



Pergamon

Communist and Post-Communist Studies 35 (2002) 191–211

www.elsevier.com/locate/postcomstud

**Communist and
Post-Communist
Studies**

“Please invest in our country”—how successful were the tax incentives for foreign investment in transition countries?

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Abstract

Because of the scarcity of capital the attraction of FDI became an objective which was followed with topmost priority in many post-socialist countries. But how effective were the introduced incentives? The comparative analysis shows that in spite of the advantageous effects of FDI on the transition process, the introduction of tax concessions appears to be of little value. No significant relationship between tax incentives and the level of FDI could be found. This, however, does not mean that the development of FDI was detached from political control. The way in which privatization took place had a big impact and a comparatively low general level of taxes influenced investments positively. Beyond this the general success of transformation was of importance for the attractiveness of a country. © 2002 The Regents of the University of California. Published by Elsevier Science Ltd. All rights reserved.

Keywords: Foreign direct investment; Tax incentives; Political economy; Comparative analysis

Introduction

Can capitalism be set up without capital? The question points to a specific problem, which confronted the governments of post-socialistic countries undergoing economic transformation. In view of the extraordinary shortage of capital, the incentives to attract FDI (Foreign Direct Investment) became a focus of political activity to which great importance was attached.

The introduction of tax incentives for FDI could be justified by a number of

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reasons. The technological standard of production in post-socialist countries was low at the time of transition; on the other hand the occupational skills of the employees were high. FDI induced “spill overs” (OECD, 1995; Liu et al., 2000; de la Potterie and Lichtenberg, 2001 promised to bridge technological and capacity gaps.

Every transfer of know how has an effect on local suppliers and customers as well as on the competing firms which are struggling to adapt to the given changes. The strategic decisions of foreign investors could thus contribute to a fundamental change of the economic climate (Jermakowicz, 1995; Barrell and Holland, 2000). Furthermore the cross border networking of production facilities brought about by FDI gave rise to the hope that the problem of economic isolation could be eliminated (Laski, 1998).

The academic discussion whether there are negative effects which are at least as important as the positive ones has been going on for a long time (see Dunning and Hamdani, 1997; Dees, 1998; de Soysa and Oneal, 1999; Zhang, 2001. In view of the peculiar starting point, the pessimistic side of the debate (Bornschiefer and Chase-Dunn, 1985; Kentor, 1998; Aitken and Harrison, 1999) has met with little response in the post-socialistic countries. Although nationalistically oriented critics enjoyed public support, they had surprisingly little influence on government policies.¹ Of the 15 transforming countries compared below,² only Poland did not make use of tax concessions to facilitate FDI.

With this in mind the question whether or not the introduced incentives in the form of tax concessions were successful becomes important.

Was it possible to stimulate FDI activity by tax incentives or does one now, in retrospect, see that the steps undertaken did only have a low impact on the level of FDI?

It may have been possible that the level of investment was largely dependent on factors which politics had *no* influence on. First of all the different legacies of the past of the countries have to be considered. If these differences were so significant that it was possible to control the propensity of foreigners to invest at best marginally the resources could have been saved and utilized elsewhere for a more useful purpose.

A further possibility is that the level of FDI could be influenced not by tax incentives but by other political measures. Under the special conditions of post-socialist countries the privatisation process might have been of special significance. The financial resources for tax incentives equally could have been used better elsewhere, if this was the dominant factor for FDI.

Central to the following analysis is, therefore, the question to what extent the incentives have contributed to an increase in FDI. Firstly the peculiarities and compl-

¹ “Controversy about unwelcome foreign takeover is usually confined to parliamentary and press debates and has no decisive influence on government policies” (Hunya, 1992, p. 507).

² This concerns those transforming countries that were not influenced by wars or the radical changes following such events (Bulgaria, Czech Republic, Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Poland, Romania, Russian Federation, Sloval Republic, Slovenia, Ukraine, Uzbekistan and Belarus). Kyrgyzstan and Turkmenistan could not be considered because of insufficient data.

icacies of regulations for FDI will be considered (Section 2). In the second step, by means of a comparison of 15 post-socialist countries, we shall look at whether there is a connection between investment incentives and levels of FDI (Section 3). With multivariate regression models it then will be examined which other factors could help to explain the variance in the distribution of FDI (Section 4). In the fourth part we shall focus on the connection between the progress of transformation and the level of FDI (Section 5). In conclusion we will evaluate whether the high priority accorded to the promotion of FDI in the context of transformation was generally justified or not (Section 6).

The uncertain effectiveness of incentives for FDI

The effectiveness of policies intended to attract foreign investment is highly uncertain. The introduction of incentives is directed towards changing the decision making structure in prospective foreign investors. As the focus group of such investors is not homogenous, one may also expect different areas of interest. According to whether the investors are large or small, whether they have adequate international experience, whether they come from a particular branch of business, certain incentives which could be of interest to some investors are not at all interesting to others. The exemption of tax on profits, over a relatively short period of time, can only be of interest to those investors who can rely on profits from the very beginning. Incentives, which presuppose a certain volume of investment, do not appeal to small investors.

