

## **Attracting foreign direct investment: the public policy scope for South East European countries**

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### **Abstract**

*Based on earlier empirical literature for Central and Eastern European Countries this paper attempts to analyze the likely impact of changes in corporate income taxes, in the endowment with production-related material infrastructure and in the institutional environment on Foreign Direct Investment (FDI) – and thus on one channel of regional development in South Eastern European Countries (SEECs). Specifically, we explore the scope for public policy to attract FDI separated by these three policy areas and across the SEECs. Our findings suggest that the potential for SEECs to attract FDI upon changes in these policy areas varies not only substantially between the three policy areas but also within the group of SEECs. Yet, as a general picture, most SEECs have substantial scope to attract FDI by improving their institutional environment as well as their infrastructure endowment. The tax instrument, in contrast, is largely exhausted as a means to attract FDI. Based on these findings some medium- and long-term policy issues are outlined.*

*Key words:* foreign direct investment, taxes, infrastructure, institutions, South Eastern European countries

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## 1. Introduction

From a policy perspective, investment location decisions of Multinational Enterprises (MNEs) are important as Foreign Direct Investment (FDI) may exert substantial economic impacts on both, the host and the home country of FDI. For instance, from a host country perspective, empirical evidence points to a positive impact of FDI on economic growth (e.g. Ghosh and Wang 2009). These potential positive effects of FDI on a host country's economic performance have been used by governments to justify the attraction of FDI (see e.g. OECD 2008).

The South East European Countries (SEECs)<sup>1</sup> have attracted a considerable amount of FDI so far: the average annual growth of inward FDI in the SEECs reached 26% over the 2001 to 2008 period. Nevertheless capital is still a scarce production factor in SEECs and hence there is room and the need for additional FDI (e.g. FIPA 2008).

Among the policy instruments of governments to attract FDI are low taxes on the proceeds of FDI, production-related material infrastructure as well as the institutional environment toward FDI, for example legal restrictions to conduct FDI in particular sectors.<sup>2</sup> These three location factors are mostly under the immediate control of public officials. That is, they clearly are policy variables. This is rather evident for taxes and the institutional environment. However, due to market failures (e.g. sub-additivity of cost functions), distributional concerns or "merit good" aspects, the provision of a substantial part of a country's material infrastructure is in the realm of the public sector. Even where private agents provide the infrastructure at least the decision making and the funding is largely within the public sector. Concerning the impact of variations in these three policy variables on FDI inflows the empirical literature points toward statistically and economically significant relationships (e.g. Bellak et al. 2009; Bénassy-Quéré et al. 2007a; section 2 below).

Also the SEECs have developed various strategies to actively attract (promote) FDI to their countries rather than relying solely on market size and low wage costs as location factors. Indeed, the attraction of FDI has become an important policy goal for regional development of SEECs. Thereby, especially corporate income taxes play a dominant role in the policy mix used by SEECs' governments to attract FDI (see e.g. the information given on the websites of the FDI promotion agencies in SEECs<sup>3</sup>). As a very general remark, in SEECs investments into production-related material infrastructure (henceforth INF) have been financed via public spending but private sector participation in the

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<sup>1</sup> The SEECs are defined here to include Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Moldova, Macedonia, Montenegro, Romania and Serbia.

<sup>2</sup> Production-related material infrastructure comprises *inter alia* the telecommunication, the transport infrastructure and the electricity generation capacity (e.g. Gramlich 1994).

<sup>3</sup> Available at [http://www.fdi.net/dir/ipa\\_index.cfm](http://www.fdi.net/dir/ipa_index.cfm).

provision of INF has substantially increased (e.g. Leibrecht and Liebensteiner 2011), corporate income taxes (henceforth TAX) have been lowered (e.g. Bellak and Liebensteiner 2011) and the institutional environment toward FDI (henceforth INST) has been considerably revised in the SEECs (e.g. EBRD 2010). Yet, after several decades of policy measures conducive to FDI, the question arises, *what room exists for further improvements of policies in the SEECs – and which impact they would have on FDI.*

Based on earlier empirical literature on Central- and East European Countries (CEECs) the *goal of this paper therefore is to analyze the likely impact of TAX changes, improvements of INST and of INF on FDI* in SEECs – and thus regional development. The analysis of the FDI impact is based on hypothetical changes in the three fields of public policy (TAX, INF, INST) assuming that a particular SEEC *ceteris paribus* reaches a “best practice” or “benchmark level”. Thereby the best practice level is operationalized in various ways. Yet, in any case, the CEECs act as peer-group as they have undergone a strong catching-up process with respect to FDI in the past, not least due to policies in the areas of TAX, INST and INF.

