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Economic Transformation in the Czech Republic—a Qualified Success

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Abstract

The post-1989 economic transformation in the Czech Republic has created a market economy acceptable for EU membership but measures of international competitiveness show it to be some way behind the most advanced countries. Features of the transformation strategy in banking, the development of small businesses and privatisation created an economy with limited potential for autonomous, innovative growth. Policy shifted in the late 1990s towards supporting inward investment. Some of this is associated with low skill levels and minimal innovation. The motor vehicle sector is the most promising, but the strategies of multinational companies may create barriers to matching the productivity levels of advanced countries.

ASSESSMENTS OF THE SUCCESS OF TRANSFORMATIONS OF centrally-planned economies have frequently focused on the most basic attributes of a market economy, meaning price liberalisation, a predominance of private ownership and opening to the world economy. On these criteria, the Czech transformation has been successful, creating the 'functioning market economy' required for EU accession in 2004. However, this leaves open the question of the kind of market economy created, of its level relative to advanced countries in the world and of its potential for future growth. These are important themes, not least in view of a powerful Czech self-image which sets the country among the advanced nations of the world. A fully successful transformation should imply reclaiming a place within, or not far behind, that family. The aim of this article is to assess the transformation in terms of the level and growth potential of the kind of market economy that has been created.

The article starts with an outline of GDP growth since 1989, identifying distinct phases and leading to an assessment of the country's economic level. The following sections show how elements of the transformation of the early and mid-1990s have squandered some of the country's potential, pushing it towards dependence on inward investment. A centrally planned economy has been replaced with a market economy, and one associated with a reasonably high level of GDP. In that sense the

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transformation has been successful. However, the form of development that has predominated in the period after the late 1990s is likely to leave the Czech Republic some way behind the most advanced countries in the world. The transformation therefore has been moderately successful but, with different policy choices, it could have been significantly more successful.

The economic transformation

The most familiar indicator of a country's economic level is per capita GDP. This shows the Czech Republic some way behind the advanced countries of Western Europe throughout the twentieth century. Per capita GDP was probably about 57% of the average for EU members in 1990 when compared using Purchasing Power Parity (PPP). Table 1 shows the changes in real GDP levels over the following years.

This indicates periods in the Czech transformation. The transformation depression, similar to that in other Central East European countries (CEECs), was precipitated by a combination of the collapse in exports to the Soviet bloc and sharp deflationary policies introduced in 1991. It was followed by accelerating growth, based on new private enterprise and a reorientation of exports towards Western Europe. The EU took 69% of Czech exports in 1999, compared with 18% for Czechoslovakia in 1989. The downturn after 1997 was followed by a resumption of growth bringing per capita GDP from 64% of the level of the 25 subsequent EU members in 2000 to 73% in 2005, compared using PPP (Spěváček *et al.* 2005, p. 52). The catching-up process was actually faster during the renewed recovery period than GDP growth, owing to a favourable shift in the terms of trade.

Renewed depression in the late 1990s was caused by weak export competitiveness and rising import demand in the context of full financial liberalisation. A rising current account deficit led to a fall in international confidence and a foreign currency crisis. The authorities responded with restrictions on demand and credit. The underlying causes of this renewed depression included weaknesses in the transformation strategy of the 1990s leading, as indicated in subsequent sections, to severe problems in banks and enterprises. Recovery depended on a substantial change in the nature of the Czech transformation. The emphasis in government policies shifted away from maintaining and privatising into Czech ownership—large enterprises inherited from the communist past and towards selling to foreign owners and encouraging inward direct investment.

	ANNUAL PE	RCENTAGE GROWT	H KATES IN GDP, I	990-2005	
1990	1991	1992	1993	1994	1995
-2.0	-11.6	-0.5	0.1	2.2	5.9
1996	1997	1998	1999	2000	2001
4.2	-0.7	-1.1	1.2	3.9	2.6
2002	2003	2004	2005		
1.5	3.2	4.7	6.0		

 TABLE 1

 ANNUAL PERCENTAGE GROWTH RATES IN GDP 1990-2005

Note: The methodologies used for calculating constant prices differ for 1990, 1991–92 and 1993–2005. *Source*: Calculated from ČSÚ (Czech Statistical Office) (2005, Table 1) and ČSÚ, *Makroekonomické údaje*, 2006, available at: www.czso.cz, accessed 1 January 2007.

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This created the basis for accelerating growth from 1999 and for the first trade surplus in the Czech Republic's existence in 2005. The current account was still in deficit, but that, as indicated below, posed no immediate threat. The budget deficit passed the 3% of GDP marker in 2000, as spending rose due to higher unemployment, rising costs of health care and pensions and the need to write off debts created by the transformation strategy of the 1990s, but fell back to 1.9% of GDP in 2005. EU accession confirmed the generally successful outcome of the Czech transformation and the country was on course for acceptance into the European currency union, although continuing uncertainty over the state budget was likely to delay this beyond the target year of 2010.

Sources of competitiveness

This story of success needs to be balanced with a recognition of the Czech Republic's economic level and the potential that it gives for further development. The World Economic Forum's Growth Competitiveness Index summarises the economic and institutional factors that it believes contribute to growth.¹

For leading countries, the 'core innovators', innovations and the technology environment count for half the rankings. Other, less advanced, countries are allowed to rely more on technology developed elsewhere. The Czech Republic is well below the top group of countries, 38th in the 2005 rankings, close to other CEECs. However, it occupied an encouraging 22nd place on the technology index, firmly ahead of all other CEECs.² This is somewhat flattering although, as indicated below, the Czech Republic does have a research base.

Pre-1989 Czechoslovakia occupied a dual position in terms of its trading relationships. It developed and sold complex finished products in the CMEA market, but could only compete on world markets with raw materials and semi-manufactures, selling more sophisticated finished products, such as cars, at very low prices, reflecting obsolete design and technology. Renewed growth saw a shift back towards motor vehicles and electronics. Thus the share of machinery and transport equipment (SITC 7) in total exports declined from 37.7% in 1990 to a low point of 25.4% in 1992, before rising steadily to pass 50% in 2003.

