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BUSINESS COMPETITIVENESS AFTER EURO ADOPTION IN SLOVAKIA

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Business Competitiveness after Euro Adoption in Slovakia

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Abstract

Slovak enterprises recorded significant worsening of economic and financial indicators in the time after euro adoption. Dramatic changes in the results of non-financial corporations were observed in most of the EU countries. The main driving factor was a drop in global demand. Some indicators suggest that the adoption of the euro and consequent effective exchange rate appreciation could have an additional negative effect on selected services. Decrease in price and cost competitiveness was only temporary. Tradable sector represented mainly by manufacturing seems to be sufficiently competitive. With gradual recovery of the global economy we can see a growing importance of previously identified competitiveness factors: support of research and development, education and innovations.

JEL classification: D21, L10, L25, O12

Keywords: business competitiveness, impact of euro adoption

Reviewed by Ľudovít Ódor and Martin Šuster

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INTRODUCTION

After a thorough preparation process which lasted for a few years, Slovakia successfully managed to replace Slovak koruna with the common European currency. Several independent domestic and foreign institutions agreed that the transition to the euro passed very smoothly.

Considering the openness and the size of the Slovak economy, it was expected that the introduction of the euro would bring more advantages than disadvantages, not only at macroeconomic level. The first estimations included in the NBS impact studies also counted with a positive net impact on enterprises and on citizens.

The euro was introduced in Slovakia in 2009. However, discussions about its impact on competitiveness of Slovak businesses intensified already in late 2008, mainly in connection with determination of the conversion rate of the Slovak koruna (SKK) to the euro and the weakening of neighbouring currencies.

It is not an easy task to evaluate the impact of the introduction of the euro on company competitiveness. Taking into account the fact that competitiveness is a rather medium-term or a long-term phenomenon, and the fact that this report was prepared only one year after the introduction of the euro, the task is demanding. On top of that, shortly after the introduction of the euro negative impacts of the global economic recession started to be felt by the Slovak economy. Under these circumstances we can draw only preliminary conclusions.

The main aims of the present analysis were to assess the development of the business sector in 2009 (with an emphasis on the first three quarters) and to analyze possible factors of competitiveness. We are dealing with the readiness of companies, the impact of company and macroeconomic development, and reactions of companies to current developments.

Chapter I contains a review of initial expectations regarding the impact of the introduction of the euro on the business sector from the point of view of public institutions as well as companies.

The experiences of those who had to struggle with the transition to the common European currency before Slovakia could be an important indicator of the future development. This is the reason why the following chapter summarizes the development of business competitiveness after the introduction of the euro in other euro area countries.

The third – major - part of the analysis focuses on the development of the Slovak business sector in 2009, emphasizing the development of basic competitiveness indicators. In an effort to come to the most objective conclusions possible, the report contains available cross-sector and international comparisons.

The final chapter describes preconditions for further increase in competitiveness of the Slovak business sector. In addition to essential company factors, business environment improvement and economic policy development are also assessed.



2. EXPECTATIONS BEFORE THE INTRODUCTION OF THE EURO

Initial expectations regarding the benefits and costs of the Slovak transition to the common currency and common monetary policy were of a mostly positive nature. However, particular associations related to the euro introduction differed among companies, the public sector and the general public; opinions about the euro's impact on competitiveness were also diverse.

2.1 OFFICIAL DOCUMENTS, STUDIES AND ANALYSES

Neither professional studies nor public declarations published in the period before the introduction of the euro dealt with detailed expectations associated with the impact of the euro on the competitiveness of Slovakia and Slovak businesses. Only few general statements and recommendations regarding competition and competitiveness appeared; there was no detailed view on the impact of the euro's introduction on the competitiveness of Slovak businesses. This makes it impossible to confront initial assumptions with real facts and to make an in-depth ex post comparison.

The 'Strategy of the Slovak Republic for Adoption of the Euro'¹ in relation to determining central parity says that "an overestimated central parity would weaken the competitiveness of the Slovak economy." The list of basic tasks resulting from the euro's introduction for the business sector also included the "modification of company business strategies to deal with integration and growing competition."

The 'National Euro Changeover Plan for the Slovak Republic'² mentions that "price transparency will act as a factor boosting competition" and "an increase in competition in the area of goods and services may, in the long run, contribute to a growth in competitiveness."

The Study called 'The Effects of Euro Adoption on the Slovak Economy'³ deals mainly with macroeconomic impact: "competition in Slovakia may currently be seen as strong enough to impede producers and businessmen from increasing prices excessively." It also contains recommendations for long-term growth of competitiveness: "on the contrary, there are several areas (education, science and research, infrastructure) where it will be necessary to support spending in order to reach the required effects – human capital development, productivity growth support and the country's competitiveness boost".

The 'Assessment of the Potential Impact of the Euro Adoption on the Business Sector'⁴ study draws attention to growing competition pressures related to price transparency: "in the long run we can perhaps speak about a possible increase in competition pressure on entrepreneurs resulting from a higher price transparency in international trade."

¹ NBS and MF SR (2003).

² NBS and MF SR (2005).

³ Šuster et al.(2006).

⁴ NBS(2006).



This study also says that competition pressures may increase mainly in the agriculture, food and textile industries.

2.2 EXPECTATIONS OF SLOVAK ENTERPRISES

Results of available surveys made before the introduction of the euro show that the expectations of enterprises were generally positive. The largest companies located in Slovakia felt a negative impact of SKK strengthening and they understood the introduction of the euro perspective as a positive factor for their competitiveness.

An NBS survey⁵ carried out before the introduction of the euro showed that SKK strengthening had a negative impact on most large companies. 30% of them perceived very strong negative impact. More than 70% of large corporations expected that the introduction of the euro would increase their competitiveness. Approximately one fifth of enterprises expected a strong or very strong positive impact of the euro on competitiveness.

Outcomes of another survey carried out among large enterprises⁶ suggest that when assessing a potential impact on their export, turnover and profit, large enterprises were less optimistic. Most of them expected no impact on those parameters; some managers even estimated their income and turnover could go possibly down after the introduction of the euro.

Table 1 Expected impact of Introduction of the euro on turnover, export and profit

% of respondents	Turnover		Export		Profit	
	SMEs	Large	SMEs	Large	SMEs	Large
Increase by <5 %	16.0	4.0	8.8	7.0	16.2	9.0
Increase by 6 - 10 %	5.2	4.0	5.0	4.0	6.2	4.0
Increase by 11 - 20 %	2.2	0.0	1.6	0.0	2.3	0.0
Increase by >20 %	0.8	0.0	0.7	1.0	0.7	1.0
No change	44.5	87.0	63.5	81.0	42.0	76.0
Decrease	15.1	4.0	1.8	0.0	18.0	9.0
No opinion	16.2	0.0	18.7	6.0	14.6	0.0

Source: NBS (2006).

⁵ For more information see Lalinský (2008).

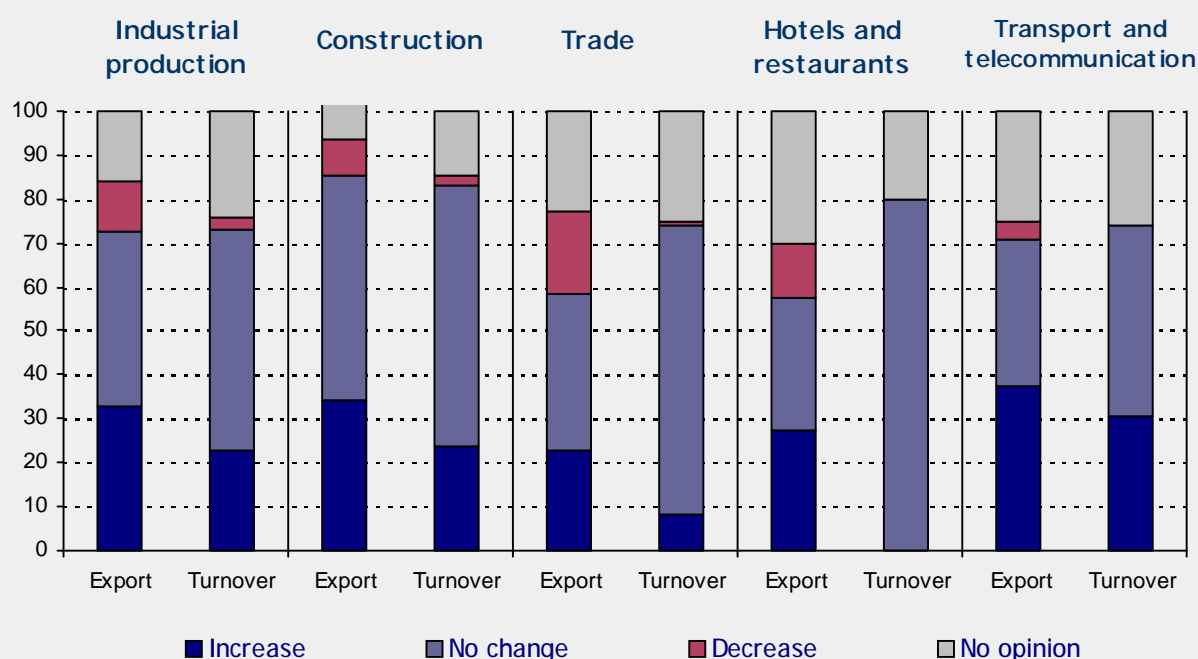
⁶ NBS (2006).

In 2006 approximately one quarter of small and medium enterprises (SMEs) expected the euro to bring them new euro area consumers, turnover and profit rise. 16% of SMEs counted on higher export after the euro adoption.

A more recent survey from 2008⁷ carried out exclusively with SMEs basically confirmed their initial expectations related to export, import and profit. It indicated indeed that, in comparison with older forecasts, SMEs could gain a lower number of new consumers and new markets.

Dividing the answers based on industries they come from, it is clearly seen that it was mainly enterprises from the transport, post and telecommunication industry that expected the introduction of the euro to have a favourable impact. Half of those who answered questions regarding the impact of the euro on their export were inclined to expect growth in export after the transition to the common currency. An unfavourable impact on export was expected mainly by trade companies. Regardless of the industry, the prevailing answer regarding the estimated impact on turnover was that the turnover rate would not change after the introduction of the euro. A few businesses from production, construction and trade industries expected a turnover decrease.

Chart 1 Expected impact of introduction of the euro on export and turnover of SMEs (% of respondents)



Source: NARMSP (2008), author's calculations.

An increase in costs after the introduction of the euro was seen as the most significant negative point, and more than a half of large enterprises as well as SMEs shared this opinion. The second most widely perceived disadvantage was an increase in pressure

⁷NARMSP (2008): Readiness of SMEs to the Introduction of the Euro.



from competition, which was expected mainly by a majority of SMEs after the introduction of the euro.

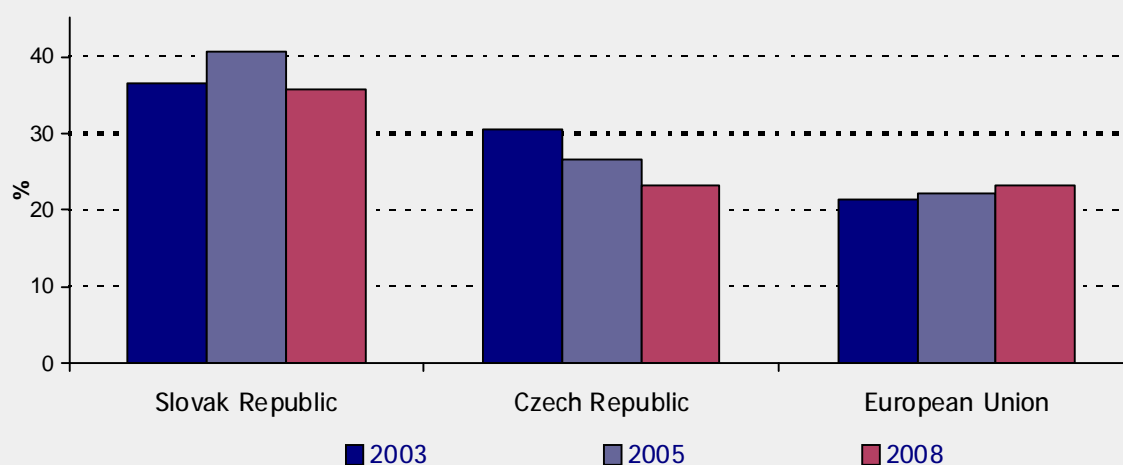
Table 2 Main negative effects expected by enterprises after the introduction of the euro (% of respondents)

	SMEs	Large enterprises
Increase in competition pressure	45.5	22.0
Growth of costs following the introduction of the euro	57.4	54.0
Loss of markets	8.6	0.0
None or other negative effects	10.7	15.0

Source: NBS (2006).

Despite companies being aware of more risks, they didn't see the euro as a threat. Comparing the investment rate development, we can conclude that they understood the common European currency more as a chance and a challenge. In the pre-euro preparatory period, Slovakian enterprises invested considerably more than was the average in the EU. At the same time, the investment rate, measured by a share of gross fixed capital in added value of Slovak non-financial corporations, was, before the introduction of the euro, higher than in non-financial corporations pursuing their business activities in neighbouring countries.

Chart 2 Share of gross fixed capital in added value of non-financial corporations (share in %)



Source: Eurostat, author's calculations.