The problem controlling these mechanisms is further complicated by the fact that investors pursue different objectives with their investments. Certain investors may have the opening of "new" markets in mind; others are interested in taking advantage of low labor costs, others in exploiting natural resources. These differing objectives can usually be achieved in several ways. For the companies that are mainly interested in selling their products to the people in the transition societies, the setting up of a production facility is not absolutely necessary. Firms, which are interested in low labor costs, can try to reduce costs in their existing locations. Cheap raw materials can also be imported from the region. The final choice of strategy depends not only on a cost benefit calculation, but also to a large extent on the overall strategic orientation of the companies in question (Melin, 1992). The propensity to invest on the part of the foreign investor will be primarily influenced by the specific situation of the individual investor. According to the analyses of Klaus Meyer and Saul Estrin the decision to adopt a specific form of direct investment (Joint Venture, acquisition, formation of a new company) can better be explained on the basis of the investors' different characteristic features rather than by factors that distinguish the transforming countries.³

³ Meyer and Estrin (1997); Meyer (1998).

A further problem for the political control of the investment volume is related to the variability in the terms of reference. The efficacy of an investment always depends at least on the competing conditions of the different post-socialist countries, if not on the changing alternatives, which are given worldwide. If all transforming countries were to offer similar incentives then their effects would in turn cancel each other out. The individual countries land themselves into a competitive situation, which consumes a lot of resources without a proportionate impact.

The deterioration of the relationship with other political and economic players within the country has also to be reckoned with. The introduction of incentives may fuel nationalistic campaigns by political opponents. Moreover, encouraging FDI puts existing domestic companies and investors to a disadvantage. The negative effects, which are caused because of this, could possibly outweigh the positive ones which might be achieved through FDI.

Irrespective of these many-faceted control problems almost all transforming countries have implemented incentives for FDI. In most of the countries these measures are not being followed up consistently (Beyer, 2001). Only Hungary and Romania have offered incentives from the beginning of the transformation process till now. In some countries these measures were stopped at a particular point in time (Latvia, Lithuania, Slovak Republic, Ukraine), in some others new measures were taken up again after a certain interval (Czech Republic, Belarus). In Slovenia tax incentives were introduced only very late and in the case of Bulgaria, we can notice several rapid changes in policy towards FDI.

The most common means of favoring foreign investors are tax holidays,⁴ that is, tax exemptions that are limited for a certain period in time. Frequently, restrictions are introduced so that the incentives only apply for certain types of investment. Such limitations would usually stipulate a specific threshold level of investment, whereby below this level no incentives are offered. A variation of this procedure came about in Estonia and Latvia. Here investors were given incentives according to the volume of money brought in (FAZ et al., 1995). In many post-socialist countries certain economic sectors were given priority or the incentives were graded depending on the branches of the industry. In the Hungarian case the appropriation of incentives is furthermore linked to the condition that a certain percentage of commodities are produced in Hungary. For Joint Ventures there are regulations in many countries whereby a certain percentage of foreign investment is necessary, so that this type of investment is eligible for incentives.

In later years one finds regulations that are particularly narrowly specified.⁵ A

⁴ Besides tax holidays, in some cases advantageous rates of depreciation were made use of, e.g. in the incentives offered in the Czech Republic in 1998.

⁵ The current Romanian regulation can serve as an example. A 50% reduction in taxes is offered when profits are reinvested or if money is spent on environmental protection measures. A 25% reduction is offered for complying with the following regulations: (1) Import of at least 50% of the requirements of raw materials, energy or fuels; (2) Export of at least 50% of the production or services; (3) At least 10% to be spent on R&D in Romania; (4) Creation of at least 50 new jobs (FAZ et al., 1999).

general trend towards stricter specifications cannot be deduced from this, as some countries continue to rely on simple criteria for incentives.

Incentives and their importance for the inflow of FDI

To what extent did the special regulations for foreign investors succeed? Let us first of all have a close look at the development of FDI between 1989 and 1998. (Table 1). It becomes clear that the level of FDI fluctuates considerably between the countries concerned. Whereas Belarus between 1989 and 1999 could attract FDIs worth only US\$ 739 million, Poland received US\$ 20 047 million in the same period, i.e. more than 27 times as much. According to the level of cumulative investments, Hungary, Czech Republic and the Russian Federation lie considerably lower than Poland. If one considers FDI per capita, Hungary (US\$ 1764) comes before the Czech Republic (US\$ 1447) and Estonia (US\$ 1115), and the lowest levels of per capita FDI are found in Belarus, Ukraine and Uzbekistan.⁶

In most countries the investments increased over the years. In almost all countries the investments made in 1999 are substantially higher than those made in 1993. Only in the case of Hungary one can note an exception, as here the rates of investment were comparatively high from the very early stages of the transition process. The most remarkable increases are to be found in Lithuania (the value for 1998 is 30 times higher than in 1993), in Romania (1998—21 times), Bulgaria (1999—20 times) and Poland (1999—11 times).