Our findings suggest that the potential for SEECs to attract FDI upon changes in these policy areas varies not only substantially among the three policy areas but also within the group of SEECs. Yet, as a general picture, most SEECs have a substantial scope to attract FDI by improving their institutional environment as well as their infrastructure endowment. The tax instrument, in contrast, is largely exhausted as a means to attract FDI.

The paper is organized as follows: Section 2 provides the conceptual background on the effects of various policy measures on FDI. Section 3 outlines the methodology and data used and describes the steps of the empirical analysis. Section 4 presents the results and section 5 concludes.

## **2. Survey of the Impact of TAX, INST and INF on FDI**

Especially corporate income taxes and legal stipulations toward FDI received substantial interest as a location factor not only in the political but also in the academic discussion. In contrast, the relation between FDI and the production-related material infrastructure receives comparatively less attention, even if its importance is growing (see e.g. UNCTAD 2008, chapter three). One reason for this limited attention is the lack of meaningful indicator variables for production-related material infrastructure (Mutti 2004).

### **2.1. Impact of TAX on FDI**

Theoretically, location decisions are *inter alia* determined by taxes on corporate income through their impact on the cost of capital and / or on the after-tax profitability of an investment. In the former case marginal FDI, financing

scale expansions of existing firms, may be altered and in the latter case infra-marginal investments, earning a positive economic rent, could be influenced (see e.g. Devereux 2004).

From an empirical viewpoint, corporate income taxes do indeed matter for investment location decisions of MNEs. For example, DeMooij and Ederveen (2008) carry out a meta-analysis of 35 empirical studies and find a median tax-rate elasticity, defined as semi-elasticity, of about -2.9 for FDI, mainly between homogenous countries (esp. FDI from the US to Europe or vice versa or within the US and the EU, respectively). However, the typical tax-rate elasticity crucially depends on the tax measure used and the operationalization of FDI applied. Concerning tax rates various measures are proposed in the literature (see e.g. Devereux 2004). Among them, forward-looking effective average tax rates (EATR) in the spirit of Devereux and Griffith (1998) are a proper measure when dealing with location decisions of firms (e.g. Devereux 2004). For these measures DeMooij and Ederveen (2008) find a tax-rate elasticity of about -5.9.<sup>4</sup> Bellak and Leibrecht (2009) show that effective average tax rates on corporate income of the Devereux and Griffith type also matter for FDI in CEECs. Specifically, these authors establish a tax semi-elasticity of FDI of about -4.3. Their analysis is based on 56 bilateral country relationships combining 7 home countries from the EU and the US, and 8 CEECs of FDI for the 1995 to 2003 period. The result implies that every reduction of the effective tax rate in the CEECs by one percentage point increases inward FDI *ceteris paribus* by 4.3 per cent, which clearly is a non-negligible amount. This result is not only in line with the findings of DeMooij and Ederveen quoted above, it is also corroborated by the analysis of Overesch and Wamser (2010) based on firm level data. Furthermore, the relevance of corporate income taxes as location factor is also shown by the meta-study of Feld and Heckemeyer (2009). Thus, there is broad agreement in the literature that corporate income taxes matter for FDI.

## 2.2. Impact of INF on FDI

From a theoretical viewpoint, public production-related material infrastructure – if it is complementary to private capital – should determine the level of marginal FDI via its impact on productivity and production costs (e.g. Bénassy-Quéré et al. 2007b; Fontagné and Mayer 2005). If this impact also alters the profitability of the investment, infrastructure could also influence infra-marginal FDI. Moreover, a certain endowment with infrastructure is in many instances a precondition for firms to generate rents from production (e.g.

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<sup>4</sup> One should keep in mind that there are strong variations in the results depending on the time frame, method applied, tax measure used, FDI indicator employed, the quality of data in general etc., but negative and statistically significant results are derived in the majority of studies. The magnitude of these variations can be found in DeMooij and Ederveen (2008).

Richter et al. 1996). In addition, Egger and Falkinger (2006) show theoretically that increases in public infrastructure investments in the home economy have a negative impact on the propensity of (parent) firms to outsource production internationally. Thus, infrastructure not only has an impact on the probability of gaining FDI but also on the probability of losing existing investments.