3. EXPERIENCES OF OTHER EURO AREA COUNTRIES

Impact studies elaborated before the introduction of the euro were mainly dealing with benefits related to decrease in transaction costs and exchange rate risk elimination. These direct advantages were expected to show later in indirect advantages of the common European currency. New direct investment and an increase in foreign trade should, in the long run, lead to faster economic growth and higher efficiency and competitiveness of the whole economy.⁸ Works dealing with the expected impact of the introduction of the euro in Slovakia⁹ are of a similar nature.

Published *ex post facto* analyses assessing the impact of the introduction of the euro on the growth of foreign trade, the inflow of direct foreign investment and the related potential rise in competitiveness indicate that the expected benefits have not yet been shown to the extent predicted.¹⁰ The share of foreign trade among Euro area countries has grown to approximately one third of the GDP (from 26% of the GDP in 1998). The increase in importance of direct foreign investment within the euro area was slightly higher than that (a rise from 20% to 33% of the GDP). Since the establishment of the euro area, the euro is believed to have had a positive impact on foreign trade of 10 to 15% on average.¹¹

At the same time, several quantitative studies confirm that the impact of the euro on foreign trade show great industry-related differences. Flam and Nordstrom (2003) calculated the total increase in trade among euro area countries to be 15%, while the impact on individual industries ranged between 7 and 50%. In their more recent work, Flam and Nordstrom (2006) found an increase of 26% and a higher positive impact on industries producing semi-finished goods and finished products. Baldwin et al. (2005) identified a stronger effect and greater differences among industries (40 - 177%). De Nardis et al. (2008) stated that, on an industrial level, the euro's impact on foreign trade could even be negative for some countries. Industries using decreasing costs of scale got the greatest advantage from the introduction of the euro. Industry-related division and industry location, together with other factors (such as different access to production resources and market liberalization rate), could have played a decisive role in the introduction of the euro being a benefit for a particular country and industry or not.

⁸ For existing companies the euro introduction can mean a worsening of their competitive position in relation to new competitors, and lower ability to determine prices.

⁹ We mainly refer to Šuster et al. (2006) and NBS (2006a).

¹⁰ Rose (2000) initially expected a threefold increase in foreign trade. Later works, such as by Rose and Stanley (2005), brought more realistic estimations. Šuster et al. (2006) forecasted total Slovak foreign trade to increase by 50% after the introduction of the Euro.

¹¹ Chintrakarn (2008) came to the conclusion that Eurozone countries do more (9 - 14%) business with each other than non-Eurozone countries. According to Baldwin (2008), the Euro has caused an increase in business activity among Eurozone countries of 5 to 15%.



Most papers examining the impact on direct foreign investment identified a positive effect at the level of 14 to 36%.¹² Not only has FDI inflow gone up among countries which have adopted the euro, but FDI inflow from or to countries where the euro has not been introduced has increased too. According to Taylor (2007), however, we have seen a shift in investment from non- euro area countries to euro area countries.

There are only few *ex post* analyses of the euro changeover impact on competitiveness, and there are even fewer in-depth studies about the impact on business competitiveness available. Foreign studies focused on competitiveness concentrate mainly on price and cost competitiveness. They are examining mainly the development of real exchange rates and unit labour costs in the euro area countries and determining factors. The focus is mainly on interconnections with the national economic policy of a particular country. In its Quarterly Report on the Euro Area¹³, the European Commission observes a divergence in the price competitiveness of countries after the introduction of the euro. Some countries have strengthened their competitive positions and other countries' competitiveness has significantly deteriorated. Main reasons could be insufficient wage flexibility and strong national demand pressures connected with high debts. Lower price competitiveness was later reflected in the decrease in non-price competitiveness in some countries. Cost competitiveness showed a similarly uneven development¹⁴. In few countries, labour costs increased much faster than productivity. Several studies¹⁵ also indicate that the relation between export performance and price/cost competitiveness changes depend on the country. In several cases, the factors of non-price competitiveness and relative national demand are more important.

Studies based on the New Trade Theory focus their attention on those euro advantages that are related to lower prices and higher productivity resulting from stronger and more transparent international competition.

Barrell et al. (2008) confirmed that the euro had increased labour productivity. The direct effect resulting from economic integration related to economies of scale and higher competition pressures lead to a productivity increase of 3%. Indirect impact related to the fall in GDP volatility and risk premium was calculated at 2%.

The Ottaviano, Mauro and Taglioni (2009)¹⁶ paper shows that with rising competition, resources are allocated towards more efficient enterprises; total productivity and foreign trade are increasing. Small, open countries (Finland, Belgium and Austria) benefited the most from the introduction of the euro. It was in industrial sectors with strong competition and low barriers (in particular the production of electrical devices, basic metals and metallic products and of motor vehicles) where competitiveness grew most. This might be good news for Slovakia, as it is a small and very open economy with the mentioned industries playing a major role.

¹² E.g. Petroulas (2006), Sousa and Lochard (2006) and Foad (2006).

¹³ European Commission (2009).

¹⁴ European Commission (2008).

¹⁵ E.g. ECB (2005) and Allard et al. (2005).

¹⁶ The Euro's impact on competitiveness was examined by a general equilibrium model of 12 countries (9 euro area countries, UK, Denmark and Sweden) and 12 industries. Competitiveness was measured by cost efficiency. Their estimations were based on data from 2001 – 2003.



4. COMPETITIVENESS OF SLOVAK ENTERPRISES AFTER THE INTRODUCTION OF THE EURO

Competitiveness still has no unambiguous definition. It is mainly related to leadership, growth, development, success, prosperity or productivity. It is not a purely economic notion; it depends on relations between different subjects and it reflects an influence of all enterprise levels from a long-term perspective.

An enterprise can become and remain competitive thanks to some production or supply processes, e. g. a faster distribution of products to consumers or a higher quality of stock management. In relation to human resources management, the competitiveness of an enterprise may be strengthened by supporting the employees' spirit of enterprise, i.e. supporting their initiative, creativity and discipline regarding company activities. Other factors determining competitiveness are knowledge of the market and quick adaption to changes in the quality or quantity of demand.

There are several basic and secondary indicators enabling the evaluation of business competitiveness; quite a large number of indicators describing the impact of individual factors is also available. However, assessing business competitiveness in practice is often limited to analysing how successful a company has been in recording good financial results expressed by ratio financial indicators.

A group of indicators that can reflect short-term trends in the development of business competitiveness is rather limited. Company success can be evaluated on the basis of the development of production, revenues, export and a resulting market share. These indicators are usually available on a monthly basis. Short-term trends may be observed on the basis of quarterly data regarding revenue, added value or profit of non-financial corporations. We can also consider the development of cost and price competitiveness, labour costs, number of employees, capital formation and changes in the number of enterprises. Estimations of future production, orders, etc. may help us to get an opinion on the short-term development of a company's business competitiveness.

4.1 PERFORMANCE AND PRODUCTIVITY

In the period of transition to euro, Slovakia saw a dramatic decline in its export and industrial production. The index of industrial production dropped by more than 16 points within the period of one month (December 2008); the index of total export was lowered by 36 points in the same month. On average for 2009, export decreased by 30 points and production by approximately 20 points (on y-o-y basis). At the first glance, we could blame too strong exchange rate and the appreciation of the effective exchange rate subsequent to and caused by the devaluation of neighbouring currencies. Considering the hypothesis that the fixing of the koruna exchange rate and the euro transition had a negative impact on the competitiveness of Slovak enterprises, the industrial production in Slovakia would have been growing more slowly in 2009 (or would even have fallen) in comparison with the Czech republic or other countries. However, as we can see

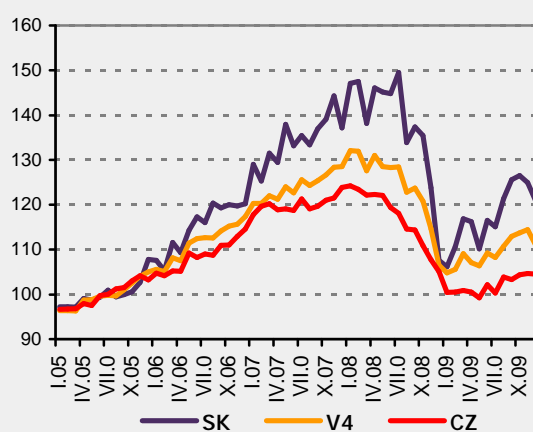
in the Chart 4, industrial production in Slovakia was growing faster than in neighbouring countries in 2009.¹⁷ In the course of the year, Slovakia saw the highest production growth among all EU countries.¹⁸

Chart 3 Development of industrial production and export from SR (index 2005=100)



Source: SUSR.

Chart 4 International comparison of industrial production development (index 2005=100)



Source: Eurostat.

Note: SK – Slovak Republic, V4 – simple average of V4 countries, CZ – Czech Republic.

In 2009 a largely similar situation could be seen also in other economic areas, not just in industry. In the case of construction (Chart 5), there was some recovery visible; nevertheless it did not seem to be long-lasting in comparison with the development in the neighbouring countries. At the end of the year, construction output dropped below the level recorded at the beginning of 2009.

In the period under review, retail turnover dropped more significantly in Slovakia (Chart 6) than in its neighbouring countries, and the quick return to previous levels seen in the industrial sector is not the case here. In 2009, retail turnover development in Slovakia corresponded more or less with average V4 development.

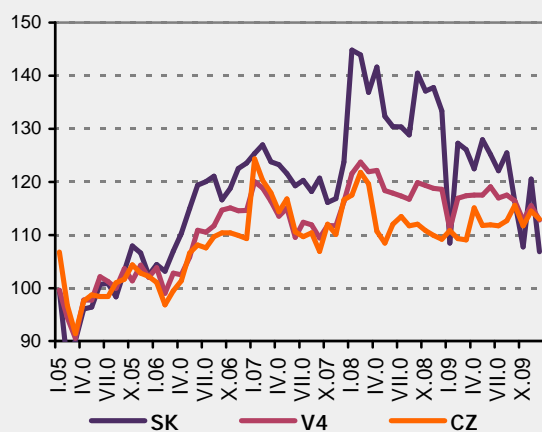
In both construction and retail trade, the 2008 development in Slovakia was very expansive and reflected the impact of the quick economic growth from previous years. In 2009 it came back close to the V4 average.¹⁹

¹⁷ At the same time, this does not exclude the possibility of an even faster growth in production in Slovakia had the euro been *not* introduced. Poland saw a significantly lower drop in production, and in late 2009, the cumulative index of industrial production, as compared with early 2008, reached a slightly higher value than in Slovakia.

¹⁸ We are comparing end of the year values of the index in 2008 and 2009. It cannot be clearly confirmed that countries with the largest year-to-year drop in previous periods would see the largest increase. Comparing non euro area and euro area countries' development, there are some hints suggesting that the euro area countries are recovering faster.

¹⁹ In industrial production, an advance against the V4 average was created more gradually and started to be re-created in 2009. Development of the construction index in Slovakia was less positive and the decreasing trend continued in 2009.

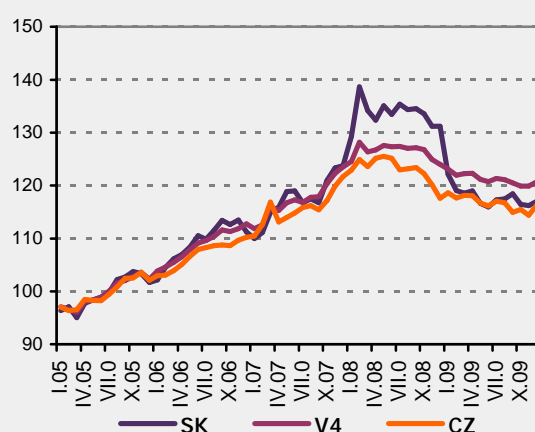
Chart 5 International comparison of construction production (index 2005=100)



Source: Eurostat.

Note: SK – Slovak republic, V4 – simple average of V4 countries, CZ – Czech republic.

Chart 6 International comparison of retail trade turnover (index 2005=100)



Source: Eurostat.

Note: SK – Slovak republic, V4 – simple average of V4 countries, CZ – Czech republic.

After the conversion rate of Slovak koruna to euro was established, discussions about advantages of having an independent currency and benefits of potential currency depreciation for local enterprises revived. As shown in the charts above, neighbouring countries did not see a substantially different development in industrial and construction output after depreciation of their currencies. The sharper drop of retail turnover in Slovakia in comparison with neighbouring countries and its remaining on lower levels could in theory be a proof of a certain delayed impact of an effective SR exchange rate appreciation.²⁰

A closer look at the wholesale, retail trade and motor vehicles and motorcycles repair industry shows that individual sub-industries responded in different ways. According to the data of the Statistical Office of the Slovak Republic (SU SR), the situation in wholesale worsened more than in retail in 2009. Wholesale revenues decreased by 27% and retail revenues by 12%. In a year-to-year comparison, the biggest drop was seen in machinery wholesale (-45 %) and in non-specialized wholesale. The only increase was seen in IT and communication devices (+5.6 %). Within the retail sector, the biggest drop was seen in other household goods (-30 %).²¹ In a year-to-year comparison there was an increase in the demand for culture and recreation goods (+5,9 %), as well as IT and communication devices (+2,6 %). In spite of the decline in the global demand, retail revenues in non-specified shops, including the majority of retail chains, also increased (by 1.2 %).

