FDI, INTERNATIONAL TRADE AND THE ADJUSTMENT TO WORLD MARKETS IN A SMALL OPEN ECONOMY OF TRANSITION: THE CASE OF CZECH ECONOMY

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1. Introduction

Since the outset of economic transition in Central and Eastern Europe, there have been widespread expectations that foreign direct investment (FDI) would play an important role in the process of convergence. The long-term nature of FDI motivates investors to take an active part in the decision making process, and often necessitates basic changes in the targeted firm's structure and strategy. In addition, FDI brings with itself various positive externalities that help the host economy overcome its shortages outside the host enterprise with foreign capital.

A major problem faced by the transitional economies was the level of knowledge of new technology and its organisation. They displayed 'idea' and 'object' gaps (Romer, [1993]), which the transition process clearly needed to bridge. This problem can be addressed in a number of ways that were also reflected by alternative strategies to economic transition and restructuring. On one hand there is a "national" approach, relying on own (already existing) capital, domestic management and local improvements in education. On the other hand there is an "international" approach, relying primarily on importing the missing technology and know-how. The first approach has many national variants that can be represented by concrete policies, as observed for example in Czechia (1990-1997), Slovenia or Poland, and Belarus and Serbia, respectively. In many aspects the "national" approaches alone proved insufficient to overcome the mentioned gaps. They either failed completely or their potential was soon exhausted. Therefore, in the majority of cases, they were complemented or replaced by an international orientation and the reliance on FDI.

Prior to the recent transition in the Central and East European countries (CEECs), strict limitations were imposed on the access to foreign technology, though the local education was at a high technical level. This posits that lifting the barriers to foreign capital, combined with an expansion in trade linkages with the major industrialised economies, would create a potential for rapid increases in productivity and promote the introduction of necessary reforms to market structures. FDI may, therefore, be of particular importance in the transformation of the formerly centrally planned economies. It can also act as an ideal complement to domestic savings, as low levels of savings combined with credit rationing and financial market failures are likely to keep investment levels sub-optimal.

Many 'ideas', coming as a complement of FDI, are an inherent feature of the technology brought about by foreign firms. They reflect competent 'ways of doing' that are specific to the firm. Other ideas are more appropriable, but may be kept under the control of their proprietor by licensing. In both cases, the involvement of FDI incorporates also the

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inflow of information, R&D and skills. Inflows of FDI can improve the prospects for growth both by introducing more productive technology and techniques and by increasing the level of capital investment in the economy. However, the success of FDI is more easily acknowledged by the host society if the foreign capital direct investments have spillovers outside the particular firms. The success of FDI becomes somehow a "national" success and a part of the national esteem.

It can be the managerial and labour skills, along with the R&D know-how, that spill over to indigenous firms practically free. Firms with foreign capital may also discipline the corporate governance in the indigenous supplying firms by pressing them to upgrade the quality of their material supplies. Also the local political, administrative and social system may become more stable, once the firms with FDI enter into a mutually favourable interaction with their hierarchies. In addition, FDI in tradable sectors helps to integrate the country into the networks of world economy, as nearly two-thirds of global trade is conducted by or with multinational firms. The widening access to world markets, on both the export and import sides, is an act widening the window of opportunities for other domestic firms.

This study is a follow-up of a part of research that was conducted by the author in the past two years and which dealt with international adjustments of the Czech economy. Although the Czech economy went already during 1994-96 through its period of growth and self-confidence, now in 2001, eleven years after the toil of restructuring and adjustments, one cannot claim that its transformation has been completed yet. The available time series for 1993-97, on which the majority of our analysis was performed, is too short for allowing us to draw general conclusions that could be valid even in the long-run. We must be aware that the Czech economy is still in a flux of changes and many developments can be only transitional [2].

2. FDI as an Engine for Survival

Czech economic transformation had its ups and downs. In 1990 it commenced in a hind position, with hardly any experience from entrepreneurship under its "reformed" central planning and with households lacking capital for the initiation of large-scale investments. With these adverse endowments being given, betting on FDI, as the Hungarians recognised very soon, would be a very promising strategy for securing the future growth. Nevertheless, Czechoslovak government opted at that time for a very different strategy in the large-scale businesses based on national self-reliance. By giving priority to the voucher privatisation scheme and the scheme of sales to Czech owners (Mejstrik [1996]) it set forth for a highly unorthodox avenue of development. The ensuing intransparent ownership and perverse objectives of the quasi-owners had a long-term impact on the performance of firms and the Czech society. Though still accepted as an important means of privatisation, the FDI remained a less-favoured child that was assumed to be strong enough to care for himself.

Without doubt, the stress on one's own capacities was a dire undertaking, which was at first criticised by IMF and the World Bank, but very soon it became the Czech most admired achievement. Unfortunately, already in 1996 there were first signals that indigenous Czech firms lagged behind the firms with foreign capital [3]. Czech privatisation strategy was

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[2] *Benacek, Visek [1999], Benacek [2000], Benacek, Zemplinerova [1999] and [2000].*

[3] *The first studies in this respect were by Benacek, Zemplinerova [1996] and Zemplinerova, Benacek [1996] and [1997]. These studies covered the full sample of firms with employment over 24 employees (altogether over 3000 enterprises) and their conclusion was less*

a bet on odds that it could be possible to build capitalism without capital. This was an impossibility theorem, which had to fall down on the new Czech capitalists-to-be. The accumulation of capital was a necessity and the indigenous firms had to act in such a way that instead of concentrating on the restructuring of production, they had to cope with corporate property control, equity transfers and the acquisition of assets under their own management. Many of these acts were illegal [4] and their effects on firms were negative.

