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FDI PROMOTION OF THE VISEGRÁD COUNTRIES IN THE ERA OF GLOBAL VALUE CHAINS

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FDI promotion of the Visegrád countries in the era of global value chains[1]

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Abstract

Investments (FDI) have become more connected to the global value chains (GVCs) in the past decated. As known, the Visegrád countries intensively participate in GVCs and have collected considerable stock of FDI. The purpose of the paper is to analyse how governmental investment promotion policies of these countries reacted to these phenomena. Investment can be promoted in a wide sense – creating stabile business environment – and in a narrow sense (grants, tax allowances, etc). Narrow sense FDI incentives serve in most cases large multinationals. The Visegrád countries have applied several type of state incentives on a large scale. Based on official data and press information we provide insight into the narrow sense FDI promotion steps, from grants to special industrial zones.

Using international surveys and indices we show that several factors that favourable for FDI in a wide sense, have deteriorated recently. Legal stability has been shaken, corruption increased and education indices declined. The shortage of qualified labour force became acute. Visegrád countries continue competing for large investments, therefore costly, tailored grants for foreign firms (narrow tools) will be more and more important. However, this cannot endlessly compensate for worsening business climate (wide tools).

JEL Codes: F13, F14, P52

Keywords: global value chains, FDI, state aid

Introduction

During the last decade in the world economy investment and trade within global value chains (GVCs) has become even more intensive than before. As known, firms of the Visegrád region are producing and exporting within these global production chains

[1] The study was prepared in the research supported by the National Research, Development and Innovation Office, project no. K 115578, title: "Factors influencing export performance – a comparison of three European regions".

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(Éltető, 2015, Antalóczy and Éltető, 2016). Multinational companies of mainly automotive and electronic GVCs invested heavily in this region since the nineties. Foreign Direct Investment (FDI) and trade is thus strongly interconnected in these countries and because of this, incentives for FDI promote also exports.

Investment can be supported by several measures. Promotion of foreign direct investment can aim not only new investments but also expansion of existing capacities, reinvested earnings. We can speak about investment stimuli in a *narrow sense* and in a *wide sense* (Antalóczy and Sass, 2000). Investment promotion in a wide sense means the attractiveness of a country and its economic policies, like monetary and fiscal policy, budgetary system, structural policy such as labour market policy and education. “Doing business”, regulatory conditions and infrastructure can also influence the opinion of entrepreneurs. Favourable business environment factors concern both large and smaller firms.

Investment incentives in a narrow sense can be first tax allowances (from profit tax, customs duties, contributions for several years). A second group consists of financial incentives (grants, local allowances) and the third group includes other investment benefits, for example infrastructure, services, technical help, training. Countries compete for foreign investments with these “narrow” incentives and this can have positive and negative effects (Oman, 2011). Theoretically these measures refer to all investors, but in practice large foreign companies benefited from them in the Visegrád region. In the four Visegrád countries generous grants have been provided as investment incentives, mostly targeted to multinational investors. Apart from this, tax exemptions and other benefits have been assured, often bound to special investment zones, industrial parks, as it is described in this paper.

Foreign Direct Investment in the Visegrád countries

FDI in a country is registered in the Balance of Payments, given by statistics of National Banks. FDI consists of three parts: equity and other owner share, reinvested earnings and other capital (mainly intercompany loans). In the last decade registration of FDI became more and more problematic in several countries (Antalóczy and Sass, 2015). In the mid-2000 years for example the activity of "Special Purpose Entities" increased. The primary task of SPEs is to execute transactions for tax optimization for their parent foreign company, they have no ties to local economy. Similarly, after the crisis the phenomenon of "capital in transit" appeared in large volumes, that is a transaction within a company group (linked through ownership), transiting through a given economy without affecting it (OECD, 2008, 157). Among the Visegrád countries only the Hungarian National Bank provides FDI data "cleaned" from SPEs and capital in transit (Montvai, 2015)[4] and the Polish National Bank publishes SPE-free FDI data since 2014[5].

In some cases, multinationals invest in a country through permanently established foreign affiliates or through established SPEs intermediaries in third countries. This is called indirect FDI (Kalotay, 2012). In these case the nationality of the immediate investor and the ultimate owner is different. The reasons for indirect investments can be various (Aykut et al. 2017). In some cases, the intention might be to conceal the identity of the ultimate investor. Several times domestic capital is channelled through offshore centres to the local economy in the form of direct investment (round tripping) so foreign investment is not even foreign.

Having these statistical distortions in mind, let us have a look at Table 1 that gives data on FDI stock in the Visegrád countries in absolute value and in percentage of the GDP. What we can definitely state is that in both terms the stock of FDI increased considerably during 15 years.

[4] "We have identified two types of activities that resulting huge transactions without any effect on the domestic economy: one is capital in transit, the other is restructuring of asset portfolios, when transactions are related to a financial restructuring of some affiliate of MNEs. Besides capital in transit, restructuring of asset portfolios has similar effects on FDI flows (sharp increase and decrease in flows), these impacts on statistical data are very similar to that of SPEs" (Montvai 2015 p.6)

[5] http://www.nbp.pl/homen.aspx?f=/en/publikacje/ziben/ziben.html

Table 1. FDI Stock, million EUR and percentage of GDP

	2000	%	2010	%	2015	%
Czech Republic	23 323	*35.0*	96 153	*61.5*	100 076*	*63.8*
Hungary**	21 048	*41.1*	67 999	*69.1*	76 672	*69.9*
Poland	36 792	*19.7*	161 378	*44.6*	167 091	*38.9*
Slovakia	4 026	*18.0*	37 665	*55.7*	40 129	*50.9*

Source: WIIW Handbook of Statistics, 2016

*2014 data
** Data without FDI in Special Purpose Entities

Except for Poland FDI stock represents everywhere more than 50% of the GDP. It is an illustration of the well known fact that these countries have become dependent on foreign capital. This dependency is present both from the macroeconomic point of view (see "dependent economy model" by Nölke and Vliegenthart 2009) and also on regional, local level (see "nested dependent city regions" by Jacobs, 2017).

Investment promotion in a narrow sense

During the nineties the Visegrád countries applied several kinds of FDI promoting measures, allowances, grants, targeted for large multinational companies (Sedmihradsky and Klazar, 2002). After the adhesion to the EU this should have become more difficult because of competition distortion. Under EU law, incentives provided for investment projects classify as state aid, which may violate the EU's competition policy: Article 107 of the Treaty on the Functioning of the European Union prohibits any state aid that may distort competition within the EU[6]. While targeted sectoral aid is generally not supported, state aid promoting the development of an economically backward area can be compatible with EU law[7]. This is especially relevant for Central and East European countries because their per capita GDP is well below the EU average in most of

[6] The latest regulation to the Treaty: law: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.187.01.0001.01.ENG&toc=OJ:L:2014:187:TOC

[7] Article 107(3a):.. may be considered to be compatible with the internal market: aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment, and of the regions referred to in Article 349, in view of their structural, economic and social situation.

the regions. Thus incentives provided for investments in these backward locations of the Visegrád countries can be legally justified (Blauberger, 2009, Medve-Bálint, 2014).

Among the Visegrád countries, Hungary shows the highest intensities of aid within all the region (Table 2) around twice as high than the EU-average.

Table 2. State Aid in % of GDP and Regional aid in % of total aids

	EU		CZ		HU		PL		SK	
	SA/GDP	REG	SA/GDP	REG	SA/GDP	REG	SA/GDP	REG	SA/GDP	REG
2000	0.48	20.28	2.22	2.13	1.10	18.57	0.95	36.73	0.55	61.81
2001	0.53	16.07	1.76	5.04	1.00	24.18	0.63	11.42	0.50	38.53
2002	0.66	14.92	3.63	2.40	1.03	25.20	0.44	13.53	0.42	44.17
2003	0.56	15.32	2.63	3.65	1.33	21.05	2.98	3.41	0.58	62.12
2004	0.47	16.56	0.34	36.90	0.89	25.41	1.04	9.19	0.67	54.11
2005	0.45	17.43	0.42	54.93	1.19	24.94	0.39	19.47	0.67	51.06
2006	0.62	13.61	0.52	40.43	1.13	24.83	0.46	32.21	0.50	66.70
2007	0.41	18.71	0.57	44.12	1.03	19.65	0.42	22.46	0.44	48.23
2008	0.54	18.88	0.73	65.15	1.85	16.14	0.74	18.54	0.47	56.93
2009	0.54	24.36	0.55	45.65	1.34	27.28	0.77	22.24	0.39	42.87
2010	0.50	22.31	0.63	44.06	1.88	15.42	0.79	25.71	0.37	45.41
2011	0.44	22.72	0.76	59.29	0.93	25.81	0.58	24.53	0.23	70.45
2012	0.44	20.72	0.88	60.47	0.91	30.28	0.58	30.34	0.16	57.45
2013	0.44	21.71	1.01	53.92	1.18	26.75	0.56	36.09	0.24	40.32
2014	0.65	16.21	1.02	52.41	1.38	58.35	1.14	39.85	0.39	35.67
2015	0.62	11.01	1.16	56.48	1.17	33.69	0.73	23.07	0.51	53.36

Source: Own calculations from European Commission State Aid Scoreboard[8] data

The economic effects of EU membership may also have forced the new members to increase their aid in order to cope with the more competitive situation. Apart from that the crisis had also sharpened competition among countries. Data of Table2 show that after the international crisis the Czech Republic increased its state aid intensity again, devoting aid to regional development.

