

IV. Investment activity in industries of the Czech economy in the period of 1995-2005

The very high rates of investment in the economy of the Czech Republic recorded over the last decade varied considerably among industries. The trends show that the highest investment rate³ in 1995-2005 was in „non-productive“ industries linked with the environment and in certain industries developing new technologies such as mobile telecommunications. However, their weight in the economy⁴ is low, and so is their weight in the total volume of investments in the CR, even though their shares noticeably increased during the last decade. In total, investments in the Czech economy grew by a quarter, from CZK 586.3 billion in 1995 to CZK 731.2 billion in 2005.

Investment activity in the national economy can be analysed from various points of view – not only by amounts of invested money and their distribution in dependence of time, but also by weight of individual industries in total investment in the economy and by comparing this weight with the weight by which a specific industry participates in the economic output of the Czech Republic. Also interesting is a look at investment rates in individual industries showing the share of investment expenditures in total annual output of a given industry (measured as its gross value added).

Generalisation of most of these parameters to the industrial structure of the CR's economy leads to a conclusion that **investment activity** in the 1995-2005 period **was pulled by industries with strong weight in economic activities**, whereas the absolute majority of industries in which invested money were on the decrease in the period is characterised by their weight in the economy being lower or very low.

By their investment policy, the “strong” industries have been creating space for further expansion, while the “weak” industries may expect further weakening of their share in the economic activity of the Czech Republic.

Robust growth...

Comparison of dynamics at the beginning and at the end of the 1995-2005 period shows that **the highest percentage growth took place in wholesale and retail trade** where the investment volume more than doubled (+111.4%) between 1995 and 2005, like in education (+125%) where, however, the volume of invested money was substantially lower, like health (+94%). Transport and telecommunication companies increased their p.a. volume of investments twice (+100.2%). Also investments in 'real estate, renting and business activities' grew significantly (+40.4%), particularly due to high dynamics in data processing and related activities in last two years and due to leasing – real estate keeps the highest increase in volume, but not in dynamics. **In the whole economy, investment expenditures in 2005 were by 24.7% higher than in 1995.**

Above-the-average increases in investment (in terms of p.a. figures at the beginning and at the end of the 1995-2005 period) were recorded, besides the above-mentioned industries, in entire **manufacturing** (+43%) with widely varied rates of investment growth in its individual parts, in 'other community, social and personal service activities' (+39%), and in construction (+37%).

Steep fall...

Conversely, below-the-average dynamics (in terms of p.a. figures at the beginning and at the end of the 1995-2005 period) were registered for agriculture. Some other industries saw even a real fall in the volume of invested money in 2005 against 1995 – hotels and restaurants by over a tenth (-13%), mining and quarrying by a third, and electricity, gas and water supply by roughly a half. However, the highest fall occurred in the industry comprising banks and insurance companies, which in 2005 invested a mere third of money in comparison with 1995; this is attributable to dramatic changes – reduced number of entities on the one hand and strong pressure to economise on the other (in comparison to 1995, the number of banks in the Czech market more than halved, expensive networks of branches were largely replaced by internet banking, some banks realise and some banks abandon the ambition to invest money in new head offices outside the town centres, etc.).

Where the most money was invested ...

The strength of **manufacturing** in the Czech Republic is noticeable not only in the areas of employment, sales, number of companies and profits achieved, but also in the field of invested volumes of money in anticipation of the multiplying effect on the output in individual industries (measured by the volume of gross added value). **Whereas constant price⁵ investments in manufacturing amounted to CZK 120.7 billion in 1995, they were CZK 172.7 billion in 2005**, which

³ 'Investment' for the purposes of this analysis is the item of national accounts called 'gross fixed capital formation' as one of the components of the aggregate 'gross domestic product'. The 'rate of investment' defined in theory as the ratio of 'expenditures on gross fixed capital formation' to 'gross disposable income' (GDI) in the economy is, where no GDI figure is available, related to 'gross value added' (for individual industries). When the rate of investment is calculated for the whole economy, the nominator is GDP.