The big variation existing between the countries calls for an explanation. The comparatively high investments per capita in the Hungarian case suggest that tax incentives provided by the state are of prime importance. The continuing promotion of FDI in Hungary ever since the beginning of the transformation process has caused many analysts to proclaim a close connection between FDI and tax incentives (Csáki, 1995; Hunya, 1998).

The second country in which FDI incentives have continually existed—Romania—shows, however, a propensity to invest that is below average. The remarkable increase in FDI in Poland also proved the expectation wrong that incentives are of pivotal importance, since Poland consistently did it without preferential incentives. Likewise, the above-average increase in Lithuania cannot be a result of incentives as the increase was achieved at a time when no incentives were offered.

A correlation in which all country/time points between 1993 and 1998 are combined shows the insignificantly negative correlation coefficient of $r = -0.116$. This speaks also against the assumption that incentives play a central role. But the result of this correlation might be influenced by the way of comparison.

⁶ Most analysts have come to the conclusion that the levels of investments achieved have been surprisingly low in general (Sinn and Weichenrieder, 1997; Cornia et al., 1998). As an exception refer to the analysis of Brenton et al. (1998) who, basing their analysis on “gravitation theory”, showed no abnormally low levels of investment. Case specific reasons for two levels of FDI in the Ukraine are analysed in Ishaq (1999).

Table 1
Foreign direct investment (net inflows recorded in the balance of payments)

Country	1989–92	1993	1994	1995	1996	1997	1998	1999	1989–99	1989–99 per capita
Hungary	3428	2328	1097	4410	1987	1653	1453	1414	17770	1764
Czech Republic	1614	563	749	2526	1276	1275	2641	4912	15556	1447
Estonia	58	156	212	199	111	130	574	222	1662	1115
Latvia	43	50	279	245	379	515	303	331	2140	866
Slovenia	155	111	131	183	188	340	250	144	1502	701
Lithuania	52	30	31	72	152	328	921	478	2064	545
Poland	401	580	542	1134	2741	3041	4966	6642	20047	518
Kazakhstan	0	473	635	964	1137	1320	1143	1584	7256	494
Slovak Republic	100	107	236	194	199	84	374	701	1995	391
Bulgaria	42	40	105	98	138	507	537	806	2273	284
Romania	77	87	341	417	415	1267	2079	949	5632	252
Russia	200	400	500	1663	1665	4036	1734	746	10944	71
Belarus	57	18	11	15	73	198	142	225	739	67
Ukraine	170	200	151	257	526	581	747	489	3121	55
Uzbekistan	9	48	73	-24	90	167	226	201	790	32

Source: EBRD Transition Report, 2000, UNCTAD World Investment Report 1999. Note: FDI inflows in million US\$, last column: FDI inflows per capita in US\$.

Because of this, complementary analyses are required. On the assumption that an appreciable attraction is given by incentives, every change in FDI policy should result in changes in the level of annual investment. A comparison between the year preceding the one in which the tax incentives were introduced and the following two years should make evident that the level of investment in the succeeding years exceeded the level of investment of this year. Conversely, the abolishing of the regulation or expiration at the end of its duration should lead to a reduction in the investment.

Between 1993 and 1998 there were 14 cases of such changes between incentives and no incentives (Table 2). In five cases an advantageous regulation was introduced, whereas in 9 cases an existing regulation was abolished or expired. In three of the five cases in which a preferential treatment was introduced an increase in investment was observed in the first year (Czech Republic/1998, Bulgaria/1996, Bulgaria/1998). In regard to the second year the number of expected results was increased by Belarus/1998. In the Slovenian/1998 case, in spite of the introduction of a special regulation, a reduction in investment took place in both years rather than the expected increase.

In the 9 cases in which an existing regulation was not continued, in the first year

Table 2
Effects of tax incentives in the two years after introduction or expiration

Country/Year			1. year	2. year	Comparison with expectation
Introduction of a tax incentive for foreign investors	Belarus	1998	71.7	113.6	—+
	Bulgaria	1996	140.8	517.3	++
	Bulgaria	1998	105.9	159.0	++
	Czech Republic	1998	207.1	385.3	++
	Slovenia	1998	73.5	42.4	--
Mean			119.8	243.5	
Expiration or abolition of a tax incentive for foreign investors	Belarus	1996	486.7	1320.0	--
	Bulgaria	1994	262.5	245.0	
	Bulgaria	1997	367.4	389.1	--
	Estonia	1994	135.9	127.6	--
	Kazakhstan	1996	117.9	136.9	--
	Latvia	1996	154.7	210.2	--
	Lithuania	1995	232.3	490.3	--
	Slovakia	1996	102.6	43.3	—+
	Ukraine	1996	204.7	226.1	--
Mean			229.4	354.3	

Source: EBRD Transition Report, 2000, FAZ et. al. (eds) Osteuropa Perspektiven Jahrbuch, own calculations. Note: Net inflows of foreign direct investment in per cent of the level of inflows at the time of introduction or expiration/abolition ($t_0 = 100$) of a tax incentive. + in last column indicates an expected result, - stands for unexpected results.

not a single case of FDI was reduced; in the second year only in a solitary case did the investment fall below the initial investment (Slovakia/1996). In general, noticeably more cases were found which contradicted the expected trend than those which can be interpreted according to our initial considerations.