The necessity to close the widening trade balance deficit during 1994-97, the government had to proceed with restricting both the monetary and the fiscal policies. That brought the frail Czech firms to a test of survival during 1997-98. In the same period there was a sharp change in the views on ownership. The openness to FDI became the most-favoured policy not only for all liberal parties, but also for the trade unions and Socialists. Unfortunately, foreign investors became very cautious and the changeover to a new strategy remained to a large extent without practical response.

Now it looks evident that those firms that succeeded in attracting FDI were those more lucky ones where the growth of production was combined with high wages and high profits. Since only a minority of firms succeeded in that, the Czech economy was slowly progressing into a system of dual set of firms distinguished by speed. On one hand, there are the indigenous firms that press for low wages, government bailout schemes, soft budget and soft legislation. On the other hand, there are firms with foreign capital that can withstand appreciating exchange rate and still increase its market competitiveness and capital returns. Under this "division of roles" in entrepreneurship there is a rising danger that the gap between these two groups will even deepen and thus perpetuate the existing split.

Thus in 1999 approximately a half of the large firms in the Czech economy were firms able to stand on their own with the prospect for gaining profits. The majority of these were firms with foreign capital. The remaining half (or a third, in the better case) of all large firms is now challenged by either pending restructuring or liquidation. Since it is not very likely that the weakened indigenous Czech corporate sector would be able to recover with the help of their own means, there are two alternatives left which may do the job. The first one is the government bailout. Because the Czech propensity to save is extremely high and also the taxes are very high, the means so available are substantial. The present Czech government thinks that there may be a hope for a change to the better. The problem to be solved is only managerial: who are those clerks and entrepreneurs who will administer and use these means productively? With the lack of them one can have doubts there may be anything perspective in that scheme.

The other chance left to the ailing indigenous enterprises rests in their association with the foreign capital, either in joint-ventures or by their direct takeovers by foreign firms. Unfortunately we can doubt that the FDI entry into Czechia would change its strategy and, instead of concentrating on green-field investments (as was clearly the situation since 1996), it would return back to acquisitions and mergers. If this would not be the case, the only possibility then remains that **the FDI firms, which have now become leaders in the Czech economy, would have positive spillover effects on the rest of the economy.** So, at this stage of development, the Czech economy would be helped more by means of **externalities** spinning off from foreign to indigenous firms than by **direct effects** on productivity in the

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optimistic than what was found in the study by Djankov and Hoekman [1998] who used a selected pattern of 513 firms.

[4] *The word "tunnelling" became a synonym for ingenious schemes of asset stripping and rent-seeking, which have left the majority of indigenous corporations and banks in debts. On top of its inefficient acquisition, the extracted "authentically private" capital was often either sent abroad or spent on imports of consumer goods.*

firms under foreign control. It is the aim of this study to analyse more closely how the foreign investors behaved in the past, what were the determining factors for their local activities, what were the industrial patterns, which attracted their attention, and how was it with their effects on the economy.

3. Foreign Direct Investment into Accession Countries

Though not exceedingly high, if compared with the FDI flows to the developed market economies or to some newly industrialised countries in Asia, the FDI to many post-Communist countries of Europe was significant. It was close zero in 1989 and $ 5 bn in 1994, but in 1997 and 1998 the annual inflows reached $ 18.5 and $ 17.5 bn respectively. UNCTAD estimates that the total FDI flows in the world were $ 644 bn in 1998 (UN [1999]). The recent increasing trends of FDI inflows to Central and East European countries (CEECs) notwithstanding, the results for the whole region in 1998 still represented only 2.7 % of that amount.

The standing of CEECs would be even weaker if we considered their share on total accumulated stock FDI in the world (estimated at $ 4088 bn in 1998). UN [1999] statistics indicate that the FDI stocks in European post-Communist countries reached altogether $ 83 bn at the end of 1998. That would indicate that their 5.1% inhabitants of the world received only 2% of the total world FDI stock in 1998. However, one should keep in mind that there is a deep variation in the FDI absorption among CEECs. The main recipients belong to the accession countries of Central Europe. They received a flow of 4.5 bn $ in 1994, 8.1 bn $ in 1996 and $ 11.6 bn in 1998. Their FDI stock in 1998 was $ 63 bn.

It is clear that the amount of FDI inflows depends on the stage of transformation to market-based economies. The countries (including Russia, Ukraine, Belarus, Lithuania, Latvia and the Balkan countries, altogether with approximately 260 mil inhabitants) have all received in 1998 $ 5.9 bn, what makes $ 23 of FDI flows per capita only. Their total FDI stock is estimated at $ 23 bn. On the other hand, the most intensive FDI total absorption at the end of 1998 was in Hungary ($ 18.3 bn), Poland ($ 24.8 bn) and Czechia ($ 13.5 bn). These countries represent 60 million inhabitants what makes approximately 940 $ of FDI stock per capita, what is quite an imposing record achieved in mere 8 years.