⁴ The weight of a specific industry is measured as the share of the industry's value added in total gross value added in the economy.

⁵ Expressed in prices of 2000, i.e. in volumes adjusted for price fluctuations in given period.

represents a growth of 43%. Compared with the increase of investments in the whole economy (+25%), manufacturing expanded more. Manufacturing thus strengthened its position further – especially due to **dramatic changes in ownership** that brought in the companies foreign capital with developing strategies: data for 2004⁶ say that more than 56% of manufacturing assets are foreign-controlled and the latest data (for the first half of 2006) suggest that the share of foreign-controlled companies in total sales⁷ is nearly two-thirds (63.3%) and in direct export sales more than three-quarters (76.6%).

The second place as to the volume of investment expenditures in 2005 was taken by **Transport, storage and communication** with CZK 131.8 billion. Also this industry saw a very significant shift against the year 1995; in 1995 investments stood at CZK 65.8 billion, which ranked this industry fourth in terms of invested money. Of a key importance were transport-related investments (construction of terminal building II at the Ruzyně Airport) at the end of the 1995-2005 period and investments in mobile telecommunication networks at the turn of the decade.

The third position in the volume of invested money was maintained by the industry encompassing the range of activities related to **real estate, leasing, computers, R&D and business services**. In total CZK 142.2 billion was invested in 2005, which represents – like in transport and telecommunications – a significant rise against the year 1995 (with the difference that the gradually increasing trend of investment volumes peaked in 2005). The **strength of property developers** is documented by the fact that the volumes of money invested in developer projects in 2005 were nearly 2.5 times higher (CZK 103 billion) than investments in the remaining economic activities in this industry (CZK 40.3 billion). Investment expenditures in excess of a hundred billion p.a. throughout the 1995-2005 period are the main reason for real estate being among industries with the highest investment rates calculated as the annual average of the 1995-2005 period – money invested accounted for 77.6% of gross value added produced there every year on average. Higher averages were recorded only for the above-mentioned industries⁸ related to the environment (100.6% for water supply and 85.8% for refuse disposal).

...and where by tens of billions less

The reasons for **falling volumes of invested money in certain industries** can be looked for within the following contexts:

- **decrease** observed in **primary industries** (mining and quarrying, fishing) **caused objectively** by shifts in the structure of the economy towards high-tech production and services
- **alternative ways of acquisition of fixed assets** such as the leasing of Gripen fighters
- **development specific for the circumstances in the Czech Republic** (banking)
- **the potential being gradually exhausted due to completion of large projects** (electricity supply).
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A massive decrease is apparent especially in electricity supply – resources amounting to CZK 76.8 billion were invested in the entire industry **Electricity, gas and water supply** in 1995, which was then the third highest investment volume after manufacturing and real estate incl. business activities. In 2005 investments in this industry reached CZK 40.4 billion, which resulted in a fall to place five among industries in the Czech economy as regards the volume of invested money. The figures for the entire industry show the dominant position of electricity supply whose participation in total invested volumes was 87% (CZK 66.4 billion) in 1995 and 71.8% (CZK 29 billion) in 2005. The markedly higher volumes of invested money in the 1995-2005 period seem to be related to the long-lasting construction of the nuclear power plant Temelín. The next significant wave of investments in electricity supply is anticipated after 2010 when the coal power plants in north Bohemia are to be renewed.

Investments in **Public administration and defence, compulsory social security** plummeted to nearly a third (from CZK 48.2 billion to CZK 18.2 billion) in the 1995-2005 period. The well-known military investment in the acquisition of Gripen fighters was not included in this industry as an investment, because the purchase was financed as leasing, with subsequent inclusion to government expenditures (not to gross fixed capital formation expenditure)⁹.

