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Global Opportunities and Local Businesses

edited by
Krzysztof Wach

Centre for Strategic and International Entrepreneurship
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Entrepreneurial Business and Economics Review

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Editorial: Global Opportunities and Local Businesses

It is our great pleasure to inaugurate our new journal 'Entrepreneurial Business and Economics Review' (EBER), which is a multi-disciplinary and multi-contextual journal, dedicated to serve as a broad and unified platform for revealing and spreading economics and management research focused on entrepreneurship, individual entrepreneurs as well as particular entrepreneurial aspects of business. We aim to focus on both entrepreneurial business as well as entrepreneurial economics.

For the first 2-3 years of our activity, we decided to use a double recognition. During this time, each issue will focus on a selected topic, forming a monograph with the ISBN number (the articles will be considered as book chapters). Parallel to that, we will consequently search for our own place on the publishing market and build our image as a journal dedicated to entrepreneurship. We will continue using the ISSN number for periodics. We do look forward to reaching international readers and gaining our own position among other journals through continuous efforts, commitment and dedication.

The theme of the first issue is very multi-disciplinary. It links economics with management by exploring global opportunities through particular local businesses. The European Union, as all of Europe, is now facing grand global challenges that primarily relate to economic issues. As stipulated by H. Sirkin, J. Hemerling and A. Bhattacharya in their world-famous book: *Globality: Competing with Everyone from Everywhere for Everything*, in the resent future the European, American and Japanese firms will compete not only with each, other but increasingly with very competitive Chinese, Indian, South American, and even African firms, which currently may seem farfetched (Kotler & Caslione, 2009, p. 29). We believe it is extremely important to recognise global opportunities, which have resulted from globalisation, internationalisation and Europeanisation processes (Wach, 2012, pp. 137-150 and 298-299).

The issue consists of 6 papers revealing how local businesses can take opportunity of global opportunities. These papers are related to the European dimension of international business, taking four Visegrad countries into special consideration.

Liwiusz Wojciechowski, a PhD student of the Faculty of Management of the Cracow University of Economics (Poland), in his article *The Determinants of FDI Flows from the EU-15 to the Visegrad Group Countries – A Panel Gravity Model Approach* analyses the inflows of foreign direct investment in four countries of our region namely the Czech Republic, Hungary, Poland and Slovakia. The article presents research results based on the original gravity model.

Judyta Lubacha-Sember, a PhD student of the Faculty of Economics and International Relations of the Cracow University of Economics (Poland), in her article *High-Tech Export from the V4 Countries: Structure and Factors,* discusses the impact of

intellectual capital assents on the structure of high-tech export in Visegrad countries as well as its factors.

Robert K. Gruenwald, a PhD student of the Inter-Faculty PhD Study Programme of the Cracow University of Economics (Poland), in his article *Entrepreneurship Challenges in High-Growth Companies and Consequences for SME Policy,* presents the various research results on success factors of high-growth companies and presents relevant implications and recommendations for SME policy.

Remigiusz Lewandowski and Grażyna Rafalska, from the Polish Security Printing Works based in Warsaw (Poland), in their article *The Internationalization Process – A Case Study of PWPW S.A.*, expose the characteristics and peculiarities of the internationalisation process taking place in the company PWPW S.A.

Jana Gálová, from the Faculty of Economics and Management of the Slovak University of Agriculture in Nitra (Slovakia), in her article *Opportunities for Doing Business with Countries Neighbouring V4 – The Case of Ukraine,* discusses the possibilities that eastern partnership offers for European businesses and tries to give some recommendations for regional entrepreneurs based on the research survey and field experiences.

Mariusz Omelańczuk, a PhD student of the Warsaw School of Economics (Poland), in his article *Export Platform FDI as a Concept for Growth – Selected Global Experiences,* discusses a relatively new concept of export-platform FDI (EPFDI) by referring to American, Asian and European experiences taking Poland into special consideration.

I hope you will find these works of much interest and I invite you to participate in our academic conversation, for which we have set a stage in the form of our new journal.

Krzysztof Wach
Editor-in-Chief

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The Determinants of FDI Flows from the EU-15 to the Visegrad Group Countries – A Panel Gravity Model Approach

Liwiusz Wojciechowski

A B S T R A C T

Objective: The objective of this paper is to evaluate determinants of the general FDI flow to Visegrad countries and the effect of participation in EMU and EU.

Research Design & Methods: It was decided to investigate how augmented Gravity Model of trade allows identifying and evaluating the significance of pull and push factors of FDI. In an empirical analysis of panel data Hausman-Taylor estimator was used because of the time-invariant variables presence.

Findings: While investment decisions regarding the choice of country are determined by the size of the target market, the distance is still a negative factor in creation of FDI volume. Additionally, it was proven that membership in EMU, differences in taxation, historical background, access to the sea and prices stability have significant impact of FDI stock formation in each country belonging to V4. Is was also noted that Poland became a leader of the V4 as well as EU-12 FDI market sourcing from the old EU Member States.

Implications & Recommendations: It is necessary to develop an "FDI attracting mechanism" using existing resources. Business regulations and taxation policy as well as main macroeconomic variables which are responsible for the economy standing are also examined as attracting the FDI flow.

Contribution & Value Added: The originality of this work lies in studying some aspects of FDI inflow into the group of both similar and different countries in economic measures terms.

Article type: research paper
Keywords: Visegrad countries (V4); FDI; gravity theory; panel
JEL codes: C33, F21

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INTRODUCTION

Business regulations and taxation policy as well as main macroeconomic variables which are responsible for the economy standing are also examined as attracting the foreign direct investment (FDI) flow. The objective of this paper is to evaluate determinants of the general FDI flow to Visegrad countries and the effect of participation in EMU and EU. The analysis is based on the data for 2001-2011. The gravity equation is used to evaluate the importance of host countries potential factors. Other determinants of bilateral FDI flows such as market size measured by GDP terms, distance, price stability, infrastructure development, common border and language and cultural similarities are also important part of the equation. Despite the existence of numerous papers about the structure and dynamic of Central and Eastern European (CEE) countries FDI determinants there is still a lack of empirical studies about the individual characteristics with reference to the theory of capital movement. Dunning decided to distinguish factors attracting FDI from EU-15 to V4. This is important for economic policy because 3 out of 4 V4 countries still remain outside the EMU, which as evidenced by empirical studies, limits the inflow of FDI. Taking into account this limitation, it is necessary to develop an "FDI attracting mechanism" using existing resources.

LITERATURE REVIEW

FDI Theory

Foreign direct investment is explained as an international investment within the balance of payment account. "According to the IMF and OECD definitions, direct investment reflects the aim of obtaining a lasting interest by a resident entity of one economy (direct investor) in an enterprise that is resident in another economy (the direct investment enterprise)" (Duce, 2003, p. 2). Direct investment capital transactions are considered as including three basic components (Duce, 2003): equity capital, reinvested earnings or other investment capital. Data on FDI flows and stocks are published by several independent sources. OECD and Eurostat offer comparable and reliable data[1].