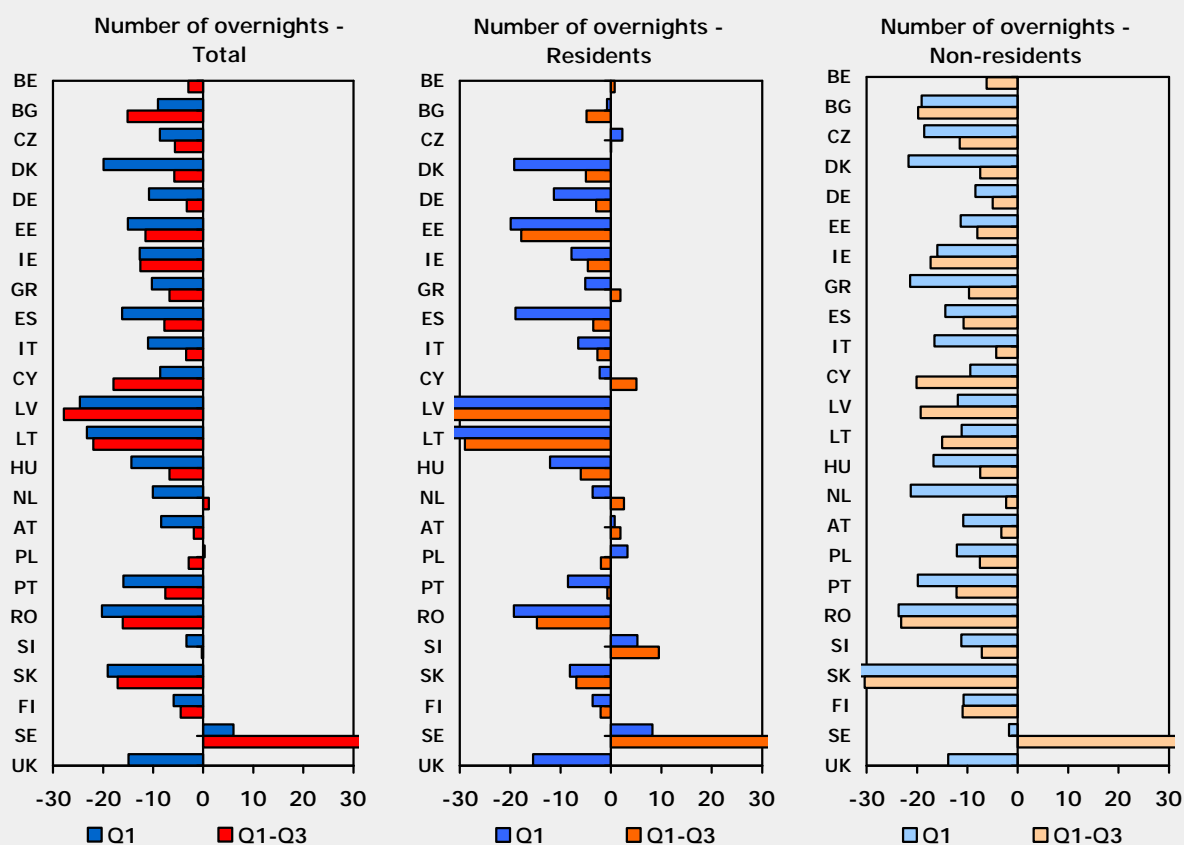
²⁰ The argument of currency depreciation is used mainly in the Czech Republic as an important argument for retaining their independent currency. However, the evolution of production and turnover does not indicate that a weakening of the Czech koruna in 2008 would be of a measurable benefit. We can only see a significantly different evolution in the case of construction and retail trade turnover in Poland, where both indicators grew almost continually in the previous period in spite of the global economic crisis and higher exchange rate volatility. The key role, however, may have been played by the size of the local economy and the resulting higher significance of local demand and lower openness of the economy. Tax cuts, expansive fiscal policy and structural policy measures had a positive impact on the development in Poland.

²¹ Retail trade in kiosks and markets dropped by more than 60%; however, its share on trade is very small.

Shortly after the introduction of the euro in Slovakia, discussions about the negative impact of exchange-rate fixing on the domestic tourist industry arose. Available data shows that a decline in revenue from tourism was recorded in almost all EU countries (with mainly foreign trips being cut). Slovak citizens travelled less too; they mainly cut back on their number of foreign business trips. On the other hand, the number of home and foreign visits of relatives rose significantly.

Slovakia is also one of the countries whose citizens only slightly decreased their number of foreign overnights in 2009, year-to-year. However, their interest in local tourism dropped largely. Data regarding the number of overnights of all (home and foreign) tourists suggests that 2009 saw one of the most notable halts in the collective tourist industry, mainly from the point of view of foreign tourists (Chart 7). During 2009 the drop in the number of overnights in collective accommodation facilities was gradually reduced in most countries monitored. There is a slight recovery visible in Slovakia too; however, the year-to-year drop of foreign tourists' interest during the first three quarters was still the largest among assessed EU countries.

Chart 7 Nights spent in all collective accommodation establishments in 2009
(year-to-year change in %)



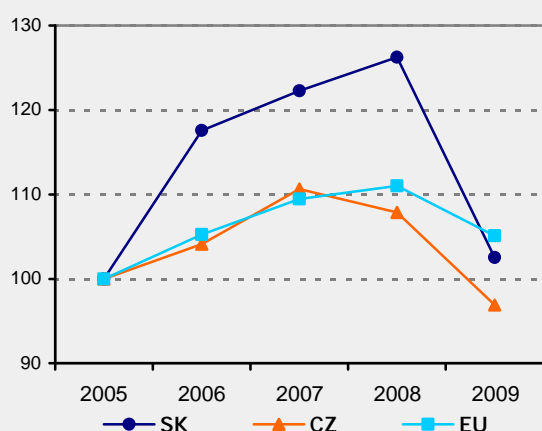
Source: Eurostat, author's calculations.

Note: Data on France, Malta and Luxemburg were not available.

According to results published by the Statistical Office of the Slovak Republic (SU SR), revenue from accommodation services decreased by 19% on year-to-year basis in 2009. Revenue of restaurants and food establishments dropped by 24%. Chart 8 shows that the medium-term development of revenue is similar to the development in other sectors. Until 2008 the sector revenue in Slovakia grew faster than in other countries and in 2009 we saw a sharp fall. This indicates that the major factor influencing development in the tourist industry in Slovakia in 2009 was probably the global decrease in demand.

In the first three quarters of 2009 Slovakia saw a year-to-year drop in the interest of foreign tourists by 18%. Number of domestic tourists declined less significantly than the number of foreign tourists. The largest change in number of tourists visiting Slovakia was seen among Polish tourists in particular.²² The rate of decrease of Czech tourists was comparable to the decrease of tourists from other countries.

Chart 8 International comparison of revenues in accommodation and food establishments (index 2005=100)



Source: Eurostat, SU SR.

Note: SK – Slovak Republic, EU – European Union, CZ – Czech Republic. Harmonized data for SR was not available; the development includes only accommodation facilities.

Table 3 Territorial structure of visitors of accommodation establishments in the SR (in %)

	Share in 2008	Share in 2009*	Change in volume 2007/2008	Change in volume 2008*/2009*
SK	56.7	60.9	10.6	-9.3
CZ	13.2	12.9	9.4	-22.6
PL	7.6	5.2	26.4	-47.0
DE	4.0	4.0	-6.4	-21.2
HU	2.2	1.8	-3.9	-38.3
Other	16.3	15.2	-2.0	-25.4

Source: Eurostat.

Note: SK – Slovak republic, CZ – Czech Republic. PL- Poland, DE – Germany, HU – Hungary.

* 1Q – 3Q

4.2 EXPORT PERFORMANCE

Perhaps the most significant indicator of business competitiveness is export performance. Value of export from EU countries from the period between January and December 2009 was 19% lower compared to the value from the previous year.²³ Table 4 shows that the drop

²² It is important to realize here that the Polish did not cut only their travels to Slovakia but also to other countries and they notably decreased also their domestic tourism. In the first three quarters of 2009 they decreased their number of nights spent abroad by 35% (in comparison with the same period in the previous year).

²³ The drop in foreign trade was highly synchronized not only within the EU but also worldwide.



in export from all V4 countries was almost identical. Total import saw an even larger fall. More detailed data on the right side show that export from the Slovak Republic to non-EU countries fell slightly more than export from the Czech Republic.²⁴ In comparison with other EU countries, Slovak companies saw a relatively lower decline in the export of intermediate products and capital goods. Outcomes of an analysis of the 12-month average of a year-to-year change in export in 2009 are very similar.²⁵

The year-to-year share of Slovakia in export to non-EU countries did not change considerably.²⁶ The share of individual V4 countries in common V4 export changed only slightly. The share of Hungary remained at a level of 25.2%; the Polish share declined approximately by 1 percentage point (to 39.2%), to the benefit of the Czech Republic (0.8 p. p. growth) and Slovakia (increase from 11.1% in 2008 to 11.3% in 2009).

According to the Slovak foreign trade statistics for the first three quarters of 2009, it was export to Asia (-17%) and to Europe (-25%) that decreased the least. Export to America dropped by as much as 48.8%.²⁷ The development of import was very similar, though differences among countries and continents were less striking. All countries (with the exception of the UK) exported less to Slovakia.

As for product structure, the only increases were seen in oil and gas export (42%) and export of electronic and optical devices (1.4%). The largest fall was seen in export of basic metals (-42%) and other mining products. A year-to-year rise was recorded in import of clothes (26%), tobacco products and pharmaceuticals. The largest drop was seen in the import of metals (-48%) and some services.

Apart from the general shift from a growing trend to a decrease, no particular industries or regions became apparent in 2009. Exports to America and Oceania were falling already in the previous year. Import from the UK was growing, though much more slowly. Export of oil, gas, electric and optical devices belonged to the most dynamic areas even before.

Chapter 2 provides a summary of the outcomes of surveys related to the impact of the introduction of the euro. The majority of enterprises did not expect any changes in export dynamics. Expectations of companies anticipating an impact from the introduction of the euro on their export performance were mostly of a positive nature. In fact, in 2009, Slovak companies (with the exception of the industries mentioned above) saw lower exports than in the period before the introduction of the euro. The biggest difference between

²⁴ This, however, means that the drop in export from Slovakia to EU countries was more moderate indeed. This seems to be in conflict with the frequently used hypothesis that an independent monetary policy helps Czech companies maintain their competitiveness.

²⁵ As a result of a quite dynamic development in 2008, the 12-month average growth of exports to non-EU countries was still positive in March 2009, while the Czech Republic had already seen a fall. As a result of the base effect in the following quarters, the average 12-month change in exports from the SR, on the contrary, saw a higher negative value. At the year's end, the average 12-month decrease in export from Slovakia slowed more notably than in the euro area countries or in the Czech Republic.

²⁶ According to the average monthly data from Eurostat it fell from 0.54 % in 2008 to 0.52 % in 2009.

²⁷ The largest fall was seen in exports to Australia (55.6%) and Oceania (70.8%). Export to Africa fell by 26%. But their share in total exports from the SR is low.



expected and actual exports was seen in large companies that had not expected a decline in their exports.

Table 4 International comparison of foreign trade development in 2009
(year-to-year change in %)

Country	Total Trade		Export to non-EU Countries				
	Export	Import	Total	Capital goods	Consumer goods	Consumer goods (excluding transport)	Intermediate goods
EU	-19	-24	-16	-20	-18	-7	-18
AT	-20	-18	-19	-23	-9	-4	-19
BE	-17	-20	-14	-26	-24	-1	-20
BG	-22	-33	-31	-32	-6	1	-35
CY	-19	-6,1	-12	13	-20	-16	-15
CZ	-19	-22	-17	-17	-22	-11	-20
DK	-16	-21	-10	-17	-1	-4	-11
EE	-24	-33	-22	-14	-7	-25	-27
FI	-32	-31	-31	-37	-20	-24	-23
FR	-16	-17	-13	-17	-22	-5	-15
DE	-18	-17	-17	-19	-16	-7	-18
GR	-18	-30	-14	-19	-42	-10	-16
HU	-19	-24	-21	-25	-28	-13	-22
IE	-4	-22	-1	7	-21	12	-13
IT	-21	-23	-18	-18	-11	-16	-20
LV	-21	-37	-18	-31	16	-19	-13
LT	-27	-38	-35	-56	-21	-19	-36
LU	-13	-19	-2	27	-19	-4	-17
MT	-25	-20	-16	-29	2	-37	-12
NL	-18	-19	-11	-17	-30	1	-9
PL	-17	-26	-22	-25	-20	-14	-27
PT	-18	-18	-21	-17	-14	-5	-30
RO	-14	-32	-25	6	-36	-9	-29
SK	-17	-21	-20	-19	-23	-11	-15
SI	-19	-25	-22	-31	-28	-17	-22
ES	-18	-28	-17	-15	-11	-8	-19
SE	-25	-25	-22	-28	-22	-6	-21
UK	-19	-20	-16	-17	-22	-8	-20

Source: Eurostat.