Furthermore if we compare the changes in the group of those cases where tax incentives are introduced with those where tax incentives expired or were abolished we can observe an increase in the second group which is on average much higher (Table 2, $t_1=119.8$ to 229.4, $t_2=243.5$ to 354.3) than in the first group. If we omit the extraordinary case of Belarus/1996 in this calculation comparable changes in both groups are found ($t_1=119.8$ to 197.2, $t_2=243.5$ to 233.6).

To summarize, the bivariate comparison speaks clearly against the impact of incentives. In the next step of analysis, this result will have to be examined as to whether it is sustainable in a multivariate analytical design.

Multivariate analyses for the explanation of different FDI levels

Principally it is possible that the results of a bivariate analysis will not be validated in a multivariate design. This is always the case when other relevant factors overlap an existing effect.

In the discussion of the varying success of transformations of post-socialistic countries particularly the different starting conditions of the countries undergoing transformation are usually considered to be meaningful (Karl and Schmitter, 1991; Stark, 1992; Beyer and Wielgohs, 2001). Some authors argue that the legacies of the past are so important and the freedom of action of the players so inhibited that the result of transformation can be judged completely as dependent on the past (Jowitt, 1992; Murrell, 1996; Panagiotou, 2001).

In the literature on transformation, two sets of explanations are often viewed as alternatives, which exclude each other: the legacies approach vs. approaches that focus on the policy choices of actors. In a multivariate perspective this antagonism might be resolved. The controlling inclusion of variables, that define the starting conditions, in fact can lead to a picture where the impact of incentives becomes evident for the first time. It would, for example, be possible that the big difference of the levels of FDI can be put down to the different starting positions of the different countries. However in the case of similar starting positions incentives become decisive. The support for FDI in this case would not be a suitable instrument to bridge the differences in the starting situations, but could at least work as a compensatory factor.

To check this possibility several multivariate regression models have been worked out. In the case of a dependent variable we always consider the logarithm of the annual per capita level of FDI. The data was pooled for a maximum of 6 years (1993 to 1998)×15 countries that is 90 points of observation. Because of the availability of data, however, the number of observation points to be analyzed is reduced in the majority of the models to 4 years (1995 to 1998)×15 countries = 60.

The models have been constructed in such a way that specific variables are always contained in the model and further variables are introduced subsequently. Table 3 gives an overview of the variables used. Apart from the variables for the starting situation and for (tax) incentives for FDI in particular, additional variables for the economic and political context after transition and the differences in the privatization process have been taken into account.

In the first block of models (models 1–10) we control for the initial conditions with the two variables PRIN1 and PRIN2, which resulted from a factor analysis by de Melo et al. (1997). The variable PRIN1 represents above all the following background variables: for one, initial economic distortions, which are made operational by the level of suppressed inflation, the extent of dependence on foreign trade and the difference between official and black market values as well as the regional historical experience of the market and the degree of the country's independence before 1989. De Melo et al. describe the variable PRIN1 as follows: "PRIN1 might largely be interpreted as an index of the degree of macro economic distortions in the beginning of transition and a measure of unfamiliarity with market processes. With liberalization these distortions would translate into shocks to the economy and therefore be viewed as a measure of the *intensity of transitory shocks*." (de Melo et al., 1997, p.17).

In contrast to this PRIN2 covers the following variables: Level of per capita GDP (PPP), level of growth rates reported in the 80s, availability of natural resources, degree of "over industrialization", and level of urbanization. According to de Melo et al. PRIN2 therefore can be interpreted as "an index of the overall level of development, incorporating the so called socialist development overhang" (de Melo et al., 1997, p.18)

Each one of the models 1–10 contains apart from the described variables PRIN1 and PRIN2 also the variables regarding the structure of incentives for direct investment TIFI and RLTZ and BUY (Table 4). TIFI is the dichotomous variable known from the bivariate comparison, which covers the existence and non-existence of tax incentives. Likewise the variable RLTZ concerns the setting up of special low tax zones. The variable BUY refers to the possibility for foreigners to purchase land and real estate. In surveys the exclusion of the ownership of land/real estate was often mentioned as a decisive hurdle for FDI. The possibility to own is no real incentive but has a similar effect. The models 2–10 differentiate themselves from the basic model 1 in so far as an additional variable is taken up in each model, which improves the explanatory power of the model. Insignificant complementary variables were not considered in the presentation.

As a result of a regression analysis we can say that the expectation has *not* been confirmed whereby a larger influence of tax incentives turns out when we control for starting conditions. The variable TIFI (tax benefits) is not significant in any model. The same applies to the variable RLTZ. Solely the variable BUY (ownership of land) is weakly significant in one regression model—taken together with the variable ITAX (maximum level of income tax)—and in all other models equally insignificant. This speaks clearly *against* the impact of incentives.