In the current globalized world, capital is getting more and more flexible and mobile. Among the different types of sources of capital, FDI are considered as the safest and the most beneficial form of international capital flows. Foreign capital operates on the economy of the supply, as a kind of complement deficiencies accumulation. Favorable factors of systemic and structural FDI are a way to gain access to modern techniques and technologies both in the production and management and markets. Therefore, as a particularly important element of government policy, administration should permanently develop a workable mechanism for attracting foreign capital (Brenton et al., 1999; Estrin & Milica, 2013; Rajan & Hattari, 2008; Estrin & Klaus, 2008; Egger & Pfaffermayr, 2004; Turan & Sotrios, 2013).

From the point of view of the host country FDI substitutes for imports. There is ample empirical evidence indicating the substitution relationship between exports and the size of the flows of foreign direct investment led to the country of importation

[1] In this study Eurostat stock FDI from EU-15 to EU-12 in 2000-2011 are considered. Position at the end of the period = Position at the beginning of the period + FDI flows + price changes + exchange rate changes + other adjustments.

(Ahmed et al., 2008; Mauro, 2000). Direct foreign investments are divided into two types, considered them in a horizontal and vertical as well as brown field and greenfield investment (Alan & Bevan, 2000). In theoretical terms, the impact of FDI on the differences in the competitive advantage associates with the concept of Porter (1979) forces. Porter identified four main groups of factors that contribute to gain an advantage (Julio et al., 2013):

- work in productive factors,
- demand factors,
- the corresponding partition structure,
- conditions of formation,
- organization and management.

However, the basic theory of FDI determinants engaging movement of capital is Dunning's eclectic OLI paradigm. Under the acronym OLI hides the key explanatory factors, according to Dunning, making direct investments (Ownership, Localization, and Internalization). Dunning suggests that taking FDI is due to the interaction of three conditions. Ownership advantages of an oligopoly, the existence of specific favorable locational factors and the occurrence of the benefits of internalization advantage over externalization companies. In turn, the method of classification motives behind foreign investment developed by J. Dunning, points to the search for suitable resources that serve maintaining or improving the international competitiveness of enterprise (Dunning, 1998). Dunning singled out four main themes of the project (Dunning, 1998; Wach 2012, p. 69; Daszkiewicz & Wach, 2013, p. 37):

- resource-seeking (seeking access to natural resources and transport infrastructure),
- market-seeking (seeking access to new markets, a skilled workforce, suppliers and subcontractors, better organization of the market at the level of economic, institutional and legal),
- efficiency-seeking (seeking increased efficiency due to the reduction of manufacturing costs, facilitating doing business, incentives for investors, flexibility, and increasing the quality of work on the part of the workforce),
- strategic asset-seeking (seeking access to strategic resources related primarily to the know-how, technology, manufacturing, distribution, etc.).

The Gravity Model in FDI Research

The gravity model is a major simplification when it comes to terms of dealing with the variables affecting positively on the volume of trade (GDP) and negative (distance). Mostly authors use the gravity model with an additional vector of explanatory variables. They are described by examining significance of the relationship and direction and the impact of the variable on the phenomenon. Model has an ability to be augmented by quantitative and qualitative variables, which can make that countries seemingly similar in terms of GDP *per capita* or neighbouring states (Suder et al., 2012) trade less than the others. However it does not state as a denial of the gravity model fact, because it is like any other kind of simplification and refers to the general correctness (Brun et al., 2005). The gravity model has become as defined in literature a “work horse” to describe international or regional trade, foreign investment and other socioeconomics facts such as migrations.

Literature abounds with varied approaches in researching specific hypotheses as well as considering way of expression variables. In recent years, there are more and more publications dealing with gravity model of trade considering trade or investment flows (Babula & Kamińska, 2013)

Focusing on the theme, we refer to the approach of analysing FDI flows by DeRosa (2006). He describes gravity model based on bilateral trade flows estimated on the panel of 170 countries in the period 1976-2006. The model included binary variables reflecting participation in free trade areas (FTAs) (Konstantinos et al., 2010). DeRosa suggested in contrast to the classical model of gravitational set of variables such as $\prod_{ij}$GDP (or difference between GDP in partner and host country) and expressed in per capita terms, as well as variables representing the historical and geographical conditions (common language, boundaries, continent, common colonizer and belonging to communities like EU, Mercosour). The author also noted that there are correlations between trade and foreign direct investments, namely, the greater resources of FDI are located in the partner country the greater the volume of trade between the countries under consideration. DeRosa also pointed out that the gravity model can be used to predict the effects of further economic integration, which should be taken into account in decision-making at the international level.

P. Folfas (2011) estimated the gravity model of FDI flow between members of the EU (EU-27) with particular emphasis on the importance of taxes. The model combined not only geographical distance but also other variables to illustrate the economic distance: membership in the euro zone, cultural similarity, period of membership in the EU. In addition to the model there were included variables representing the tax policy towards enterprises (CIT). Model confirmed the importance of the offshore financial centres (Cyprus, Luxembourg and Malta), which play a very important role in the flow of capital in the European Union. The presence of variable time constants (invariants) imposed on the use of the H-T estimator (Hausman & Taylor, 1981). By the empirical study showing that the flow of foreign investment is conditioned in the EU (EU-27) by the size of GDP (total and *per capita*) and the distance factor. The estimation results confirm the meaning of the motto of the European Union "In varietate concordia". The study showed that the tax disparity between countries is a factor that stimulates the flow of FDI. In addition, cultural similarity factor implements a positive impact on foreign direct investment. FDI in Visegrad Group countries are also matter of concern. Authors analyze the structure and the type of FDI. Some publications take into account the dynamics of changes due to the accession V4 to the EU (Hunya & Richert, 2011; Babunek, 2012; Jambor, 2013). Nevertheless there is still a lack of studies that would show key factors of attracting FDI internationally respecting V4 countries.

MATERIAL AND METHODS

Goals and Hypothesis

This paper aims at deciding, which factors determinate FDI flow from EU-15 to the Visegrad Group. from EU-15 to the Visegrad Group. Referring to the classical gravitation model we verify whether and, if so, how the “size factors” determine the volume of FDI flows. Interesting from the point of view of this study is whether the larger economy tends to accumulate a larger portion of total investment flows and whether the distance

actually has a negative reflection on the volume of these flows. The model was further extended to include elements that are considered direct and contributory factors inhibiting the influx of investments in order to answer the question whether these factors equally determine the size of FDI between countries that invest a host. There will be verifies, inter alia, the hypothesis of a significant negative relationship between the level of wage costs of the host country and the size of foreign investment in the country. In fact, it should be vital not only for empirical research but most of all for government policy, to understand how such factors as: exchange rate volatility, stability, inflation, interest rates, protectionism, unemployment, level of education or general investment climate, determine competitiveness of a country in the international sourcing of foreign capital. Knowledge of the significance and influence of the above as well as many other variables can influence the monetary and fiscal policies in order to enhance the competitive position of the country.