As the economies of the accession countries keep proceeding in their pace for restructuring, modernisation and openness, we can assume that the inflows of FDI to them would continue at an abated intensity or even increase. It can be also expected that, due to the past world financial shocks, the attractiveness of many Pacific Rim countries and some Latin American countries will get under constraints. The stabilisation of Germany after the shock of adjusting with Eastern Germany and the present expectations of increased German growth rates due to the implementation of a liberalised taxation scheme – these factors that could strengthen the position of Europe in the three super-power world conquest. Then one could conclude **that the Central European accession countries might soon become candidates for one of the world's most attractive and the most important destinations of foreign capital investment outside the club of industrially developed countries**. Thus we can expect an acceleration and not a slow-down in the future FDI activities in that region. Recent FDI annual inflows of the mentioned accession countries, with $ 173 per capita in 1998, was already higher than what was achieved in 1998 in Latin America ($ 145) or the world average ($ 109) – see UN [1999].

4. Foreign Direct Investment into the Czech Economy

The average intensity of annual volumes of Czech FDI inflows, measured as a percentage of GDP in the period 1993-1998 (converted to US$ at current exchange rate), is comparable with recipients as successful as Spain or Portugal. The Czech average of 3.6% was higher than what was received during 1991-96 by Spain (1.4%), Portugal (2.5% - see Corado et al. [1996]) or Chile (2.5% of GDP during 1990-95). A less satisfactory result would be received if the FDI per capita or FDI per GDP measured in purchasing power parity (PPP) were used as a criterion. Here, until 1998, the Czech FDI relative intake lagged behind both Spain and Portugal. However, the inflows of 1999-2000, reaching nearly exactly the same amount as in the previous 10 years (i.e. $ 11.2 bn) stroke with an intensity that was not expected by any optimist.

The accumulated amount of incoming foreign direct investment to the Czech Republic reached only $ 5.7 bn in 1995. At that time approximately 65% of all FDI were deals negotiated with the government. After 1995 the initiative was moving to stock market and private green field transactions. This also brought with itself an uncertainty about what was and what was not an FDI and the problems of measurement were mounting. The total Czech stock of FDI at the end of 2000 is estimated to reach $ 22 billion.

Table 1 (in Appendix) suggests that FDI was not an exclusive foreign funding coming to the Czech economy. Long-term foreign credits, with a net contribution of over $ 9 bn during 1990-99, became a very important element of restructuring of the Czech economy. Also the inflows of foreign portfolio investments were significant, though the institutional arrangement at the Czech capital market was ailing chronically. The net inflows of foreign capital of all kinds, (after consolidation with the negative net balance on the factor payments), amounted to $ 23.8 bn during 1991-99. That was more than any of the annual volumes of domestic savings in the post-Communist period.

As far as the industrial composition of FDI is concerned, financial services, hotels, telecommunications, trade networks and business services attracted at least 38% of all FDI. The attraction of the financial service sector has been on a rise in the last two years. However, the remaining services have been burdened with a low level of prices that did not attract investors. The EU accession will press for a speedy price convergence what will also attract the attention of the foreign capital. Until 1999 the manufacturing industry was the most important beneficiary - attracting approximately a half of all FDI. The highest attention of foreign investors was dedicated to automobile industry, electronics, glass, building materials, plastics, rubber, electric machines and food industry. Agriculture, mining, metallurgy, furniture, shoe and textile industries received low attention. It is evident that the distribution of FDI was not proportional among all industries.

The location of FDI in a small open economy is subject to factors reflecting the comparative advantages, factor endowments, market structure and institutional conditions. Taken from a theoretical point of view, the problems of location and long-term growth have been studied most intensively by the analysis of determining factors of specialisation and trade. Closely linked with it, there was the analysis of determining factors of FDI. Let us now bring more attention to these problems.

5. Factor Intensities of Czech International Trade

According to the neo-classical trade theories, the patterns of specialisation are given by relative factor endowments and factor intensities of domestic production. The principle of relative factor endowments implies that, once a country abandons its original integration block and integrates its economy with a different set of countries, its comparative advantage

in factors may change dramatically. This could have happened once the Czech economy switched in its trade alignments from COMECON to an EU partnership. Also the government interventions in a non-market (centrally planned) environment could distort the comparative advantages and lead to trade patterns inconsistent with market signals.

The analysis of factor intensities of exports, imports and total production is therefore important, once our aim is to map the circumstances of changing patterns of trade. There were already several studies that quantified the Czech trade factor intensities before and after the transition (Drabek [1984], Benacek [1987], Hanel [1995], Landesmann [1996], Hoekman, Djankov [1997] and Stolze [1997]). Unfortunately all of them worked with data prior to 1995. Our analysis aims to find out how the factor requirements have changed in the period 1993-1997. Usually the following factors are used for such purposes: physical capital, unskilled labour, human capital and natural resources. For that purpose we have adopted the classification of factor contents by industries, as designed by Neven and Wyplosz [1994]. Accordingly, the industries in a 3-digit NACE classification were clustered into five categories that are indicated in Table 2 in the first column. Our task was to find out what was the growth rate in the given five groups and how this influenced their structure at the end of 1997.