However, the Czech Republic was able to compete with advanced market economies only on the basis of low labour costs. In 2005, with GDP at 73% of the EU average level, productivity, measured as GDP per person working, stood at 67% of the average for the 25 EU members. Labour costs measured by the exchange rate, the relevant figure for a company investing in the Czech Republic with the intention of exporting, stood at only 20-25% of the EU average (Spěváček *et al.* 2005, p. 57). Wages, the largest element in labour costs, were around half the level of those in Slovenia, about the same as those for Hungary and Poland and significantly above Slovakia (on 14%) and other post-communist accession countries (Spěváček *et al.*

¹WEF (World Economic Forum), *Global Competitiveness Report 2005–06*, 2006, available at: www.weforum.org, accessed 1 January 2007.

²WEF (World Economic Forum), *Global Competitiveness Report 2005–06*, 2006, p. xviii, available at: www.weforum.org, accessed 1 January 2007.

2005, p. 63). This indicates that the advantage bestowed by low wages cannot provide lasting competitive strength. The Czech Republic continued to benefit from its geographical location and past industrial strengths, but export structures in other CEECs moved rapidly towards SITC 7, suggesting that any Czech advantage in this kind of product could quickly disappear.

Other important elements of a more lasting competitive strength have been assembled from a range of sources using both 'hard' and 'soft' (survey-based) data (Kadeřábková *et al.* 2005). Czech weaknesses relative to more advanced EU countries lay particularly in the three areas of institutional environment, the climate for innovation and the labour force. They point to a country that may be very acceptable to a certain kind of inward investor that is not interested in innovation activities with the Czech Republic, but that offers less chance for innovative new Czech companies.

Weaknesses in the institutional environment included the ineffectiveness of bankruptcy laws, poor protection of intellectual property and limited access to credits and risk capital, all areas that could hamper innovative domestic firms. The Czech Republic also scored very badly on corruption, as did other CEECs. This follows from evidence of perceptions from Transparency International, which put the Czech Republic in 51st place in its league table, although that organisation does give a health warning against assuming that perceptions are a precise reflection of reality.³ There were frequent Czech press reports of corrupt practices and networks had been uncovered with links into high levels in the government, but there was little sign of large-scale crime organisations capturing positions of political power (Dančák *et al.* 2006). It remains unclear how harmful this was to economic development, a point taken up below.

In relation to the climate for innovation, the Czech Republic was well behind the EU's leaders (Sweden or Finland on most indicators), but not too far behind the EU average on some input indicators: there was government support for research; enterprises conducted R&D; there was collaboration between firms and universities; and there were qualified scientists and scientific publications. Gross domestic R&D spending in 2003 was 1.26% of GDP, compared with an EU average of 1.92% and a highest EU figure of 3.98% for Sweden. The Czech figure had increased from 0.95% in 1995, representing a slightly higher growth rate than in the EU as a whole, albeit well below the 54% growth in second-ranked Finland (Kadeřábková *et al.* 2005, p. 83).

Output measures point to a wider gap with 'core innovators'. There were 10 hightech patents registered in the EU in 2002, a per capita rate of 2% of the EU average level or 0.4% of the level of Finland, the top-ranked country. Moreover, a possible indicator of new Czech firms' ability to exploit such innovations, the uptake of risk capital, put the Czech Republic around the bottom of the EU league with figures barely above zero for the pre-start, start-up and expansion phases. The highest scores on the first of these were again achieved by Scandinavian countries.

In relation to the labour force and skill levels, the Czech Republic scored particularly badly on higher education, with 12.3% of the population aged between 25 and 64 in 2004 having attended higher education compared with an EU average of

³Transparency International, *Annual Report 2004*, 2004, p. 8, available at: www.transparency.org, accessed 1 January 2007.

21.9%. No post-communist country was below the Czech level, which had grown by only 16% since 1998, compared with a growth of 35% for the pre-2004 EU members. This may partly reflect a lack of international consistency in definitions and Czech figures indicate a substantial increase in numbers in higher education, which suggests a likely improvement of labour-force quality in the future.

There was also compensation as the Czech Republic stood out for the numbers with a middle level of education, possibly very relevant to a particular kind of inward investor. Nevertheless, state spending on education as a percentage of GDP was actually lower in 2002 than in 1995 and remained at 85% of the EU average.

Alongside these indicators of a general environment, the road to an innovative economy also depends on key actors. These include firms and financial institutions. Firms able to operate successfully in a market environment could be created from scratch, by the transformation of existing state-owned enterprises into private companies, by sales of existing enterprises to foreign companies, by new investment from foreign companies or, finally, by transforming enterprises under continuing state ownership. State-owned firms actually performed quite well, but few were left unprivatised by 2006.

The assumption behind much of the strategy of the early and mid-1990s was that domestic entrepreneurs, managers and engineers would rise to the challenge and bring the country growth and prosperity. As the following sections demonstrate, elements of the chosen strategy actually helped create barriers to the development of innovative, indigenous firms, leaving inward investment as the key source of growth. The following sections outline how this outcome has come about.