Empirical evidence for production-related material infrastructure being a determinant of FDI is surveyed for instance in Bellak et al. (2010) and Glass (2008). However, a meta-analysis comparable to the ones of De Mooij and Ederveen (2008) or Feld and Heckemeyer (2009) is not available. This is no coincidence, as the number of studies dealing with FDI and INF can be counted on one hand's fingers. The paper by Bellak et al. (2009) also includes evidence that FDI in CEECs is attracted by increases in the infrastructure endowment. Especially, information- and telecommunication as well as transport infrastructure impact on FDI. These findings are consistent with Wheeler and Mody (1992) who study the importance of infrastructure for the location decision of US MNEs. They find that infrastructure, measured via a comprehensive index capturing various dimensions, is an important location factor, especially in less developed countries.

Cheng and Kwan (2000) find support for the fact that a favorable transport infrastructure is a relevant determinant of FDI into Chinese regions. Goodspeed et al. (2005) explain FDI in a broad range of countries and include the consumption of electric power, the number of mainline telephone connections and a composite infrastructure index in their regressions. For the latter two proxies they find a significant positive impact upon FDI. In a related paper Goodspeed et al. (2009) find that a favorable infrastructure endowment attracts FDI to developed as well as to less developed countries. Thereby the impact is larger in the latter country group. They use a composite infrastructure index comprising transport, telecommunication, energy and environmental infrastructures. Mollick et al. (2006) analyze the role of telecommunications and transport infrastructure for FDI in Mexico and find a positive impact of both types of infrastructure. Bénassy-Quéré et al. (2007b) use data on the net stock of public capital as proxy for the quantity and quality of production-related infrastructure. They analyze FDI from the US to 18 EU countries and find a significant positive impact of the net stock of public capital on FDI. Thus, the empirical evidence available suggests that production-related material infrastructure is an economically and statistically significant determinant of FDI, especially in developing and in transition economies.

### **2.3. Impact of INST on FDI**

From a theoretical viewpoint, an “investor friendly” institutional environment of an economy, that is the formal and informal norms which shape the behavior of economic agents, secure property rights and allow foreign firms

to enter a particular market, is frequently seen as a necessary condition for a country to receive FDI. Poor institutional quality leads to potentially higher costs of investments and, thus, reduces FDI activity. In addition, poor legal structures increase the probability of expropriation of firms' assets which, in turn, make investment activity less likely in the host country (e.g. Blonigen 2005; Bénassy-Quéré et al. 2007a).

Daude and Stein (2007) use a wide range of institutional indicators obtained from Kaufmann et al. (1999), the International Country Risk Guide (ICRG) compiled by the PRS Group and the World Business Environment Survey (WBES) provided by the World Bank. While the ICRG indicators are based on experts' opinions exclusively, and the WBES data on country surveys, Kaufmann et al.'s indices rely on surveys and experts polls. Using different econometric methods on cross-sectional and panel data estimations, the coefficients on the quality of the institutional variables are largely statistically and economically significant and robust to alternative specifications. Daude and Stein (2007, p. 341) conclude that "countries that would increase foreign investment would be able to do so by increasing their institutional framework, especially by establishing a predictable framework for economic policies and enforcement."

Disdier and Mayer (2004) investigate the location choice of French MNEs in 13 EU countries and 6 CEECs from 1980 to 1999. The location choice data is collected by the "*Direction des Relations Economiques Extérieures (DREE)*" of the French Ministry of Finance. The empirical approach contains different institutional quality measures besides standard control variables. One variable indicating the degree of political and civil freedom in a country averages two ratings, political rights and civil liberties. They are provided by the Heritage Foundation (see O'Driscoll et al. 2001). A further institutional variable is the liberalization index developed by de Melo et al. (1997). It measures internal markets liberalization, external markets liberalization and private sector entry. The results indicate that institutional quality is indeed an important determinant of the location choice. Furthermore, splitting up the sample period shows that the impact of improvements in the institutional quality decreases over time. This leads to the suggestion of a "convergence in the levels of institutional quality". (Disdier and Mayer, 2004, p. 291) This finding is of special interest here not least as it is consistent with the view that for countries in their early years of transition, like many SEECs, an improvement of the institutional environment seems to have especially large pay-offs in FDI terms.