Table 2: The share of commodity groups classified by factor requirements in production (Q), imports (M) and exports (X) in 1993 versus 1997 (in %)

Commodity groups:	Q 1993	Q 1997	M 1993	M 1997	X 1993	X 1997	Trend
1 – advanced technologies	14.2	12.9	27.6	23.3	15.4	12.7	↘
2 – human capital	18.4	21.3	32.9	31.0	20.1	26.7	↗
3 – labour	19.4	21.5	14.2	18.7	24.3	27.3	↗
4 – physical capital & labour	35.0	32.3	20.4	22.9	33.1	29.1	↘
5 – physical & human capital	13.0	12.0	4.8	4.1	7.1	4.2	↘
All commodities	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	

Source: Czech Statistical Office enterprise database (for Q), customs statistics (for M and X)

As one can see in Table 2, during the whole studied period the position of exports of physical capital intensive commodities weakened while exports of commodities with high contents of labour gained. That would be consistent with general expectations in the evolution of comparative advantages in post-Communist countries (Hanel [1995], Stolze [1997]. The buildup of capital intensive industries during the period of central planning (1948-1989) was artificial and the majority of the huge volumes of physical capital endowments were falling behind in the parameters of technical efficiency. Thus they qualified more as sunk costs than a capital that had an economic usage. The falling tendency in industries with advanced technologies can be partially explained by consumer behaviour. As the country was experiencing a fall in income and the budget constraint was becoming tighter, the expenditure on advanced technologies was treated as expenditures on a luxury that must decline. It was also discovered that advanced technologies have lesser space in domestic production since their engagement lacked the comparative advantages.

The most surprising finding, however, concerned the usage of the human capital. While at the beginning of transition (1990-93) both the gross domestic production and the production for exports orientated to products with lower contents of value added and lower contents of human capital, the later stages of transformation have signalled that the role of human capital was rising significantly. We can interpret this finding as a message that the

processes of real adjustment required six years before gaining momentum and set the economy on a new qualitative path.

We have also confronted the above findings with results of a different method of analysis. We have estimated an econometric model where we tried to "explain" the revealed comparative advantages in exports (we have used exports per sales as an endogenous variable) divided into 93 industries (NACE classification). The data were for the year 1994. Results are summed up in Table 3 where UE/VA, LE/VA and K/VA are relative factor requirements of university educated labour (proxy for the human capital), lower educated labour and physical capital. CR3 is the concentration ratio (estimated as the share of the three largest firms on total output in given industry), TFP is the total factor productivity (estimated from Cobb-Douglas production functions), BAL is the Balassa index of intra-industrial specialisation and DP is the index of inflation in given industry. In fact, the above specifications cover the basic determining factors of trade, as they are used by the mainstream of theories of industrial location and specialisation.

The results are compatible with the previous findings. The labour usage (both as skilled and unskilled) was positively correlated with exports while the capital usage was influencing the exports in an opposite direction. The total factor productivity variable was highly significant, what stressed that the costs are important for the competitiveness of exports.

Table 3: Regression coefficients from the analysis of export intensities

Statistics	b_1 (UE/VA)	b_2 (LE/VA)	b_3 (K/VA)	b_4 (CR3)	b_5 (TFP)	b_6 (BAL)	b_7 (DP)
slope coefficients	11.89	7.41	-0.027	0.127	0.006	0.002	0.190
t-statistics	6.75	2.88	-9.98	5.15	9.78	1.24	12.98
probability of 0 hypothesis	0.00	0.01	0.00	0.00	0.00	0.22	0.00

R-squared: 0.940 F-statistics (probability of 0 hypothesis): 0.00

The variable DP describing the change of nominal prices during 1991-94 deserves a special attention. It is assumed that the difference in indices of the industrial inflation reflects the narrowing of the gap between the world prices and the former prices under central planning. The index of DP reflects how the domestic relative prices changed after opening up to the West and how the new domestic prices converged to the price levels on world markets. This is also closely related with the improvements in the terms of trade and the improvements in quality. The higher is the imported "inflation" in the given industry, the higher is the growth in its exports. The Stolper-Samuelson and the Haberler theorems are consistent with this hypothesis. There, after the opening-up of an autarchic economy, the highest price increase is in the industries with comparative advantage. On the other hand, the industries with comparative disadvantage are challenged with a domestic price decrease. Our econometric test did not refute our hypothesis.

The positive relationship between the intensities of exports and inflation in industries became the statistically most significant factor from all selected variables. This finding refutes the common sense offered by the PPP hypothesis. According to the PPP reasoning built into the concept of real exchange rate, any inflation, if it is uncompensated by nominal exchange rate depreciation, is taken as a sign of a losing competitiveness in exports. In case that the „inflation" comes from abroad as an increase in export prices, the PPP hypothesis offers a false conclusion. The increased export price may reflect an improvement in quality, image or better marketing technique. The improving terms of trade due to export price

increases are also a sign that the competitiveness of exports was rising, notwithstanding the parallel real exchange rate appreciation.