On the other hand, the significance of the variables for the starting conditions is

Table 3
Overview of independent variables in regressions

Initial conditions	
PRIN1	Aggregated index - degree of macro economic distortions, de Melo et. al. 1997
PRIN2	Aggregated index - intensity of transitory shocks, de Melo et al., 1997
NATR	Natural resources, Dummy 1 = high, 0 = low, de Melo et al., 1997
GNP89	Gross National Product US\$ (PPP0, 1989, World Bank).
YUCP	Years under communist pressure, de Melo et al., 1997
DRI89	Freedom House Democratic Rights Index 1989, Murrell, 1996
EFI89	Freedom House Economic Freedom Index 1989, Murrell, 1996
Economic and political context	
RMCP	Reformed or marginalized communist parties, Dummy 1 = yes, 0 = no, Fish, 1998
ELEC	Index - outcome of first election after transition, Fish, 1998
LR1	Influence of trade unions and works councils (according to law), Scale 1 (low) to 7 (high), Yearbook "Osteuropa Perspektiven".
LR2	Influence of trade unions and works councils (in practice), Scale 1 (low) to 7 (high), Yearbook "Osteuropa Perspektiven".
WL1	Wage level - wage in DM of a secretary, bilingual, Yearbook "Osteuropa Perspektiven".
WL2	Wage level - wage in DM of an executive, bilingual, Yearbook "Osteuropa Perspektiven".
CTAX	Maximal level of corporate tax in per cent, Yearbook "Osteuropa Perspektiven".
ITAX	Maximal level of incomes tax in per cent, Yearbook "Osteuropa Perspektiven".
EF-IX	Freedom House Economic Freedom Index, Freedom House.
Incentives	
BUY	Purchase of real estate is allowed for foreigners, Dummy Variable 1 = yes, 0 = no, Yearbook "Osteuropa Perspektiven".
TIFI	Tax incentives for foreign investors, Dummy Variable 1 = yes, 0 = no, Yearbook "Osteuropa Perspektiven".
RLTZ	Regional low tax zone, Dummy Variable 1 = yes, 0 = no, Yearbook "Osteuropa Perspektiven".
Privatisation	
P1	Effectiveness of privatisation authority, Scale 1 = low, 7 = high, Yearbook "Osteuropa Perspektiven".
P2	Practicability of privatization law, Scale 1 = low, 7 = high, Yearbook "Osteuropa Perspektiven".
P3	Influence of companies/traditional management in the decision making process, Scale 1 = low, 7 = high, Yearbook "Osteuropa Perspektiven".
P4	Direct sales as primary or secondary method for privatisation, Dummy Variable 1 = yes, 0 = no, EBRD Transition Report, 1998

Table 4
Testing the importance of incentives (multivariate regressions)

	CONSTANT	PRIN1	PRIN2	BUY	TIFI	RLTZ +	F	R ²
Model 1:	2.310***	-0.490*	0.572*	1.007	-0.270	0.318	6.741	0.384
Initial conditions								
Model 2:	1.904**	-0.099	0.025	0.487	-0.259	0.739	9.758	0.525
Model 3:	1.479*	-0.083	0.050	0.221	-0.218	0.594	7.842	0.470
Model 4:	1.504	-0.360	0.753**	0.991	-0.130	0.414	7.137	0.447
Economic context								
Model 5:	4.592***	-0.648***	0.530*	0.853	-0.424	0.515	7.496	0.459
Model 6:	4.633***	-0.798***	0.170	1.150*	0.118	0.592	8.090	0.478
Model 7:	8.258***	-0.117	-0.348	0.682	0.136	0.088	9.487	0.564
Privatisation								
Model 7:	0.463	-0.074	0.291	0.741	0.034	0.535	14.891	0.628
Model 8:	0.546	0.054	0.468*	0.561	-0.082	0.770	11.066	0.556
Model 9:	4.830***	-0.286	0.473*	0.826	-0.380	0.329	9.135	0.511
	CONSTANT	NATR	GNP89	YUCP	DR189	+	F	R ²
Model 10:	4.751***	0.378*	0.000234***	-0.0576***	0.0181*		21.243	0.467
Incentives								
Model 11:	4.897***	0.595*	0.000341***	-0.0691***	0.0136	0.238	15.163	0.584
Model 12:	4.816***	0.586*	0.000349***	-0.0719***	0.0152*	0.0458	19.344	0.535
Model 13:	5.368***	0.647*	0.000343***	-0.0728***	0.0141	-0.0767	15.048	0.582
Economic context								
Model 14:	5.838***	0.657**	0.000347***	-0.0717***	0.0162	-0.103	15.241	0.585
Model 15:	5.158***	0.495*	0.000364***	-0.0660***	0.0243***	-0.207*	17.501	0.618
Model 16:	6.310***	0.860***	0.000447***	-0.0873***	0.0197***	-0.00160	16.721	0.608
Model 17:	6.917***	0.904***	0.000421***	-0.0902***	0.0116	-0.000471	16.763	0.608