With respect to CEECs, Dhakal et al. (2007) explore the determinants of FDI inflows to these countries. Among other control variables, the authors include an indicator for government regulations, obtained from the Economic Freedom Index, provided by the Heritage Foundation, which incorporates wages and price controls, banking, and financial market regulations and FDI

regulations (O’Driscoll et al. 2001). As expected, stronger government regulations have a statistically negative impact on FDI inflows. This result is of special interest, as the Heritage Foundation indicator will be used for the empirical approach in this paper (see section 3 below).

Thus, the empirical evidence is in favor of a positive impact of good institutional quality in general and government regulations toward FDI in particular on FDI activity. A positive impact is especially likely to occur in the case of countries in their early years of transition into market economies.

### **3. Empirical approach**

#### **3.1. Methodological aspects**

The objective of this part is to show how a policy change in SEECs may contribute to FDI attraction. To be more specific, we undertake a policy experiment where a particular country hypothetically changes its scores on TAX, INF or INST in a way that this country reaches the best practice or benchmark level. The *ceteris paribus* impact of this hypothetical policy change on FDI is derived. We thereby closely follow the approach used by Bellak et al. (2010) and Demekas et al. (2007) to derive FDI-gaps from econometric estimates. However, due to limited data availability for SEECs we cannot provide econometric results in a first step as Bellak et al. (2010) and Demekas et al. (2007) have done. Instead, we utilize econometric results which were derived earlier based on studies exploring the determinants of FDI into CEECs. Specifically, regressions coefficients (COEF) recently derived by Bellak et al. (2010) and Bellak and Leibrecht (2009) are applied to proxy the sensitivity of FDI in SEECs with respect to corporate income taxes, production-related material infrastructure and legal stipulations toward FDI. For each of these three variables the best practice level is defined, based on the mean or the maximum / minimum value of the respective policy variable in CEECs<sup>5</sup>. The CEECs, hence, act as peer-group. Then, the percent difference (DIFF) of a particular SEEC to this best practice policy level is calculated for each of the three policy variables (TAX, INF, INST). The regression coefficients derived from the two papers mentioned above (Bellak et al. 2010 and Bellak and Leibrecht 2009) are multiplied by DIFF, if there is room for policy improvements, i.e. if a particular SEEC has not yet reached the best practice level in a specific policy field. This gives the *ceteris paribus* percent change in FDI (POT) a particular SEEC could realize if it changed its policy to meet the best practice level. Based on POT the hypothetical level change (measured in millions of Euro) in FDI can be deduced (LEVEL).

To summarize, we proceed in our empirical analysis as follows:

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<sup>5</sup> The CEECs are eight of the ten countries which joined the EU in 2004 (Malta and Cyprus are hence not considered as CEECs).

Regression coefficients for the impact of TAX, INF and INST on FDI in CEECs, i.e. COEF, are taken from two recent studies dealing with FDI in CEECs.

The best practice policy level (benchmark value) is derived for each of the three policy variables. Thereby the CEECs act as peer-group and the most recent year for which data are available is used.

The relative distance, i.e. DIFF, of each SEEC and for each policy variable (TAX, INF, INST) to the best practice level is calculated as  $((\text{benchmark value} - \text{value of SEEC}) / \text{value of SEEC}) * 100$ .

If improvements are possible, i.e. if an SEEC has not already reached the best practice level,  $\text{COEF} * \text{DIFF}$  gives the hypothetical *ceteris paribus* percent change in FDI, i.e. POT, if a best practice policy would be realized.

The hypothetical level change in FDI inflows (LEVEL) is derived based on  $\text{POT} * (\text{Mean of FDI inflows})$  to a particular SEEC over the 2001 to 2008 period.

### **3.2. Measurement of TAX, INF and INST**

TAX is measured as the statutory tax rate on corporate income in a country including local business taxes. As it has been argued above, for analyzing the incentive effects taxes exert on FDI decisions of firms forward-looking effective average tax rates would be preferred to statutory tax rates. Yet, except for Bulgaria, Croatia and Romania such effective tax rates have not yet been calculated. Thus, we stick to the more widely available statutory tax rate, which usually is highly correlated with the forward-looking effective average tax rate.

INF is proxied by the sum of telephone mainlines, mobile phone subscribers and internet connections per 1000 inhabitants, i.e. the information and communication infrastructure endowment (ICT; see e.g. Bellak et al. 2010, Table 1). Of course, production-related material infrastructure also consists of additional items like the transport infrastructure and the electricity generating capacity. However, for SEECs no infrastructure index which combines all of these types of infrastructure is available.