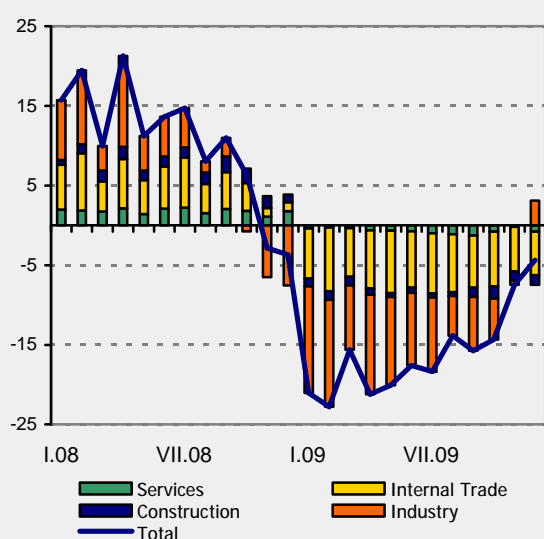
Note: Total trade includes trade with EU and non-EU countries. Changes were calculated from the value of export in EUR.

4.3 TURNOVER AND REVENUES

A dramatic fall in total revenue recorded in the beginning of 2009 has moderated in the course of the year. However, at the end of the year, selected major industries

registered year-on-year decline.²⁸ This trend was closely connected to the development of domestic consumption. We can see that internal trade revenues were not as flexible as industrial revenues in their response (Chart 9). More detailed data for 2009 published by Eurostat shows that, in comparison with neighbouring countries and the euro area, revenue from sale of durable consumer goods was reduced less in case of Slovakia. On the contrary, revenue for sale of non-durable consumer goods dropped a lot more in the SR than in the euro area (Chart 10).

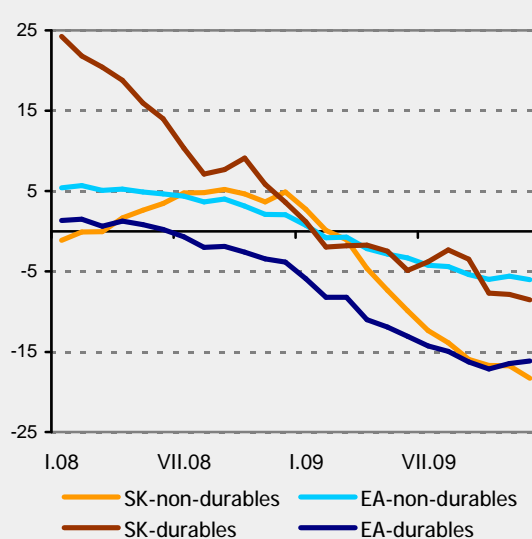
Chart 9 Revenue from own output and goods in Slovakia (year-to-year change in %)



Source: Eurostat.

Note: Internal trade includes vehicle sale and repair, wholesale, retail, hotels and restaurants.

Chart 10 Industrial revenue development (12-month average of year-to-year change in %)



Source: Eurostat.

Note: EA – euro area, SK – Slovak Republic.

Before the introduction of the euro, only a minor part of enterprises expected an increase in turnover and revenue. 15% of SMEs, mainly from the industrial production sector, expected a lower turnover.²⁹ In 2009, revenues in all major industrial sectors declined (on year-on-year basis), mainly in industrial production and wholesale, while revenue of small enterprises decreased faster.

Lower production, export and revenue were reflected in worse financial and economic results of Slovak enterprises.

4.4 ADDED VALUE

Companies created lower added value. In the first three quarters of 2009 we could see a significant reduction of the share of industrial and trade sector in the added value of all

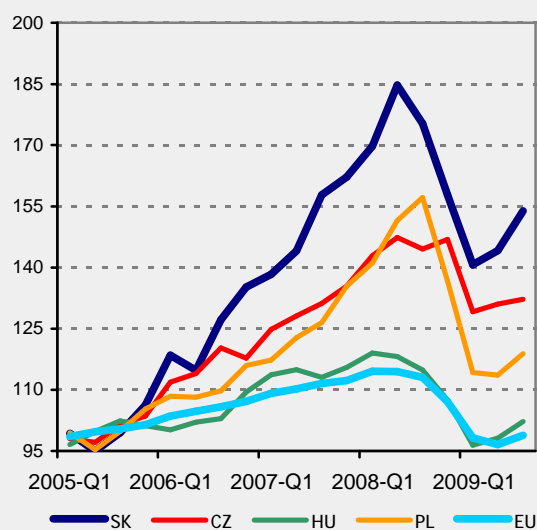
²⁸ In spite of the recovery in industrial production.

²⁹ However, none of the addressed enterprises probably expected the impact of the global economic crisis. This fact makes it particularly complicated to compare the expected and actual growth.

non-financial enterprises. Certain services and network industries strengthened their positions. Other EU countries experienced a very similar development. In the period from January to September 2009, the euro area saw a year-to-year drop of 15.5% in added-value coming from industrial enterprises, of 5% in construction companies, and of 2.8% in market-oriented services.

Charts 11 and 12 show that analysed industries created a lower added value in most EU member states. The year-to-year volume decline in gross added value suggests that the decrease in competitiveness of Slovak enterprises did not exceed average EU level (both in production and services).

Chart 11 Comparison of added value development in industry (index 2005=100)

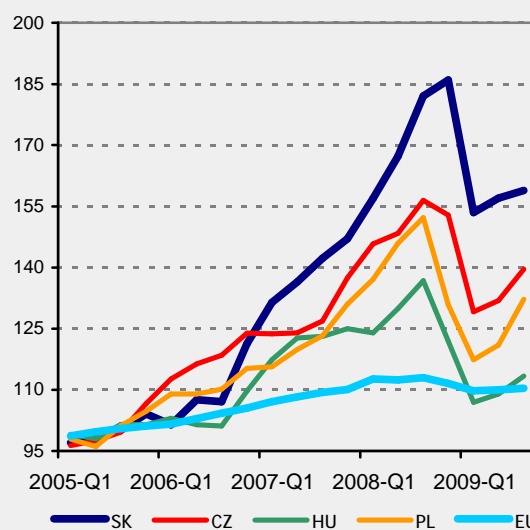


Year-to-year change in % (Q1- Q3 2009 / Q1- Q3 2008)

	EE	UK	LX	PL	EU	SK	MT	PT	CY	
min	-25.2	-23.8	-23.6	-22.9	-17.2	-17.2	-7.9	-6.5	-4.9	max

Source: Eurostat.

Chart 12 Added value in trade, transport, accommodation and food services (index 2005=100)



Year-to-year change in % (Q1- Q3 2009 / Q1- Q3 2008)

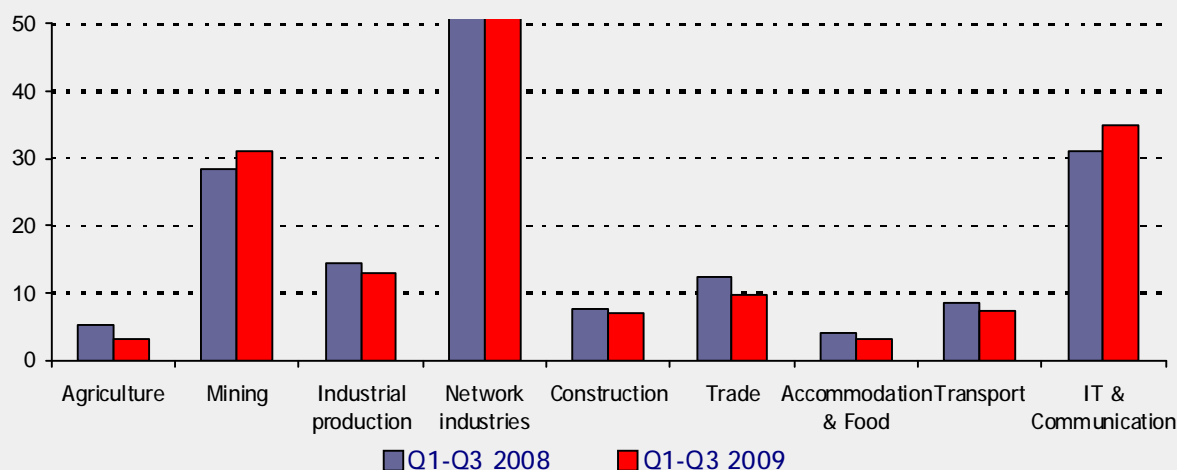
	LT	EE	UK	HU	SK	EU	ES	FR	GR	
min	-22.8	-19.5	-17.1	-15.7	-7.3	-6.7	0.0	0.9	2.9	max

Source: Eurostat.

In spite of the generally decreasing trend in added value, some areas managed to increase their labour productivity in 2009. Mining, IT & telecommunication as well as network industries saw an increase in added value per employee. Labour productivity in other areas dropped, mostly in trade.³⁰

³⁰ International data regarding the sectoral structure of employees in 2009 was not available at the time of assessment. Looking at the quarterly development of total employment in EU countries, we can see that labour productivity decreased to lesser extent in Slovakia than in relevant countries. Observed fall in employment during the first three quarters was more dynamic in Slovakia than the EU

Chart 13 Added value per employee
(in thousands EUR)



Source: SU SR, author's calculations.

Note: Added value per employee in network industries was 70 euro in 2008 and 105 euro in 2009.

Enterprises affected by the global drop in demand were forced to cut back on their production and focus on cost minimization.

4.5 TOTAL COSTS AND LABOUR COSTS

All major industries (with the exception of mining and quarrying) saw a year-to-year decline in their total costs in Q1 – Q3 2009. Generally speaking, we can say that the growing efforts to cut costs were accompanied by a growing attempt to reduce also labour costs.³¹ However, in the period under review, labour costs in construction, transport and trade grew.

Labour costs were decreasing more quickly than the total costs only in network industries and accommodation and food establishments (Chart 14). The following chart shows that industries that responded to lower demand by reducing their labour costs preferred employee lay-offs.

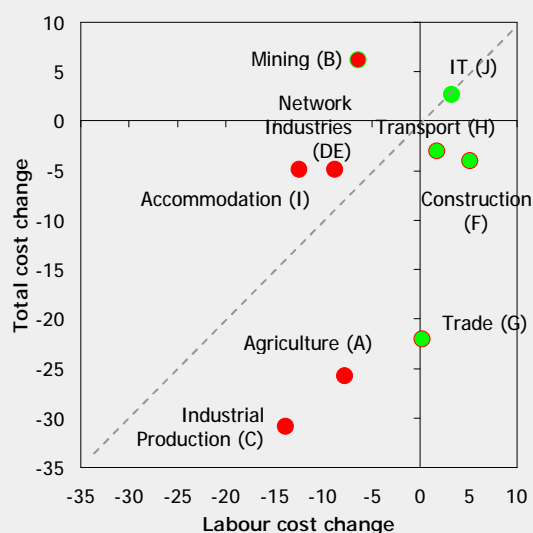
Indicative estimates of the share of labour costs in the total costs do not suggest that industries with a higher share of labour costs would try to cut their labour costs more. A comparison with the development of added value indicates that not all industries were able to respond flexibly to market developments by adjusting their labour costs.

or V4 average. However, there was a more substantial employment drop seen in Baltic countries, Ireland and Scandinavian countries (Denmark, Sweden and Finland).

³¹ When assessing labor costs, we take into account numbers of employees and average wages in non-financial corporations.

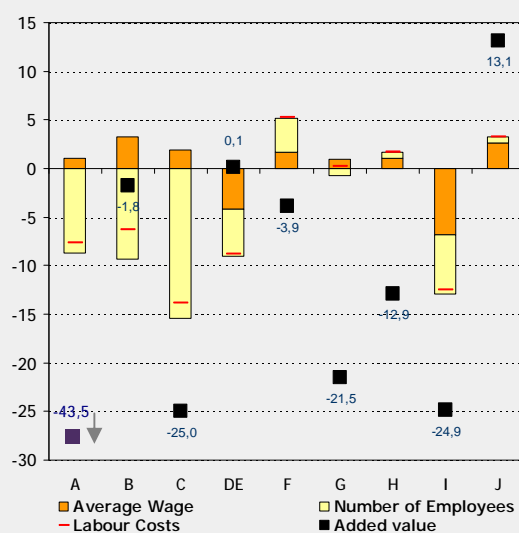
Taking into account year-on-year changes in labour market indicators, the least flexible seem to be trade, transport and construction.³²

Chart 14 Development of total costs and labour costs in Slovakia
(year-to-year change in %, Q1 - Q3)



Source: SU SR, author's calculations.

Chart 15 Comparison of developments in labour costs and added value
(year-to-year change in %, Q1 - Q3)



Source: SU SR, author's calculations.

According to ECB (2010), regional differences in the development of compensations per employee were not as significant as cross-sector differences. Based on the first estimates, the average year-to-year growth of labour costs in industry in the euro area slowed to almost zero; services saw an average growth of 2% in the first three quarters of 2009; construction accounted for more than 3%. A sectoral view on the total employment developments indicates that cross-industrial differences in employment decrease were higher in Slovakia than in the euro area; particularly as a result of insignificant or no reduction in number of employees in construction, transport and trade.