Banks

The development of domestic businesses depended on adequate means of finance and this centred at first on banks inherited from the communist past. These were partially privatised during the 1990s. Central planning had relied heavily on credits to the enterprise sector. The volume of investment credits (20.6% of GDP in 1989 for Czechoslovakia as a whole) was more than balanced by household savings (with deposits at 36.6% of GDP against credits to households at 6.2% of GDP). Table 2 shows the broad indicators for identifiable periods for 1993 onwards. In the first

		Credits				Deposits
	Total	Government	Households	Manufacturing	Total	Households
1993-97	61.1		3.2	18.7	62.8	30.4
1998-2001	52.0	2.5	3.9	12.6	59.9	38.9
1999	54.9	0.8	5.5	14.1	58.8	38.3
2002 - 04	38.8	5.9	9.3	5.9	66.08	37.5

TABLE 2CREDITS AND DEPOSITS AS % OF GDP

Source: Calculated from ČSÚ (Czech Statistical Office) (1997-2005, Chapter 7 in each volume), also available at: www.czso.cz, accessed 1 January 2007.

period household saving remained high and well above the level of credits to households. In effect, households were financing the enterprise sector. This was usual in CEECs, but the scale was unusually high in the Czech Republic. By contrast, in the UK deposits from, and credits to households tend to be roughly equal.

The behaviour and performance of Czech banks has been analysed elsewhere (Myant 2003, Chapter 8). Thanks to the large deposit base, and under pressure from the government, banks lent to new firms and to newly privatised enterprises. It was impossible to assess risks accurately with so little experience in the new market environment and it was clear from very early on that much of the lending was unsound, such that 29.3% of credits were classified in December 1996, meaning in many cases that nothing was likely to be returned.⁴

Banks dramatically cut lending after 1997 and the volume of credit in the two periods (shown in Table 2) after that year was close to normal levels for CEECs. Credits to government increased to cover budget deficits and the volume of credit to enterprises fell dramatically. The sharp drop for manufacturing is noteworthy in view of that sector's importance for export performance. This actually made little difference to investment in fixed assets in that sector which continued at a steady rate of 6-7% of GDP between 1993 and 2003: the higher share of credits into the sector in earlier years evidently reflected acquisitions and share purchases, many unsound investments, rather than productive investment.

Recovery for the banking sector was based on the re-establishment of full state control and sale to established foreign banks which pursued more cautious and orthodox policies including, for example, a shift towards credits to individuals for house purchase with obviously solid collateral. Classified credits, with bad debt continuing from the past, still stood at 12% of the total in December 2005.⁵ The figures in Table 2 suggest that favourable conditions existed for financing economic transformation in the 1990s, and for investment to improve competitiveness, but the promising macroeconomic base was wasted. The foreign-owned banks were more cautious with credits to enterprises and the period left behind a burden on the state budget following the financial rescue of banks before further sale, which added the equivalent of 1.5% of GDP to state spending over the 2000-05 period.⁶

New small businesses

Starting from practically no legal base up to 1989, individual entrepreneurs quickly established themselves as a powerful force, especially in trade, repair, personal services and catering. Their growth can be followed from figures on registered businesses, which record the first steps towards becoming an entrepreneur rather than actual activities undertaken. Labour force survey statistics, available from late 1993, show

⁴ČNB (Czech National Bank), Initial Capital, Capital Adequacy and Classified Credits as of 31 December 1997, 1998, available at: www.cnb.cz, accessed 1 January 2007.

⁵ČNB (Czech National Bank), *Basic Indicators of the Banking Sector*, 2006, available at: www.cnb.cz, 1 January 2007.

⁶Calculated from MF (Ministry of Finance of the Czech Republic), *Macroeconomic Forecast* (Prague), 2006, Table 8.2, available at: www.mfcr.cz, accessed 1 January 2007.

those in business as the principal employment activity. The figures in Table 3 indicate rapid growth, reaching a higher share of the working population in 2004 than that in Poland (self employed outside agriculture with or without employees were 9.6% of the labour force), Hungary (12.1%) and Slovakia (11.2%, from only 5.9% in 1997) (OECD 2005). It was also higher than the 12.8% in the UK. Although entrepreneurs complained about bureaucratic barriers to starting up, a factor that harms the country's standing in competitiveness league tables, these results do not indicate a major problem.

Czech entrepreneurs included a wide range of types and income levels. Some did achieve high incomes—earnings from enterprises were a major factor spreading inequality—but household survey data (ČSÚ 2005, Table 9.3, and earlier years) show average per capita household incomes consistently below the national average (87% in 1993 and 92% in 2004). The category probably included 'forced' entrepreneurs, unable to find other employment, and 'lifestyle' entrepreneurs, seeking independence but displaying no eagerness to establish larger businesses. Those that did grow were frequently 'Kirznerian' entrepreneurs, discovering opportunities within the market to trade to make a profit, thereby reallocating resources that already existed but not directly altering production processes or contributing to a higher level of national income (Kirzner 1985, p. 11). Few were 'Schumpeterian' entrepreneurs, seen by Schumpeter as the driving force for technological and organisational progress in a capitalist economy as they 'reform or revolutionize the pattern of production by exploiting an invention' (Schumpeter 1954, p. 132).

Voucher privatisation, the breaking of established forms of contacts, and the opening of the economy all provided scope for quick profits for those with particular skills and knowledge. Probably the most successful of the few manufacturing firms that grew from scratch to significant size was Linet, claiming to be the world's fifth largest manufacturer of hospital beds. The founder chose the product because it was simple and there were market openings. He emphasised continuous innovation, but insisted that this did not require sophisticated technology or external finance (Fiala & Korbel 2006), the areas in which the Czech business environment was particularly weak.

 TABLE 3

 Registered and Active Non-agricultural Entrepreneurs as Percent of the Civilian Labour Force

		Active		
	Registered	Without employees	With employees	
1991	2.5			
1992	18.1			
1993	21.5	6.5	2.9	
1997	24.7	8.2	4.1	
2004	41.6	12.2	4.0	

Source: Calculated from ČSÚ (Czech Statistical Office) (1996, Tables 10-23; 1998, Tables 10-22 and 21-28; 2005, Tables 10-11), also available at: www.czso.cz, accessed 1 January 2007.

Privatisation into Czech ownership

Privatisation of big state-owned enterprises into domestic ownership proceeded by two voucher waves, completed in 1994, and by direct sales (Myant 2003, Chapter 7). By the end of the 1990s most of these firms were in very serious trouble. The nominal change in ownership had done nothing to overcome weaknesses of backward technology, lack of access to world markets and poor management abilities in relation to the new market environment.