INST is operationalized by the investment freedom index obtained from the Heritage Foundation's Index of Economic Freedom. This index ranges from 1 to 5 with higher scores implying larger restrictions on FDI (see O'Driscoll et al. 2001). It consists of seven sub-indices: (i) national treatment of foreign investment, (ii) foreign investment code, (iii) restrictions on land ownership, (iv) sectoral investment restrictions, (v) expropriation of investments without fair compensation, (vi) foreign exchange controls and (vii) capital controls. The index thus covers only the regulatory environment specific to FDI, but not the wider institutional setup, i.e. regulations, which would apply also to domestic investment / businesses.



### 3.3. Typical regression coefficients and best practice policy levels

Concerning INF, Bellak et al. (2010) derive an FDI elasticity of 0.64; concerning TAX, Bellak and Leibrecht (2009) establish an elasticity of about -0.56 and with respect to INST, Bellak et al. (2010) isolate an elasticity of about -0.23.<sup>6</sup>

Using these regression coefficients implies that we assume parameter constancy across time and across countries. As already mentioned, data on many variables are missing for SEECs which precludes a first stage regression analysis as, for example, conducted by Bellak et al. (2010). Yet, given that the regression coefficients have been derived on the basis of CEECs in an earlier stage of their development (mostly the period from 1995 to 2004), these constancy assumptions can be meaningfully applied.

The “best practice policy” is defined as *the lowest (minimum) or highest (maximum)* values of each location factor in the CEECs for the most recent year available. Specifically, the best practice policy value for TAX and INST are the lowest tax rate in the CEECs in 2010 and the lowest investment freedom index value in the CEECs in 2009. For INF it is the highest realized value of the ICT penetration rate in the CEECs in 2008. If a SEEC has a lower (higher) or equal TAX or INST (INF) score than any of the CEECs, we consider this SEEC to be already at the benchmark value. In contrast, if a SEEC has a higher (lower) TAX or INST (INF) score than any of the CEECs then DIFF is positive and an improvement toward best practice is possible. Yet, while using minimum and maximum scores may be relevant for long-term analysis, for short- and medium-term analyses, the definition of a best practice policy seems to be more meaningful in terms of *mean* values. In this case the *mean over* CEECs serves as the benchmark value (again 2010 for TAX, 2009 for INST and 2008 for INF).

## 4. Results

The following Tables 1 to 5 show how catching up toward the benchmark value in the areas of TAX, INF and INST may *ceteris paribus* impact on the attraction of additional FDI inflows. Table 1 displays the most recent values for the three policy variables in the SEECs considered, as well as the mean values of the SEECs. It also displays the elasticity values (COEF) which will be used to derive the hypothetical *ceteris paribus* percent and level changes in FDI in case the best practice policy is conducted. Table 2 contains the best practice values we use. This table reveals that Estonia is benchmark in two cases (INST and INF) and Lithuania and Latvia are benchmark in one case (TAX).

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<sup>6</sup> The elasticity for TAX is taken from the coefficient of the variable “statrate” in Model 3 in Table 5 of Bellak and Leibrecht (2009):  $-1.90 \cdot 0.295 = -0.56$ . Thereby 0.295 is the mean sample value of “statrate”. Elasticities for INF and INST are taken from the FE\_Pref model in Table 4 of Bellak et al. (2010).

**Table 1. Current values of INST, TAX and INF in SEECs**

	INST (points)	TAX (%)	INF (1000 pers.)
Albania	2.0	10	1347.24
Bosnia and Herzegovina	3.0	10	1462.45
Bulgaria	2.5	10	2011.84
Croatia	3.0	20	2254.33
Macedonia, FYR	3.0	10	1864.95
Moldova	4.0	0	1207.69
Montenegro	3.5	9	2235.10
Romania	2.5	16	1659.31
Serbia	3.5	10	2177.30
Mean SEECs	3.0	10.56	1802.25
Elasticity (COEF)	-0.23	-0.56	0.64

*Sources:* INST: World Heritage Foundation: Economic Freedom Index: Investment Freedom. URL: <http://www.heritage.org/index/>

TAX: IBFDs European Tax Handbook 2010, printed version.

INF: World Development Indicators 2010. URL: <http://data.worldbank.org/data-catalog/world-development-indicators>.