4.6 CAPITAL EXPENDITURES

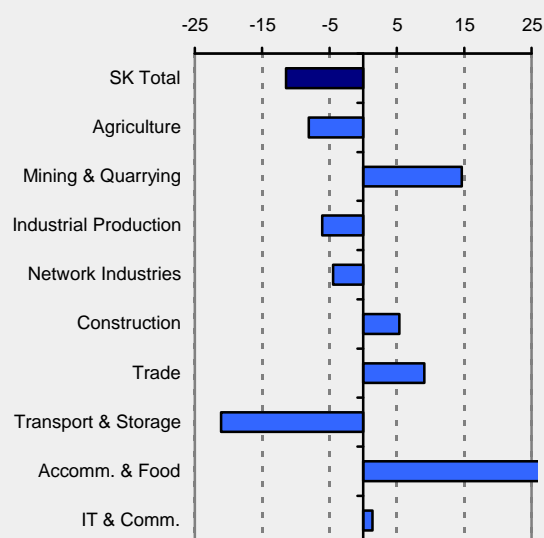
In response to the worsening global economy, enterprises were forced to cut not only operational but also capital expenditures. Investment activity decreased by more than 11% in Slovakia. The double-digit drop was evident particularly in the transport and storage industries.

³² In theory, we could assume that these are industries with low wages and the scope for wage decrease was rather limited as a result. In fact, the average monthly wage in industrial production was 712 euro, in trade it was 704 euro and in transport 749 euro. Only construction industry recorded relatively lower wage (548 euro). The area of accommodation and food services, which experienced a substantial drop in labor cost, had the lowest average wage (468 euro per month).

Industrial production enterprises restricted their investment activities as well.³³ In spite of lower revenues, year-to-year investment activity became more intense in accommodation & food services and retail trade.

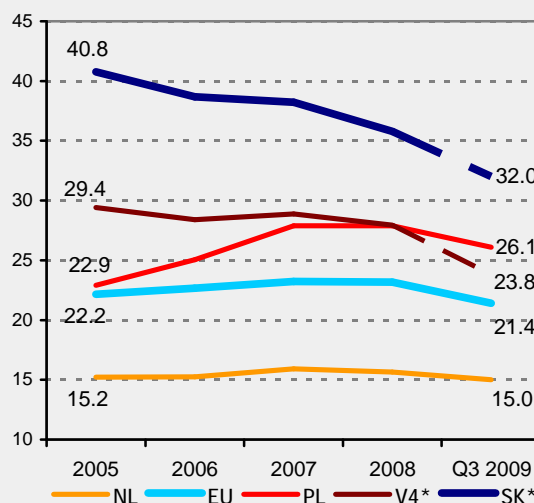
Even though Slovakia saw a rather large drop in total investment, it is still a country with one of the highest investment rates. In 2008 the Slovakia's share of investment in added value was highest among all EU countries. Taking into account the investment development estimate published by the European Commission indicating that investment activity in Slovakia in 2009 declined less than in other EU countries (SR -7.5% vs. EU -11.5%), the Slovak non-financial sector probably kept its leading EU position.

Chart 16 Formation of gross fixed capital in Slovakia in 2009
(year-to-year change in %, Q1-Q3)



Source: SU SR, author's calculations.

Chart 17 Comparison of investment rate in EU countries
(share of investment in the added value in %)



Source: Eurostat, author's calculations.

Note: *estimation for Q3 2009, SK – country with the highest value and NL – country with the lowest EU value.

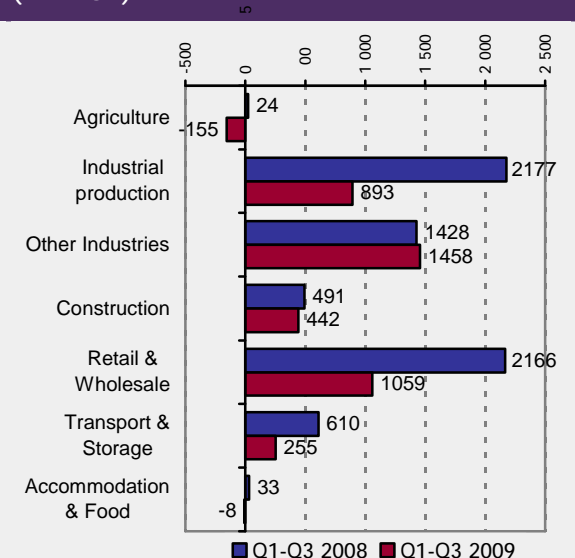
Preliminary data suggests that the financial and economic crisis had a significant impact on cross-border investment flows. According to UNCTAD (2010), global flows of foreign direct investment plummeted by 39 % (drop from USD 1.7 billion to USD 1 billion). The flow of foreign direct investment into developing countries declined relatively less, into advanced countries relatively more. The flow of investment into Slovakia in the form of equity capital increased year-to-year. However, the decrease in other capital was more massive than the increase in equity capital, so the total inflow of direct foreign investment to Slovakia was negative.

³³ It is interesting to note here that, according to preliminary data, investments dropped less than labor costs or added value.

4.7 PROFITABILITY

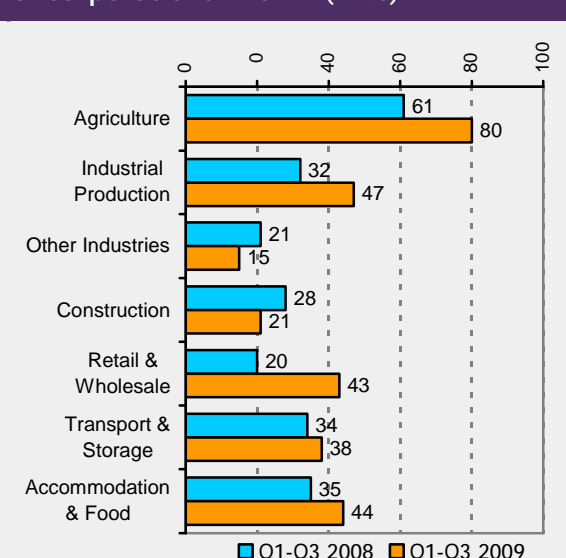
The lower rate of added value creation was reflected in smaller profits of non-financial companies. A year-to-year decrease was predominantly seen in industrial production, trade and transport. Agriculture and accommodation & food industries showed losses; these areas also saw a growth in the ratio of loss-making enterprises to total number of enterprises.

Chart 18 Development of profits in non-financial enterprises in Slovakia (mil. EUR)



Source: SU SR, author's calculations.

Chart 19 Ratio of loss-making corporations to total number of corporations in SR (in %)



Source: Eurostat, author's calculations.

Note: the year-to-year development may have been significantly influenced by the drop in the number of monitored corporations..

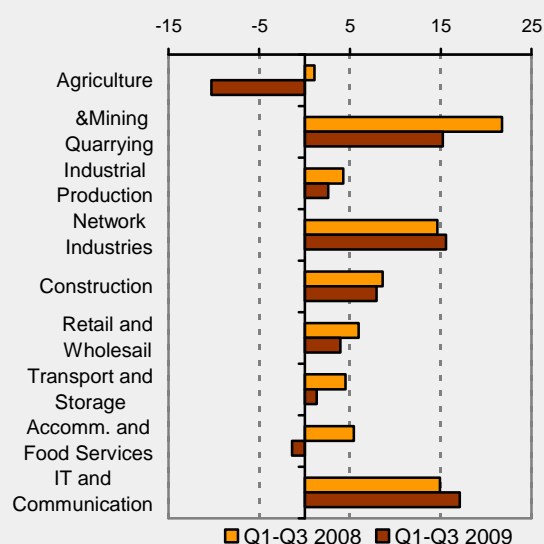
An international comparison shows that the Slovak business sector has long been one of the most profitable ones in the EU. According to the latest data available for 2008, Slovak enterprises saw the third highest share of gross operating surplus in added value. The return on revenue was one of the highest and the return on capital was actually the highest in the EU. At the same time Slovakia is one of the countries with highest variation between individual industries. Profitability of enterprises dropped in 2009. However, based on our preliminary estimations, Slovak non-financial corporations are still among the most profitable in the EU.³⁴

Total return on revenue calculated on the basis of SU SR data (for Q1 - Q3 2009) fell from 6.5% to 5.3%. Not all industries saw a decline in profitability. However, agriculture and accommodation did see losses; this is the reason why differences among industries grew

³⁴ Quarterly data regarding the share of gross operating surplus in added value was not available for Slovakia. The estimation is based on the share of profit in added value.

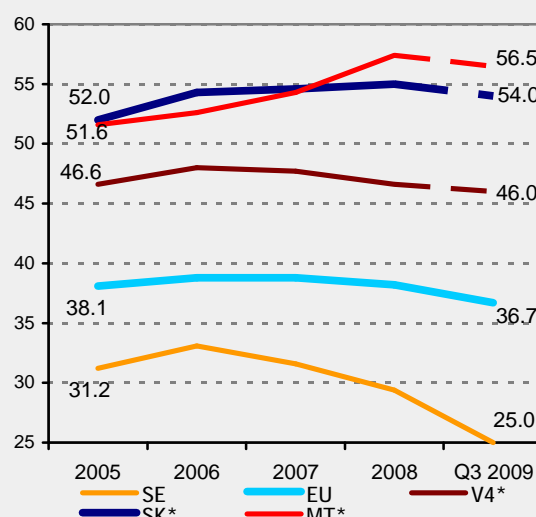
even more. A substantially lower profitability was seen in the transport and storage industry in 2009. Ratio indicators of profitability clearly worsened also in the industrial production and in trade.

Chart 20 Return on revenue in non-financial companies in Slovakia (share of profit in revenue in %)



Source: SU SR, author's calculations.

Chart 21 Comparison of profitability rates in the EU (share of operating surplus in added value in %)



Source: Eurostat, author's calculations.

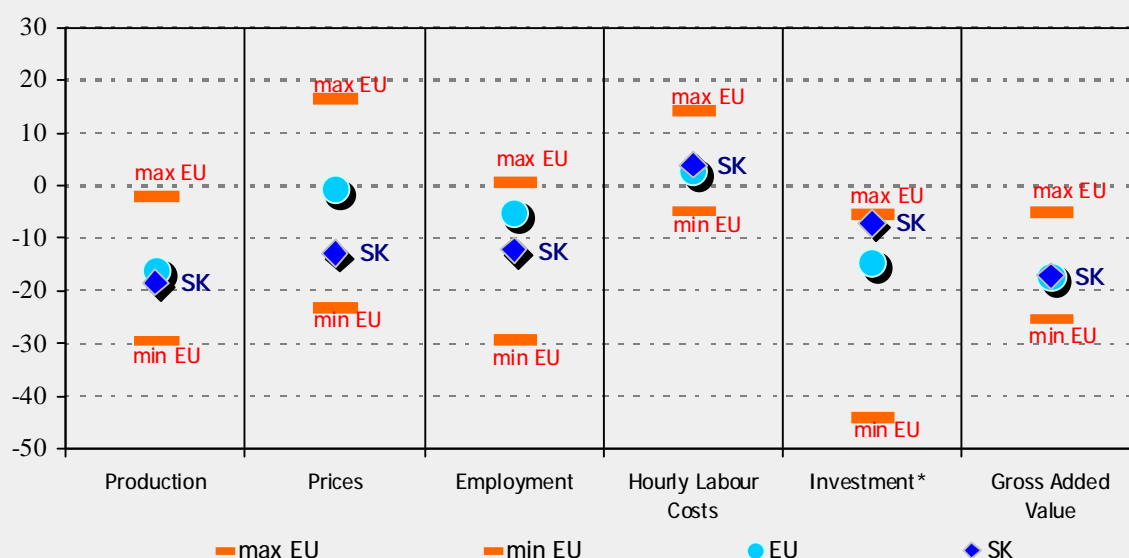
Note: *estimation for Q3 2009, MT – country with the highest EU value and SE – country with the lowest EU value.

In the first three quarters of 2009, the economic crisis did not lead to reduction in the total number of enterprises. The number of emerging companies was still higher than the number of enterprises finishing their activities. The number of enterprises rose year-to-year by almost 15% (in the previous year it was only by 10%). The most rapid rise was seen in companies dealing with professional, scientific and technical services (by 25.5%). IT & communication and transport & storage companies also saw a year-to-year growth of more than 20%. The slowest increase was seen in the number of enterprises in agriculture (5%) and industrial production (7.3%). As for their size, it was mainly the number of small and micro enterprises that grew. The number of medium-sized enterprises increased by 5% and, with an annual growth of only 1%, the number of large companies more or less stagnated. The number of self-employed slightly dropped (by 0.4%, or 1,393 persons), mainly in trade (by 4,767 persons) and industrial production (by 3,636 persons). In construction the number of self-employed continued to rise. The growth of number of enterprises largely outperformed the drop in the number of self-employed.

4.8 SUMMARY VIEW ON ENTERPRISES

From a competitiveness point of view, we are mainly interested in the development of the tradable sector. In Slovak conditions, the tradable sector is formed mainly by industrial companies. In spite of the fact that the drop in industrial production was slightly bigger than the average EU decrease, the gross added value fell year-to-year in the same proportion as in EU countries on average. Slovak enterprises decided to cut back considerably on prices and number of employees; they managed to retain a relatively low reduction of investment activities.

Chart 22 Summary of main indicators of industrial production development in Slovakia in 2009
(year-to-year change in %)



Source: Eurostat, author's calculations.

Note: based on the data for Q1 - Q3.

* Data for the whole business sector.

In a more detailed look at the development of industrial production we can see that the largest 2009 decrease was recorded in the production of machinery and equipment. In spite of a huge reduction in costs, this sub-industry saw a loss in the first three quarters. The least affected area was electric and optical devices production, which, despite the global economic crisis, grew and saw a more than twofold year-to-year profit increase. Significant differences in the development of financial and economic results among individual sub-areas of industrial production suggest that other factors (such as production and product life cycle) played a more crucial role than the introduction of the euro and the related appreciation of the effective exchange rate.