Variables and Data Sources

The choice of the "traditional variables" is based on the existing theory and empirical research of the literature. The model also takes into account other variables; the choice was dictated by the nature of the studied phenomenon. As a result, the set of explanatory variables the model uses can be divided into three major groups. The first are the variables taken from the traditional gravity model (size of the market within the meaning of GDP *per capita*, population, geographical distance). The estimation procedure considers different combinations of variables (in terms of total *per capita*, as the difference, the product of variables), referring to examples from the literature issues.

The second group of separable variables are expressed as factors stimulating or inhibiting the influx of foreign investment to host countries. The FDI has numerous variables, which will be examining actual significance in relation to the individual economies in the sense of obtaining foreign direct investment. The third group included all other variables that could potentially contribute to improvement of the quality of estimates. Among these, there are many binary variables. There should be taken into account such elements as institutional membership groups (EU, EMU, OECD, CEFTA, BAFTA, ERM II, the access to the sea). Macroeconomic data come from Eurostat database, UNTCAD and official websites of national banks of individual countries. Financial data were collected from sites Bloomberg.com, Tradingeconomics.com.

Research methods

Cross-sectional (panel) data, are data that describe a certain group of individuals as in the case of cross-sectional data, with the difference that the observations are made in more than one period. Panel data are indicated by yit, where $i = 1,...,N$, $t = 1,...,T$. Panel models are both static and dynamic forms. The overall formula of the static model, which we will consider is (1):

$$y_{it} = \beta_0 + \beta' x_{it} + \alpha_i + \nu_t + u_{it} \quad (1)$$

where :

β_0 - is the intercept,

β' - is the vector of structural parameters,

α_i - is the result of individual i-unit,
v_t - effect of periodic t-period,
u_{it} - the assumption of random error component.

Referring directly to the model (1), where it is held and insignificance of the individual and periodic effects panel appears homogeneous. It comes down to the fact that the relationship between variables in a statistical sense is not significantly different for the test units and periods. The assumption in the model such attempt is a homogeneous which means in practice that the analyzed individuals have a similar specification. This in turn should reveal the same or tightly close together structural parameters of the model to all individuals and periods. Any deviation while (the rest of the model) are the result of random noise. Often, however, at least one group of effects is important. The panel is then the nature of heterogeneous and, depending on whether only one group of effects is important that both models are considered one or two-way (one-way model/two-way model). These effects α_i and v_t effects may be of a fixed (unchanging in time or fixed for a specific entity) independent random factors u_{it} (Baltagi, 2005). They also have a random character with a certain distribution, which depends on the random component. In the first case we have to deal with the model with fixed effects (called Fixed Effects) and the second with the model with random effects (called Random Effects). RE models with greater precision of estimates. FE analysis does not allow time invariants (Baltagi, 2005).

The consequence of the inclusion of the model variables which values do not change over time (eg. a common border of neighbouring countries, access to the sea) is collinear with the individual fixed effects. This in turn rules out the use of the fixed effects model. When the explanatory variables found to be correlated with the interfering component is also not permitted to use model RE model. Proposed several solutions to this problem: Estimation of the use of the FE estimator Hausman–Taylor, The Chamberlain approach of RE model (Chamberlain & Moreira, 2006).

According to the procedure Hausman-Taylor variables included in the vector X are split into two parts according to the criterion of variation in time. On this basis, the provision of the model is as follows (2):

$$y_{it} = z'_i \gamma + x'_{it} \beta + \alpha_i + \xi_{it}; \; i, t; i=1,\ldots,N; t=1,\ldots,T; \tag{2}$$

where:

z'_i is a vector of variables assuming constant values during,
x'_{it} is a vector of variables over time.

The model assumes (3) and (4):

$$E\left(\xi_{it} \left| z'_{it}, \alpha_i \right.\right) = 0 \tag{3}$$

$$\hat{\gamma} = \left(\frac{1}{N} \sum_{i=1}^{N} z_i z' \right)^{-1} \left(\frac{1}{N} \sum_{i=1}^{N} z_i \left(\bar{y}_i - \bar{x}'_i \hat{\beta}_{FE} \right) \right) \tag{4}$$

Where β_{FE} is a vector of parameter estimates β estimated in the FE model, and expected values of (y_i), (x_i) are the arithmetic means of individuals in-time. Estimation of the model with variable time constant according to the procedure Hausman-Taylor is twofold. In the first phase are estimated structural parameters β of the FE model, and given that the variables are constant over time, as has been said previously, aligned with the individual effects, it is discarded. In the second stage, using the estimator γ estimated parameters of the variables constant in time with regard to the arithmetic average of these variables and parameter estimates β.

The Use of the Gravity Model

The gravity model appears as an adaptation of the law of universal gravitation for socioeconomic phenomena like trade, investment flows, and migrations. Under the concept of gravity model of international trade we mean the model proposed independently by Tinbergen in 1962 and Pyhonen in 1963. This formula was to explain the bilateral flows between countries taking into account the size of countries and the limiting factor in trade which have identified the costs of movement between two countries. This proxy of resistance factor was the geographical distance (Anderson, 1979) according to the equations (5) and (6):

$$X_{ij} = K \frac{Y_i^a Y_j^b}{D_{ij}^c} \tag{5}$$

$$\ln X_{ij} = \ln K + a \ln Y_i + b \ln Y_j - \beta \ln D_{ij} \tag{6}$$

where:

D - distance, transportation costs,

K - factor proportionality,

X_{ij} - the volume of trade between countries i and j,

Y_i, Y_j - the size of the economy of the country i and j, expressed by GDP, GDP *per capita*, the size of the market, population size, etc.

According to the formula, the volume of trade is proportional to the product of the size of these countries (in terms of GDP or other variable imaging market size) in ceteris paribus terms, and the volume decreases with increasing distance between two countries, which generates additional costs that reduce the attractiveness of trade. However, there are many variables which can embody economic masses of locations. Economic size can be measured by: gross national product, gross domestic product and population, gross domestic product *per capita* or endowment of production factors (absolute value or *per capita*). Therefore, there are a great number of methods of measuring gross domestic products: in current prices, in constant prices or in purchasing power parity. It is debatable which measure is the most adequate for gravity models (Folfas, 2011; Czarny & Folfas, 2011).

RESULTS AND DISCUSSION

For the general background it has been decided to isolate the largest, in relative terms the position of FDI, host countries relative to investing countries. Choosing the highest values, indicated for each EU-15 country, from 1 to 4 countries we can accept that Austria, Belgium, France, Spain, Netherlands, Luxemburg and Germany invest mainly in Czech Republic. Austria, Belgium, Netherlands, Luxemburg and Germany invest in Hungary. All EU-15 (without Greece and Austria) allocated the largest part of its investments in Poland.