The results of the mentioned estimation, based on robust technique of estimation, are consistent with another intuitive hypothesis: that the Czech economy in 1994 had a dual character. There can be observed two parallel patterns of behaviour among producers. In the first group of industries there prevails the behaviour similar to that in stabilised market economies. That means, the behaviour of firms, as far as their parameters of economic efficiency were concerned, was compatible with standard economic theory of resource allocation. The second group consisted of industries where the restructuring was at the beginning and the behavioural pattern of their firms was similar to that under socialist "ownership". First, it was characterised by lower profits and higher debts. Second, their estimated parameters were either insignificant or they had an opposite sign that would contradict the rational behaviour. For example, the allocation of their resources did not show a tendency of substituting between the usage of labour and physical capital.

The problem of a two-speed economy can be of paramount importance, dominating the economic policy issues, if we could find out what were the sources of such peculiar differences. We have to turn to the analysis of FDI in order to uncover some other aspects of these observations.

6. Determining factors and effects of FDI in the Czech economy

The recent study of Benacek and Visek [2000] tested for the factors behind FDI inflows and effects of these investments. One of the tests was based on explanatory variables characterising the comparative advantages, efficiencies and the economies of scale. The model was specified in the following way:

$$FDI_{it} / VA_{it} = a_0 + a_1*(K_{it} /L_{it}) + a_2*(\pi_{it} /L_{it}) + a_3* IRS_{it} + a_4* DP_{it} + a_5*TFP_{it} + \varepsilon_{it}$$

where the intensity of FDI per value added (as the endogenous variable, i.e. FDI_{it} / VA_{it}) in the given industry (*i=1, 2, ..., 15)* was explained by a list of variables, such as the capital per labour ratio (K/L), profits per labour (π /L), increasing returns to scale (IRS), the price level changes (DP) and total factor productivity (TFP). Data covered the period t = 1991, 1992, …, 1997.

Its results, based on OLS regression technique, were more than disappointing. The only statistically significant variable was the matrix of PPI deflators, as represented by DP. It seemed as if the inflows of FDI into industries behaved at random. The vast majority of variations of FDI remained virtually unexplained by our model.

The technique of OLS has a general weakness – it is designed to uncover "regularities" that are supposed to be **invariant** (uniform) **for all variables simultaneously**. That condition need not be always satisfied. For example, in the relationships between FDI and some variable determining the FDI location need not be valid for the whole duration of the time series or need not be relevant for all industries. The reason can rest in the very nature of economic transition: the relationships between variables can be reversed in time or some industries can be influenced in their behaviour by different objective functions. In such cases the collection of data into one data set may become a mistake caused by an insufficient recognition of qualitative anomalies determining the behavioural relationships behind them. Since in our case we cannot exclude such a situation in the analysis of FDI, we decided to

inquire into the behaviour of foreign investors by means of a more sophisticated econometric technique than is the method of OLS [5].

By using the robust method of analysis we have found that there have been only very weak permanent causal links in the Czech economy for the attraction and the success of FDI. Especially the presence of FDI in a particular industry could have been explained only partially. There seemed to be observed a tendency for a random choice of investment ventures. It looked like a mistake to assume that investments grouped into 15 industries could reveal the causes of investments. We could presume that investments were determined at the level of firms (and not industries), especially if advantageous privatisation deals could be achieved under discretionary conditions. Nevertheless, a bit better general observations could have been drawn even at the given level of industrial break-up.

Contrary to the findings concerning the specialisation pattern of **trade** before 1997, all earlier studies of Czech FDI concluded that FDI seems to be attracted more by capital intensive production than by the labour intensive production. Most probably the stabilisation of the Czech economy after 1993 and extremely high investments into capital resulted in a break in the factor comparative advantages. In late 1990s labour has not been any longer the dominant factor that offered an exclusive explanation of Czech economic (comparative) advantages. Its place has been slowly replaced by physical capital. As was found in the analysis of determining factors of Czech trade (Benacek, Zemplinerova [1999]), there was yet emerging another important factor after 1995 – the human capital. These trends, however, were in buds during 1995-97.

On the other hand, the majority of phenomena decisively distinguishing the firms (industries) with FDI from indigenous firms could be found on the side of **effects of FDI**. Generally the presence of FDI means higher efficiency (e.g. rising profitability, total factor productivity or, increasing returns to scale) and higher competitiveness (e.g. improving quality or terms of trade). If this trend would continue, the gap between the foreign and the indigenous enterprises would be further widening. As a consequence, we cannot expect that indigenous firms would enjoy the same natural "comparative advantages", which were observed to have been developing in firms with FDI. **The benefits of FDI could be then internalised exclusively in recipient enterprises** and the indigenous firms could fall out of the competition.

The analysis by means of the robust method of estimation finally confirmed the existence of two subpopulations of FDI in industries. The difference was not in the behaviour of the K/L variable (it was positive everywhere) but in the relationship to the efficiency variables. In the main subpopulation the FDI was targeting industries where there was high profitability per labour and high total factor productivity. These were industries successful from its very start. The complementary subpopulation of industries contained industries that were not very profitable. However, they revealed a potential in the increasing returns to scale and also its prices were rising fast. By separating the original sample of industries into two groups the coefficient of determination increased from 0.16 to 0.55 – 0.64. We could see that the FDI was industrially determined (though not completely). Also the economic parameters of industries mattered, though we could not find uniform determining factors for all industries at the same time.