A number of features of the transformation strategy exacerbated enterprises' problems. Voucher privatisation created uncertain and unstable ownership, diverted efforts into battles for control rather than business strategies and created scope for investment in share dealing and acquisitions that contributed nothing to real restructuring. Sales to favoured entrepreneurs gave authority to architects of over-ambitious expansion plans, often involving unsound acquisitions and, again, a failure to address core issues of restructuring. Czech-owned companies struggled to find a place with exports of simpler components replacing the finished products they had sold within the protected CMEA market. Escalating financial difficulties, leading to paralysis of many enterprises and of banks, led the government to bring key firms back under state control with the aim of selling them off to foreign companies.

Table 4 shows changes in ownership in manufacturing industry from 1996, after the completion of voucher privatisation. Domestic private ownership was consistently associated with below-average productivity and the share of these enterprises in both output and employment fell from 1997, initially largely by returns to state ownership. Sale to foreign owners or continued majority state ownership were both associated with higher, and in relative terms rising, productivity. Both produced firms that avoided diverting efforts into battles for control and into takeovers and acquisitions while the typical foreign-owned company had the expertise, finance and focus to invest in modern equipment and produce for clearly-defined outlets (Myant 2003, pp. 172-175).

	Pı	Public		Private		Foreign		mployed
	Output	Employ.	Output	Employ.	Output	Employ.	Output	Employ.
1996	21.2	17.4	60.1	68.2	11.2	7.8	7.4	6.6
1997	16.1	11.0	62.5	72.3	13.3	8.7	8.1	8.0
1998	15.0	8.8	62.0	66.1	17.6	11.0	5.5	14.1
1999	20.4	9.8	51.6	61.1	22.7	14.0	5.3	15.1
2000	10.2	5.4	50.1	57.1	34.1	22.3	5.5	15.2
2001	7.1	3.8	50.1	54.5	37.6	25.3	5.2	16.3
2002	5.9	3.1	48.9	55.5	40.3	26.4	5.0	15.1
2003	5.8	2.8	46.1	53.2	43.4	27.7	4.7	16.2

TABLE 4

PERCENTAGE SHARES OF DIFFERENT FORMS OF OWNERSHIP IN MANUFACTURING OUTPUT AND EMPLOYMENT, 1996-2003

Note: Output is measured by total revenue.

Source: Calculated from ČSÚ (Czech Statistical Office) (2002, Tables 16-19; 2004, Tables 16-10).

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Voucher privatisation was also conceived as a launching pad for a stock market with substantial share dealing. Projects were approved to transfer shares from 3,459 enterprises, out of a total of 3,818 in 1991, although the proportion of shares exchanged for vouchers was very variable ($\check{C}S\check{U}$ 1997, pp. 510, 514). Share prices quickly fell below their nominal values, as individuals sold the shares they had acquired to foreign portfolio investors and to domestic companies fighting for control over each other. The share price index reached a low point of 35% of its March 1994 level in October 1997 ($\check{C}S\check{U}$ 1999, p. 215). Trading peaked at the equivalent of 15.1% of GDP in 1996, falling to a minimum at 5.6% of GDP in 2001 before rising back to 35.5% in 2001 (Prague Stock Exchange 2000, 2006).

The breadth of share trading declined rapidly after the chaotic early years. The number of quoted companies fell from a peak of 1,716 in 1995 to 320 in 1997 and to 39 in 2005. Engineering, electronics and a number of other branches of industry, already weakly represented in 1999 had, along with investment funds, disappeared by 2005. Instead, 98.8% of trading was accounted for by seven companies, all linked to state or foreign ownership.⁷ The stock market had become an element of no real significance either for corporate governance or as a means for new and growing companies to raise finance. New share issues became extremely infrequent events, with none from 2003 to 2006. This further emphasised the dependence on inward investors as the source of innovative growth.

Voucher privatisation has also been linked to the high level of perceived corruption with criticisms from the start that it would contribute to 'the origin of the Czechoslovak branch of the Cosa nostra'.⁸ There were also scandals associated with privatisation by direct sales. In the absence of significant accumulated wealth before 1989, it was inevitable that some unorthodox means would be used to gain capital and this was implicitly tolerated through the mid-1990s. However, the voucher method contributed immensely to an environment in which individuals could acquire wealth rapidly from very unclear beginnings and in which it was often unclear who owned enterprises or how control was exercised. The effects of that on economic performance are difficult to gauge, as can be indicated from two examples.

The major coal-mining company MUS, partially privatised by vouchers, slipped under the control of the US investment company Appian in 1998. There were allegations that this was no more than a front for the management, using the company's own money to buy themselves control. The accusations remained unproven, but resurfaced when the company sought participation in further privatisations in the energy sector up to 2004. The management was extremely skilled at lobbying to create a good impression and its widespread sponsorship activities created the impression of a modern, 'socially responsible' company. Indeed, the management was not obviously bad or incompetent, despite the continuing lack of transparency over its ownership. The same could be said of many other enterprises with which the government had dealings. The main costs from secretiveness and

⁷Calculated from PSE (Prague Stock Exchange), *Ročenka 2005*, 2006, p. 37, available at: www.pse.cz, 1 January 2007.

⁸M. Zeman, Hospodářské noviny, 27 February 1992.

possibly illegal activities may have been negative perceptions of Czech business and politics, within and to a lesser extent outside the country.