Table 1 presents the inward stock of FDI in Poland in relation to the total outward FDI from EU-15 countries co-creating the EU-27 (the 12 countries that joined the EU after 2004) in the period 2000-2011. Table 2 presents the value of interest accumulated from foreign direct investment (inward stock) from the EU-15 and Poland in the decomposition of partner countries in the 2000-2011. The analysis of this data allows drawing some initial conclusions:

- the structure of stock FDI in Poland is rather stable,
- main partners of Poland are the Netherlands, Germany, France, Luxembourg (since 2007),
- there is a noticeable systematic decrease in case of Netherlands and Germany in relation to Luxembourg.

Table 1. Inwardstock FDI in Poland as total outward FDI from EU-15 to EU-12 (in %)

Partner/Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	25	21	20	13	16	13	9	9	8	9	9	9
Belgium	45	43	42	34	45	43	42	34	36	30	32	35
Denmark	48	53	50	45	48	47	43	43	42	45	44	51
Finland	15	17	17	13	13	19	19	22	23	21	21	22
France	78	71	65	56	58	51	49	46	43	46	53	53
Greece	0	10	2	2	2	1	1	1	1	0	0	8
Spain	93	87	83	37	53	25	37	40	39	40	44	60
Netherlands	51	50	44	33	35	33	32	29	27	25	29	24
Ireland	82	74	73	75	74	72	66	56	49	49	66	38
Luxemburg	43	42	40	27	33	47	49	39	39	46	46	52
Germany	47	45	40	27	28	28	28	31	30	33	30	27
Portugal	96	99	92	83	81	73	73	68	68	67	71	72
Sweden	37	37	34	30	31	29	33	34	36	43	41	46
Italy	78	59	55	38	42	30	40	59	42	71	64	55
UK	42	31	36	29	30	25	27	36	34	33	36	35

Source: Eurostat.

To answer the question, which part of foreign investment from the individual EU-15 countries is "intercepted" by V4 countries in 2000-2011, the appropriate calculations on the basis of which lead to the regularity is to be conducted. There was a permanent decrease in the percentage of Austrian investment in V4 as compared to other EU-12 countries. A similar situation occurred in the case of Italy and the UK. The opposite trend was observed in case of Sweden and Finland (table 3). Analyzing the structure and dynamic (table 4), it can be seen that the largest investments in V4 come from Austria, France, the Netherlands and Germany and Luxembourg (the growth rate of stock FDI of Luxembourg in V4 reached 51% annually in the examined period).

Table 2. Inward stock FDI in Poland from EU-15 break down by partner country in the years 2000-2011 (in %)

Partner/Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	4	4	4	5	6	6	4	4	4	4	4	4
Belgium	2	3	4	4	5	4	4	4	4	4	3	3
Denmark	3	4	4	4	3	3	3	3	3	3	2	2
Finland	1	1	1	1	1	2	1	1	1	1	1	1
France	15	19	17	18	16	15	14	14	13	14	15	15
Greece	0	0	0	0	0	0	0	0	0	0	0	1
Spain	2	2	2	1	2	2	3	4	4	4	4	7
Netherlands	31	30	30	28	28	26	24	23	23	22	22	18
Ireland	1	1	2	2	2	2	2	2	2	2	3	1
Luxemburg	2	1	1	2	3	6	10	10	11	11	10	12
Germany	24	23	22	22	20	20	20	20	19	20	16	16
Portugal	1	1	1	1	1	1	1	1	1	1	1	1
Sweden	4	4	4	5	5	5	5	5	6	6	5	7
Italy	4	4	4	4	4	4	5	5	5	4	5	5
UK	5	5	5	4	5	4	5	5	5	5	8	6
Total	100	100	100	100	100	100	100	100	100	100	100	100

Source: Eurostat.

Table 3. Part of total EU-15 stock FDI in EU-12 invested only in V4 countries in the years 2000-2011 (in %)

Partner/Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	95	82	79	85	77	63	55	56	56	58	60	57
Belgium	99	100	94	90	92	90	89	90	90	85	85	84
Denmark	65	61	59	62	66	61	58	60	65	66	62	70
Finland	25	27	20	34	36	40	30	34	34	39	39	31
France	98	94	94	94	94	85	82	81	79	80	82	80
Greece	3	12	2	2	2	1	1	1	1	0	0	8
Spain	99	99	100	99	98	96	92	86	83	82	83	86
Netherlands	98	96	95	95	94	85	83	81	80	77	78	74
Ireland	84	85	77	83	86	80	73	68	70	70	76	40
Luxemburg	99	99	90	87	89	88	90	92	87	91	90	89
Germany	95	93	90	92	91	87	86	84	79	82	77	78
Portugal	97	99	95	94	94	85	82	88	87	88	88	87
Sweden	47	45	44	46	45	43	46	46	50	54	53	55
Italy	90	83	83	80	79	70	66	56	52	44	72	64
UK	81	84	74	76	71	77	71	60	48	54	62	60

Source: Eurostat.

Expectations, Calculations and Results

In the previous chapter there was presented the set of potential explanatory variables of the model there. Coming directly from the formula gravity model estimation is started from the linearized model to estimate dependence between the volume of the stock of FDI GDP *per capita* of the host and investing country as well as the geographical distance between them. This model would serve as a reference point to the expansion of additional elements in the vector of explanatory variables. While only estimation shows which variables significantly affect the dependent variable, we formulate expectations about the parameters standing by these variables. Referring to the many papers in which they modeled FDI in the formula of gravity model, positive parameters with variables

expressing the size of the market economy and a partner of the host country are expected. At the same time negative coefficient on the variable expressing the geographical distance (as a destimulant), a factor expressing the transport costs to reach the market, its diversity, etc. is expected. While this parameter with variable Dist will probably be negative for much of particular interest are the effects of periodic, e.g. if the distance factor in terms of globalization negated or not. We expect that the bordering effect with each country, in most cases should encourage the expansion of FDI. Similarly, it is expected that access to the sea can advantageously affect the volume of FDI deposited there, because of the enhanced transport capacity (Paas & Tafenau, 2005). In some studies authors consider the size of the economy as the size of population that makes potentially more or less absorbent market. We expect, the greater the number of residents in the host country, the greater value of FDI is invested. In the literature authors often explores the impact of the "soft factors" on the intensity of trade, and therefore we decided to investigate whether the fact the using common language as well as historical and cultural ties are reflected in the volume of FDI (Iwasaki & Saganuma, 2013).The model will test set of binary variables expressing belonging to different groupings of integration (e.g. EU, EMU). In this case, the expected positive impact on foreign direct investment flows between countries belonging to the same group. Interesting may be the results of the periodic analysis of the effects related to the accession to the European Union. The accession should positively affect because of possibility of free movement of capital across countries, including FDI.