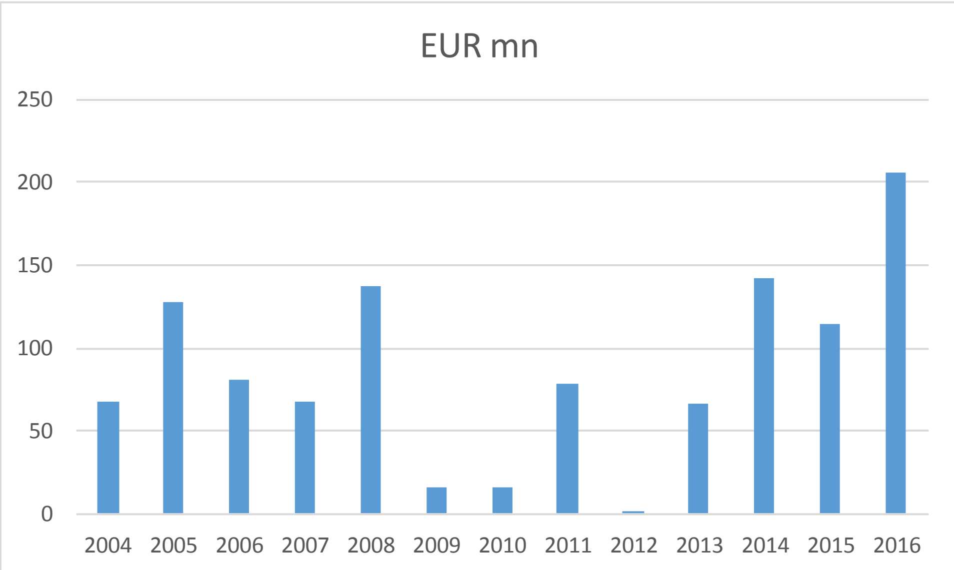
In the following we describe the financial investment grant systems, tax allowances and system of established special economic zones for (mainly foreign) investors in the four countries. We rely on official sources, as for investment grant possibilities are openly "advertised" on the homepages of the ministries, promotion organisations.

Regarding *Hungary* the maximum available amounts of regional incentives are based on a regional aid map. All seven regions of Hungary are qualified for incentives, and aid

[8] http://ec.europa.eu/competition/state_aid/scoreboard/index_en.html

intensity varies between 10% and 50% for large corporations[9]. When calculating the maximum available amount of regional incentives, all regional incentives - cash subsidies, tax incentives - need to be taken into account. The main types of incentives related to investments are cash subsidies, tax incentives, low-interest loans, or land available for free or at reduced prices. The regulations on incentive opportunities are in accordance with EU rules. The most important ones are cash subsidies and tax allowances.

Figure 1. Grants given in Hungary to companies by individual government decision 2004-2016



Source: calculations based on data of www.kormany.hu

The main types of cash incentives related to investments are focused on implementing the investment creating new jobs and training employees[10]. The Hungarian Government provides a negotiation-based "VIP" *subsidy* opportunity for investments greater than EUR 10 million with a certain number of newly created jobs, depending on the purpose and location of the investment. If the investment is between EUR 10 and 25 million, the Hungarian authorities will investigate the possibility of subsidizing the project from available EU Funds. The main areas that attract support are

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[9] Aid intensities: 25% in the Western Transdanubia region and 35% in the Central Transdanubia region. In the Northern Hungary, Northern Great Plain, Southern Great Plain, and Southern Transdanubia regions, the maximum aid intensity is 50%.

[10] http://eugo.gov.hu/doing-business-hungary/investment-incentives

investments in manufacturing, shared service centres, research and development, and tourism projects[11].

The government also offers what is known as the VIP subsidy opportunity for *training employees* for new positions. The subsidy is available to investors creating at least 50 new jobs.[12]. The training subsidy is not a regional incentive, thus it can be granted on top of the maximum regional aid intensity. A *job creation subsidy* is also provided for those investments entitled to VIP investment subsidies and that create at least 250 new jobs in disadvantaged or least-developed micro-regions. The maximum available subsidy is EUR 3 million, depending on the location and the number of new employees. A subsidy opportunity is also available for *establishing vocational training* facilities and the development of the equipment for practical training[13].

Cash subsidy opportunities are available from the Hungarian national budget for *R&D activities* involving a broad cooperation of companies, universities and research institutions. The subsidies are available through a tendering process. Tender opportunities are available from EU Funds, for which investments of less than EUR 10 million can also qualify. The tenders reflect the importance given to supporting R&D activities, the creation of new workplaces, environmental investments, and technological investments (with preference given to small and medium sized enterprises).

Various Corporate Income Tax and Local Business Tax bases incentives and allowances apply to special business areas and activities, for example projects implemented and operated in a free entrepreneurship zone. The free entrepreneurship

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[11] In order to be eligible for the subsidy, 50-100 new jobs have to be created by the investor in the case of manufacturing investments, depending on the region where the investment takes place. In the case of large investments of more than EUR 50 million, 100-200 new jobs have to be created, depending on the place of the investment. In the case of establishing or expanding SSCs, at least 100 new jobs have to be created in general, and at least 200 new jobs in central Hungary. In the case of R&D related investments at least 10 new jobs have to be created in connection with the R&D activity.

[12] The maximum amount of the training subsidy for creating 50 to 500 new jobs is EUR 1 and 2 million for creating more than 500 new jobs. It is provided for both general and special training. The maximum aid intensity is 60% in the case of general training and 25% for targeted training. The aid intensity can be increased further in the case of small- and medium-sized enterprises and for training of disabled or disadvantaged workers

[13] In order to be eligible for the subsidy, the number of vocational school students with training agreements has to be increased by at least 50 compared to the average number of trainees in the two school years prior to the submission of the subsidy request. The maximum subsidy amount is EUR 8,000 per student, and the total subsidy received cannot exceed EUR 2 million per beneficiary.

zones cover over 900 settlements in the unprivileged areas of Hungary designated by the government are treated jointly for regional development purposes[14]. The most important tax scheme is the development tax incentive. Each development tax incentive may be claimed for a 10-year period (beginning after completion of the development) in Corporate Income Tax returns within a maximum period of 14 years from the original application for the incentive. In any given tax year, the tax incentive is available for up to 80% of the tax payable, but in total up to the state aid intensity ceiling.

In 2012 the Hungarian government introduced the system of *"strategic agreements"* signed with a number of foreign companies. The aim was to encourage the activity of selected multinational firms with the declaration of partnership. Up till May 2017 the number of signed strategic agreements is 74, out of which 65 partners were foreign-owned companies[15]. The partners are concentrated mainly in electronics, automotive- and pharmaceutical industries. Agreements were initiated mostly by the government.[16] The content of the framework agreements was rather uniform, stating intention of general cooperation in job creation, training and education, R&D, local supplier network development. According to Transparency International Hungary (2014) foreign firms hoped that this new agreement would ease communication with the Hungarian government despite of its often unfriendly rhetoric.

In the *Czech Republic* the Investment Incentive Act was amended in May 2015 with the aim to increase the attractiveness for investors and to reduce the impact of the EU rules (KPMG, 2016). Incentives are provided in the following forms: corporate income tax relief for up to 10 years (tax holiday); employment subsidies as cash grants for job creation and training (only vailable in regions with high unemployment rates); cash grants for strategic projects; availability of land at discounted prices; exemption from real estate tax in strategic industrial zones. The following conditions apply for all types of investments: The acquisition of assets for the project, including construction work, cannot start before the application for incentives is submitted. The investment must be

[14] http://taxsummaries.pwc.com/ID/Hungary-Corporate-Tax-credits-and-incentives
[15] http://www.kormany.hu/hu/kulgazdasagi-es-kulugyminiszterium/strategiai-partnersegi-megallapodasok
[16] There is a set of conditions that applies for big multinational business (5 years track record in Hungary, significant contribution to GDP production and exports, investments exceeding HUF 5 billion, contribution to employment – at least 1000 own employment, intention to increase job creation for skilled workers, participation in education -, at least 10 % local supplier input in production).

maintained (in the minimum amount and structure) for at least five years from its finalization. Large strategic investments can obtain higher incentives in cash instead of tax relief. Cash grants can reach up to 10% and can be further increased to 12.5% in case of projects combining manufacturing sites and technology centres[17].