A more notorious case was the chemical firm Setuza, a company privatised by vouchers that could trace its origins back to a soap producer founded in 1848 and still had 1,300 employees in 2006. Following the failure of the state to establish full control after the debt crisis of the late 1990s, the firm appears to have come under the control, albeit through an opaque web of contracts, of a highly controversial entrepreneur in 2000. He claimed that someone in his position required a 'security adviser' with experience of such work from before 1989—'if you want to be an entrepreneur from the top drawer, it is unfortunately impossible without these contacts' (Fiala & Szirmai 2006⁹). The man was killed by a presumed professional assassin in January 2006. This was one of the few Czech companies still quoted on the stock exchange and potentially of great economic significance as it was the country's producer of fuel from rapeseed. Lack of clarity over ownership this time led to controversy, negative publicity and delays in government decisions over handling the company's burden of past debt. Development as a Czech-owned company was thereby put on ice.

Inward direct investment

Sale of state-owned companies to foreign owners was favoured by the managements of a number of companies that had been exporting into Western Europe before 1989. Enterprises that were sold to foreign owners secured access to markets, new technology where appropriate, and expansion—often in employment as well as output. Gains in these last two were enormous if the parent company transferred production from plants in Western Europe.

An example was the Barum tyre manufacture, tracing its origins to a spin-off from the Bat'a concern in 1924, which was bought by the German firm Continental in 1992. Reasonable proximity to the target market is advantageous for this kind of heavy and awkward product, and output grew from 1.75 million tyres in 1991 to 19 million in 2005, with almost 90% exported, accounting for 1.4% of total Czech exports. Employment remained at 4,300, as in 1993.¹⁰ This geographical shift in production would have been impossible had Barum remained under domestic ownership. A similar process, albeit rarely as dramatic, occurred with several other engineering and car-component companies. Another example was the Škoda car manufacturer, which was sold to Volkswagen in 1991 on the basis of reassurances that it would retain the established name and that there would be further substantial investment to allow for a doubling of output. There were doubts and conflicts in the following years when it appeared likely that Volkswagen would scale back its plans, but the promised expansion went ahead broadly as planned, raising car output from 184,000 in 1989 to almost 500,000 in 2005.

 $^{^9} Also$ available at: http://cesko.ihned.cz/1-10071860-17996370-002002_d-69, accessed 1 January 2007.

¹⁰See www.conti-online.com, accessed 1 January 2007.

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Sale to foreign owners met political resistance wherever there was any scope for fears that the new owner might be aiming to close down an awkward competitor, to downgrade facilities to an assembly function or when the firm's name was judged important to Czech national pride, making it part of the 'family silver'. Barum did not qualify partly because its problems were so clear: its management knew the Western European market in which it was losing its position due to its inability to keep up with the R&D spending and technological advances from the world's leading companies (cf. UNIDO 1991). Experience had also demonstrated the impossibility of modernising the Škoda car manufacturer without a foreign owner. Negotiations failed in many other engineering and vehicle companies, leaving the firms to struggle through privatisation into domestic ownership.

This initial reluctance to accept foreign ownership, indicated by the figures in Table 4, can be contrasted with the Hungarian experience. In that country there was less of a patriotic nationalism associated with business and large foreign debts plus a budget deficit encouraged an emphasis on privatisation by sale to foreign companies. Following the Hungarian method in the Czech Republic from 1992 would have led to a more rapid restructuring of major industrial enterprises, and a faster rise in unemployment, but the possibility of a more secure future for at least parts of major enterprises.

After 1998, sale to established foreign companies was seen by the government as effectively the only road to prosperity for troubled enterprises. However, the new buyers were generally not particularly convincing. Thus the giant Škoda–Plzeň engineering combine, with 45,000 employees in the 1980s and a possible deal with Siemens in 1992 that would have taken part of the company to 8,000 employees, was reduced to 7,000 employees by 2002 when it was sold to the Appian group, a company that, as indicated above, probably qualified only nominally as a foreign investor and was certainly not a significant world player. Employment was 4,269 in a greatly thinned-down operation in April 2005.¹¹

The switch to encouraging sales to foreigners coincided, from 1998, with a commitment to support inward investment on greenfield sites, including financial incentives and the preparation of industrial zones. This followed the introduction of similar incentives in Hungary in 1995 and the first programme for creating zones in Poland in 1994, but preceded similar measures in Slovakia which were adopted only in 2000. Inward investment by privatisation also continued in the years after 1998 for banks, energy, telecommunications and major chemical enterprises.

Greenfield investment grew as a share of FDI to reach roughly the same level as acquisitions by 1997, moving slightly ahead in most following years (Srholec 2004, p. 33). The activities of CzechInvest, the agency that can cover up to half of the capital costs of manufacturing investment, show support over the period from April 1998 to May 2006 to 224 foreign companies proposing investment valued at Kč285 billion, creating 66,000 jobs. CzechInvest was reporting promises and expectations rather than

¹¹See http://www.skoda.cz, accessed 1 January 2007.

proven outcomes, but these projects could contribute the equivalent of 55% of the stock of FDI in manufacturing at the end of 2004.¹²

FDI and the balance of payments

Czech government assessments of the impact of FDI have been overwhelmingly positive. However, the long-term implications of this transformation need to be assessed carefully (cf. Srholec 2004). FDI has a direct impact on the balance of payments, output and level of employment. This may follow a cyclical process: an investor comes, bringing immediate benefits to the balance of payments and employment, but gradually shifts towards repatriating profits before finally ending its operation. FDI can also affect skill levels and innovation in the economy, both directly and by spill-over effects on domestically-owned firms. These can be negative or positive: inward investors may stimulate domestic emulation or they may stifle other activity, 'hollowing out' the domestic economy to leave only low-tech, low-skill activities.

The assessment here starts with the impact of foreign firms' activities on the balance of payments, starting with financial flows directly related to firms' investment activities and the repatriation of profits. This points to an emerging net deficit by 2004. Inclusion of the firms' export and import activities shows a clearly positive contribution to the balance of payments in the period up to 2005, but with wide variations between branches.

Table 5 shows a division into four periods, with rough consistency of indicators within each and 2005 possibly marking the start to a fifth. The current account was in deficit throughout, with a trade deficit up to 2004. The balance of income (the element in the current account that includes current income payments such as repatriated profits and individual earnings) moved steadily into deficit, reflecting the outflow of earnings to foreign owners. However, the financial account was always in surplus and the overall balance was positive in all periods apart from the crisis year of 1997.

