustain their job even after minimum wage hike and to profit from the improved remuneration conditions.

To estimate the potential adverse impact of minimum wage on unemployment on macro level, we utilize the differences in average wage levels among the Czech districts. The districts with relatively lower average wages would suffer from nation-wide setting of minimum wage relatively more, as it would represent a larger economic burden for firms. Thus, low-wage districts should exhibit higher rate of unemployment. The analysis on regional level shows a positive relationship between the ratio of minimum wage to average regional

Figure 7: Rate of unemployment and ratio of minimum wage to average regional wage in Czech districts, 2004–2005 average, %



$y = 0.2768x - 2.9341$
$R^2 = 0.0922$

Source: Ministry of Labour and Social Affairs of the CR, Czech Statistical Office, own calculations
Note: Two outliers with extreme value of unemployment rate excluded (districts Most and Karviná)

The development of labour income of poor household did not reflect the hikes in minimum wage, not even compared to the dynamics of labour income of average household. The correlation between the shifts in minimum wage and labour income of minimum-income households was even negative in examined period. We conclude that minimum wage in the Czech Republic did not bring any significant changes in labour incomes of poor households in period 1991–2005: the development of these two variables was rather independent.

The analysis on regional level shows a positive relationship between the ratio of minimum wage to average regional wage and regional unemployment rate. The districts with prevailing low wage level registered relatively higher rates of unemployment in 2004–2005 and suffered from nation-wide setting of minimum wage relatively more.

wage and regional unemployment rate. The situation is depicted in figure 7. The districts with prevailing low wage level registered relatively higher rates of unemployment in 2004–2005:[8] the unemployment rate in ten lowest-wages districts reached 11.1%, while it amounted to 7.9% in ten highest-wages districts. Correlation coefficient between unemployment and minimum wage as a proportion of average wage in the districts was positive and reached 0.3 in 2004–2005.

Consequent regression analysis of panel data on 76 Czech districts in period 1995-2004 indicates a statistically significant positive effect of proportion of minimum wage on the average wage in district on regional rate of unemployment, even after controlling for other characteristics of districts and economic conditions. However, macroeconomic data cover large spectrum of factors and we can not attribute a large part of the differences in unemployment to the effect of minimum wage. To estimate the impact more precisely, analysis of individual data would be more appropriate.

5. Conclusions

There were substantial hikes in the minimum wage since late 1990s in the Czech Republic. The development of minimum wage tariffs was, however, not reflecting the trends in real economy and was mainly a result of political measures in social area. Despite the rapid growth, Czech Republic stays among more liberal countries in the EU as regards relative importance of minimum wage in the economic environment.

Our analyses suggest that while there exists a significant impact of minimum wage on increasing regional unemployment, potential benefits on raising incomes of the poor households seem to be insignificant. The share of working household members is rather low among poor households and their incomes reflect the developments in subsistence minimum. Therefore it seems valid to claim that minimum wage in the Czech Republic has not been a very purposeful instrument effective in decreasing poverty so far. Instead, alternative measures of motivation of low-paid workers (e.g. negative income tax) without adverse effects on employment should be introduced together with direct provisions aimed at enhancing the human capital of least productive workers.

Therefore it seems valid to claim that minimum wage in the Czech Republic has not been a very purposeful instrument effective in decreasing poverty so far. Our analyses suggest that while there exists a significant impact of minimum wage on increasing regional unemployment, potential benefits on raising incomes of the poor households seem to be insignificant.

[8] We chose the period 2004–2005 due to limitation of data: data series on wages in districts (NUTS4) end in 2005 and, moreover, there was a break in methodology of reporting the unemployment by Ministry of Labour and Social Affairs from 2004 on.

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