The agency Czechinvest provides a detailed table on state support for companies as regional aid between 1998-2017. Table 3 shows the largest grant cases (Hyundai, Nexen are outstanding). The main conditions for granting investment incentives differ depending on the supported activity (manufacturing, technology or service centers) but usually prescribe minimum investment sum and number of jobs, new machinery, etc. (KPMG, 2016)[18]. If the project is located in a "strategic" industrial zone, the employment grant is higher. There are six strategic industrial zones (Ostrava-Mosnov, Holesov, Most-Joseph, Triangle, Kolín-Ovcáry, Nad Barborou).

These strategic industrial zones and other agglomerations are important FDI attracting areas. Hecht (2015) analysed the regional determinants that influence the location choice of German multinationals in the Czech Republic. She found that German investors prefer to locate in densely populated regions and in regions with a comparative advantage in the industry of the investment. Apart from that regions with a high number of other German companies proved to be especially attractive for German investors. Several recent larger foreign investment decision targets industrial zones. (Chinese A123 Systems, a manufacturer of advanced lithium-ion batteries, opened its new production facility in Ostrava in March 2017. This is the company's first manufacturing plant in Europe. The factory in the Ostrava-Hrabová industrial zone will

[17] For strategic investments in the manufacturing industry, the minimum amount to be invested in fixed assets is CZK 500 million, of which CZK 250 million must be invested in new machinery. At least 500 jobs must be created. For strategic investments into technology centres, the minimum amount to be invested in fixed assets is CZK 200 million, of which CZK 100 million must be invested in new machinery. At least 100 jobs must be created.

[18] In the case of manufacturing industry: establishment of a new manufacturing plant, or expansion of an existing plant, including its modernization and diversification of product portfolio; minimum investment in tangible and intangible assets of CZK 100 million. (approx. EUR 3.6 million), in selected regions this is reduced to CZK 50 million. Machinery must be new; creation of at least 20 new jobs.

For technology centres: establishment of a new technology centre, or expansion of an existing technology centre; minimum investment in tangible and intangible assets of CZK 10 million (approx. EUR 360,000), of which at least CZK 5 million must be invested in machinery. Machinery must be new; creation of at least 20 new jobs.

Business support services centres**:** creation of at least 20 new jobs for software development centres, 500 new jobs for customer support centre or 70 new jobs for other business support services centres.

annually produce more than 600,000 automobile batteries for the European market. In the future, the company plans to employ 150 people, primarily highly qualified technicians and engineers[19]. Chassix, a USA based global automotive supplier of precision casting and machining solutions, in March 2017 announced plans to establish a greenfield plant in Ostrava, Czech Republic. It will be the third plant of Chassix in Europe after France and Spain and will start to operate in 2018 and accounts for an investment of about $50 million. Chassix Ostrava is expected to generate approximately 350 skilled jobs in the region.[20])

Table 3: Large state aid cases in the Visegrád countries 2004-2017

HUNGARY	**Aid EUR mn**	**EUR th per job**	**SLOVAKIA**	**Aid EUR mn**	**EUR th per job**
Mercedes-Benz, (D) 2008	88.1	35.2	Kia Motors Slovakia, (KR) 2004	179.7	75.7
Apollo Tyres, (IN) 2014	51.9	53.6	PCA Slovakia (FR) 2003	166.0	47.4
Hankook Tire,(KR) 2005	63.5	42.1	Jaguar Land Rover (UK) 2016	125.0	45.4
AUDI Hungaria, (D) 2011	46.5	25.8	Samsung Display (KR) 2007	74.9	62.4
Mercedes-Benz, (D) 2016	41.4	41.4	Duslo, a.s. (CZ) 2014	58.5	45.0
ThyssenKrupp, (D) 2016	34.1	75.8	Mobis Slovakia (KR) 2004	47.3	50.8
Elektrolux Lehel (SK) 2004	30.7	29.2	Foxconn Slovakia 2006	38.8	25.8
AGC Glass (JP) 2005	29.3	73.3	Kia Motors Slovakia (KR) 2007	38.2	57.7
Hankook Tire, (KR) 2013	25.8	27.2	AU Optronics (MY) 2009	38.2	29.4
SMR Automotive Mirror Technology (IN) 2016	24.8	55.0	Samsung Electronics Slovakia (KR) 2006	36.4	45.5

[19] http://www.czechinvest.org/en/a123-systems-opens-new-factory-in-the-czech-republic
[20]http://www.prnewswire.com/news-releases/chassix-plans-new-czech-republic-casting-foundry-300424015.html

CZ REP	**Aid Eur mn**	**EUR th per job**	**POLAND** (data until 2010)	**Aid Eur mn**	**EUR th per job**
Hyundai Motor[21], (KR) 2006	194.5	55.3	Mercedes Benz[22] (D) 2017	18.7	46.7
Nexen Tire Corp, (KR) 2016	129.0	93.2	IBM Global Services Delivery Centre 2010	7.4	2.5
Daikin Device, (JP) 2006	55.4	68.7	Michelin Polska[23] (F) 2014	7.2	28.8
IPS Alpha Techn. (JP) 2006	49.9	23.7	Orion Electric[24] (JP) 2007	6.8	13.6
Bosch Diesel, (NL) 2005	47.8	130.1	Nokia Siemens (Fi) Network 2010	5.1	12.7
Glaverbel Czech, (NL) 2006	47.7	671,49	Ford Werke Gmbh[25] (D) 2009	4.2	4.0
Knauf Insulation, (FR) 2006	47.5	316,72	Fiat Powertrain (IT) 2010	3.6	9.0
Tivall CZ, (IL) 2006	47.4	158,14	Cadbury Wedel (UK) 2008	3.0	4.0
ELBEL (IT) 2006	43.5	36,73	Goodrich Aerospace (UK) 2010	2.9	11.8
Automotive Lighting (D) 2006	43.2	68,34	MTU Aero Engines (D) 2009	2.9	7.2

Source: calculations from data of www.czechinvest.org, www.kormany.hu, www.economy.gov.sk and Slusarczyk and Kot (2012) and the European Commission documents given in footnotes

In *Slovakia*, according to the amendment of the Investment Aid Act in 2015, investment grants and employment grants are offered to industrial projects, technological centres (R&D, production and technology upgrade), strategic services centres (entities with high value added employing experts) and tourist services centres (offering at least three types of services)[26]. Each category has specifically defined conditions which shall be met in order to apply for the investment incentives. These incentives can be: a subsidy for the acquisition of material assets and immaterial assets;

[21] http://ec.europa.eu/competition/state_aid/cases/217057/217057_740586_58_1.pdf
[22] http://ec.europa.eu/competition/state_aid/cases/268157/268157_1871419_10_1.pdf
[23] http://ec.europa.eu/competition/state_aid/cases/252931/252931_1579423_90_2.pdf
[24] http://ec.europa.eu/competition/state_aid/cases/218154/218154_770525_20_1.pdf
[25] http://ec.europa.eu/competition/state_aid/cases/228855/228855_991575_85_2.pdf
[26] www.sario.sk/sites/default/files/.../sario-investment-aid-act-2015.pdf

an income tax relief; a contribution for created new jobs; transfer of immovable property or exchange of immovable property at a price lower than a general asset value. The aim of the Slovak authorities is to guide new investments to high unemployment regions (KPMG 2016b)[27].

The creation of industrial parks in Slovakia started later than in the other three countries, because of the government bias against foreign capital before 1998 (Surkala, 2014). However, in 2001 the Act on Industrial Parks was adopted. In the first years, the state supported the construction of industrial parks in the amount of roughly EUR 15 million per year but for today the support is already hundreds of millions of euros.[28] Under Sectoral Operational Program Industry and Services (2004-2006) and the Operational Program Competitiveness and Economic Growth (2007 - 2013), a non-repayable financial contribution of more than EUR 110 million was granted for the construction of 24 industrial parks.[29]

In Slovakia between 2004 and 2016 the average support was about 30,000 euros per job created. However, - as examples in table 3 also show - 18 investment received more than EUR 50,000 per job (Vlachynsky and Kristály, 2017). Multiple companies have received investment incentives repeatedly[30]. Some measures are not formally included into official investment stimulus statistics. For example, in the case of the Jaguar grant[31] the cost of extensive construction of engineering networks, railway terminal, highway, riverbeds and other investments, should be around additional 300 million euros. Officially this is not assistance for Jaguar, but for the whole of the industry park but without the arrival of the big investor these investments would not have been realised. In May 2017, the European Commission announced that will investigate if the support is really necessary for Jaguar Land Rover and the firm will lose part of the money if it distorts competition.[32] (Jaguar investment anyway attracts further foreign suppliers too.