Behind this lies an important change. The surplus on the financial account up to 1996 was due in large part to portfolio investment, with purchases of shares made available through voucher privatisation, and to short-term finance, attracted by the country's then high interest rates. This was withdrawn when confidence in the exchange rate fell in 1997, precipitating the foreign currency crisis. The following years saw the growth in inward direct investment covering the current account deficit. This brought little immediate danger of instability partly because the finance could not be withdrawn quickly and partly because the current account deficits included reinvested profits which, following the accepted IMF methodology, also appear as a positive figure under FDI, although no foreign exchange transactions take place. The current account deficit therefore exaggerates the actual volume of financial outflows while the financial account surplus exaggerates the financial inflows.

¹²Calculated from CzechInvest, *Investment Incentives: Manufacturing* (Prague), 2006, available at: www.czechinvest.org, accessed 1 January 2007; and ČNB (Czech National Bank), *Přímé zahraniční investice za rok 2004*, 2006, p. 19, available at: www.cnb.cz, accessed 1 January 2007. The figure for 2005 suggests a declining current account deficit, due to good performance in goods and services, but a continually increasing deficit on the income element. This was still below the level for Hungary, which had been above 5% of GDP since the mid-1990s, and well below Ireland's level of 17.2% of GDP for 2002-04 (calculated from IMF 2005). Nevertheless, the Czech Republic's level was well above that of other CEECs. Its continuing external stability depended on further investment to counterbalance repatriated profits and on the impact of foreign-owned companies on other elements of its external balance.

Table 6 provides more detail on the balance of payments impact of inward investment by taking account of the rising importance of reinvested profits as a source of FDI. This led to a negative balance from FDI as a whole by 2004. The main culprit was manufacturing industry, especially motor vehicles and rubber products, meaning predominantly car tyres. Finance and transport were also negative while trade still

4 10 10 10 10 10 10 10 10 10 10 10 10 10	1993–96	1997	1998–99	2000-04	2005
Current account	-3.0	-6.3	-2.3	-5.7	-2.1
Of which incomes	-0.5	-1.4	-2.0	-4.3	-4.9
Financial account	9.7	1.9	5.0	8.3	4.7
Of which direct investment	2.6	2.3	8.3	6.8	8.3

 TABLE 5

 Key Indicators of the Czech Balance of Payments as Percentages of GDP

Source: Calculated from ČNB (Czech National Bank), Balance of Payments Time Series Data from 1993, 2006, available at: www.cnb.cz, accessed 1 January 2007; and ČSÚ (Czech Statistical Office) (2005, Table 1).

	Share in total stock	% share from reinvested profits	Balance as % of stock	Balance as % of GDP
All	100	25.1	-2.2	-1.0
Manufacturing	40.1	30.3	-8.2	-1.5
Motor vehicles	8.0	36.4	-21.8	-0.8
Rubber products	2.7	66.2	-11.6	-0.1
Electronics	4.9	19.1	1.1	_
Trade	12.9	10.4	3.2	0.2
Transport and communications	6.2	10.4	-3.9	-0.1
Finance	16.5	46.3	-7.0	-0.5
Property and business services	11.3	0.8	21.6	1.1
Other	13.0	24.7	18.7	1.1

TABLE 6

BREAKDOWN OF FDI BY SECTOR AND BY DIRECT EFFECT ON OVERALL BALANCE OF PAYMENTS, 2004

Notes: Figures for balance show incomes allocated to the foreign company minus net further investment. Reinvested profits are ignored as they appear in both figures. Exports and imports are not included in these figures.

Sources: Calculated from CNB (Czech National Bank), Přímé zahraniční investice za rok 2004, 2006, pp. 18 & 47, available at: www.cnb.cz, accessed 1 January 2007.

showed a net surplus. These figures reflect to some extent annual fluctuations, since motor vehicle investment was set to rise again as two major new assembly plants were due to start production in the following years. The figures point to the limitations of dependence on inward investment, although that needs to be set in the context of the full effects of FDI outlined below.

Table 7 shows the contribution of enterprises with a foreign ownership share of over 50% to exports and imports of both goods and services, providing a more complete overview of their direct effects on the balance of payments. The foreign trade figures indicate a relatively small overall surplus, due almost entirely to the strong showing from manufacturing. This, it should be noted, more than cancels out the negative balance for this sector shown in Table 6 and confirms the importance of inward investment in manufacturing to the country's post-1998 recovery. The other sectors contributed negatively to the trade balance. They may have had other positive benefits, a point taken up in the next section.

FDI, employment and innovation

Table 8 shows the shares of foreign-owned firms in employment and value added. They appear to have above average productivity in all branches apart from trade and property and business services. Assessing their impact on the economy as a whole requires incorporating an investigation of spillovers, meaning their impact on employment, skill levels and innovation in Czech-owned enterprises, and of any wider contribution to skill levels and competitiveness. This is inevitably sketchy in view of limited data.

Foreign ownership of banks assured stability to the sector, an essential precondition for a functioning market economy. Inward investment in retailing, starting in earnest in 1995 with supermarkets and followed by the entry of a range of retail chains and the establishment of large shopping centres from 1998, was evidently welcomed by customers. The full impact was complicated as the sector experienced two transformations, with an initial one leading to small, domestically-owned shops followed by recentralisation under foreign ownership (Szczyrba 2005, pp. 37–49).