Table 5 Development in industrial production areas in 2009
(year-to-year change in %, except return on revenue)

Area	Production	Revenue	Costs	Investment	Number of Employees	Average Wage	Profit / Loss	Added Value	Return on Revenue
Industrial Production Total	-24.9	-32.1	-30.9	-6.1	-14.6	0.6	-58.6	-25.0	2.6
Food, beverages and tobacco products	-15.3	-21.8	-23.6	17.1	-7.1	1.4	26.2	3.8	5.8
Clothing and textiles	-27.5	-27.0	-24.5	-6.4	-20.4	1.3	-	-18.4	-2.7
Leather and leather products		-2.6	-2.8	-1.3			0.1	1.4	5.8
Wood processing and wood products	-24.0	-43.7	-41.0	0.4	-15.7	0.9	-	-46.2	-2.2
Paper and paper products		-19.8	-18.4	-4.5			-38.7	-13.1	5.4
Coke and petroleum refinery products	2.0	-37.7	-34.9	-21.4	-2.6	3.3	-	-54.7	-0.4
Chemicals and chemical products	-24.0	-27.8	-24.3	-9.8	-3.7	-3.2	-92.6	-13.5	0.5
Rubber and plastic products	-25.1	-33.2	-31.4	-16.0	-11.8	0.6	-77.2	-20.7	1.3
Other non-metallic products		-28.5	-22.8	-8.5			-66.4	-29.2	6.1
Metals and metallic constructions	-35.4	-41.7	-38.1	-8.5	-16.2	-2.9	-80.2	-45.5	2.8
Computer and electronic devices	7.0	0.2	-2.2	-8.7	-10.9	5.3	158.5	14.8	3.9
Machinery and equipment	-37.5	-40.5	-51.4	-20.5	-22.7	-3.6	-	-33.0	-0.3
Motor vehicles	-33.2	-44.1	-43.4	11.8	-14.8	0.3	-74.3	-31.5	0.9
Furniture, other production and repair/installation	-30.7	-26.0	-27.9	-21.4	-13.9	1.3	3.9	-21.1	8.3

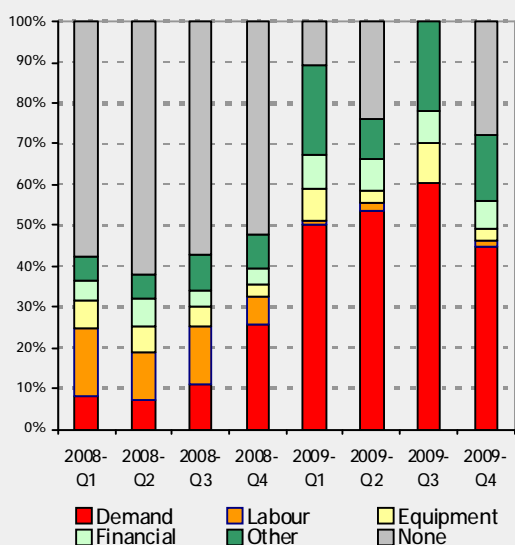
Source: SU SR, author's calculations.

Note: based on Q1 - Q3 data

4.9 ANALYSIS OF POTENTIAL FACTORS

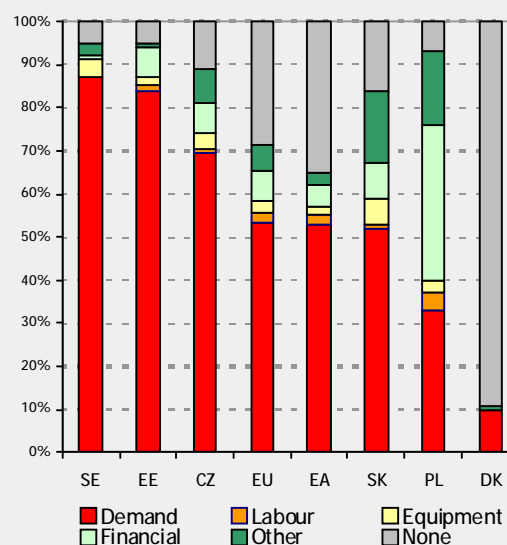
Questionnaire surveys among entrepreneurs confirmed that the main factor limiting their production in 2009 was low demand (Charts 23 and 24). As for services in Slovakia, a slightly more important role was played by financial factors, which in theory could include also the impact of the introduction of the euro, or the fixing of the exchange rate of koruna to euro. However, their impact has been higher in Slovakia than in neighbouring countries for a long time and there was no considerably higher influence of these factors seen in the period of the introduction of the euro.

Chart 23 Factors limiting industrial production in Slovakia (% share)



Source: Eurostat, author's calculations.

Chart 24 Factors limiting production in EU countries in 2009 (average share in %)



Source: Eurostat, author's calculations.

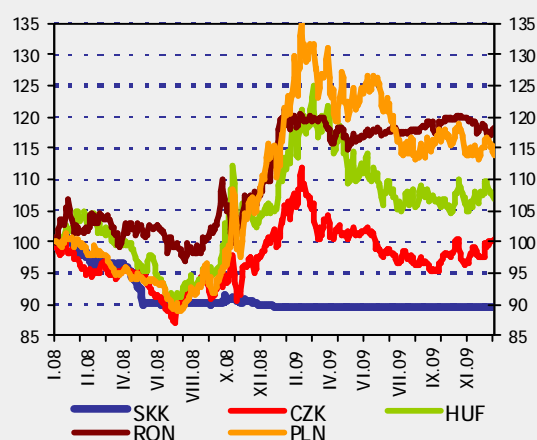
Note: SE – country with the highest value and DK – country with the lowest value in the EU.

If enterprises felt low demand as a decisive factor limiting the production in almost all EU countries, there is a question why the fall in the production and GDP in Slovakia is more significant than in neighbouring countries. The high level of openness of the Slovak economy played a major role. The share of foreign trade in GDP is one of the highest in the EU, approximately two times higher than in Poland, but also higher than in other euro area countries. At the same time, Slovakia is one of the smallest EU economies, taking into account GDP or number of inhabitants. Another important factor is that added value is largely created in industries which are sensitive to cyclical variations, i. e. industrial production and trade. These factors made the impact of external negative developments on the Slovak economy quicker and stronger.

Coincidentally, during the period of the introduction of the euro in Slovakia, neighbouring countries' exchange rates against the euro weakened as a result of worsening economic development and growing risk aversion (Chart 25). This resulted in a temporary drop in the

price and cost competitiveness of Slovak enterprises.³⁵ Average hourly labour costs in the V4 expressed in euro fell below the Slovak labour cost level (Table 6). When the situation in the financial markets calmed down, neighbouring exchange rates started to appreciate again. Late 2009 saw almost the same level of cost competitiveness as before the introduction of the euro. The observed decline in the cost competitiveness of Slovak companies can be therefore considered as a temporary phenomenon.³⁶

Chart 25 Development of exchange rates in V4 countries and Romania against euro (index I.2008=100)



Source: ECB, author's calculations.

Table 6 Development of hourly labour costs in industry

	2007	2008	Q1 2009	Q2 2009	Q3 2009	Q4 2009
EA15 (EUR)	27.7	28.3	28.4	28.7	28.9	29.0
V4 (EUR)	6.8	7.7	7.1	7.3	7.6	7.6
SR (EUR)	6.3	7.3	7.5	7.4	7.4	7.4
SR (% EU)	22.8	25.9	26.3	25.8	25.7	25.4
SR (% V4)	93.5	95.6	105.2	101.8	97.9	96.8

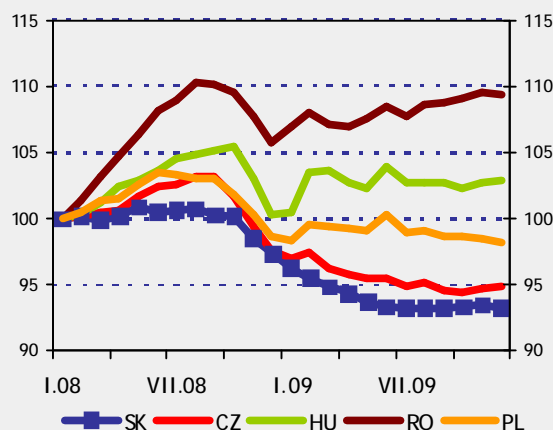
Source: Jurášeková et al. (2009), Eurostat, author's calculations.
Note: Q1 to Q4 2009 – own estimation.

Depreciation of neighbouring countries' exchange rates temporarily improved their cost competitiveness; however, higher import prices intensified inflation pressures. Slovak enterprises were able to modify production prices more in the period of global demand decrease. They could do so thanks to a faster decline in import prices of inputs and intermediate products, which fell approximately by 15% in Slovakia during 2009.

³⁵ A more detailed analysis of competitiveness of the Slovak economy during the euro transition period can be found in Jurášeková et al. (2009).

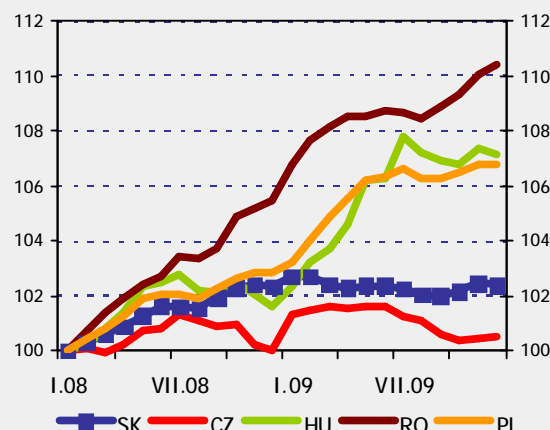
³⁶ Should the rise in labour cost have a substantial impact on the overall competitiveness of Slovak enterprises, it would have to be a long-term change in the trend, not only a short-term increase in relative labour costs.

Chart 26 Comparison of industrial producer price development (index I.2008=100)



Source: Eurostat. author's calculations.

Chart 27 Comparison of consumer price development (HICP) (index I.2008=100)



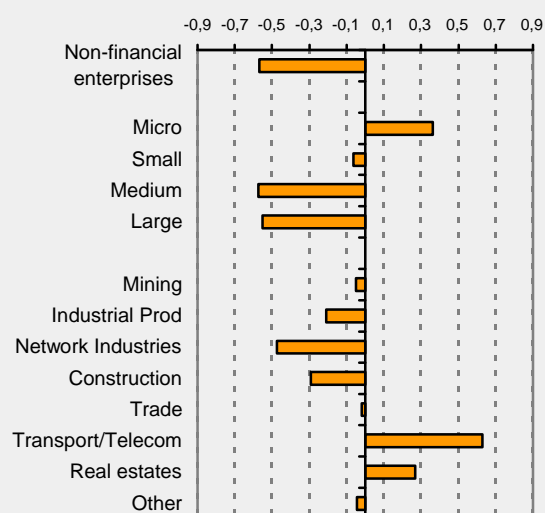
Source: Eurostat. author's calculations.

Taking into account a relatively high import intensity of industrial production in Slovakia, a short-term weakening of neighbouring exchange rates might not have had a notable impact on Slovak non-financial enterprises. In addition, Slovak industrial enterprises managed to decrease labour costs by about 15% (Chart 14). This enabled them to create a relatively large scope for final price reduction without a substantial impact on their profit.

A long-term comparison of the appreciation of the Slovak koruna and profit development (between 2000 and 2008) suggests that the appreciation had no substantial negative impact on the profitability of industrial companies. In the period of a gradual appreciation of koruna, profit growth slowed down the most in electricity, gas and water production & distribution and mostly in medium-sized enterprises (Chart 28).

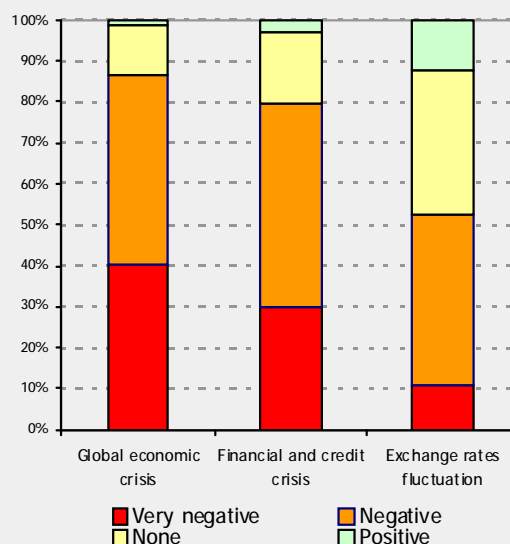
Though the exchange rate against euro remained stable in 2009, the effective exchange rate has strengthened as a result of other V4 countries' exchange rates depreciation. The greatest fall in profits was seen in industrial production, which to a certain extent corresponded to the identified long-term correlation with to the development of the exchange rate. Indeed, 2009 saw also a huge drop in trade which was almost unaffected by the strengthening of the original domestic currency in the previous periods. On the contrary, profit in construction declined in the first three quarters of 2009 only slightly in comparison with other industries, in spite of the fact that their long-term relation suggested a strong negative dependency on exchange rate development. These findings support conclusions that the main reasons for the negative economic development of enterprises in 2009 arise from another factors.