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[27] The total aid cannot exceed between EUR 20,000 and EUR 30,000 per new job. An eligible investment project must create at least 40 new jobs or 10 new jobs for the least developed regions and these jobs must be kept for at least a five year period.

[28] http://alianciapas.sk/priemyselne-parky-na-slovensku-ich-rozvoj-a-fungovanie/

[29] http://www.siea.sk/priemyselne-parky/c-2409/priemyselne-parky-podporene-zo-strukturalnych-fondov-europskej-unie/

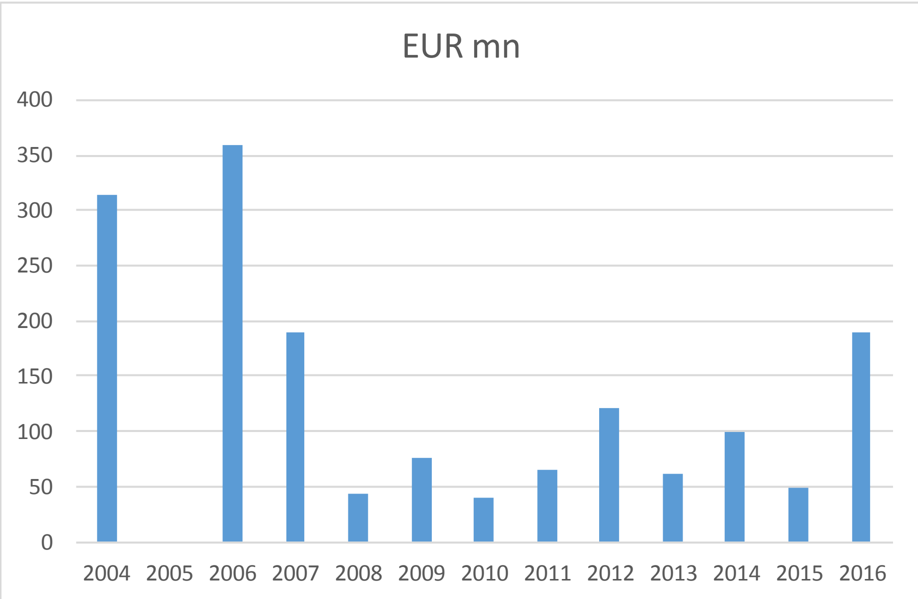
[30] 16 companies received two incentives and 6 companies received up to three incentives.

[31] In 2016 Slovakian government approved 130 million euros in direct aid to Jaguar Land Rover to build plant with an annual output of up to 150,000 cars.

[32] https://www.ft.com/content/c0539756-408e-11e7-9d56-25f963e998b2

In 2016 the Spanish company Gestamp announced it would invest EUR 133 million near the city of Nitra in Slovakia. The new firm will be a supplier to Jaguar Land Rover. The plant will start production in 2018, focusing on products which reduce vehicle weight while maintaining safety. Nitra will be Gestamp's eighth plant in the Visegrád region comprising Slovakia, Poland, Hungary and the Czech Republic, where the company employs 2,500 workers. The new project will create 229 jobs[33].)

Figure 3. Investment stimuli from the Slovak government 2004-2016



Source: Vlachynsky – Kristály, 2017
Note: 2004: KIA, 2006: Samsung, Sony, suppliers of KIA, the 2016 figure includes the announced state aid to Jaguar. With additional infrastructure the sum would be around EUR 300 million.

In *Poland* cash grants are offered by the state for projects in the automotive, electronics, aviation, biotechnological, food-processing, business services and R&D sectors, as well as for large projects in any other sector. The subsidies vary depending on the value of the investment or the number of new jobs created[34]. Governmental grants are provided on the basis of "Programme for supporting investments of major importance to the Polish economy for years 2011-2023"[35]. Support is granted in the form of a grant on the basis of a bilateral agreement between the Minister of Economy and the investor. Only those entrepreneurs planning to invest in the following priority sectors can apply for support: automotive sector, electronic sector and household

[33] http://www.automotivemanufacturingsolutions.com/news/gestamp-open-aluminium-plant-nitra
[34] http://www.financialobserver.eu/poland/poland-fails-to-improve-its-investment-incentives-4/
[35] http://www.paih.gov.pl/governmental_grants

appliances production, aviation sector, biotechnology sector, agro-food sector, modern services, research and development[36].

The program envisages on the one hand support for the cost of creating new jobs (grant for employment) depending on the number of new jobs created, the percentage of employees with higher education, location, investment expenditures, sector. On the other hand support is provided for eligible costs of a new investment (investment grant). The amount of support for eligible costs of a new investment depends, among others from the number of new jobs, the amount of investment per one place of work, location. There are four regions in Eastern Poland where the highest level of possible state aid up to 50 percent is still permitted. Even in Warsaw some support is possible, which is a difference from other CEE countries where state aid is not allowed at the capital regions.

There are significant incentives in the Special Economic Zones (SEZ) being administratively separate parts of Polish territory, allocated for the running of businesses on preferential terms[37]. SEZ were created in 1994 and their regulation was several times modified. A critical analysis of SEZ policy is given by Gwosdz et al (2008). The initial idea of keeping the zones in the originally designated areas was changed as early as 1997, mainly for political reasons. Subsequently, local governors, including zone administrators and also in some cases the foreign investors themselves, have been able to bargain to make the policy applicable in areas adjacent or other areas to the original zones[38].

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[36] In addition, support may be requested by entrepreneurs planning production investments in other sectors, with a minimum eligible cost of PLN 750 million and creating at least 200 new jobs, or a minimum eligible cost of PLN 500 million, and creating at least 500 new jobs (significant investments).

[37] http://www.paih.gov.pl/investment_support/sez

[38] Because of pressure from large companies, SEZs were located in places without high unemployment rates. Gliwice is a good example of where a SEZ was clearly opened under the pressure of General Motors, who made the opening of the zone a condition precedent to the location of the new Opel plant there. An even more unequivocal example is provided at Kwidzyn and Bielsko-Biala where land owned by Philips and Fiat were given special zone benefits, as a result of effective lobbying by a coalition of company management, trade unions, and local politicians. Both Fiat and Philips made the continuation of their investments in their locations conditional on gaining such privileges (Gwosdz et al 2008).

Fourteen Special Economic Zones have been set up for the purpose of: speeding up development of the Polish regions[39]. The total area of the SEZ cannot exceed 25,000 Ha, and the final date of their operation was extended to 31 December 2026. The main benefits of investing in SEZs are among others: corporate income tax exemption, availability of land and infrastructure; opportunity to buy or rent a property, other incentives like exemptions from real estate tax, investment grant from the administration state, subsidized employment. However, some say that the policy of special economic zones creates islands where it is better than other parts of the country and because mainly foreign firms use the benefits, it discriminates domestic companies[40].

Grants *by municipalities and cities* can also be various in the Visegrád. TPCA was granted generous incentives from both the Czech state and from the town of Kolín, which paid for the complete development of the industrial zone, costs of traffic route extensions, sound barriers, new housing units and other adequate infrastructure. As a result of all of this the town of Kolín is indebted until 2019 (Guidote, 2008). For Hyundai an industrial park was built, the region of the Czech Nošovice took responsibility for preparing the site for the erection of the industrial zone at its own expenses. Furthermore, they agreed to build all the utilities needed, roads, railways, services and other facilities (Bobák, 2011). Swiss Rehau[41] plans to increase the output capacity of its factory in Jevíčko, in the Czech Republic aiming to create about 120 new jobs at the

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[39] The leading investors within special economic zones by investment expenditure include: General Motors Manufacturing Poland (USA), Volkswagen Poznań (Germany), Toyota Motor Manufacturing Poland (Japan), Volkswagen Motor Polska (Netherlands), Michelin Polska (Switzerland), Electrolux Poland (Sweden), Gillette Poland International (Luxembourg), LG Display Poland (South Korea).

[40] For example according to the Polish ministry of economy data turbines and component producer Hispano Suiza received EUR 3,85 mn in exchange for employing 109 people at a factory in Sędziszów Małopolski. It costs almost EUR 35 thousand per job. Samsung, which opened a new production line in Wronki, received EUR 4 million. The company promised to employ 251 workers, it is almost EUR 16 thousand per job.
http://www.money.pl/gospodarka/wiadomosci/artykul/specjalne-strefy-ekonomiczne-polski-podatnik,56,0,1900344.html

[41] Rehau is a global polymer processing company supplying products to the construction and automotive industries. The company's Czech subsidiary supplies various injection moulded parts and sealing systems to a number of car producers. The Swiss company's Czech subsidiary, Rehau Automotive, s.r.o., owns a production facility in Moravská Třebová, in the country's east. The company has been active in the Czech Republic since 1992.

plant[42]. The city provides protection against flooding (the plant is in a flood area) with a water trough for EUR24 thousand. Some cities provide international school development projects and family assistance to manager families or a free of charge industrial property for 50 new jobs.[43] For KIA Slovakia a new health center, training center, railway terminal and police station was built in Žilina 1,000–1,200 new apartments and luxury houses close to Bratislava for South Korean managers. For PSA a French school was established in Trnava, among others (Pavlínek, 2014).