Notes: values for INST are for 2009, for TAX for 2010 and for INF for 2008; elasticity is the elasticity derived from Bellak et al. (2010) and Bellak and Leibrecht (2009) which is used to calculate the hypothetical percent change in FDI

Table 1 indicates that Albania is the least restrictive country out of the group of the SEECs with an INST score of 2, whereas Moldova has the highest value of 4 meaning that tight regulations with respect to FDI are given. However, all SEECs' INST scores are above the CEECs mean of 1.94 which clearly shows that there is room for catching up. INF reveals a similar picture as six out of nine SEECs are below the CEEC-mean value of 2143. Only Croatia, Montenegro and Serbia have ICT penetration rates above the CEECs' mean. These countries seem to be comparable to the average CEEC in terms of infrastructure endowment. Still, none of the SEECs can outperform the minimum / maximum benchmark of Estonia's INST score of 1.0 or its INF value of 2916 respectively. The case of TAX, however, is different. Most SEECs impose corporate tax rates at around 10 percent – far below the CEECs mean of 18.38. While Croatia and Romania are the top outliers in this group with tax rates of 20 and 16 percent, Moldova is the bottom end extreme with a zero profit tax rate.

**Table 2. Best practice policy values in CEECs**

	INST	TAX	INF
Min	Estonia (1.0)	Latvia (15), Lithuania (15)	n.a.
Max	n.a.	n.a.	Estonia (2916.97)
Mean CEECs	1.94	18.38	2143.34

Notes: n.a. = not applicable as benchmark is either MIN or MAX; values are for 2008 (INF); 2009 (INST) and 2010 (TAX)

Table 3 includes the relative distance of each SEEC and for each of the three policy variables to the benchmark values displayed in Table 2. Table 3 summarizes what has been explicated above: Most SEECs are better than the benchmark (Lithuania and Latvia) in the case of TAX (indicated by the zero value in Table 3). Only Croatia and Romania could gain from a tax cut with reference to the CEECs' mean. By contrast, in the case of INST, each of the SEECs performs worse than the benchmark country, with Moldova lacking most strongly behind. With respect to INF three SEECs, Croatia, Montenegro and Serbia, *ceteris paribus* perform better than the benchmark when the latter is defined as the mean value of the CEECs considered.

**Table 3. Relative difference to best practice value (DIFF)**

	Benchmark is CEECs Min/Max			Benchmark is CEECs Mean		
	INST	TAX	INF	INST	TAX	INF
Albania	-50.00	0	116.51	-3.13	0	59.09
Bosnia and Herzegovina	-66.67	0	99.46	-35.42	0	46.56
Bulgaria	-60.00	0	44.99	-22.50	0	6.54
Croatia	-66.67	-25.00	29.39	-35.42	-8.10	0
Macedonia, FYR	-66.67	0	56.41	-35.42	0	14.93
Moldova	-75.00	0	141.53	-51.56	0	77.47
Montenegro	-71.43	0	30.51	-44.64	0	0
Romania	-60.00	-6.25	75.79	-22.50	0	29.17
Serbia	-71.43	0	33.97	-44.64	0	0

Notes: values display percent changes; zero value means that a country is at benchmark or better; negative value in case of INST and TAX means that a country performs worse compared to benchmark; the negative value gives the percent distance to the lower benchmark (for example the -50 value in column 2 in case of INST of Albania is calculated as  $((1-2)/2)*100$ ); the positive value in case of INF means that a country performs worse compared to benchmark; the positive value gives the percent distance to the higher benchmark.

Tables 4 and 5 contain information on the *ceteris paribus* changes in FDI inflows if best practice policies were conducted. Table 4 displays the *ceteris paribus* percent change and Table 5 transforms this percent change into million (mn) of EUR changes by using mean FDI inflows during the 2001 to 2008 period.

As already stated above, the SEECs outperform the CEECs in terms of tax policy. No other country than Croatia and Romania could benefit from a tax cut referring to the CEECs minimum (Latvia, Lithuania with 15%) as benchmark and solely Croatia, if the mean of the CEECs is taken as a benchmark.

All SEECs would gain *ceteris paribus* from improvements of the institutional quality. In case of the CEECs' minimum value (Estonia with 1.0) as benchmark, Moldova, Montenegro and Serbia are the highest potential winners with additional FDI inflows of 17.25% (mn 34.5 EUR), 16.43% (EUR 48.3 mn), and 16.43% (EUR 246.1 mn) respectively. Even Albania, the country that

performs best out of the SEECs in terms of INST, could attract additional 11.7 percent FDI (EUR 35 mn) by enhancing its institutional environment toward FDI. When taking the mean of the CEECs as benchmark, Moldova, Montenegro and Serbia are still leading but the potential gain of 0.72 percent additional FDI in the case of Albania is economically negligible.