Chart 28 Correlation between exchange rate and profit of non-financial enterprises in Slovakia (correlation coefficient)



Source: SU SR, author's calculations.
Note: based on annual data for 2000 - 2008

Chart 29 Impact of main factors on company investment projects (% share)



Source: UNCTAD.

According to the actual report on global investment developments (which is closely related to competitiveness),³⁷ most multinational corporations perceived the global economic crisis as the main factor of decrease in investments. Financial and credit crisis had a strong negative impact too. Future investment plans were negatively influenced also by fluctuations in exchange rates originated from the crisis. In this respect the volatile development of neighbouring countries' exchange rates observed during the period of introduction of the euro in Slovakia could (especially from the long run perspective) have even more negative than positive impact on company competitiveness in the mentioned countries.

³⁷ UNCTAD (2009).

Box 1 The impact of main business competitiveness factors - results of regression analyses

The volumes of production and export are considered to be crucial parameters characterizing the level of competitiveness. At the same time the company activity must be profitable. The most widely available indicator of economic success is gross added value.

A simple regression analysis confirms that industrial production in Slovakia is dependent not only on foreign but also on domestic demand. Export is driven mainly by the German demand. Added value creation is bound mainly to domestic production and domestic demand. An important finding is the fact that a dummy variable* which can represent a potential impact of the introduction of the euro, but also a negative impact of the global economic crisis, increases the overall fit of the models.

Table A Results of simple regression analysis for Slovakia

		Independent variables							Modified R ²	
		Foreign demand		Domestic demand - SK	Domestic production - SK	Dummy variable				Constant
		World	DE			Q3 2008	Q4 2008	Q1 2009		
Dependent variable	Industrial production	0.4 (7.9)					-8.1 (-2.4)		0.59	
			0.3 (5.2)	0.3 (2.6)					0.51	
			0.2 (3.9)	0.5 (4.5)			-14.1 (-4.4)		0.68	
Export from Slovakia	0.9 (5.9)						7.6 (3.5)	0.48		
	0.6 (4.4)				-22.3 (5.4)		12.3 (2.1)	0.64		
		0.8 (4.4)					-25.3 (-3.5)	11.3 (5.6)	0.68	
Added value in industry				0.9 (7.6)			6.91 (4.8)	0.59		
		0.3 (3.3)	0.8 (3.9)					0.45		
		0.2 (2.2)	1.2 (4.8)		-12.2 (-2.5)			0.52		

Note: the table includes only coefficients of statistically significant variables (t-statistics in the brackets).

Several lead or lag variables were significant, but they did not increase the estimation accuracy. Growth of wages, employment and prices were significant in some cases, but with opposite signs.

Based on the identified strong impact of the dummy variable, we could come to the preliminary conclusion that euro could have a temporary negative impact on enterprises. The problem is that the Czech Republic has not introduced euro and that Germany had it a long time before. However, regression models for these countries are more accurate after the inclusion of the dummy variable for the period of the introduction of euro in Slovakia. The average value of an indicator showing the rate of the dependence between production and the dummy variable is higher too. Therefore the simple regression analysis presented above only confirms a significant change in the development of indicators monitored in the given period, which is most likely related mainly to the negative impacts of the global economic recession.

Table B Results of regression analysis for Czech Republic, Hungary, Poland and Germany

		Independent variables					Modified R ²
		Foreign demand (world)	Domestic demand (household consumption)	Dummy variable			
				Q3 2008	Q4 2008	Q1 2009	
Dependent variable	Production – Czech Republic	0.45 (9.86)			-7.6 (-3.3)		0.73
	Production – Hungary	0.43 (12.8)	0.12 (2.28)			-15.1 (-9.47)	0.91
	Production – Poland	0.40 (12.2)				-6.58 (-2.95)	0.66
	Production – Germany	0.48 (7.6)	-0.47 (2.01)			-8.60 (-4.50)	0.90

Note: the table includes coefficients of statistically significant variables (t-statistics in the brackets).

* The variable equal to 1 in the period after the introduction of euro (or after the fixing of the exchange rate), and equal to 0 in all previous quarters.

Note: estimations were based on quarterly data on year-to-year changes of selected indicators for the period from Q1 2000 to Q3 2009.

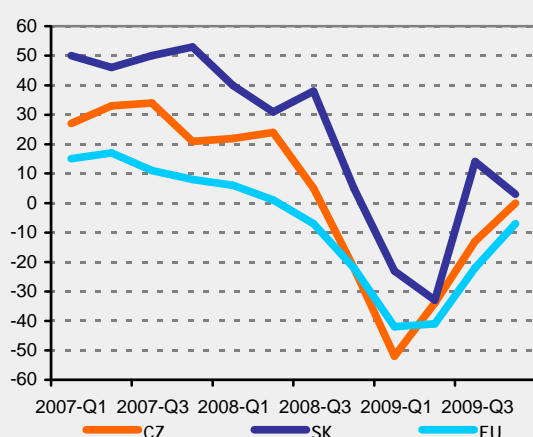
5. CONDITIONS FOR BUSINESS COMPETITIVENESS GROWTH IN SLOVAKIA

According to several independent outlooks, as early as 2010 the Slovak economy should see a more significant recovery than other EU countries. Consensus Economics (2010) expects a rise of both the euro area and EU gross domestic product (GDP) at the level of 1.1%. The Slovak GDP should increase by 2.5%.³⁸ According to available forecasts, in 2011 Slovakia will reach the fastest or one of the fastest growths among EU countries too.

The current NBS medium-term forecast (NBS, 2010) also foresees a gradual economic activity recovery as a result of the growth in world demand, which should be reflected mainly in subsequent increase of Slovak export performance. According to the NBS and ECB estimates, real GDP should increase year-to-year by 3.2% in 2010 and by 4.4% in 2011. Increased production will be translated into a positive labour market development with a certain delay. With employment continuing to decrease, labour productivity should grow faster than the GDP. The rise of consumer prices will probably accelerate slightly in relation to the recovery in economic activity.

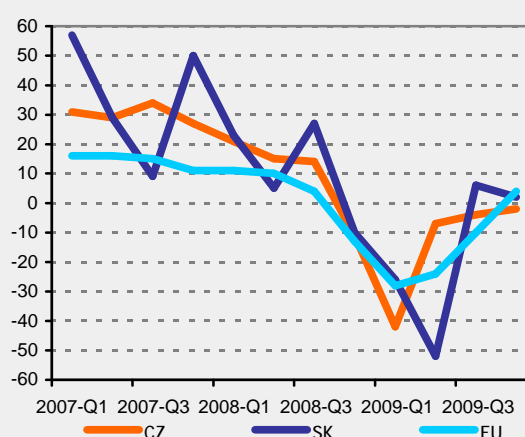
In late 2009 and early 2010, companies had positive expectations regarding the development in industry. Slovak enterprises saw more dynamic growth in orders and expected a quicker export recovery.

Chart 30 New orders in industry
(seasonally adjusted balance)



Source: European Commission.

Chart 31 Expected export in future months
(seasonally adjusted balance)



Source: European Commission.

In the period under review the development in services was not so promising. Demand expectations for three following months stagnated for most of the year at the level to which

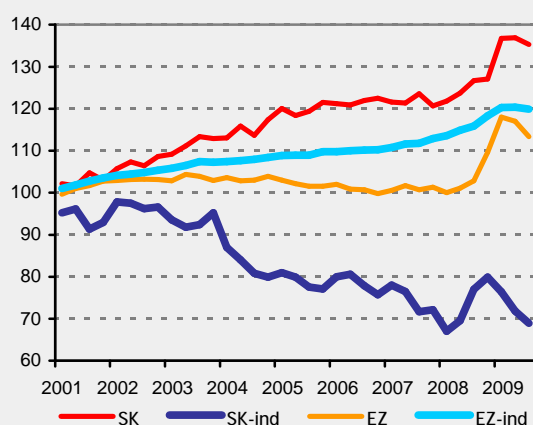
³⁸ Consensus Economics (2010a).

they had plummeted in early 2009. And the average EU expectations have been gradually growing since Q1 2009. However, in the last quarter the development of both real and expected demand in services seemed to be a bit more positive in Slovakia than in the EU; and in 2010 Q1, even more positive than the development in the Czech Republic. The recovery was least obvious in construction; Slovak construction saw a demand increase as late as in the beginning of 2010. However, expected future construction activity did not change considerably. Results of questionnaire surveys from other EU countries indicated a similar situation.

5.1 LABOUR COSTS

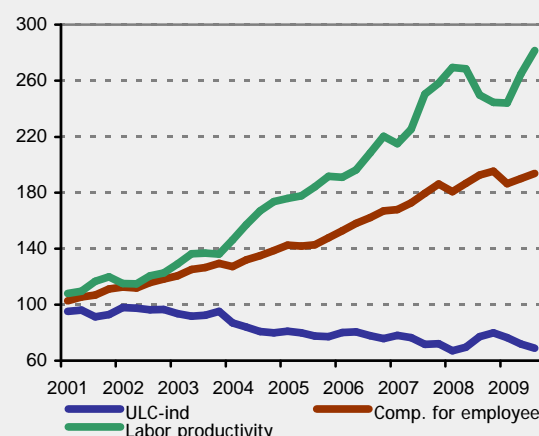
When assessing cost competitiveness, it is necessary to mention that unit labour costs in industrial production in Slovakia were decreasing in the long term. Temporary increase in labour costs in late 2008 and early 2009 was caused by a GDP fall. In that period unit costs grew also in other EU and euro area countries. Unlike Slovakia, the euro area registered a long-term stagnation or a slight increase of unit labour costs in industrial production.³⁹

Chart 32 Development of unit labour costs in Slovakia and in the euro area (index 2000=100)



Source: Eurostat, NBS calculations.
Note: ind – industry.

Chart 33 Development of main components of unit labour costs in industry (index 2000=100)



Source: Eurostat, NBS calculations.

5.2 OTHER KEY FACTORS

Table 7 summarizes a list of the most important factors for the future competitiveness of Slovak companies, identified in a survey carried out with leading companies in Slovakia before the introduction of the euro.⁴⁰ We can see that Slovak companies expected stronger

³⁹ Average unit labor costs in the whole Slovak economy were more dynamic than in the euro area. Theoretically, we can see it as a certain risk of higher future price development in Slovakia. However, from the point of view of competitiveness of the business sector, we think that development in industry which takes up the most part of Slovak tradable sector (i.e. a sector directly exposed to international competition) is more relevant.

⁴⁰ More detailed information and results to be found in Lalinský (2008).

pressures in cost reduction and buyer demands satisfaction. Without a more detailed survey, it is hard to assess their real responses to those expectations or whether they did prepare strategic plans for the identified areas. Indeed, their awareness of the challenges itself means that most companies were, to a certain extent, ready for the development that we have observed. Of course, the real pressures to decrease costs and satisfy customers were probably a lot more intense in 2009 than even the most pessimistic expectations. Initial perceptions of the importance of macroeconomic factors are currently perhaps the least relevant. To a great extent, enterprises saw the introduction of the euro as a competitive advantage closely connected to exchange rate stability. But most probably, none of the companies expected such a significant strengthening of the local currency against neighbouring countries' currencies.

**Table 7 Main factors of future competitiveness of Slovak companies
(top 5 most significant factors)**

Company-related factors	Industry-related factors	Macro-level factors
Cost (production prices) reduction	Buyer demands satisfaction	Transport infrastructure quality
Degree of customer orientation	Availability of experienced managers	Energy costs
Management quality	Supply of adequately educated labour force	Introduction of the euro in Slovakia
Management efficiency	Nature of competitive advantage	Slovakia's EU membership
Management proficiency	Existence of developed supply industries	Legal system functionality

Source: Lalinský (2008).

The aforementioned survey (especially the difference between significance of factors for current and future competitiveness) also indicates that even before the introduction of the euro, the companies were increasingly more aware of the importance of factors of long-term competitiveness. Companies felt the need to invest in research and development, to boost innovation and support their employees' education. Taking into account the negative impact of global economic recession on enterprise management, there was not enough time available for the growing importance of identified factors to be reflected in significantly higher expenditures flowing into these areas.

Enterprises evaluated the capital availability, in Slovakia represented mainly by availability of bank loans, as above-average. In 2007, more than one third of large companies acknowledged very easy access to credits. At the same time most companies considered credit availability an essential factor for their present and future competitiveness.⁴¹ The global financial and economic crisis brought a fundamental change in the perception of the risk of business activities. Worsening of business economic results was reflected in increase of non-performing loans. A higher prudence of financial institutions slowed down the growth of volume of new credits; a similar trend was seen in most countries in the world.

⁴¹ Lalinský (2008).



This meant that the possibility of funding outside Slovakia got worse too. In this sense, at the moment we can consider the availability of capital to be one of the factors limiting further growth in Slovak business competitiveness.

5.3 EXPORT STRUCTURE

In the last years, export from Slovakia have been growing much faster than export from Europe or the USA. A basic product structure development of our export was not in line with trends recorded in developed countries: the share of export of machinery and transport equipment from the USA and Europe has dropped in comparison with its share in 2000, while in Slovakia this product group has become undoubtedly dominant (Table 8).