(continued on next page)

Table 4 (continued)

	CONSTANT	PRIN1	PRIN2	BUY	TIFI	RLTZ +	F	R ²
Model 18:	8.347***	0.766***	0.000333***	-0.0924***	0.0075	-0.0612***	23.713	0.585
Model 19:	7.555***	0.714**	0.000264**	-0.0831***	0.0127	-0.0292	16.101	0.599
Model 20:	7.032***	0.249	0.000151	-0.0480**	0.0156*	-0.630	13.851	0.601
Privatisation								
Model 21:	3.059***	0.212	0.000168	-0.0377*	0.0112	0.256***	20.301	0.653
Model 22:	3.003***	0.362	0.000272***	-0.0421*	0.0119	0.215*	17.800	0.622
Model 23:	5.320***	0.250	0.000331***	-0.0263*	0.0275***	-0.494***	27.634	0.719
Model 24:	3.649***	0.203	0.000232***	-0.0464***	0.0205***	0.473	17.513	0.477

Note: significance levels: * < 0.05, ** < 0.01, *** < 0.001, dependent: lgFDI = log of FDI-inflows per capita.

strongly dependent on the inclusion of other variables. In model 1, which is the basis of the following models, both the variables PRIN1 and PRIN2 show a significant effect on the level of FDI. But an inclusion of the two variables RMCP (reformed or marginalized communist parties) and ELEC (result of the first elections), which cover the general political setting, pushes the effects of the variables for initial conditions into the insignificant area. The same is true for the inclusion of the variable EF-IX (index for economic freedom) and P1 (effectiveness of the privatizing authority). The effect of PRIN1 is getting stronger when the maximum tax ratios are integrated in the model and the variable PRIN2 remains significant with the inclusion of the privatization variables P2 (managing the privatization regulations) and P3 (impact of the companies to be privatized on the process) as also the inclusion of DRI 89 (index of democratic rights in 1989).

What conclusions can be drawn from regressions 1–10 in view of the question of political control? Several of the variables included to control the differences in the privatization process appear to be significantly influencing the level of FDI. Political control of this area was therefore much more decisive than offering incentives.

A potential for control is indicated furthermore by the significant effects of the two fiscal variables CTAX and ITAX (maximum tax levels for corporate and income tax).⁷ For investors it appears less important to have tax holidays or other reliefs which influence taxation in short-term. Greater importance for investment decisions have the tax levels, which can be expected after the expiration of tax benefits.

Another reason for the importance of tax incentives grounds in the specificity of tax incentives. Typical investors in Central and Eastern European countries are to a large extent small and medium sized enterprises (Kaufmann and Menke, 1997). The activities of these investors are often not covered by the “objectively oriented” incentives of the countries in transition. With respect to the aim of the incentives for FDI, supposedly a general reduction in tax levels would have achieved better results than the preferential treatment of individual investors.

The variables PRIN1 and PRIN2 which were used in the first regressions consider only the economic starting situation. The significance of the independent variables RMCP, ELEC and DRI89 in the models 2 to 4 indicates that political aspects should be considered when controlling for initial conditions.

In order to compensate for this the regression models 11–25 were calculated. In the new group of models four variables were used when modeling the starting situation. The variables NATR (natural resources), GNP89 (gross national product in 1989) and YUCP (number of years under communist pressure), which were important background variables of the De Melo-indices, are complemented by the variable DRI 89 (index for democratic rights in 1989). The new starting model 11 shows a noticeably higher correlation ($R^2=0.467$) compared to the old starting model 1 ($R^2=0.384$). All variables measuring aspects of the initial situation are significant in the starting model. In each of the regression models 12–25 the starting model 11

⁷ In the bivariate design the fiscal variables showed no correlation with the level of FDI. By controlling the starting conditions, the dependence becomes clear.

is complemented by an additional independent variable.⁸ Those regressions in which the additional variables are insignificant are also presented this time.

The following is indicated in the regression models 11 to 25: the starting situation of the transforming countries plays a significant role for FDI. The variable YUCP (number of years under communist domination) is in all cases significant; the variable GNP 89 (gross national product in 1989) is also significant in practically all regression analyses. The variable NATR (natural resources) is significant in nine of the fourteen models and loses its significance only, when the variables for privatization are considered. The significance of the effect of the variable DRI89 (democratic rights in 1989) is, however, dependent to a large extent on the inclusion of other variables.

Tax incentives played no role again. TIFI (tax incentives) and RLTZ (regional low tax zones) are insignificant in any case, the coefficient of the variable RLTZ furthermore has the wrong sign.

The level of wages (WL1—comparative salary—secretary, WL2—comparative salary of an executive employee) is also of no importance. Differences in the level of wages between the transforming countries seem to effect the decisions of investors only marginally.