The most important decrease in investment activity was registered for **Financial intermediation**, predominantly due to the above-mentioned development in the commercial banking sector. Whereas CZK 35.4 billion was invested in the entire financial intermediation in 1995, in 2005 it was only CZK 11.7 billion. The steepest decrease occurred already in the years 1995-1999 when the difference between investment volume in 1995 and in 1999 stood at CZK 21.5 billion.

⁶ See the following CZSO publications for more detailed analysis: ad-hoc study "The Role of Domestic Capital in the Transformation of the Czech Economy", January 2006, ad-hoc study "Enterprise Resources and Book Value Added in Non-financial Corporations in the Period of 2000-2004", end of 2005, and a short analysis "Structural Changes Yielded Profits of Hundreds of Billions CZK for Companies in the Czech Economy", October 2006.

⁷ Shares in sales from industrial activity.

⁸ Average data calculation is made for two-digit subsections of the CZ-NACE.

⁹ In national accounts the value of aircraft (considering it is a destructive weapon) was classified as intermediate consumption and not as government expenditure on final consumption. The same amount was added to government non-market production and to government expenditures on final consumption.

Weakening primary production

The **sphere of primary production** also reports reduced investment activity in comparison with both manufacturing and the sphere of services.

Agriculture, hunting and forestry show stagnation – CZK 19.7 billion was invested in 1995 and CZK 20.6 billion in 2005. The volume of investments peaked in 1996 (CZK 25 billion) and bottomed in 1999 (CZK 12.8 billion). The share of forestry and removal of timber was markedly lower (in 1995-2005, investment volumes fluctuated between CZK 1.4 and 3.4 billion, while investments in agriculture and hunting between CZK 13.5 and 21.7 billion). Investments in **fishing** dropped to a mere CZK 31 million in 2005 from CZK 141 million in 1995.

Mining and quarrying in total experienced a decrease in investments from CZK 11.2 billion in 1995 to CZK 7.5 billion in 2005, especially due to markedly reduced investments in the **coal industry** (from CZK 7.8 billion to CZK 4.8 billion). Conversely, more money was invested in **extraction of crude petroleum and natural gas**, whose share, in comparison to mining of coal and lignite, is substantially lower (CZK 753 million in 2005 as against CZK 347 million in 1995). Last years saw renewed investments in **mining of uranium ores** (from CZK 28 million in 2000 to 552 million in 2005), which may be related to securing fuel for nuclear power plants. On the other hand, the volume of investments in mining of metal ores was zero from 2002 and indicates gradual closing of mines for non-ferrous metal ores, whose processing (incl. imports) and exports has had a tradition of many years.

Growing investment rate in transport...

The very high rate of investment in transport **in last two years** was affected by supporting and auxiliary transport activities where **investment expenditures were higher than gross value added produced**. This CZ-NACE division encompasses for example airport infrastructure.

However, an analyses of the structure of Transport, storage and communication for the 1995-2005 period shows very interesting trends also from different points of view: **thanks to strong investment tendencies, the weight of this industry in total volume of investments in the economy increased** – from 11.2% in 1995 to **18% in 2005**; the highest figure was reached in 2001 when this industry accounted for nearly a fifth of the total volume of money invested in the Czech economy (19.7%). This share shows a markedly strengthened position because the highest weight in terms of investment volume is maintained by **manufacturing (23.6% in 2005, 28% in 2004)**.

The second most important aspect distinguishing transport and telecommunications from the absolute majority of other industries is the above-mentioned **very high investment rate** – the ratio of investments to annual output in this industry (measured by gross value added) grew dramatically in particular between 1995 and 2001. The ratio kept high also in the years that followed. While **in 1995 activities in transport, storage and communication participated by roughly a third (33.3%) in total value added produced in this industry, in 2005 it was more than a half (53.8%)**. The highest rate of investment in the 1995-2005 period was fuelled by post and telecommunication activities where investment volumes made up nearly two-thirds (62%) of value added produced annually on average. This aspect is attributable to **high investments at the time when operators developed mobile networks**, which corresponds to the highest investment rate in 2000 and 2001 when companies engaged in this subdivision spent over CZK 50 billion every year, which represented 89.1% and 83%, respectively, of gross value added produced there. **However, in the years that followed investments of telecommunication companies significantly decreased** – in 2003-2005 even below the average investment rate registered for the whole economy.