Table 8 Share of individual product groups in export
(% of total export)

Product group	Slovakia		Europe		USA	
	2000	2008	2000	2008	2000	2008
Foodstuff	2.5	3.1	5.5	5.7	5.2	6.6
Beverages & tobacco	0.4	0.2	1.3	1.2	0.9	0.4
Basic materials	3.2	2.3	2.4	2.6	3.7	5.9
Oil, gas, natural resources	7.0	5.0	7.0	11.9	1.7	5.9
Animal and vegetable oils	0.1	0.1	0.3	0.4	0.2	0.4
Chemicals and chemical products	7.9	4.4	12.3	14.3	10.3	13.8
Industrial materials	26.7	19.7	15.8	15.3	9.2	9.6
Machinery and transportation equipment	39.5	54.0	38.7	33.6	52.8	42.8
Other industrial products	12.4	8.9	11.2	9.8	11.9	10.3
Other products	0.0	2.2	5.5	5.3	4.1	4.3
High-tech products	3.6	4.9	15.6	11.6	29.9	22.3

Source: UN Comtrade, author's calculations.

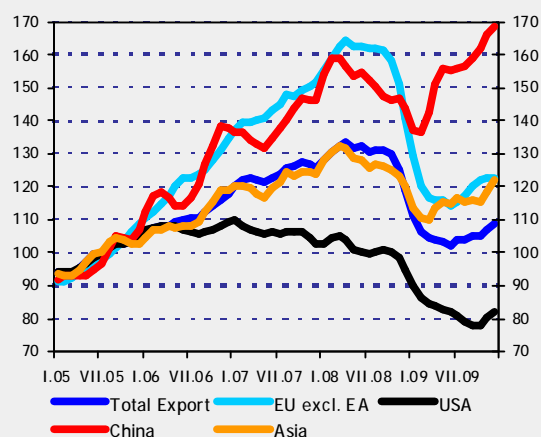
The annual development of export in individual product groups shows that in the last years Slovakia has been gradually losing its share in oil, gas and natural resources exports. Between 2005 and 2008, food export growth has also slowed.

From a competitiveness point of view, we can consider the long-term trends in our export product structure to be mostly positive. However, Slovakia is not successful particularly in chemical industry export. Its high-tech products export share has increased in the last nine years. Though the share in the USA or Germany has decreased, Slovakia is still significantly lagging behind in high-tech products export.

The current recovery in international trade is to a large extent driven by growing demand from Asian countries, dominated by export to China. In 2009 the euro area also profited mainly from development in Asia, as the demand of developed countries was stagnating.

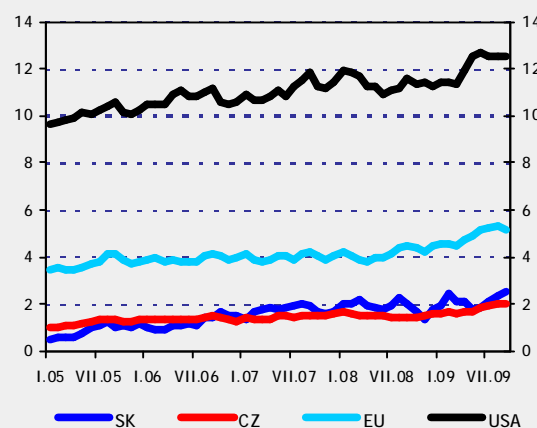
As for the product structure, the export of intermediate products has been recovering most quickly.

Chart 34 Territorial structure of export from euro area
(index 2005=100, 3-month average)



Source: ECB, author's calculations.

Chart 35 Share of export to Asia* from selected countries and EU
(% of total, 3-month average)



Source: MMF, author's calculations.

Note: * Developing Asia

Despite the fact that the share of Slovak export to Asia has been growing quite quickly, the rise of export to Asia originating in developed countries has been very dynamic too. In late 2009, the share of Slovak export to developing Asian countries (in relation to total export from Slovakia) was about one half lower than that of EU countries on average, and more than four times lower in comparison with the USA.

5.4 BUSINESS ENVIRONMENT QUALITY

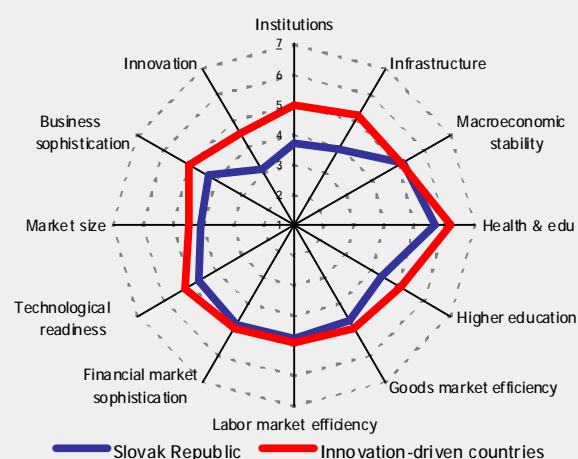
The current Global Competitiveness Report⁴² ranks Slovakia among countries which growth is based on innovation. However, in comparison with other countries ranked in the same group, it is innovation and professional requirements that we lag behind in. This lag has actually increased year-to-year. Slovakia has great room for improvement also in the areas of basic infrastructure, institutions and higher education. As for levels of innovation and nature of competitiveness, Slovakia falls behind not only in comparison with the average for all innovation-driven countries, but also when compared to the Czech Republic.⁴³

The World Bank survey (World Bank, 2009) shows that the proportion of innovating companies in Slovakia is smaller than in other Central and Eastern European countries. The innovation gap is growing with increasing company size. The proportion of small innovating companies in Slovakia is approximately the same as in the monitored European countries. The proportion of innovating large companies to small-sized companies is on average higher by 13% in Central and Eastern Europe. In Slovakia, the share of large enterprises pursuing innovation activities is only by 6% higher (compared to SMEs).

⁴² WEFORUM (2009).

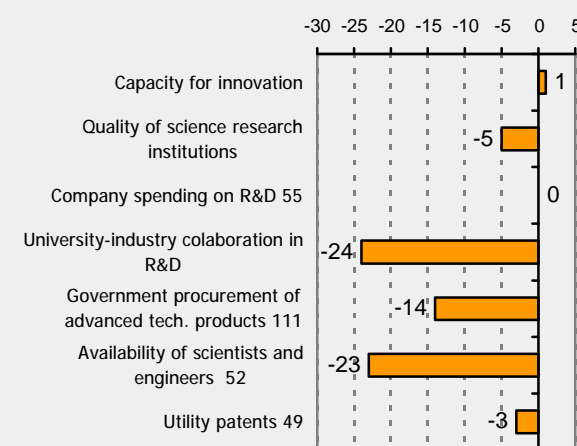
⁴³ Of all V4 countries, only the Czech Republic is ranked on the same development level, i.e. among innovation-driven countries. Poland and Hungary are ranked among transition countries, i.e. *en route* from being efficiency-driven to innovation-driven economies.

Chart 36 Competitiveness pillars of Slovakia (aggregated score)



Source: WEFORUM, author's modifications.

Chart 37 Development of partial innovation indicators in Slovakia (year-to-year change in ranking)



Source: WEFORUM, author's calculations.

Note: the number following the name of each indicator shows the position of Slovakia among all 133 countries assessed.

Based on the above-mentioned reports, the largest competitive disadvantages of Slovakia include inefficient government bureaucracy, low efficiency in the legal system and the related administrative burden on businesses, wastefulness of government expenditures and corruption.⁴⁴

In the long term it is necessary to focus on enhancing the education system, put a greater emphasis on research, development and innovation. Compared to developed countries, Slovakia has also a relatively low proportion of university-educated people; a lack of interest in higher education among young people may be a future obstacle in proceeding to a higher level of competitiveness. The World Bank survey (World Bank, 2009) showed that a great part of companies pursuing entrepreneurial activities in Slovakia had already perceived the lack of professional skills and experienced labour force as significant limiting factors. The GDP share of public (as well as company) expenditures on research and development has been one of the lowest within the EU for a long time.

The introduction of the euro and the transition to a common monetary policy has led to an increase in the importance of other economic policies. It is necessary to continue with structural reforms and to ensure a responsible fiscal policy.⁴⁵ Towards a long-term sustainable growth in the Slovak economy and in Slovak competitiveness, structural policies should focus on increasing the flexibility of the economy; labour market flexibility should play a crucial role.⁴⁶

⁴⁴ The lag of Slovakia increased year-to-year mainly in perceiving politically-related factors: misusing public sources, protectionism in government officials' decisions and credibility of politicians.

⁴⁵ As for fiscal policy, it is necessary to consolidate and reach a balanced or surplus management as soon as possible. Problems in the long-term sustainability of public finances related to the pension system need to be tackled more vigorously.

⁴⁶ Total flexibility of real and nominal wages as well as geographic, sectoral and professional labour mobility in Slovakia are also insufficient.



CONCLUSION

Initial expectations regarding development in business competitiveness after the introduction of the euro were very general. Mainly, large enterprises expected the transition to the common currency to have a positive impact. Detailed examination of the impact of the euro on competitiveness, be it on a company or country level, is not a common topic of scientific studies. Available experiences from euro area countries suggest that, given the openness and the industrial focus of the country, Slovakia and Slovak enterprises should gradually become one of the winners, or at least be one of the countries and enterprises to which the common European currency has brought more advantages than disadvantages.

The number of indicators enabling to assess short-term trends in the development of business competitiveness is rather limited. Indicators are not always internationally comparable and available in the necessary industrial division and for a sufficiently long period of time. Perhaps the most significant indicator of business competitiveness is export performance. Results from the data we had at our disposal show that in the period of transition to euro, Slovak companies faced a dramatic drop in their export and industrial production. Export from the Slovak Republic decreased by a similar rate compared to export from V4 and EU countries. In comparison to other EU countries, Slovak enterprises saw a relatively lower slowdown in export of consumer goods excluding transport vehicles, which was a result of growing export of electrical and optical devices. The least significant reduction was seen in export to Asia.

Internal trade revenue fell too. Shortly after euro introduction in Slovakia, discussions about the negative impact of exchange rate fixation on the domestic tourist industry have emerged. Almost all EU countries had to face the problem of decreased tourism revenues in 2009. But the year-to-year decrease seen in the interest of foreign tourists for collective accommodation facilities in Slovakia was bigger than in other EU countries. Increased preference of Slovak citizens for shopping abroad was also widely perceived. It seems that the transition to euro was challenging mainly for smaller specialized shops. In fact the revenues drop in wholesale was twice as big as in retail trade.

Lower levels of export, production and revenue were also translated into the worsening in the financial and economic results of Slovak enterprises. Companies affected by the drop in demand were forced to cut their production and focus on costs minimization. In general we can say that the growing effort to decrease costs went hand in hand with the effort to reduce labour costs. Labour costs were decreasing more slowly than total costs in most industries. Industries responding to the drop by reducing their labour costs preferred mainly lay-offs. In their response to the worsening global economic development, enterprises were forced to cut back not only on operational but also on capital expenditures. In spite of a relatively big average decline in investment, Slovakia was still one of the countries with the highest investment rate in 2009.

A year-to-year profit decrease was recorded mainly in industrial production, trade and transport. Agriculture and accommodation & food establishments saw turn from a slight profit into a loss. The international comparison shows that the Slovak business sector as a whole has long been one of the most profitable ones in the EU.



The drop in industrial production was slightly bigger than the average EU decrease. Slovak enterprises chose to lower their prices and number of employees more significantly. As a result, year-to-year decline in gross added value was very close to the EU average.

Analyzing factors impacting the competitiveness of Slovak enterprises, we discover that the business sector perceived low demand as the key factor limiting the production. A more significant drop in production and GDP in Slovakia as in neighbouring countries was probably caused by the greater openness and small size of the Slovak economy as well as a higher share of cyclically sensitive industries.

We cannot see any notable change in total competitiveness of Slovakia. The worsening of price and cost competitiveness related to the fixing of the euro exchange rate was only of a temporary nature. So far, there is no direct evidence that the euro could have had a purely negative impact on some industries. Even after a longer time-period since the introduction of the euro in Slovakia it will not be possible to draw clear conclusions, because we will never know how the domestic economy and enterprises would have developed under an independent monetary policy. Comparing the current development in Slovakia with other EU countries allows us to admit a possible, though hard to quantify, negative impact which the strengthening of the effective exchange rate could have had on selected services.

Slovakia has relatively good preconditions for quick adaptation and competitiveness growth. Enterprises seem to be flexible and to prefer productivity increase: they do not focus only on bringing down cost.

The current improvement in the global economic situation has created conditions for Slovak export to recover, and also for a more dynamic GDP growth than in other EU countries. In late 2009 and early 2010, Slovak companies saw a quicker rise in orders and expected a faster export growth too.

Business surveys have confirmed that companies are increasingly more aware of the importance of factors for long-term competitiveness. They feel the need to invest in research and development, boost innovation activity and support the education of their employees. Long-term trends in the development of export product structure representing export competitiveness are considered to be prevalingly positive. Nevertheless, Slovakia is still failing to be successful in chemical industry and is lagging behind in high-tech products export. Almost all export volume is destined for European countries. Following the trend seen in developed countries, Slovak enterprises should focus more on export to quickly-developing Asian countries.

The business environment in Slovakia has not changed considerably in the last years. Due to several reform steps taken in other countries, Slovakia has started to lag behind in the support of its business environment. Perception of the quality of basic infrastructure, institutions and higher education has worsened. There is a large space for improvement in the innovation and professional requirements necessary for the growth of competitiveness.



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