Table 4. Value of stock FDI in V4 from EU-15 in the years 2000-2011 (in million EUR)

Partner/Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	4 579	6 031	6 542	11 959	15 224	17 591	20 105	25 665	28 526	30 985	32 602	30 715
Belgium	0	1 563	3 186	3 800	4 933	5 538	6 317	9 616	9 408	11 040	10 025	10 219
Denmark	1 251	1 577	1 565	1 886	2 505	2 884	3 248	4 280	4 348	4 537	4 508	4 237
Finland	388	462	380	1 081	1 351	2 006	1 483	1 994	1 994	2 239	2 489	1 844
France	5 642	9 537	9 175	11 201	13 622	15 986	18 288	23 510	23 341	25 010	29 730	28 649
Greece	4	28	22	27	30	37	55	48	48	-10	7	728
Spain	752	686	691	1 444	2 253	5 366	6 360	7 506	7 562	8 576	10 144	12 423
Netherlands	17 263	21 948	24 691	30 862	39 279	42 251	49 705	64 193	66 380	70 606	78 851	69 225
Ireland	437	551	645	908	1 328	1 467	1 918	2 676	3 045	3 455	4 441	954
Luxemburg	0	445	1 234	2 914	4 719	6 767	13 955	23 434	22 741	22 149	26 175	27 048
Germany	14 134	18 181	18 855	27 996	34 253	39 999	47 961	51 262	49 050	51 780	54 785	58 831
Portugal	180	327	221	224	330	459	531	798	907	984	1 729	1 504
Sweden	1 629	1 716	2 110	2 789	3 696	4 712	5 170	6 143	7 416	8 091	8 048	10 919
Italy	1 841	2 739	2 848	3 521	4 546	6 441	7 000	4 929	5 425	3 245	11 774	9 450
UK	2 314	3 916	2 983	4 072	4 626	8 273	9 609	7 652	6 201	7 554	10 726	9 910

Source: Eurostat.

One of the reasons the expansion of companies into foreign markets are the benefits of a lower tax rate compared to the home market. It is therefore reasonable to say that the greater the difference between the rate of corporation tax between the partner country and the host country, the more likely the investment in a country with a lower load will be carried out. As part of the search for efficiency transnational corporations seeking investment location noting, inter alia, on labor costs, therefore, are

expected to be negative evaluation parameters before variables expressing income workers (in decomposition for people with secondary and higher education).

Referring to the Dunning's (1998) classification, the company guided by motives resource seeking investments will be located in countries with identified resources of raw materials, hence the expected positive assessment of the structural parameter and variable e.g. Res, infra.

Dunning singled out market-seeking motive associated with the search for access to new markets, a skilled workforce, suppliers and subcontractors, better organization of the market at the level of economic, institutional and legal. It can be expected that the more countries spend on education and research and development the more likely developed countries will invest in them, given their potential. Based on the Doing Business report we choose three variables (Procedures, Protection, Tax-rate/profit). For a foreign investor additional risk factors may be an increased number of administrative and legal procedures (expected negative sign with variable structural parameter Procedures). At the same time, foreign investors can look at the dynamics of changes in these indicators and based on it to make decisions. It is expected to be positive when the variable parameter expresses the index of investor protection in the host country and the negative index expresses the share of corporate tax in profits.

It was decided to examine the impact of exchange rate volatility in the host country of the size of investment in the country. From the point of view of an investor greatest risk is not so much the possibility of losses resulting from the settlement of foreign exchange, (which in fact can be significantly reduced by means of an option strategies), but the same variation of the exchange rate, expressing the uncertainty of investors in the foreign exchange market, which is a derivative of the situation in the real economy. Therefore, negative coefficiency on the variable expressing the volatility of the exchange rate of the euro against the host country is expected. At the same time the observed effects may be of interest periodically in the case of countries which joined the ERM II, the aim of which is to stabilize the exchange rate (DeRosa, 2006).

Central and Eastern European countries have generally higher yield government debt and higher inflation than the EU-15. These values correlated positively the actual return on investment in the country. It is therefore expected that the higher are the rates, including the EU-15 lead in their expansion in a limited way.

High level of unemployment in the market potential of the host country may provide additional incentives for foreign investors, or it may offer a wage rate which deviates little from the average level of wages in the country. The emergence of new vacancies will reduce unemployment in the host country, also, benefits businesses efficiency of a partner country. Hence, positive evaluation parameter of the variable expressing the level of unemployment in the host country is expected (Dunning 1998).

Foreign investors may attach importance not only to the absolute changes in key economic categories such as GDP, but also to the relative changes in the short, medium and even long term. Positive evaluation parameter of the variable GDP *per capita* y/y rate, expressing the rate of growth of GDP *per capita* in PPS market prices of the host country year to year. Based on this variable periodic moving average which is 3 proxy the medium level of economic growth in the V4 was constructed. It is expected that foreign investors will be willing to invest capital in countries with not only high expected rate of

growth, but also a stable one. This was done analogously to the analysis of the impact of changes in prices of stock indices (the average rate of return on the capital market) should have a positive impact on the expectations of foreign investors, as well as on their specific investment decisions , expressing the location of FDI in the country. At the same time one cannot exclude lack of investor's indifference to increased investment risk reaching hand in hand with a higher expected rate of return on capital in the country.

Developed database building the extended vector of explanatory variables the model let us define the key determinants of the size and direction of flow of foreign direct investment from the EU-15 countries to V4.

As mentioned earlier, panel regression is used in the study. The following is the panel model which is estimated, explaining bilateral inward stock foreign direct investments from each partner (i; i=1,...,15) country from old EU-15 to 4 Visegrad host country (j; j=1,...,4). The sample covers the period 2001-2011[2]. The applied gravity model is estimated in terms of natural logarithms (7):

$$\ln FDIstock_{ij,t} = \beta' \ln GDP_{i,t} + \beta' GDP_{j,t} + \beta' \ln DIST_{ij} + \beta' Z_{ij,t} + \alpha_i + \lambda_t + u_{i,t} \qquad (7)$$

where:

α_i - individual effect,

λ_t - time effect,

$u_{i,t}$ - i.d.d.error term,

i, j, t - indexes respectively for: partner economy, host economy and year,

D_{ij} - geographic distance between capitals of partner and host country (km) (time invariant),

$Z_{ij,t}$ - vector of other variables which potentially affecting on bilateral FDI flow[3],

$GDP_{i(j),t}$ - GDP *per capita* PPS of partner (host) economy in year *t*,

$FDIstock_{ij,t}$ - inward stock FDI into host economy coming from partner economy in year t.