	Exports	Imports	Balance
All	28.4	26.7	1.8
Manufacturing	25.7	16.8	9.0
Trade	1.1	6.3	-5.2
Transport and telecommunications	0.6	2.0	-1.4
Finance	0.3	0.4	-0.2
Property and business services	0.3	0.4	-0.1
Others	0.5	0.8	-0.3

 TABLE 7

 Contribution to the Trade Balance of Enterprises with Majority Foreign Ownership, 2003

Notes: Exports and imports and balance include goods and services and are percentages of GDP. *Sources*: Calculated from ČNB (Czech National Bank), *Přímé zahraniční investice za rok 2003*, 2005, p. 60 and Tables 1 & 5-4, available at: www.cnb.cz, accessed 1 January 2007.

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TABLE 8

PERCENTAGE SHARES OF ENTERPRISES WITH MAJORITY FOREIGN OWNERSHIP SHARE IN EMPLOYMENT AND VALUE ADDED, 2003

	Employment	Value added
All	14.9	19.0
Manufacturing	29.0	37.8
Trade	17.1	14.3
Transport and telecommunications	5.0	12.8
Finance	79.0	87.8
Property and business services	8.7	7.9
Others	4.5	7.6

Notes: Employment is a percentage of total civilian employment in that sector. Value added is a percentage of gross value added from national income accounts.

Sources: Calculated from ČNB (Czech National Bank), *Přímé zahraniční investice za rok 2003*, 2005, p. 60 and Table 1 & 5-4, available at: www.cnb.cz, accessed 1 January 2007.

Total employment hardly changed from 1999 to 2003, suggesting that job gains from new investment were balanced by losses in Czech-owned firms and among individual entrepreneurs. Intense competition in the sector may also have had the beneficial effect of helping to keep inflation down to an average year-on-year rate of 2.5% from 1999 to 2005.

Within manufacturing the impact on the domestic economy beyond numbers employed and the trade balance varies between branches and forms of investment. It is lower, in terms of use of domestic components or transfer of technology and expertise to other firms, for greenfield investment rather than acquisitions. It is particularly low for electronics assembly firms. The US firm Flextronics invested in Brno, benefiting from various forms of government help and employing 2,400 in 2002. It then announced the plant's closure and transferred production to Hungary. The wider impact on the local economy was negligible (Srholec 2004, p. 152). Similarly, Philips started production of television screens in a newly-built factory in September 2001 and increased employment to 1,300. It announced its withdrawal in January 2006, as demand shifted towards flat screens, leaving open the fate of the Kč1.3 billion that had been received in state support. There is likely to be little further impact on the local economy.

It can be added that a strong representation in sectors requiring a high knowledge input has been used as an indicator of a country's level of innovation activity. The Czech Republic seems to do well here with 13.5% of exports from such sectors, meaning primarily electronics, in 2004 (Kadeřábková 2005, p. 107). However, employment was overwhelmingly in relatively low-level activities and figures for R&D spending in this sector show that it was even below the average for the Czech manufacturing industry as a whole and that subsidiaries of foreign-owned companies were less active in R&D than the remaining domestically-owned firms (Srholec 2004, p. 93; 2005). This indicator of the country's technological level is therefore misleading.

Much of the investment in industrial zones, 95 of which were created between 1998 and 2005 with support from CzechInvest, was based on relatively small branch plants

of multinational companies making very specific components and requiring labour of a low general skill level. This was true of a widely praised pioneering zone in the small town of Klášterec nad Ohří, claiming 1,424 jobs in branches of 11 foreign firms and 54 jobs in three Czech firms at the end of 2004 (Šašek *et al.* 2004). In this and many other cases the managements of zones welcomed investors requiring little linkage into the local economy as they feared the possible impact should the investor decide to leave. The impact of FDI was fairly precisely measured by the jobs directly created (estimated at 50,000 in all zones by 2005^{13}) and by the effect on the balance of payments.

The diversity of forms of inward investment makes further generalisations on skill levels dangerous. The trend in the economy as a whole was towards higher-quality services, to which inward investors contributed, and public sector employment associated with a more qualified labour force. The apprenticeship system for industry in the communist period had been linked to large enterprises and it suffered as they declined. It was neither systematically organised nor seen as a priority by post-1989 governments. Some multinational companies with major operations brought new skills. The Škoda car manufacturer provided training that more than covered its own needs. Others have generally been satisfied with the existing pool of workers. By 2006 some major multinational companies in the engineering industry were joining Czech firms in complaining of shortages that could make the country unattractive to investors within a few years (Ježek 2006).

Thus, taken as a whole, inward investors were not a consistent and active force for raising skill levels. There is some support for a 'hollowing out' hypothesis in some cases and for an argument that a more active government policy could have attracted more substantial inward investors. There is similar diversity in relation to innovation and R&D activities, albeit also with some support for the 'hollowing out' hypothesis for much of manufacturing (Srholec 2005).

Motor vehicles

If there is a clearly and unambiguously positive story to be told in manufacturing then it should be in the motor-vehicle sector. This industry was crucial to the country's economic prosperity and 90% of its output came from foreign-owned firms by 1999 (Srholec 2004, p. 29). Displacement of jobs from domestic firms, or transfer of technology and expertise to domestic firms, were therefore largely irrelevant. In fact, apart from a very few with a strong tradition in a particular component, domesticallyowned firms frequently sought out a foreign partner that could assure access to markets (Myant 2003, Chapter 9).

This is not considered a high-tech industry, but spending on R&D stood at 12.5% of output over the 1997-2001 period, a figure well above the manufacturing average and not far below Japan's level of 13.7% (Srholec 2004, p. 93). The figure was higher for foreign-owned firms, but still around 9% for the remaining domestically-owned firms. However, internationally comparable figures suggest labour productivity levels in domestic and foreign-owned firms in the passenger-car sector at 12.5% and 30.0%,

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¹³Hospodářské noviny, 14 April 2006.

respectively, of the OECD average in 2001 (Scholec 2004, p. 91). Even allowing for relative price levels, that suggests a substantial gap that requires an explanation both of its causes and of its implications. The point is taken up at the end of the section.