The above described investment incentives in a narrow sense are good tools for influencing location choice of foreign investors. Competition for new investments is strong among the Visegrád countries. (In the beginning of 2017 (among other projects) Poland and the Czech Republic is in competition for Daimler's new logistic centre[44], Hungary, Slovakia and Romania compete for a new large Mitsubishi plant[45] that would produce engines, Poland and Hungary compete for JP Morgan's new large back office operations centre that would support the bank's European and Asian business[46]). Bargaining between states and multinational companies on incentives and grants, conditions of investment can be complex and depends also on the strong capacity of the state (Bakir, 2015). The "state" itself is complex because consists of several public sector actors, regional and national authorities among which efficient collaboration is necessary. However, large multinationals have their own "games" to put pressure on governments as it is nicely detailed in Akcaoglu and Erol (2011) concerning the competition of the Czech Republic and Turkey for Hyundai Motor investment in 2005, or in Pavlínek (2014) concerning KIA[47]. Corporates can influence states and "capture" them

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[42] http://www.autofox.cz/index.php?idx=71115

[43] https://www.slideshare.net/csorjan/grants-for-manufacturing-in-eastern-europe

[44] https://prague.tv/en/s72/Directory/c214-Business/n8418-Daimler-may-build-Czech-warehouse

[45] http://www.intellinews.com/three-cee-countries-compete-for-200mn-mitsubishi-engine-plant-116965/

[46] http://www.businessinsider.com/r-jpmorgan-zooming-in-on-warsaw-for-new-global-back-office-center-2017-4?utm_content=buffer540be&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer-finance

[47] KIA in August 2003 reported that the factory location would be either in Hungary or in Czechia. "At that point, the Slovak minister of Economy traveled to South Korea to present in person a new package of investment incentives to the management of Kia, 'an offer which was impossible to refuse. Kia obviously used (in vain) the late Slovak offer to attempt to obtain bigger incentives from Hungary and Czechia. Kia eventually selected Slovakia on 2 March 2004. Slovakia simply provided everything Kia asked for. The contract was extremely onesided, suggesting a very asymmetrical power relationship between Kia and the state" (Pavlínek, 2014).

(Pavlínek, 2014, Bobák, 2011). In other cases – like in Hungary – the oligarchic state can select certain foreign companies to demonstrate its patronage with support and allowances (Szanyi, 2016).

As Table 3 also shows, the largest state supports were provided to automotive multinationals. The spectacular growth of Slovakian automotive industry has been enhanced by the Slovakian government policy by applying narrow-type incentives (Pavlínek, 2014). Situation is similar in Hungary and in the Czech Republic. However, the degree of dependency on automotive sector is so large for today, that there is no way back, subsidies will continue. State aid is provided not only for creating new jobs, but preserving existing ones (not to leave the country).

If we examine the data on state support for companies provided by the ministries, it is obvious that in the past 20 years the largest amount of state aid has been given to German and Asian multinationals. We can also find few companies from other Visegrád countries as beneficiaries of subsidies (for example the greenfield investment of Polish Alumetal in Hungary). However, in some cases these are not original regional firms but affiliates of multinationals. (In the list of companies supported by the Slovak state we can find for example the "Hungarian" Yanfeng Automotive Interior Systems.) What is more, in the case of supporting "domestic" firms, also these companies are affiliates of foreign multinationals. Among for example the "Czech" companies supported (that means in the cell "applicant's country of origin" the Czech Republic is given) we can see Mondelez CR Biscuit, Robert Bosch, s.r.o, Johnson Controls International, s.r.o, Muramoto Manufacturing Europe s.r.o, etc[48]. Similarly, in the Slovak state aid sheet we find the "Slovak" T-Systems, etc. Thus, similarly to indirect FDI exists also "indirect state aid", formally given to domestic firms but in reality to foreign owned joint ventures or earlier privatised companies.

Apart from job creation, the aim of subsidising foreign investors can be the boosting of export. Automotive and electronic plants produce massively for export from the Visegrád countries. The first biggest export items of these countries are usually motor vehicles, motors or automotive components (Éltető, 2015). The mentioned plants

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[48] http://www.czechinvest.org/investicni-pobidky-nove, Excel sheet

import heavily, so domestic value added is extremely low in these countries'export. This fact can be considered a measure of inclusion into global value chains (Koopman et al.2014, Timmer et al., 2015). As for the massive volumes of exports are stemming from foreign multinationals, their investment promotion means trade promotion too at the same time. Therefore trade and investment promotion is strongly interconnected in the Visegrád countries. Box 1 provides some examples of state supported, highly trade intensive multinationals.

Box 1: Some individual grant cases largely affecting trade

Audi - Hungary

On 28 October 2009, the European Commission has approved a regional aid package of EUR 49.52 million for an investment project of the car manufacturer Audi in Gyor, Hungary, which belongs to the German Audi AG, part of the Volkswagen Group[49]. The regional aid was a direct grant in the years 2009-2013 and a corporate tax allowance for 2012. The aid facilitates the production of engine components and increase the overall production capacity by 100'000-250'000 engines per year.

Mercedes – Benz Hungary

In July 2011 the Hungarian authorities provided regional aid to Mercedes-Benz Manufacturing Hungary Kft. for the establishment of a new production plant for passenger cars in Kecskemét[50]. The beneficiary firm is a 100 per cent subsidiary of Daimler AG. The products range from the high-quality small cars of the smart brand to the premium automobiles of the Mercedes-Benz. The financial support is given in the form of a cash grant and a corporate tax allowance.

General Motors – Poland

On 18 December 2012, the European Commission granted investment aid to the General Motors Manufacturing Poland Sp. z o.o. The aid worth EUR 14.54 million was used to start a new production line at the Gliwice factory in the Slaskie region for the fourth-generation Astra models in the years 2012-2013[51]. The beneficiary company belongs to the Opel/Vauxhaull corporation, which is part of the General Motors Group. The factory in Gliwice produces multiple Opel models but it specializes in the Astra series. Most of the aid originated from EU's Operational Fund Innovative Economy and amounted to EUR 12.36 million, whereas the remaining 2.18 million were financed by Poland.

Samsung – Poland

On 20 November 2013, Poland notified the EC about its intention to support Samsung Electronics Polska Sp. by providing an adhoc grant of EUR 0.9 million[52]. Samsung already received state aid in relation to the extension of the Warsaw, Lodz, Poznan. The main products of Samsung Electronics are LCD & LED panels, mobile phones, semiconductors, hard disks, notebooks, digital cameras, printers and televisions. The grants are used in the extension of the research facilities in Warsaw to develop software for smart consumer electronic products.

Mercedes - Poland

The factory will be in Jawor, about 430km southwest of Warsaw, and will be Mercedes's first plant in Poland and second engine facility outside Germany after Beijing[53]. The implementation of the project is dependent on various investment conditions, including the granting of state aid, Daimler said. Polish government awarded nearly € 19 million in subsidies to the Mercedes engine plant in Jawor[54]. The Jawor factory will be built in a special economic zone and Daimler will also be eligible for CIT exemption. The amount of the tax relief has not been disclosed. At least 400 people will work at the Mercedes factory in Lower Silesia and the plant will export engines worth nearly 500 million euros a year. Engines from Poland will probably be sent to the factory opened in 2012 Mercedes cars in Hungary. There are 4 thousand working there. Daimler announced that he would invest another € 1.6 billion to build a Hungarian factory by 2019 and build a second factory for his cars by 2019.

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[49] http://www.globaltradealert.org/measure/hungary-regional-aid-car-manufacturer-audi

[50] http://www.globaltradealert.org/measure/hungary-aid-mercedes-benz-manufacturing-hungary-korl%C3%A1tolt-felel%C5%91ss%C3%A9g%C5%B1-t%C3%A1rsas%C3%A1g

[51] http://www.globaltradealert.org/measure/poland-financial-aid-general-motors-manufacturing-poland-sp-z-oo

[52] http://www.globaltradealert.org/measure/poland-state-aid-electronics-producer-samsung

[53] http://invest-in-wroclaw.pl/en/kolejne-miliardy-na-inwestycje/

[54] http://wyborcza.biz/biznes/1,100896,21095908,wicepremier-morawiecki-przyznal-prawie-19-mln-euro-dotacji-na.html?disableRedirects=true

Volkswagen – Slovakia
In December 2008, the Slovak authorities notified their intention to grant aid for a large investment project by Volkswagen Slovakia a.s. in Bratislava[55]. The Slovak authorities provided regional aid of EUR 14 300 000 to Volkswagen Slovakia for an investment project in Bratislava.