By using the gravity model it has been proved that FDI inward stock in Visegrad countries from EU-12 are determined by variables such as: GDP *per capita* of host and partner economy, distance, access to sea, medium-term rate of growth, membership in the EMU. However, based on the research sample, membership in the EU, OECD, CEFTA significantly affect the flow of FDI as well as rate of unemployment, common border, cultural similarity. It probably demonstrates further mobility of capital, which pays no attention to the presence of boundaries in the search for efficiency and economies of scale. The analysis of data suggests that foreign investors are interested rather in medium-term dynamics of the GDP of the state, than in just annual growth rates. Based on empirical research we accept statement that the extended gravity model of international trade is able to satisfactorily explain the phenomenon of accumulation of foreign direct investment. The final model estimated using Hausman-Taylor estimator

[2] Before 2001 new member states (EU-12) including V4 countries had been cut off from substantial FDI flows, there are a lot of gaps in databases. Also missing the most recent data (Pavlov, 2001; Karp, 1996).

[3] Infrastructure quality (spatial density of highways (Eggger & Pffaffermayr, 2004; Roberto, 2004; Portes, Rey, 2005), cultural similarity (Buch et al., 2003), taxation (Egger & Pffaffermay, 2004; Milner et al., 2004), unemployment rate (Szczepkowska & Wojciechowski, 2002), membership in international organizations (Brenton et al., 1999; Lada & Tchorek, 2008), GDP deflator (Szczepkowska & Wojciechowski, 2002) and other variables.

explained FDI accumulation in nearly 81%, while simple models using only classical variables nearly explained only in 20% (Table 5). It suggests the importance of predicting FDI flows by taking into account individual characteristics of each country. In spite of increasing globalization, declining transport costs, it has been observed that the distance factor continues on flow of FDI. However, it has been observed that this effect was not equally strong in time. It has been noted that after 2005, negative effect of distance underwent successively. Also, the hypothesis of a negative relationship between the size of foreign investment in the country and the level of wage costs failed to verify. This may be due to the relatively low income diversification in the host countries. EU-15 countries behave in relation to V4 rather as market, efficiency and strategic assets seekers than resources seekers.

Table 5. The list of estimated models

Variable / Measure	Pooled one way individual	One way individual within	One way time within	Two ways within	One way individual random effects	HT[4]
const.	-45.86***	-	-	-	-31.540***	-16.4*
ln GDP_{it}	4.53 ***	-0.21	4.47***	1.26	1.78*	2.26**
ln GDP_{jt}	0.58	2.75***	-0.46	3.46***	2.13***	1.12**
EMU_{ijt}	-	-	-	-	-	0.59**
$magrowth_{jt}$	-	-	-	-	-	-6.01*
ln $DIST_{ij}$	-	-	-	-	-	-1.63**
sea_i	-	-	-	-	-	3.12***
R^2	**0.19446**	**0.19402**	**0.17379**	**0.041463**	**0.1815**	**80,23**
F statistics	1012.7 p< 2.22e-16	71 p < 2.22e-16	67.3 p < 2.22e-16	12.6 p < 4.54e-06	72.1 p < 2.22e-16	316,6 p < 2.22e-16

Significant codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

sea_j - binary variable 1- country has got access to sea, 0 – others,

EMU_{ijt} - each pair countries (partner and host) are in EMU in t- year -1, 0 others,

$magrowth_{jt}$ - average growth expressed by 3-year moving average of GDP *per capita* PPS yearly logarithmic rate.

Source: own calculations in R-studio.

CONCLUSIONS

It should be noted that Poland as a "FDI-attracting leader" plays a significant role in Central and Eastern Europe. Data show that Poland in 2011 was "interceptor" of the largest part of FDI invested by the old EU countries. Presumably Polish accession to the EMU would potentially accelerate FDI inflow in connection with the disappearance of currency risk. In fact, it seems very probable, when looking at the estimation model and the dynamics of cumulative FDI in Slovakia after joining the EMU the positive potential impact.

[4] In the LM test (King & Wu, 1997) is found two-way effects presence. According Hausman test (comparing RE and FE model) the null hypothesis was rejected (chisq = 6.0548, df = 2, p-value = 0.04844) Thus, the FE (while the alternative hypothesis is assumed that GLS estimator is loaded, and should use model fixed effect, the estimator does not show up unbiased). Baltagi test confirmed the presence of Li effects AR (1).Test Baltagi Li: rejection of the null hypothesis-occurrence effects AR (1) / MA (1) error RE.

It can be assumed that the extension of the model with autoregressive component would improve the quality of estimates and predictive properties of the model. However, this would require the use of another class of estimators.

To sum up, gravity model seems to be a very useful analytical tool not only for researchers but mainly for economic policy, whose aim should be to create an appropriate mechanism for attracting foreign capital. Further research based on it seems to be very lucrative, taking into account the autoregressive dependences between variables as well as cointegration relationship and non-stationary of panel units.

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High-Tech Export from the V4 Countries: Structure and Factors

Judyta Lubacha-Sember

A B S T R A C T

Objective: The purpose of this article is to verify the relation between the value of high-tech export and the value of intellectual capital assets.

Research Design & Methods: At the first stage of the study, an analysis of the value and structure of high-tech export in the V4 countries was performed. At the second stage, the Synthetic Intellectual Capital Asset Index (ICA) was calculated using the Perkal index. At the last stage, in order to examine the relation between the value of high-tech export and the value of intellectual capital assets, an estimation of panel models for selected variables was performed.

Findings: The results of analysis show that the value of high-tech export from the V4 countries varies, and the V4 countries score lower in the ranking of EU countries arranged by the value of ICA is than in the ranking of EU countries arranged by the value of high-tech export.

Implications & Recommendations: The relation between the value of high-tech export and the value of ICA was negative for the V4 countries, but models created with the data for all EU countries showed a positive correlation. Identify the causes of such a situation could be very valuable.

Contribution & Value Added: Linking intellectual capital assets to the high-tech export could be helpful to find the sources of the high level of exports in this sector.

Article type: research paper
Keywords: export; high-tech; knowledge-based economy; intellectual capital
JEL codes: F14

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INTRODUCTION

According to the *Central Europe fit for the future Visegrad Group ten years after EU accession* (2014, p. 5) report, 'the combined GDP of the Visegrad Group countries (V4)[1] already makes them the world's 15th-biggest economy.' In the knowledge-based economy, the high-tech sector is developing dynamically and is usually an important export sector. The manufacturing of high-tech products requires specific assets, necessary to invent and develop those products.

The purpose of this article is to verify the relation between the value of high-tech export and the value of intellectual capital assets. This was achieved by meeting the following operational purposes:

- analysis of the value and structure of high-tech export in the V4 countries,
- calculation of intellectual capital assets for EU countries and the analysis of the value of intellectual capital assets in the V4 countries,
- examination of relations between value of high-tech export and the value of intellectual capital assets.

The research hypotheses were:

- All V4 countries have the same performance of the value of export in high-tech sector.
- For all V4 countries, the value of high-tech export in intra-EU trade is higher than in extra-EU trade.
- The value of intellectual capital assets has a positive influence on the high-tech export.