Yet, the greatest possible benefits to SEECs arise by enhancing the ICT infrastructure endowment. By hypothetically achieving the CEECs' maximum of 2143.34 (Estonia), the SEECs could raise at least 18.8 percent (EUR 409.4 mn) additional FDI inflows in the case of Croatia and the most of 90.58 percent (EUR 181.28 mn) in the case of Moldova.

Broadly speaking, there are hardly any gains to be expected from tax lowering strategies, there are modest potential benefits for SEECs by enhancing their institutional environment toward FDI. The by far most promising policy instrument in terms of FDI attraction is INF.

Independently of the benchmark used (CEEC mean or CEEC min/max) the gains in FDI are substantial. To put these figures into perspective, note that the mean average annual growth rate of FDI inflows into the SEECs between 2001 and 2008 was 26%. The individual country means range from 7% to 56%.<sup>7</sup> All of the hypothetical gains for SEECs in FDI contained in Table 4 are within this range in case the benchmark is the CEEC mean value.

**Table 4. Hypothetical *ceteris paribus* percent change in FDI inflows in the case of best practice policy (POT)**

	Benchmark is CEECs Min/Max			Benchmark is CEECs Mean		
	INST	TAX	INF	INST	TAX	INF
Albania	11.50	0	74.57	0.72	0	37.82
Bosnia and Herzegovina	15.33	0	63.65	8.15	0	29.80
Bulgaria	13.80	0	28.79	5.18	0	4.18
Croatia	15.33	14.01	18.81	8.15	4.54	0
Macedonia, FYR	15.33	0	36.10	8.15	0	9.55
Moldova	17.25	0	90.58	11.86	0	49.58
Montenegro	16.43	0	19.52	10.27	0	0
Romania	13.80	3.50	48.51	5.18	0	18.67
Serbia	16.43	0	21.74	10.27	0	0

Notes: values display percent changes; zero value means that a country is at benchmark or better so that no FDI inflow can be achieved if policy is changed toward the CEEC benchmark; the values are derived as  $\text{DIFF} \cdot \text{COEF}$  whereby DIFF is taken from Table 3 and COEF are the elasticity values given in Table 1; for instance the value for INST of Albania of 11.50 in column 2 is derived as  $-0.23 \cdot -50$  and implies that *ceteris paribus* 11.5 % more FDI inflows can be received if INST of Albania would meet the benchmark value of 1 (Estonia).

<sup>7</sup> For Montenegro, only values 2003-2008 have been used when calculating the mean, since the 2002 value was particularly low, because it would boost the growth rate.

Yet, even if the benchmark is the minimum or maximum value, most of the gains displayed in Table 4 are within the range of actual individual country mean values (i.e. 7% to 56%). Thus, most of the hypothetical additional *ceteris paribus* gains are in line with the actual annual growth in FDI. This not only suggests that our methodological approach is useful but also that SEECs could keep the growth rates in FDI experienced in the past by conducting best practice policies with respect to INST and especially INF.

**Table 5. Hypothetical *ceteris paribus* level change in FDI inflows in case of best practice policy (LEVEL)**

	MEAN	Benchmark is CEECs Min/Max			Benchmark is CEECs Mean		
		INST	TAX	INF	INST	TAX	INF
Albania	304.39	35.00	0	226.98	2.19	0	115.11
Bosnia and Herzegovina	583.31	89.44	0	371.29	47.52	0	173.81
Bulgaria	3949.01	544.96	0	1137.07	204.36	0	165.20
Croatia	2176.51	333.73	304.98	409.44	177.29	99.12	0
Macedonia, FYR	287.57	44.09	0	103.82	23.42	0	27.47
Moldova	200.13	34.52	0	181.28	23.73	0	99.23
Montenegro	294.12	48.32	0	57.43	30.20	0	0
Romania	5081.88	701.30	178.02	2465.12	262.99	0	948.74
Serbia	1497.75	246.06	0	325.64	153.79	0	0

Notes: values display changes in EUR mn; zero value means that a country is at benchmark or better so that no FDI inflow can be achieved if policy is changed toward CEEC benchmark; the values are derived as  $(POT/100)*MEAN$  whereby POT is taken from Table 4 and MEAN is the mean FDI inflow to a SEECs in the 2001-2008 period in million of EUR; for instance the value for INST of Albania of EUR 35 million in column 3 is derived as  $304.39*(11.5/100)$  and implies that *ceteris paribus* FDI inflows of EUR 35 million can be received if INST of Albania would meet the benchmark value of 1 (Estonia).