AU Optronics – Slovakia
In 2011 the Commission endorsed Slovak investment aid of € 34.9 million in favour of AU Optronics for setting up a new production plant for the manufacture of thin film transistor liquid crystal display (TFT-LCD) modules and TV sets[56]. Annually, the facility produces up to 6.3 million LCD modules and up to 2.4 million TV sets with a 26 to 58-inch screen. The total investment worth around €184 million created 1300 jobs in Trenčín, Western Slovakia, which is also an area eligible for regional aid. Here too, the market shares of the beneficiary remain below the 25% threshold on all plausible market definitions and these markets are fast growing. AU Optronics was founded in 2009 and operates as a subsidiary of AU Optronics Corp., a Taiwanese electronics manufacturer.

Jaguar - Slovakia
The Slovak government approved around 130 million euros in direct aid to Jaguar Land Rover in 2016 to build plant with an annual output of up to 150,000 cars[57]. The investment is 1.4 billion euros and the first cars are expected to come off the production line in late 2018. The plant will employ 2,800 people[58]. (The recruitment of skilled workers caused a wage increase in other Slovakian automotive plants).

Hyundai Motor Corporation - Czech Republic
The investment took place in Nošovice (EUR 194.49 million), for the setting up of an automobile manufacturing plant with an initial production capacity of 200 000 vehicles per year. The total investment amounted to EUR 1.2 billion, it started in 2006 and was expected to create 3514 new jobs.[59] The local land owners and some non-governmental organizations opposed the plan of the industrial zone close to the village and to the Beskydy Protected Landscape. Czech authorities exerted pressure on locals, the regional Governor offered all households 100 000 CZK to accept the construction of the Hyundai factory, the local agricultural cooperative was threatened by expropriation, national law was modified and opposing families not selling their land were threatened by anonym letters (Bobák, 2011). Even a film was made from the story of the Hyundai site.[60] Local infrastructure was built and the state transferred the industrial zone land to Hyundai at a reduced (one seventh) price. In addition, the state subsidised created jobs and requalification and Hyundai got exemption from value added tax for 10 years. The state was also obliged to provide investment help to the other corporations which have been interconnected with Hyundai (services, suppliers). Hyundai produced 358 400 cars in 2016, mostly for export.

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55 http://www.globaltradealert.org/measure/slovakia-state-aid-volkswagen-slovakia
56 http://europa.eu/rapid/press-release_IP-11-875_en.htm
57 http://uk.reuters.com/article/slovakia-autos-idUKL8N1AS2LY
58 http://media.jaguarlandrover.com/en-us/news/2016/09/jaguar-land-rover-begins-construction-slovakian-plant
59 http://ec.europa.eu/competition/state_aid/cases/217057/217057_740586_58_1.pdf
60 http://www.taskovskifilms.com/?film=all-for-the-good-of-the-world-and-nosovice

Bosch – Czech Republic

Czech government approved in November 2016 that German Bosch will receive an incentive of up to 444 million in the Czech Republic to expand production[61]. Within three years Bosch intends to invest 1,294 million crowns in the expansion of existing production of parts and accessories for motor vehicles. Thanks to this, 505 new jobs will be created in the České Budějovice district. The company also plans to invest 904 million crowns in the expansion of the R & D Center for parts and accessories for the next four years. This investment will create 120 new jobs, mainly higher and vocational secondary education. Robert Bosch is the largest engineering firm in South Bohemia established in 1992 as the joint venture Robert Bosch GmbH Stuttgart and Motor Jikov. Since 1995, it is a wholly-owned subsidiary of the German concern. The maximum rate of public support may not exceed one fifth of the total eligible cost. By way of material support for the acquisition of tangible and intangible fixed assets, the company could receive up to 275 million crowns for both projects, the remainder being a reduction of income tax.

Investment and trade promotion in a wide sense

In a wide sense investment promotion means such business conditions that are favourable for the functioning of firms (either domestic or foreign). Apart from regulatory factors (ease of doing business, bureaucracy) several other government policies belong here. In some areas there are comparable indices gathered by international organisations. Some are complex ones, constructed from sub-indices.

In the book of Götz (2016) EU countries' approach towards FDI is described by available global indices, tools. These are: IRR – Investment Regulatory Restrictiveness Index by OECD, concluded Bilateral Investment Treaties (BITs), launched claims under Investment State Dispute Settlement procedure, (ISDS), Doing Business ranks, "business impact of rules on FDI" index by Global Competitiveness Report and indicators of discriminatory measures reported by Global Trade Alert (that provides up to date information on State measures likely to affect foreign commerce). These elements inform either about the progress in reforms launched, international openness/closeness or observance of the existing anti-discriminatory law. Götz (2016) presented data for 2015, in Table 4 we show the results for 2016.

[61] http://www.novinky.cz/ekonomika/420872-nemecky-bosch-dostane-v-cesku-pobidku-az-444-milionu-na-rozsireni-vyroby.html

Table 4: Major international indicators concerning FDI policy

2016	Poland	Czech R	Slovak R	Hungary
GCR[62]	4.6	5.3	5.5	5.1
DB[63]	24	27	33	41
GTA cases	2	1	0	1
IRR[64]	0.072	0.010	0.049	0.029
ISDS[65]	23	34	13	14
BIT[66]	68	113	58	60

Indicators based on the concept of Götz (2016) updated from the relevant sources

According to the Global Trade Alert Slovakia has not applied discriminatory investment measures after 2008. Global Trade Alert lists one harmful law amendment initiated by Hungarian government: the ban on foreign land ownership (18.12.2012) and one by the Czech government: revision of the Act on investment incentives (01.05.2015). In Poland such discriminatory law was the "Corporate income tax exemption for foreign investment and pension funds" (25.11.2010) and the law "protecting strategic Polish companies from hostile takeovers" (15.08.2015).

The total number of ISDS cases has increased in every country since 2008, being quite high for the Czech Republic. According to the GCR subindex on FDI attractiveness, the 4.5-5.5 value for the V4 economies are around the EU average (the best is of Ireland with 6.4) and improved somewhat from 2015. The number of BITs are especially high in the case of the Czech Republic and the investment regulatory restrictiveness index is rather high in Slovakia.

Apart from these indices and rankings there are some other areas that influence the functioning (investment and trade) of the firms. In the following we use some other international indicators and the evaluation of the European Commission (Country Reports 2017) on these countries' progress.

62 https://www.weforum.org/reports/the-global-competitiveness-report-2016-2017-1
63 http://www.doingbusiness.org/rankings
64 http://stats.oecd.org/Index.aspx?datasetcode=FDIINDEX#
65 http://investmentpolicyhub.unctad.org/ISDS/FilterByCountry
66 https://icsid.worldbank.org/en/Pages/resources/Bilateral-Investment-Treaties-Database.aspx#a42

Legal system, regulations, corruption

Legal uncertainty can be harmful for investment. Predictability of regulatory, and tax policies, well functioning institutions are important. Corruption in general decreases transparency and increases inefficiency in allocation of financial resources.

In *Poland* the EU Country Report warns on legal uncertainty. The Polish tax system (including VAT, CIT, excise duties and others) underwent many rapid changes in 2016 increasing uncertainty about the stability and credibility of the Polish tax system, given that changes are often introduced quickly and without broad consultations. In 2016, policy instability became the third most problematic factor for doing business, from a previous ranking of 10th. The ease of doing business in Poland has been however gradually improving. This is mainly due to the introduction of the new insolvency law, faster procedures for property registration, and amendments to the construction law. The government has plans to further simplify certain business procedures with a range of proposals put forward within the "Strategy for Responsible Development".

The *Czech* authorities are planning to introduce some steps to simplify the tax system (integrated tax and social security administration, greater digitalisation of the tax administration). Corruption in the Czech Republic continues to be a major problem. The business environment is characterised by a heavy regulatory burden and numerous administrative barriers. Recently a large number of simplification measures were implemented. Public investment is hampered by inefficient public procurement procedures. While the Czech authorities have adopted some reforms, progress is still lacking in areas such as centralised purchasing and the incidence of corruption in public tender procedures.

Regarding *Hungary* international indicators point to a low and deteriorating quality of institutions, mainly since 2010. As the Country Report argues, policy uncertainty is one of the most important barriers to doing business in Hungary. For government initiated proposals, consultations tend to be limited to very short time periods, around 4.5 days in the last three years. Transition periods allowing the affected parties to prepare for policy implementation are often inadequate. In 2011 the personal income tax was replaced by a flat rate of 16% and the corporate income tax was reduced to 10% on revenues below HUF 500 million. On the other side, VAT rate rose and sector specific taxes were introduced. Moreover, welfare benefits were cut and government spending on education and infrastructure decreased (Šćepanović, 2015). The tax burden on labour income still remained substantial because of high social security contributions. Revenues from sector-specific taxes were estimated at about 1.5 % of GDP in 2016, including banking, insurance, utilities, energy, telecommunication and retail sectors. From January 2017 the general corporate income tax rate was lowered to 9% (for all revenues), mostly benefiting large companies. This lowest corporate income tax rate in the EU will improve Hungary's competiveness, and also make it more attractive for tax optimisation purposes by foreign companies.