The value of intellectual capital assets was calculated using the standardized sum method (the Perkal index). To examine the relation between the value of high-tech export and the value of intellectual capital assets, panel models were estimated. The data for EU-28 countries were collected from the Eurostat database and the World Bank database for the period of 2007-2012.

LITERATURE REVIEW

The category of intellectual capital was established for the first time in the field of accounting (Edvinsson & Malone, 1997). The term *intellectual capital* was mentioned for the first time in M. Kronfeld and A. Rock's (1958) article and in the personal letter from J.K. Galbraith to M. Kalecki written in 1969 (quoted in Hudson, 1993, p. 15)[2]. The first definition of intellectual capital of a nation was created in 1996 by C. Stenfelt and M. Jerehov, in collaboration with L. Edvinnson, followed by a study of intellectual capital in Israel conducted in 1998 by E. Pasher, with the support of L. Edvinsson and C. Stenfelt (Edvinsson & Stenfelt, 1999)[3]. In 2001, N. Bontis (2002) conducted a research on intellectual capital in Arab countries and proposed the following definition: 'The intellectual capital of a nation includes the hidden values of individuals, enterprises,

[1] The Visegrad countries (V4) include: the Czech Republic, Hungary, Poland and Slovakia.

[2] To a review of intellectual capital models see: N. Bontis (2001), L. Alcaniza, F. Gomez-Bezaresa & R. Roslenderb (2011).

[3] In 2011 L. Edison and C.Y. Lin published the book with reports on intellectual capital indicators for 40 countries.

institutions, communities and regions that are the current and potential sources for wealth creation.' D. Andriessen and C. Stam (2005) published the results of a study measuring the intellectual capital of EU-15 countries. They proposed to measure the components of intellectual capital (human capital, structural capital and relational capital) from three different perspectives: present (assets), future (investments), and past (effects) (Andriessen & Stam, 2005, pp. 5-6). 'Human capital is defined as the knowledge, education and competencies of individuals in realizing national tasks and goals' (Bontis, 2004, p. 7). 'Process capital[4] is defined as the non-human storehouses of knowledge in a nation which are embedded in its technological, information and communications systems as represented by its hardware, software, databases, laboratories and organizational structures which sustain and externalize the output of human capital' (Bontis, 2004, p. 8). 'Market capital[5] is defined as the intellectual capital embedded in national intra-relationships. Market capital represents a country's capabilities and successes in providing an attractive, competitive solution to the needs of its international clients, as compared with other countries' (Bontis, 2004, p. 9).

The components of intellectual capital are to some extent similar to the four pillars of knowledge-based economy, which were proposed by the World Bank (Chen & Dahlman, 2005, p. 4):

- education and training,
- information infrastructure,
- economic incentive and institutional Regime,
- Innovation Systems.

Knowledge-based economies are defined by the OECD (1996, p. 6) as 'economies which are directly based on the production, distribution and use of knowledge and information'. Knowledge-based economy is characterized by fast development in sectors related to the development of science, the use and creation of knowledge (high-technology industries) and information society services (Nowakowska, Przygodzki & Sokołowicz 2011, p. 31). What is more, currently the knowledge-based economy is transforming towards the entrepreneurial economy (Wach, 2012, p. 200). OECD (1997, p. 8) defined high-tech industries by the following criteria: R&D intensity, scientific and technical personnel, the technology embodied in patents, licenses and know-how, strategic technical co-operation between companies, the rapid obsolescence of the knowledge available, quick turnover of equipment, etc. The production in high-tech sector includes the following groups of products (OECD, 1997, p. 9):

- aerospace (HT1 – abbreviations used in graphs),
- computers-office machines (HT2),
- electronics-telecommunications (HT3),
- pharmacy (HT4),
- scientific instruments (HT5),
- electrical machinery (HT6),
- chemistry (HT7),
- non-electrical machinery (HT8),

[4] At the national level 'process capital' is defined as 'structural capital'.
[5] At the national level 'market capital' is defined as 'relational capital'.

– armament (HT9).

MATERIAL AND METHODS

The data was collected for EU-28 countries, for the period of 2007-2012. The value of high-tech export in this article is presented in millions of euro, and Eurostat is the data source.

The presentation of intellectual capital assets was adopted from D. Andriessen and C. Stam research (2005). The indicators for human capital assets, structural capital assets and relational capital assets were selected according to data availability (table 1).

Table 1. List of indicators used in the analysis

Components of the intellectual capital	Indicator	Source (the code of dataset)
Human capital assets	HCA_1: Percent of persons with upper secondary or tertiary education attainment (%) aged 25 to 64	Eurostat (edat_lfse_08)
	HCA_3: Percent of persons participated in education and training aged 25 to 64	Eurostat (trng_lfse_01)
	HCA_4: Researchers as percentage of total employment	Eurostat (rd_p_perslf)*
	HCA_5: Employment rate (15 to 64 years)	Eurostat (lfsi_emp_a)
	HCA_6: Employment in knowledge-intensive activities as percentage of total employment	Eurostat (htec_kia_emp and htec_kia_emp2)
Structural capital assets	SCA_1: Percentage of households who have Internet access at home	Eurostat (isoc_ci_in_h)
	SCA_2: Percentage of enterprises who have access to Internet	Eurostat (isoc_ci_in_e and isoc_ci_in_en2)
	SCA_3: Number of patent applications to the European Patent Office (EPO) per million inhabitants	Eurostat (pat_ep_ntot)*
	SCA_5: Number of scientific and technical journal articles	WorldBank (IP.JRN.ARTC.SC)*
	SCA_9: Number of days needed to start a new business	WorldBank (IC.REG.DURS)
Relational capital assets	RCA_3: Foreign students as percentage of all students	Eurostat (hrst_fl_tefor)*
	RCA_4: International outgoing calls (1000 minutes)	Eurostat (isoc_tc_cal)*
	RCA_5: Number of arrivals of non-residents at tourist accommodation establishments	Eurostat (tour_occ_arnat)*

* missing data were eliminated by imputation, in the case of shorter time series were used to extrapolate the trend, taking into account the method giving the lowest ex-post error evaluation,
Source: own elaboration based on (Andriessen, Stam, 2005).