In last four years the role of a dominating division has been assumed by **Supporting and auxiliary transport activities** and activities of travel agencies, as mentioned above. In 2004 and 2005 investment volumes were higher than output (investment rate reached 113% and 134.5%, respectively, of gross value added). **In 2005 the volume of investments amounting to CZK 75 billion was more than three times higher, compared to 1995** – this enormous investment rate was affected not only by the above-mentioned construction and completion of terminal building II at the Ruzyně Airport, but also by investment activities of other economic entities (ČEPRO).

... and steadily high in electricity supply

In spite of the above sharp dynamics of transport investments, **Electricity, gas and water supply maintains the highest rate of investments in the long term**. In the 1995-2005 period the average annual volume of investments reached 77.7% of produced gross value added (electricity supply alone with a high weight within the industry reached investment rate 74.2%, water supply with a low weight within the industry even 100.6%). We should be aware of the fact, however, that the 1995-2005 period embraces the financially demanding completion of nuclear power plant Temelín and that the volumes of invested money were constantly decreasing from 1995 to 2002. Just this is the reason for the shrinking weight of the industry within the Czech economy (from 4.5% in total gross value added in 1995 to 3% in 2005). The absolute decrease of investments reflected itself also in a relative decrease, so that the **weight of this industry in total investments in the Czech Republic's economy was down too (from 13.1% in 1995 to 5.5% in 2005)** – i.e. the share in total investments decreased faster than the share in total gross value added. Large construction projects thus decisively affect investment rate in the industry.

Environment-related industries recorded the highest rates of investment on average in the long term

Investment rate in the Czech economy by industry made up 31.9% p.a. on average – i.e. investment expenditures reached nearly a third of gross value added. **Above this very high figure**, also in international context, were not only **Electricity, gas and water supply (77.7%)** and **Transport, storage and communication (49.5%)** – but also **Other community, social and personal service activities (47.5%)** where **activities related to refuse disposal** are classified, for which investment rates are above 70% every year since 1999 (the average for the 1995-2005 period is **85.8%**).

The absolutely highest investment rate was recorded, as mentioned above, for activities related to **water supply** – reaching **100.9% on average** p.a. in the 1995-2005 period and exceeding 135% p.a. in last three years. The very surprising fact of investment volume being higher than gross value added may be explained by extensive construction of waste water treatment plants especially in the countryside funded largely from EU funds (according to the European Commission, e.g., at the end of 2004 selected projects in the Czech Republic in the area of water management infrastructure and water treatment obtained financial assistance from the Cohesion Fund amounting to CZK 5.9 billion)¹⁰.

In **real estate**, due to the boom in the market, the long-term high investment rate (**77.6%**) is natural, but due to lower investment tendencies apparent in the other activities classified to **Real estate, renting and business activities**, the resulting investment rate in the whole industry is lower (**44.7%**). Above-the-average investment rate was registered also for **Financial intermediation (35.8%)**, mainly thanks to the strong investment wave in 1995-1997 (63.7%) – afterwards the pressing problems in the commercial banking sector, its dramatic reduction and pursuit of effectiveness heavily restricted the investment rate (25.3% in 1998-2005).

Investment rates in the other industries are lower than the Czech economy figure. On average for the 1995-2005 period, the lowest proportions between investment volume and output in the industry were observed for **hotels and restaurants (18.5%)**, **construction (15.4%)** and **education (12.9%)**.

¹⁰ An amount of EUR 178.9 million was obtained from the Cohesion Fund for ten selected environmental projects. See <http://www.mmr.cz/index.php?show=001021348000006&lang=1> for more information.