The complexity of the tax system generates important administrative and compliance costs, that hit particularly SMEs. Public procurement consistently suffers from limited competition and transparency. Single-bid contract awards and negotiated procedures without prior publication of the tender have been more extensively used in Hungary than in most other Member States. Based on the Transparency International corruption perception index (CPI), Hungary's score has continued to deteriorate over the past few years (see table 5).

In *Slovakia* administrative and regulatory barriers continue to be significant, the process of setting up and running a business in Slovakia remains relatively complicated. However, tax compliance costs for businesses have declined and measures are being taken to improve the business environment and foster entrepreneurship. Weakness persists in the public procurement system and limits the competition. The level of perceived corruption remains high and the impact of anti-corruption strategies is limited by institutional shortcomings. These factors discourage smaller foreign companies from investing in Slovakia and affect investment decisions of local SMEs.

The Slovak taxation framework has been changed several times. The up till then flat 19% rate corporate income tax was raised to 23% in 2013 and later reduced to 22% and in 2017 to 21%. The tightening of tax rules brought additional corporate income tax revenue. However, over half of all companies do not pay this tax because of exemption or declared losses (Country Report). For 2017, the government has extended and increased the levy on companies in regulated industries. The bank levy that had also been set to expire was extended until 2020.

Infrastructure

The *Czech Republic* continues to perform below the EU averages regarding transport infrastructure. The quality of the road network remains relatively low[67]. The density of the rail network is very high but the network requires substantial modernisation. There is also a lack of high-speed railway connections, and cross-border connections are poor. Investment in transport infrastructure has been inadequate in recent years, particularly for the road network. Investment in transport infrastructure also suffers from general problems related to public procurement transparency and corruption[68].

In *Slovakia* the fragmented road transport network harms investment, especially in the Central and Eastern regions, and aggravates the regional economic divide. Foreign direct investment inflows tend to concentrate around Bratislava, while Central and Eastern regions attract much less domestic or foreign investment. Road density is low in comparison to EU and congestion levels and average delays are significant. While motorways and expressways are usually in good condition, the country still lacks a continuous motorway along the Bratislava-Kosice corridor and an upgraded rail link. Slovakia's ageing rail network restricts train speed, while various lines appear to be virtually obsolete in view of the very low frequency of trains and small or inexistent passenger volumes.

Poland has been rapidly improving its infrastructure with the help of EU funding[69], but key structural bottlenecks persist. The road fatality rate is still among the highest in the EU. The railway sector continues to face challenges and bottlenecks in project implementation. Significant agglomeration railway lines are still awaiting modernisation to allow more passenger traffic. Rail freight remains uncompetitive. Cumbersome legal, financial and administrative procedures linked with bottlenecks within the railway infrastructure manager still persist and lead to project delays and insufficient

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[67] The motorway network density was 9.8 km per 1 000 km2 in 2014 compared to an EU average of 16.8 km.

[68] Road construction is especially problematic in this regard, with many projects exceeding the initial budget specified in the tender, experiencing significant delays in completion or being of questionable quality and safety. Indeed, deadline extensions for motorway and other infrastructure projects often reach up to seven years, and projects are often changed to include additional works after the contracts are signed, resulting in considerable extra costs. To simplify and accelerate the procedure for granting building permits, the Czech government approved an amendment to the Construction Act and related legislation in September 2016.

[69] In 2015-2016, 115.8 km of new or modernised motorways and expressways were built. The EU funds allocation for Polish roads in 2014-2020 is EUR 15 billion.

investment. Improving Poland's air quality, currently among the worst in the EU, remains a major challenge.

Table 5. Factors of business environment in the Visegrád countries

	Poland	**Czech Republic**	**Slovakia**	**Hungary**
Transport infrastructure	improving but key bottlenecks, large fatality rate	high rail density, inadequate road network	fragmented road transport network	improved air transport, but rail system underdeveloped
TEN-T road *TEN-T rail core network*	34% 23%	55% 63%	39% 20%	81% 9%
Legal, regulatory environment	The current systemic threat to the rule of law creates legal uncertainty.	Heavy regulatory burden and administrative barriers, but improving	Harmful administrative and regulatory barriers, corruption	Legal uncertainty, changing taxes, deteriorating institutions, corruption
Corruption	improving CPI=62	stagnating recently CPI=55	stagnating recently CPI=51	worsening CPI=48
Education	Improving, good	Relatively good	Deteriorating	Significantly worsening results
PISA 2015 *PIAAC 2015*	501,504,506 267,260,19	493,492,487 274,276,29	461,475,453 274,276,28	477,477, 472 n.a
Vocational educational training (VET)	Relatively good results	Relatively good outcomes, positive perception	In 2015 introduced a dual VET system, but interest among potential participants remains limited.	Secondary school types were renamed in 2016, unlikely improvement in basic skills and competencies.
Skilled labour force	relatively good	available, good	shortage	shortage
*GERD/GDP 2015**	1.0%	1.95%	1.18%	1.38%

Source: EU Commission Country Reports and
http://www.transparency.org/news/feature/corruption_perceptions_index_2016
http://www.oecd.org/pisa/
http://www.oecd.org/skills/piaac/
http://ec.europa.eu/transport/facts-fundings/scoreboard_en
*Gross domestic expenditure on R&D, %, source Eurostat[70]

In *Hungary* ratings of the quality of the Hungarian transport infrastructure are below EU average for all modes of transport, with however a clear positive trend concerning air transport infrastructure. Both conventional and high-speed rail need more

[70] http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=t2020_20&plugin=1

development, such as (sub) urban connections and regional connectivity. As regards the completion of the TEN-T Core Network, the Hungarian road network is 81% complete, but rail network only at 9% (table 5).

Education, training, R&D

Educational performance (basic skills) in *Poland* has remained strong over recent years in comparison to other EU countries. The school system however, is changed from September 2017 onwards phasing out lower secondary schools, practically returning to the pre-1999 structure. Participation in early childhood education and care has increased but challenges remain in quality and inequalities of access. At present, all four- and five-year-olds are entitled to a preschool place and from September 2017 this right will also be extended to three-year-olds. Abolishing the preschool obligation for five-year-olds may weaken the educational chances of children from socially disadvantaged backgrounds according to the Country Report.

Vocational education and training (VET) often does not provide students with basic skills and key competencies. At the same time, the results for technical secondary schools are considerably better than for basic vocational schools. Employment rates of recent vocational school graduates were still slightly below the EU average in 2015. Weak links between academia and the business sector and the quality of science are crucial barriers to e.g. the development of in-house R&D activities and for investment in knowledge-intensive areas. The government has launched a revision of the legislative R&D framework.

In the *Czech Republic* the implementation of reform measures aimed at improving the inclusiveness of compulsory education started in 2016. The reform aims at gradually increasing the participation of children with special needs in mainstream education, by granting them a legal right to individual support measures. Only a limited number of pupils have benefited from the reform to date. The reform is largely co-financed by EU funds. Ensuring a good understanding among the wider public on the societal benefits of inclusive education is also essential. Low labour market relevance of vocational education and training is criticised by some employers. However, the employment outcomes of VET students are good, so the macroeconomic impact of the limitations is marginal. The current plans for further involvement of employers in designing curricula and increasing the number of apprenticeships (supported by the European Social Fund) can help strengthen links between education and the labour market.

While total investment in R&D is at the EU average, this is largely driven by the public sector, EU funds and large, foreign-owned enterprises. R&D intensity has increased significantly in recent years, reaching 1.95 % of GDP in 2015, nearly at par with the EU average of 2 % but this is not being matched by corresponding improvements in the quality of outcomes. While progress has been made, the Czech Republic still fares significantly below the average EU performance in terms of openness and excellence of its research system and intellectual assets.

In *Hungary* labour shortage in both skilled and unskilled categories is deemed to be the most important investment barrier in Hungary as stated by company managers. The 2015 PISA survey of educational systems showed significantly worsening results for Hungary and a very high impact of the socio-economic status on students' performance. Performance in reading and science worsened significantly compared to 2012. Results remained stable, but low, in mathematics. Hungary saw the one of the highest increase in the EU in the share of low achievers in science. The reduction of teaching hours of science subjects in vocational grammar schools since 2016 is likely to amplify Hungary's bottleneck in science skills. The growing demand for highly-skilled workforce is not matched by a sufficiently large pool of applicants to tertiary education and adequate completion rates. A recent reform has changed the structure of vocational education and training. The different secondary school types were renamed in 2016 with the intention to make vocational education more attractive. However, the revised curricula seem unlikely to lead to an improvement in basic skills. The proportion of VET students in work-based learning is one of the highest in Europe (about 70%). Adult participation in life-long learning has increased but remains below the EU average.