The results regarding the influence of works councils and unions are mixed. The differences in legal regulations in this field between countries seem to be negligible, since variable LR1 shows no significant effect. Otherwise, the variable LR2 (power potential of works councils and unions as judged by investors) shows a significant negative effect, which indicates that in some cases Works Councils and Unions managed to obtain the right to veto FDI. Since the evaluation of the actual power potential presumably depends on the openness of conflicts, the discrepancy between the legal potential and the perceived influence indicates that influential representatives of the interests of workers in some countries have not built up antagonistic feelings against FDI or could be motivated to give up their veto position.

A significant role of “veto players” (Tsebelis, 2000) is further proved by the highly significant negative effect of the variable P3, which measures the influence of the companies to be privatized on the process of privatization. In those countries, where the old management of the state-owned companies was given the possibility to influence the process of privatization, little flow of FDI has been noticed.

The regressions show also from several other angles that the privatization process was of prime importance for the level of FDI in the transition countries. A highly effective privatizing authority (variable P1) and the adoption of regulations which allowed trouble-free implementation (P2) enhanced FDI to a large degree. Surprisingly, this does not depend on the *method* of privatization, since the countries that had placed a stake on direct sales do not have higher levels of FDI, which is against common assumptions (P4).

⁸ Variables which show a high correlation with the already integrated independent variables have not been considered. This, for example, holds true for the variables RMCP and ELEC which played a prominent role in the earlier group of regressions.

The top level of corporate tax (variable CTAX) remains a powerful factor, even after the exchange of the variables for the starting position. The general level of the corporate tax therefore influences the level of FDI—the short-term nature of tax incentives on the other hand has little influence.

Thus, the following conclusion can be arrived at from the analysis so far. There is hardly any evidence to support the effect of tax holidays and regional low tax zones on the level of FDI. But this does not mean that FDI could not be influenced by political action. The implementation of privatization laws and the effectiveness of the authorities responsible for privatization had for example a considerable influence on the flow of investments. Also decisive was the extent of influence of potential veto powers (worker councils, unions and old established management). Direct Investments are significantly higher in those countries in which the influence of these groups has remained limited or could be mediated or channeled. A comparatively low level of corporate and income tax was also beneficial. Hence, we have little reason to believe that the preferential treatment of foreign investors in the transition economies served the purpose to increase investments.

FDI and the general success The relationship between the success of transition and FDI

The objective of the analysis so far has been to answer the question whether concrete measures of political action had any impact on FDI. It has been shown that there was no evidence of a positive influence of tax incentives on the levels of foreign investment. The significance of the factors privatization policy and general tax level, on the other hand, demonstrated that FDI levels could be influenced indirectly.

In the following section we will abandon the narrow reference on tax incentives for investment. The objective now is less on testing a hypothesis than to highlight the question, which factors are particularly suitable to support higher levels of FDI. The changed perspective allows for the inclusion of variables, which were not taken into account so far because of their high level of aggregation. This concerns indicators which were developed to measure the general success of transformation (“EBRD”—transition index, “Rödel & Partner”—transformation index) and those which evaluate investment risks of countries in a comprehensive way (“Euromoney”-, “Institutional Investor”- and “CEER”- risk index).

Table 5 shows the correlation matrix of these indices with the level of FDI.⁹ It can clearly be seen that the variables correlate highly with one another. The perceived risks for investments are therefore lower in countries in which the progress of transformation is evaluated highest. The strong correlation between these indicators and the variable EF-IX (index of economic freedom) demonstrates that the perception

⁹ As not all indices cover Kazakhstan and Uzbekistan these countries were not considered in the calculation.

Table 5
Indicators for investment risk, success of transformation and the level of FDI (Correlation matrix)

	LgFDI	EB-IX	RP-IX	EF-IX	EM-IX	II-IX	CE-IX
LgFDI	1.000						
EB-IX	0.752*	1.000					
RP-IX	0.736*	0.945*	1.000				
EF-IX	0.706*	0.774*	0.837*	1.000			
EM-IX	0.704*	0.837*	0.847*	0.715*	1.000		
II-IX	0.698*	0.830*	0.835*	0.708*	0.890*	1.000	
CE-IX	0.672*	0.892*	0.909*	0.775*	0.826*	0.821*	1.000

Note: significance level * < 0.001, algebraic signs are changed in all correlations with the index EF-IX.

of risks, the valuation of progress in transition and the judgement regarding the degree of economic freedom are interconnected largely.

Surprisingly, it turns out that the investment oriented indicators are not the ones which are best suited to explain FDI. Both the indices for the general success of transformation clearly show a higher correlation with foreign investments (lgFDI), whereby the index of the European Bank for Reconstruction and Development (EB-IX) shows a stronger relationship than the index of the consulting firm Rödel & Partner (RP-IX). The investment related indices of the journals *Euromoney* (EM-IX), *Institutional Investor* (II-IX) and *CEER* (CE-IX) lie, in the strength of correlation, even below those of the Freedom House index for economic freedom (EF-IX).