## 5. Conclusions

Our empirical analysis shows that all SEECs have substantial room to improve their institutional environment toward FDI, i.e. INST. This also implies that SEECs have a powerful policy instrument at hand to increase FDI inflows in the short-run. Indeed, “getting the institutions toward FDI right” is of predominant importance as a good institutional environment is frequently seen to be a prerequisite for FDI. Once an institutional environment that allows FDI inflows *in principle* is established, other policy measures can be used to exert *incentives* for FDI inflows to take place *de facto*. TAX and INF are two examples of such policy measures.

With respect to TAX, our empirical analysis implies that most SEECs are already competitive in terms of the taxation of proceeds from FDI. Put differently, a policy instrument which can be used to attract more FDI in the short-run is almost exhausted. This is especially the case if the SEECs consider

joining the EU in the near future as the EU prohibits many tax base related measures through its state aid regulations. Yet, as shown by Bellak et al. (2009) low corporate income taxes compensate to some extent MNEs for a lack in the infrastructure endowment. Thus, for the SEECs it was essential to reduce TAX to compensate for the lack in infrastructure.

As most SEECs lack far behind the CEEC benchmark in terms of infrastructure in a medium to long run perspective, SEECs need to improve their infrastructure endowment to make FDI sustainable and to climb up the value chain of MNEs. Specifically, despite the fact that low taxes attract FDI even in the case of an inferior infrastructure endowment, this policy mix *ceteris paribus* will only enable the SEECs to attract FDI where productivity of the private capital does not primarily depend on complementary public material infrastructure.<sup>8</sup> For example, improved ICT infrastructure is critical if the region wants to attract higher value-added production. Specifically, if the SEECs want to attract higher stages of the value chain of production different types of public material infrastructure, including ICT, will become increasingly fundamental factors spurring this transformation (see e.g., FIAS 2007). It has to be stressed that to climb-up the value chain via the attraction of more sophisticated FDI also creates the need to focus more strongly on complementary investments in intangible infrastructure (education, skill development etc.) in addition to prioritizing infrastructure investments into production-related material infrastructure.<sup>9</sup>

Furthermore, improving the infrastructure endowment should also receive high political priority, as the low-wage advantage of SEECs<sup>10</sup> may vanish over time, as the recent experiences in Hungary and in Poland have shown (e.g., Austrian Central Bank 2010). Thus, any compensatory effects low wages (or low taxes) have with respect to the lack of infrastructure may quickly be eroded during the catching-up process.

To sum up, our analysis shows that SEECs which aim to increase FDI inflows should first reduce legal barriers toward FDI. Second, SEECs should keep corporate income taxes low at least in the short- and the medium-run.

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<sup>8</sup> Such FDI may, for example, take the form of simple production stages, which are outsourced (i.e. vertical FDI) from the home country of the investor and where the output is produced on stock rather than for just-in-time delivery (e.g. standard metal products, plastic coatings). It may be in the form of those horizontal FDI, where neither production technologies, nor product technology is very sophisticated (at the lower end of the technological spectrum) and where a large part of inputs is sourced locally (e.g. in some sectors in food production).

<sup>9</sup> The minimum and maximum shares of labor force with primary education as highest educational attainment in total labor force over the 2000 to 2007 period are in the SEECs 11% and 89%. In the CEECs the corresponding values are 7% and 21% (Source: World Development Database; Labor force with primary education (% of total)).

<sup>10</sup> Average annual wage in 2008: SEECs: 5802 EUR; CEECs: 10236 EUR (Source: WIIW Handbook of Statistics 2009, online edition).

Third, SEECs need to free financial means to improve their infrastructure endowment in the medium- to long-run. Of course, securing financial means to improve INF in the case of low corporate income taxes implies that other revenue sources have to be used. For instance, SEECs with a low public debt level could consider increasing public borrowing. Moreover, measures to reduce tax fraud and to reduce the importance of the informal sector may be implemented. Financial means should also come from European institutions as the catching-up of the SEECs should be in the economic interest of the EU as the experience with the CEECs has proven. Fourth, once the institutional environment and the infrastructure endowment have improved, SEECs might even consider to increase corporate income taxes again as “infrastructure rents” will accrue, which can be taxed without losing FDI (see Bellak et al. 2009).

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