Total spending on R&D increased in recent years, but public R&D intensity is falling. Although R&D spending in the business sector is still below the EU average, it has doubled as a percentage of GDP over the past ten years. However, business innovation is highly concentrated in a handful of large foreign-owned companies. At the same time, public R&D has been decreasing. This weakens the science base which provides the knowledge and human resources for business development. The low quality of the public research and innovation system contributes to insufficient cooperation between higher education institutions, public research organisations.

In *Slovakia* the low access to life-long learning and the weak responsiveness of the educational system to labour market needs translates into skills shortages that hold back growth and employment. Educational outcomes are weak and inequalities appear high in an international comparison. Inadequate teacher education and remuneration, low participation in early childhood education and low inclusion of marginalized groups, especially the Roma population, have all contributed to the deterioration of the educational system. Tertiary education attainment has stagnated at a low level and measures to improve quality are proving insufficient.

In 2008/9 a vocational training reform was launched. In 2015 Slovakia introduced a dual vocational education training system, but interest among potential participants remains limited. In the Automotive Suppliers Survey in Slovakia[71] almost three fifths of respondents stated that their participation in the dual education system is hindered by a lack of internal sources, i.e. materials and professional teachers. Firms are not confident about whether the graduates of the dual program will remain with the firm after graduation. Even the optimists expect that improvements to the numbers of potential hires with practical experience will not be seen for at least 3 years.

[71] Automotive Suppliers Survey, Slovakia 2015. https://www.pwc.com/sk/en/odvetvia/automobilovy-priemysel/assets/automotive-suppliers-survey-2015.pdf

Table 6. Qualification of labour force characteristics by German investors

		HU	CZ	SK	PL
Cost	2015	2,83	3,21	2,77	3,1
	2016	2,83	3,01	2,91	3,1
	2017	2,98	2,90	2,95	3,12
Productivity	2015	2,59	3,34	2,41	3,6
	2016	2,63	3,23	2,60	3,6
	2017	2,85	3,15	2,61	3,6
Qualification	2015	2,58	n.a	2,55	3,8
	2016	2,66	3,15	2,90	3,9
	2017	2,84	2,91	2,77	3,66
Academic Formation	2015	2,82	3,17	3,09	3,7
	2016	2,89	3,09	3,2	3,7
	2017	2,88	3,02	3,37	3,6
Vocational Training system	2015	3,32	n.a	3,52	2,8
	2016	3,43	2,53	3,51	2,9
	2017	3,41	2,36	3,70	2,67
Available skilled workforce	2015	3,26	n.a	3,29	3,3
	2016	3,56	2,12	3,54	3,20
	2017	3,94	1,8	3,78	2,89

Source: Various surveys of German chambers (Konjunkturbericht) in the given countries

The education and training problems and emigration had led to problems in skilled labour supply and will lead to even more serious shortage. The situation seems to be the most critical in Slovakia and in Hungary. In Slovakia two-thirds of automotive supplier firms expect they will need a double-digit increase in staff numbers and four fifths of respondents considered quality of labour to be a factor limiting production development. Shortage of workforce pushes up wages, mainly in the automotive sector. (The recruitment announcement of the new Jaguar factory immediately raised wages at KIA and PSA[72].) According to the survey of the German-Slovak Chamber the satisfaction of German investors concerning qualified workforce deteriorated most in the past three years among all factors[73]. This deterioration is even worse in Hungary.[74] As for the

[72] http://www.kisalfold.hu/kulfold_hirek/jol_jarnak_a_szlovak_autogyarakban_dolgozok_a_jaguar_land_rover_erkezesevel/2512399/

[73] http://www.dsihk.sk/fileadmin/ahk_slowakei/Dokumente/Presse/Ergebnisse_Konjunkturumfrage_2017.pdf

[74] The director of Mercedes factory admitted that the most urgent problem of the Hungarian automotive sector is the lack of labour force, because the new Mercedes factory extension requires 2500 jobs. Education is essential, therefore the multinational firm founds a new education center until September 2018. http://www.portfolio.hu/vallalatok/cegauto/itt_az_ujabb_rekord_mindent_kipreseltek_a_kecskemeti_mercedes-gyarbol.248887.html

survey is made yearly in all countries, we can have some comparative picture from German investors' point of view (see table 6). By far the best position belongs to the Czech Republic regarding the availability of skilled labour force and vocational training. This also adds to the good comparative position of the Czech Republic within Central Europe.[75] The country is geographically close to Germany, has flexible labour force and highly competitive factories. Apart from that, - as Ismaili et al (2016) write - "the country has had a highly involved and committed government and strong industry associations, which together worked to build an extensive and robust value chain and strong ties with neighbouring partners". The Czech Republic was ranked as the world's leading location for automotive-component plants for three consecutive years.

Conclusion

Foreign investment promotion had been important in the Visegrád countries during the transition process. We can distinguish investment promotion in a narrow sense (grants, subsidies, tax allowances) and in a wide sense (general business environment). Incentives in a narrow sense seemingly hurt EU rules of competition but can be well arranged as regional development aim. Grants and tax allowances have attracted foreign investors to the Visegrád area and their production facilities have increased the export of the countries significantly.

With somewhat different regulation but in all four countries we find special zones, that are made attractive for investors. Automotive clusters, agglomerations, industrial parks are beneficial for new investments, suppliers or capacity extensions. However, for example in Slovakia, despite the auto industry–related growth, the unequal development and income between the Bratislava city-region and the automotive cluster regions in the area has not changed much in the past decades (Jacobs, 2017).

Wider incentives, general business environment and policies are important for all firms (be small, large, foreign or domestic). Apart from proper administration, infrastructure and taxation, availability of skilled workers is essential for investors.

[75] https://www.bloomberg.com/news/articles/2016-01-28/in-a-bad-neighborhood-the-czech-republic-becomes-investor-haven

However, for today the education and training problems and emigration have led and will lead to serious problems in skilled labour supply in the Visegrád economies most critically in Slovakia and in Hungary. Shortage of workforce pushes up wages that will make labour more expensive.

Legal stability has shaken in Hungary and Poland, corruption is also high in Slovakia and the Czech Republic. Visegrád countries compete for large investments, therefore grants for foreign firms (narrow incentives) will be more and more important. However, this can be true on the short run but cannot endlessly compensate for the mentioned worsening business climate, that is promotion in wide sense.

The reason for this is that the choice of location for an investment is not a one-step process and incentives in a narrow sense can only play a role if general economic and legal environment of the country is favourable. As Oman (2000; 10) writes: "the decision is normally a two-stage (or multi-stage) process in which investors *first* draw up a short list of acceptable sites on the basis of the economic and political 'fundamentals' of alternative sites, largely irrespective of the availability of fiscal and financial incentives from potential host governments, and only *later, ….* do investors consider — and often seek out — investment incentives." Nunnenkamp (2001, 1) also states that "promotional efforts will help little to attract FDI if economic fundamentals are not conducive to FDI. Fiscal and financial incentives offered to foreign investors may do more harm than good."

As our paper showed, grants to investors are expensive. The cost of one job in certain cases is extremely high. Even if a part of these grants is financed from EU Funds, this is public money that could have been efficiently spent, better allocated. Support of large foreign investors may also discriminate smaller local investors. Apart from direct costs for the government and citizens subsidies for foreign investors are mostly not transparent. Secret deals create possibilities for corruption and rent-seeking behaviour, working against competitive markets, sound policy-making and accountable government (Oman, 2000).

While governments often "justify" providing investment incentives with the need to develop poorer areas, in practice incentives are often of limited effectiveness in this regard (Oman, 2000, Jacobs, 2017). Created jobs mostly do not require high skills. In certain cases industrial parks can even harm the environment or meet the opposition of local land owners (as the example of the Czech Hyundai and LG Phillips factory shows). Despite this, states are partners of the investors and can even apply deceptive and oppressive patterns towards its citizens (Bobák, 2011, Macek, et al., 2007).

Why it is so important to attract foreign investment with costly narrow-type incentives then? Is it “easier” or more worth than proper wide sense promotion, meaning stabile and transparent legal environment, foreseeable regulations and easy doing business conditions? In the case of the Visegrád countries our assumption is that yes, attracting FDI with tailor-made supports will be important for the governments in the near future. The reasons for this are that these economies are highly dependent on foreign capital with not much domestic productive capital and this marks a path. Apart from that narrow-type incentives can suit better the “style” and aims of the present political governing elite. We should not forget that legal stability has shaken and corruption has increased in these countries in the past years. Bargaining with foreign multinationals fits into this picture.

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