This implies that FDI is strongly influenced by the general development of transformation. The risk indicators which have been constructed quite elaborately,¹⁰ presumably consider aspects which are only less important for investors or certain risks are not taken into consideration by the investors because they expect that the general success of transformation on a long term basis is a better indicator for the prospects of investments than actual risks.

In a next step of analysis we used a multivariate stepwise regression approach to find a sparse model which can best explain the differences in FDI levels between transition countries. Besides those variables listed in Table 3 and the different indices analyzed in Table 5 the lagged level of FDI (variable $lgFDI_{t-1}$) was taken up in the pool of variables. The end results of the stepwise regressions are shown in Table 6.

The inclusion of the variable lgFDI with time lag leads to the inclusion of this variable in the first step of the model, because of the high time consistence of country differences. The inclusion criteria of standard stepwise models then are satisfied only by one further variable, the transition index of the European Bank for Reconstruction

¹⁰ In the country risk index which is published by Euromoney, nine weighted criteria are considered. These are "Political Risk", "Economic Performance", "Debt Indicators", "Debt in Default", "Credit Ratings", "Access to Bank Finance", "Access to Short Term Finance", "Access to Capital Markets", and "Discount of Forfeiting", thereby statistical data was combined with results of assessments (a 50 member group of experts evaluated certain aspects).

Table 6
FDI and success of transformation (multivariate regressions)

	Constant	IgFDI (t_1)	EB-IX	CTAX	P3	F	Sign.F	R ²
Model A:								
B	-1.404	0.576	0.102	-	-			
Std. Error	0.631	0.154	0.033	-	-	41.774	0.000	0.699
T	-2.225**	3.741**	3.099**	-	-			
Model B:								
B	2.797	-	0.157	-0.058	-0.224			
Std. Error	1.208	-	0.023	0.018	0.082	32.022	0.000	0.667
T	2.316**	-	6.891***	-3.255**	-2.718**			

Note: significance levels * < 0.05, ** < 0.01, *** < 0.001, dependent: lgFDI = log of FDI-inflows per capita.

and Development (EB-IX, model A). This confirms the results of the bivariate correlation analysis. The inflow of FDI is strongly dependent on the general development of transformation. This result is in tune with a series of other analyses which have all come to the conclusion that the transformation process is the “driving force” behind the development of FDI (Lankes and Stern, 1998; Meyer and Pind, 1999; Resmini, 2000).

The removal of the time-lagged variable for FDI from the variable pool results in model B. Besides the EBRD index the variables CTAX (corporate tax level) and P3 (influence of the company to be privatized on the process of privatization) are then included in the model. The models A and B suggest that changes in FDI along the time axis can be explained by the general development of transformation. Aspects of privatization and corporate taxation are of further importance with regard to the differences in the level of FDI between countries.

Evaluation of the usefulness of tax incentives for FDI

Because of the particular scarcity of capital in the transforming countries, the expectations on FDI were extremely high. From today’s perspective many of the earlier hopes appear to have been exaggerated, for example, a direct relationship between FDI and an increase in economic growth now appears to be doubtful (Kogut, 1996; Reis, 2001). However some positive expectations have been satisfied. It has been ascertained that there is a positive relationship between FDI and the economic stabilization of the economy (Laski, 1998). Furthermore, there is evidence that FDI has a complementary relationship with trading activity (Brenton et al. (1999); Deichmann (2001). Businesses owned by foreigners are not only those with the highest productivity (Barrell and Holland, 2000) but also those with the highest export rates (Turnock, 2001). Many investments, particularly in the later years, have served not only to open up the markets but are fully integrated in the production chains of multinational companies (Lankes and Venables, 1996).

Thus there would be enough reasons which could legitimize the promotion of FDI. In spite of the advantageous effects, tax incentives nevertheless appear to be of little value. The comparative analysis has shown that there is no significant relationship between the introduction of incentives for investments and the level of FDI. Foreign investors had been subsidized unnecessarily, since the impact of incentives on investments turns out to be small at best.

This, however, does not mean that the development of FDI was detached from political control. First of all, privatization policy had a big impact. This concerns especially the implementation of the legal regulations, the effectiveness of the privatizing authorities and the limitations imposed on the enterprises to intervene in the privatization process. Secondly, a comparatively low level of corporate and incomes taxes had a positive effect on investments.

Beyond this the general success of transformation was of importance for the attractiveness of a country. The cumulative level of FDI is particularly high in those countries in which the transformation process was evaluated to be positive. FDI can thus be understood to be in large extent a by-product of the general development.

The results indicate that a renunciation of the use of incentives for foreign investments was not disadvantageous in the context of transition countries. The incentives have not achieved the objectives they were implemented for. Investors do not need incentives to find investment opportunities.

Acknowledgements

The author would like to thank Andrea Beyer, Irene Gelz, Jan Wielgoths and Helmut Wiesenthal for their comments and assistance. This research was financed by the Max Planck Gesellschaft zur Förderung der Wissenschaften (Research project: Preemptive Institutions).

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