The motor-vehicle industry that was inherited from the past included finished passenger cars, buses and lorries and the necessary components. None were fully competitive in world markets. Škoda's takeover by Volkswagen was accompanied by a transformation of component manufacturers, frequently based on foreign takeovers. Škoda cars gradually took more common Volkswagen components, but domestic inputs were still contributing over 60% of output value after 2000 (Myant 2003, p. 257). Moreover, many Czech component manufacturers increased their exports both into the Volkswagen combine and to other multinational car manufacturers. They were joined by greenfield investors, exploiting the Czech Republic's low labour costs and geographical location.

Thus, strong traditions helped give the Czech Republic a lead over other CEECs in this sector, reflected in its ability to achieve a trade surplus on vehicles and components together by 1993, a status matched first by Hungary and then by Slovakia towards the end of the decade (Myant 2003, p. 254). That in turn provided a basis for attracting two further major assembly plants which, along with expansion by Volkswagen, were expected to raise total vehicle output to over a million by 2010. However, the comparative figures set out in Table 9 also demonstrate the extent to which other CEECs made up ground. Particularly Slovakia's rapid appearance as an exporter of finished cars, while maintaining balance within a high volume of trade in components apart from engines, suggests that past traditions were important only for a limited period.

The future of the Czech motor-vehicle sector depended on the strategies of major investors, particularly Volkswagen. This evolved in the mid-1990s into using Škoda to produce high-quality vehicles—using some parts and design elements in common with other Volkswagen cars—that were then sold at prices below those with the

		2003		
	SITC category	Exports	Imports	Balance/exports
Czech Republic	713	1.19	1.43	-0.24
-	781	7.16	2.85	4.31
	784	7.00	4.26	2.74
Slovakia	713	0	2.86	
	781	18.34	3.18	15.16
	784	8.72	8.81	-0.15
Hungary	713	0.71	4.73	4.73
• •	781	3.52	4.00	-0.48
	784	3.75	2.82	0.93
Germany	713	1.78	1.34	0.44
•	781	12.22	4.38	7.84
	784	3.43	2.16	1.27

TABLE 9

SHARE IN TOTAL EXPORTS AND IMPORTS OF PASSENGER CARS AND COMPONENTS, SELECTED COUNTRIES, 2003

Note: SITC 713, 781 and 784 are internal combustion piston engines, passenger cars and motor vehicles parts and accessories, respectively.

Source: Calculated from United Nations (2004).

Volkswagen name. This opened (or retained) a lower-income market without reducing prices, or harming the more expensive image, of cars with the Volkswagen name (Myant 1999). R&D activities were retained at Škoda, building on past traditions and taking advantage of lower labour costs. This made sense as long as the parent company's strategy involved using its Czech subsidiary to produce distinct models. That option was vigorously supported from the Czech side, but need not be a permanent feature of Volkswagen's strategy.

As indicated in Table 9, car exports in 2003 were very important to the Czech Republic, but they still did not play as large a role as in Germany's exports. Slovakia had overtaken both and developed a substantial component capacity, albeit also with the need for substantial imports. Thus, in terms of volume alone, the Czech motor industry was still behind the leading European country and could also be caught by other emerging exporters.

Moreover, the Czech motor industry suffered from the low price of its exports. The kilogram price for finished cars, a rough indicator of product quality or sophistication, was 40% of the German level in 1993, when Škoda was still producing models designed before 1989. It had risen only to 57% of the German level by 2003. This difference need not reflect substantial differences in labour skills or capital investment. Small, cheap cars are not much easier to make than bigger, expensive cars, but they are sold at significantly lower prices, leading to lower productivity in terms of the value of output per employee.

The division of labour within the Volkswagen group, to be followed in effect by other incoming car manufacturers, therefore explains at least part of the apparently low productivity in the Czech motor industry. This implies a limit to the scope for catching up with the most advanced EU countries, even for the most successful part of Czech manufacturing. It can be added that the kilogram prices of Slovak and Hungarian exports in 2003 stood at 76% and 97% of the German level, respectively. This suggests a possible cost of the Czech heritage of small, cheap cars carrying the Škoda name while multinational companies have chosen to produce more expensive vehicles in other countries.

Conclusion

The transformation from a centrally planned economy can have a variety of different outcomes. In some cases it appears to have led to chaos and instability. The Czech Republic appears to have followed a more successful path, creating a functioning market economy with prospects for further growth. Several indicators point to a marked improvement, with accelerating growth, a trade surplus and a decline in the budget deficit in 2005. The roots of this success lie in the base left from the past, in particular in the strong motor-vehicle industry, skill levels that are attractive to a certain kind of inward investor, and a favourable geographical location for exploiting the benefits of EU membership. Government policies of encouraging foreign ownership, pursued cautiously and somewhat sporadically before 1998 and enthusiastically in subsequent years, have also been important.

Reservations relate to a limited scope for autonomous development of Czech firms and to a heavy dependence on foreign ownership of those parts of the economy that

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are crucial to future success. The chosen forms of privatisation, particularly the voucher method, and the encouragement of unsound lending by banks left weaknesses in the finance sector, indicated by the subsequently low level of credit and the small role for the stock market, which created unfavourable conditions for the growth of innovative, domestically-owned firms.

Foreign-owned companies filled this gap, but dependence on inward investors carries dangers of instability from the cyclical nature of many multinational companies' inward-investment activities. The dangers were apparent by 2004 in balance of payments figures, but a continuing inflow of investment and good export performances from foreign-owned companies in manufacturing could be expected to ensure continued net benefits for some time to come. However, dependence on foreign-owned companies may also set limits to the economic level that can be achieved. The kinds of products they choose to manufacture, either less sophisticated or cheaper than those made in the most advanced countries, point to a lasting trap of productivity, and hence incomes, below the levels of the richest EU countries.

In short, the Czech economy has been successfully transformed into a reasonably strong market economy, well up among middle-income countries. However, the basis has not been laid for a place among the world's 'core innovators'.

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