[5] *The technique we have applied belonged to the so-called robust methods of analysis based on least trimmed squares (LTS). For more details see Benacek and Visek [2000].*

7. Predictions and Challenges for the Next Developments

The fast growing importance of FDI in the Czech economy, their profitability and re-investment activities, can lead to a prediction that foreign-owned enterprises will become the decisive actors in the Czech economy in approximately the year 2003. This will be a final closure of the "Czech way" of privatisation that dominated the domestic economic policy-making during 1990-96. It is already evident that the privatisation strategies, that were set for supporting the indigenous (national) ownership, have failed in the majority of such objectives. It was generally believed in the local political circles that the prescriptions for bringing a transient economy into a high growth and prosperity pivot around the macroeconomic stabilisation, liberalisation of trade and prices, and privatisation defined as a de-etatisation (i.e. the release of the capital assets out of the hands of the State). While the Czech macroeconomic policy was relatively successful throughout 1990-96, the misconceived and poorly implemented privatisation brought an extremely heavy price on the whole economy.

Czech approach to privatisation was based on the belief that any initial de-etatisation (redistribution) of property was a sufficient condition for finding final owners guaranteeing an optimal exploitation of given assets. It was argued theoretically, by using both the theory of factor location and the Coase theorem, that the initial misallocation of resources did not matter, once market negotiations and trade could lead to their more efficient redistribution. The desired outcome was supported by political objectives that brought transaction costs to a low level both in (a) acquiring the liquidity and in (b) the equity trading. That was why the banks were not privatised and the existence of three parallel stock exchanges was promulgated.

Nevertheless, it was somehow forgotten that there were two additional essential economic conditions:

(c) property rights should be clearly defined and enforceable;

(d) capital markets should be efficient.

Once the preference of economic actors for re-distribution of property over its restructuring was eminent, the enforcement of these two latter conditions lacked public support. Thus conditions (c) and (d) were **not** satisfied from the very start, what negatively influenced the microeconomic decision-making. The interaction of economic players became biased towards soft credits, debts and heavy government bailouts. The fast growing credits granted by banks lead to moral hazard and enormous growth in non-performing debts. The unregulated trading of equity at three isolated stock exchanges was heading to frauds and abuse of minority shareholders.

The crucial importance of the Government throughout the process of Czech privatisation caused that the capital markets were not developed and the whole privatisation was dominated by the interaction with bureaucracy. **The role of bureaucrats, either in semi-state banks or in public administration (ministries) became more important than the performance of markets**. Then the restructuring became too demanding and uncertain, especially if compared with an easy alternative represented by asset stripping. A large part of the indigenous firms (i.e. their managers or owners) even switched in their objectives from redistributional aims to destructive aims.

As the Government was too heavily involved in the privatisation, both in orchestrating the deals and in guaranteeing the bailouts, the moral hazard prevailed at the level of decision-making. Under such arrangements also the privatisation of banks, the introduction of strict bankruptcy laws and the state supervision over the capital markets would be a threat to the stability of the Government. As a result, the dependency of the economy on injections from the side of easy monetary policy was sharply rising, though it

was clear already in 1996 that the bubble would have to burst is some future. As the hidden microeconomic pressures were rising, the politics became less willing for a change at the level of macroeconomics. Thus the macroeconomic global revamping was constantly postponed until the break-out of the financial and economic crisis in April 1997.

Some important changes were introduced in the economic policy afterwards and some more are still pending. It is undisputed now that it is the foreign capital that became the engine of growth in the Czech economy. Though important, the FDI incentive schemes (implemented since 1998) have not been the decisive factor behind the acceleration of FDI inflows since 1999 [6]. What also mattered was the stabilisation of the economy after 1999, prospects of future growth, quality of the labour market and the Czech geography where the advantages of a periphery were combined with an easy access to the core of EU markets. The success of transition is not guaranteed unless further reforms are implemented that will transform Czech Republic into a modern prosperous society. A short review of these reforms is presented in the Supplement to this paper.

REFERENCES

- Benacek V.: International Trade Theories and the Adaptation Process to Structural Change in a Planned Economy, (edit. L. F. Pau, B. Martos), Pergamon Press, Oxford, 1987
- Benacek V.: Investing in Czechia and in Accession Countries of Central Europe: the Pros and the Cons. Paper presented at the conference "A New Dialogue Between Central Europe and Japan", Prague, Charles University, 2000
- Benacek V., Gronicki M., Holland D., Sass M.: The Determinants and Impact of FDI in Central Europe. Paper of NIESR, London, 1999
- Benacek, V., Visek, J. A.: Supply-Side Characteristics and the Industrial Structure of Czech Foreign Trade. ACE Project Research Paper, Charles University, Prague, 1999a
- Benacek V., Visek J. A.: The Usage of Factors in a Dual Economy: Specialisation in the Czech Foreign Trade. *Proceedings of MACROMODELS'99*, University of Lodz, Poland, 1999b
- Benacek V., Zemplinerova A.: Foreign Direct Investment - East and West: The Experience of the Czech Republic. In: Proceedings from the Conference on Technological Co-operation, Chung-Hua Inst. for Economic Research, Taipei, Taiwan, 1996, p. 301-388
- Benacek V., Zemplinerova A.: Growth and Structural Changes in the Czech International Trade in Manufacturing during 1993-97 (In Czech only). Finance a Uver, 49, no. 12, 1999, p. 737-756
- Benacek V., Zemplinerova A.: The role and position of generic private firms in the Czech economy. The comparison of large and small firms in 1994-98. Charles University, Working papers, 2000

[6] *The annual inflows of FDI were $ 2.7 bn in 1998, $ 5,1 in 2999 and the forecast for 2000 is $ 6 bn. As an illustration, let us look at the case of Philips investment into household electronics production at Hranice (North Moravia). The plant will be built in 2001 as a replacement of capacities relocated from Wales (GB) due to rising labour costs and appreciating Sterling relative to Euro. The FDI commitments are $ 200 mil in 2001 with an extension to $ 600 mil in the second stage of development. The incentives represented an injection of $ 40 mil mediated by the Czech government which comprised approximately 7% of the FDI. In addition to that there will be a corporate tax exemption and concessions for the payment of tariffs granted under free customs zones arrangements.*

- Djankov S., Hoekman B.: Avenues of Technology Transfer: FDI and Productivity Change in the Czech Republic. World Bank and CEPR London, 1998
- Drabek Z.: A Comparison of Technology in Planned and Market–Type Economies. Eupean Economic Review, 1984, p. 293-318
- Hanel P.: Factor Intensity and Composition of Foreign Trade. Czech Republic, 1989-94. CERGE-EI, Prague and IHS, Vienna, 1995
- Hoekman B., Djankov S.: Determinants of the Export Structure of Countries in Central and Eastern Europe, *The World Bank Economic Review, no.* 9, 1997
- Landesmann M.: Emerging Patterns of European Industrial Speicalization: Implication for Labour Market Dynamics in Eastern and Western Europe, WIIW Research Reports no. 230, 1996
- Mejstrik M. (ed.): The Privatization Process in East-Central Europe. Kluwer Publ., London, 1996
- Neven D., Wyplosz C.: Relative prices, trade and restructuring in European economy. Discussion Paper, no. 1451, CEPR, London, 1996
- Romer, P, (1993), 'Idea gaps and object gaps in economic development', *Journal of Monetary Economics*, vol.32, pp.543-573.
- Stolze F.: Current structural changes and emerging foreign trade patterns in the Postreform Czech Economy, 1989-1996, *Eastern European Economics*, 1997, p. 41-87
- UN: World Investment Report 1999. United Nations, New York, 1999
- Visek, J. A., Benacek V.: The determinants of FDI in the Czech economy: The robust analysis applied on industrial data in years 1991-1997. ACE Programme Research Paper, Charles University, Prague, 1999
- Zemplinerova A., Benacek V.: Foreign Investment in the Czech Republic. In: G. Czáky, G. Foti and D. Mayes (eds): FDI and Transition, Budapest, Inst. for World Economics, Trends in World Economy No. 78, 1996, p. 83-96
- Zemplinerova A., Benacek V.: Foreign Direct Investment in the Czech Manufacturing Sector. Prague Economic Papers, June, 1997, p. 141-155

APPENDIX : List of Main Pending and/or Proposed Reforms Challenging the Czech Transition

Remark: This part of the paper is normative and it relates only loosely to the previous analysis in this study.

Though the Czech society has passed through enormous changes in the period 1990-2000, many reforms were not completed and some of them were even detrimental to the development. There is still pending a vast list of further reforms. In order to bring the country to stability (both macro and micro-economic) and on the path of a fast growth, the following problems should be brought under scrutiny. The list reflects some essential current issues discussed in the Czech society. The majority of them have been already officially addressed and some pending reforms will be even soon introduced.

Nevertheless, it is easy to see that the transition will attenuate only slowly. The opposition to many changes is very strong. So, even though there could be a social consensus about many changes, their implementation could lead to unexpected and unintended results that reflect the vested interests. Therefore we should expect that many reforms will have to be implemented in several steps, some of them contrary to each other.

a] The **political system** should generate politicians that would consider politics and the Government services as a service to the public and not a service the vested interests of their own or of their parties. The present generation of politicians in their 50s and 60s should be replaced by a more innovative structure of power. Recent Czech elections have shown that parties at the right from the centre have been gaining more power and the pendulum of power may again strike even firmer to the right.

b] The existing social incentive schemes, opening too large a window of opportunities for rent-seeking, re-distribution of property and appropriation, should be turned into the preference of creative activities, productive entrepreneurship and co-operation. This can be called a **moral revival** of the society that can be associated with the changes in the political structures.

c] The **role of the state,** involved in the redistribution of the GDP (approximately 50% of the GDP is taxed or appropriated by the government) should decrease. This will give less power to the bureaucracy and offer more opportunities to the private sector.

d] The past attempts to **re-vitalise** the economy by relying on the state capitalism are ill fated, leading only to the growing indebtedness of the state. The government bailouts should be superseded by a reliance on **private initiative** and healthy banking sector.

e] The pre 1998 lukewarm or even suspicious relationship to the **EU accession** has been recently changed at the level of the Government to a more co-operative pragmatic attitude.

f] The **legislation and the judiciary** should become the underpinnings of the rule of order, superseding the present frail (and in some respects practically non-existent) enforcement of the law. The past tendency to leave the contracts incomplete, what resulted in general defaults among trading partners, is no more tenable politically because the public opinion is opposing it.

g] A new wave of a **real privatisation** (mostly by foreign owners) will continue and redress the fatal errors of the voucher privatisation, which led to dispersed ownership and weak corporate governance.

h] The **privatisation of banks** should improve the functioning of the **financial market**, helping thus transfer the large fund of savings available into efficient investments.

i] A reform of the **pension system** should proceed during the next 7 years when the ratio of retired persons (the wave of the post-war baby boom) on the working population will dramatically increase. This reform is also closely connected with the help to the ailing **capital market**.

j] The system of **taxation** is inefficient and the tax evasion should be eliminated. The burden of the tax quota should be reduced to approximately 40% or even 35% of the GDP.

k] An effective **regulation of the capital market** should halt the market imperfections caused by insider trading and moral hazard that damaged this economy so much during 1993-96.

l] The whole strategy of preparation for EU accession should be overhauled and transferred into a manageable system. The **adjustment of the local legislation to EU** legislation should be speeded up urgently, otherwise Czechia may be delayed from the entry.

m] The **regional administration**, included in the constitution since 1993, is due to be established in 2001-2.

n] The principles and the organisation of the **public service** are undergoing a process of overhauling and the present practice will be soon regulated by a new law.

o] The number of employees in the public sector should be substantially decreased (e.g. by 30%) so that the **power of bureaucracy** be reduced.

p] The **incentive scheme for foreign direct investment** should be revamped in order to bring an even more open environment for investments from whatever sources (foreign or domestic). The incentives should be extended to include the promotion of subcontracting of indigenous firms by more successful foreign-owned firms, so that the spillovers from the latter to the former are significantly higher than they were in the past.

q] The **price deregulation** in energy, fuels and some government services should be speeded up.

r] The **prices of housing and land** should be deregulated so that a normal market in real estates can be established.

s] The **natural monopolies** (such as electricity grids and public utilities) should be regulated once the markets are not effective in those fields. The regulation should be accompanied by segmented **privatisation** leading to breaking-up of monopolies.

t] The **health system and the health insurance** need a global change that would increase their efficiency, as their system of financing and incentives was neglected and delayed for long.

u] The regulation of farming products and the system of **subsidies to agriculture** should be adjusted to the regulatory norms of the EU (even though one has doubts whether this is a rational system).

v] The reform of **basic and secondary education** should be quickly initiated because these schools fail in providing the necessary skills required in globalised societies.

w] The fee-free **university education** excludes 60% of applicants because of the Government controlled quotas. The result is a corruption and a low quality of high education. The system should be changed and a more open approach introduced.

x] A new system of financing the **basic and applied research** should be implemented, allowing for competition and efficiency. The system separating the high education from R&D should be abandoned and the incentive schemes for research should promote more the applied character of R&D and reward the performing researchers.

y] The development of **small and medium-sized enterprises** should be promoted especially by institutional changes that would decrease the burden of bureaucracy falling on that sector and offer a better access to credit lines from the banking sector.

z] The **depreciation and investment policy** should be simplified and deregulated. The small and the profitable firms should then have a better access to cashflow needed for investments and restructuring.

Table 1: Review of the Czech FDI, portfolio investments, long-term credits and deposits from abroad (in million USD)

Item	Foreign financial flows	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	1990-1999
1	FDI annual inflows (in current $)	49	546	1003	653	868	2562	1428	1300	2719	5108	16236
2	Growth rate of FDI (prev. year=100 %)	-	1,114	184	57	152	297	56	91	209	188	-
3	FDI flow per capita (in $)	4.8	53	97	55	84	250	139	127	265	498	1584
4	Cumulated FDI stock from abroad	49	595	1,598	2,251	3,119	5,681	7109	8409	1112	16236	16236
5	FDI / GDP in current prices (in %)	0.09	2.25	3.54	1.80	2.18	5.05	2.52	2.50	4.88	9.63	27.4
6	FDI / total gross investment	0.7	11.7	14.1	6.5	7.4	16.3	8.0	6.9	13.1	20.0	-
7	Net flow of portfolio inv. (liab.-assets)	n.a.	n.a.	-23	1600	855	1362	726	1086	1069	-1395	5280
8	Net long-term credits (liabilities-assets)	n.a.	n.a.	215	806	1109	3367	3110	407	-918	-316	9014
9	Net short-term financial transactions	n.a.	n.a.	-1274	56	659	971	-927	-1687	122	-716	-2806
10	Annual gross capit. inflows (1+7+8+9)	49	546	-79	3115	3491	8262	4337	1106	2992	2681	27,724
11	Current account balance	n.a.	n.a.	n.a.	456	-787	-1369	-4292	-3156	-1822	-1058	-12,028
12	Net factor payments (incl. dividends)	n.a.	n.a.	-560	-118	-20	-106	-723	-650	-983	-739	-3899
13	FDI flow abroad (outgoing)	n.a.	n.a.	n.a.	-90	-120	-37	-41	-25	-110	-197	-620

Source: Bulletin of CNB, Annual Reports of CNB, Balance of Payments [1993-99]