The indicators were standardized according to the following formula (Juchniewicz & Tomczyk, 2013, pp. 50-51):

$$z_{ij}^{t} = \frac{x_{ij}^{t} - \bar{x}_{ij}}{s_{ij}} \text{ for } (i=1,\ldots,n;\ j=1,\ldots,m;\ t=1,\ldots,6) \quad (1)$$

where:

x^t_{ij} - value of *j* indicator for *i* country in *t* period
$\bar{x}_{ij}$ - value of arithmetic mean for *j* indicator for *i* country
S^t_{ij} - value of standard deviation of *j* indicator

SCA_9 was standardized according to the following formula for the destimulant:

$$z^t_{ij} = -\frac{x^t_{ij} - \bar{x}_{ij}}{s_{ij}} \ (i=1,\ldots,n;\ j=1,\ldots,m;\ t=1,\ldots,6) \tag{2}$$

where:
x^t_{ij} - value of *j* indicator for *i* country in *t* period
$\bar{x}_{ij}$ - value of arithmetic mean for *j* indicator for *i* country
S^t_{ij} - value of standard deviation of *j* indicator

In the next step, the synthetic intellectual capital assets index (ICA) for EU countries was calculated using the standardized sum method (Perkal index), with the same weights assigned to each indicator (Malina, 2004, p. 74):

$$Z_i = \frac{1}{m}\sum_{j=1}^{m} z_{ij} \text{ for } (i=1,\ldots,n) \tag{3}$$

where:
Z_i - value of synthetic index of *Z* for *i* country

The value of the synthetic intellectual capital assets index ranges from -3 to 3, where -3 is assigned to a country with the lowest value of intellectual capital assets, and 3 is assigned to a country with the highest value of intellectual capital assets.

To examine the relation between the value of high-tech export and the value of intellectual capital assets, the estimation of panel models for selected variables was performed (table 2).

Table 2. Variables for estimation of panel models

Type of variables	Variable		Source (the code of a dataset)
response variables	Y1	ln of value of export in high-tech sector intra-UE	Eurostat (htec_trd_tot4)
	Y2	ln of value of export in high-tech sector extra-UE	Eurostat (htec_trd_tot4)
explanatory variables	X1	Total intramural R&D expenditure in euro per inhabitant	Eurostat
	X2	Labour cost index (country weights)	Eurostat (lc_lci_r1_cow)
	X3	Labour productivity as percentage of EU27 total (based on PPS per employed person)	Eurostat (nama_aux_lp)
	X4	ln gross value added	Eurostat (nama_r_e3vab95r2)
	X5	Synthetic intellectual capital assets index	Own calculations based on data by Eurostat and WorldBank (table 1)

Source: own elaboration.

The estimation was performed according to the following outline (Batagi, 2005):
1. Estimation of the total regression model (pooled) according to the general formula:

$$Y_{it} = C + \alpha_i * X_{it} + \alpha_i * X_{it} + \cdots + \alpha_j * X_{jk};\ i=1,\ldots,N;\ t=1,\ldots,T \quad (4)$$

2. Execution of the significance test for individual random effects, allowing to choose between the pooled model, and the model with fixed effects (FE).
3. Execution of the BP test, allowing to choose between the pooled model, and the model with random effects (RE).
4. Execution of the Hausman test, allowing to choose between the FE model and RE.
5. Estimation of FE model according to the general formula:

$$Y_{it} = \beta' X_{it} + \alpha_i + \lambda_t + u_{it};\ i=1,\ldots,N,\ t=1,\ldots,T \quad (5)$$

6. Estimation of RE model according to the general formula:

$$Y_{it} = \beta' X_{it} + \alpha_{it} + \lambda_t + u_{it};\ i=1,\ldots,N,\ t=1,\ldots,T \quad (6)$$

At the first stage, estimation was performed only for V4 countries. At the second stage, estimation was performed for all EU-28 countries.

RESULTS AND DISCUSSION

Value and Structure of High-Tech Export in V4 Countries

The average value of high-tech export in intra-EU-28 trade in 2012 reached 11 725 million EUR. From all of the V4 countries, only the Czech Republic achieved higher than the EU-28 average, which was 14 858 million EUR. From all of the V4 countries, the lowest value of high-tech export in 2012 was reported in Slovakia (4 292 million EUR) and Poland (5 662 million EUR). In 2007, the value of high-tech export in Hungary was similar to the value of export in the Czech Republic, but after 2010, the value of export in the Czech Republic increased significantly, but stayed almost on the same level in Hungary: 9 488 million EUR in 2007 and 8 559 million EUR in 2012 (figure 1).

The high increase in the value of high-tech export in the Czech Republic is confirmed by the position of the country in a ranking of the EU countries for the analyzed period. From all of the V4 countries, the Czech Republic achieved the highest position in the ranking: it ranked 8th in 2007 and 6th in the following years, from 2008 to 2012. Poland and Slovakia went up 3 spots during the analyzed period, but they scored much lower compared to the Czech Republic. Slovakia ranked 14th, Poland ranked 13th position in 2012. In contrast, Hungary's position fluctuated during the analyzed period (table 3).

The average value of high-tech export for all EU countries in extra-EU trade in 2012 reached 9 433 million EUR. The value of high-tech export from V4 countries to non-EU countries was significantly lower than the EU-28 average. In 2012, the lowest value was achieved by Slovakia (926 million EUR), followed by Poland (2 800 million EUR). From all of the V4 countries, Hungary had the highest value of high-tech export to non-EU countries. In 2012, Hungarian export reached 5 417 million EUR, but it was fluctuating during this period. When it comes to the Czech Republic, the value of high-tech export to non-EU countries systematically increased from 2 584 million EUR in 2007 to 4 848 million EUR in 2012 (figure 2).

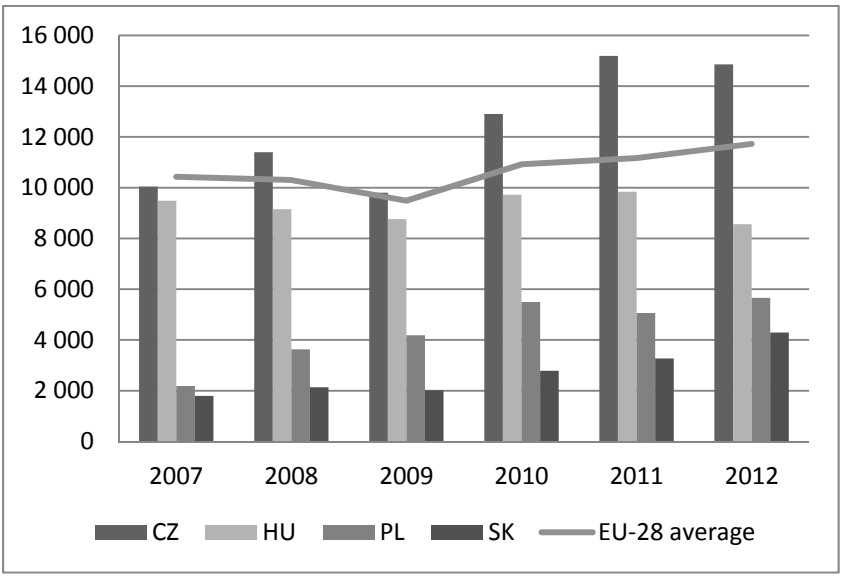

Figure 1. Export in high-tech sector from V4 countries to EU countries and EU-28 average in 2007-2012 period in million euros

Source: Eurostat (htec_trd_tot4).

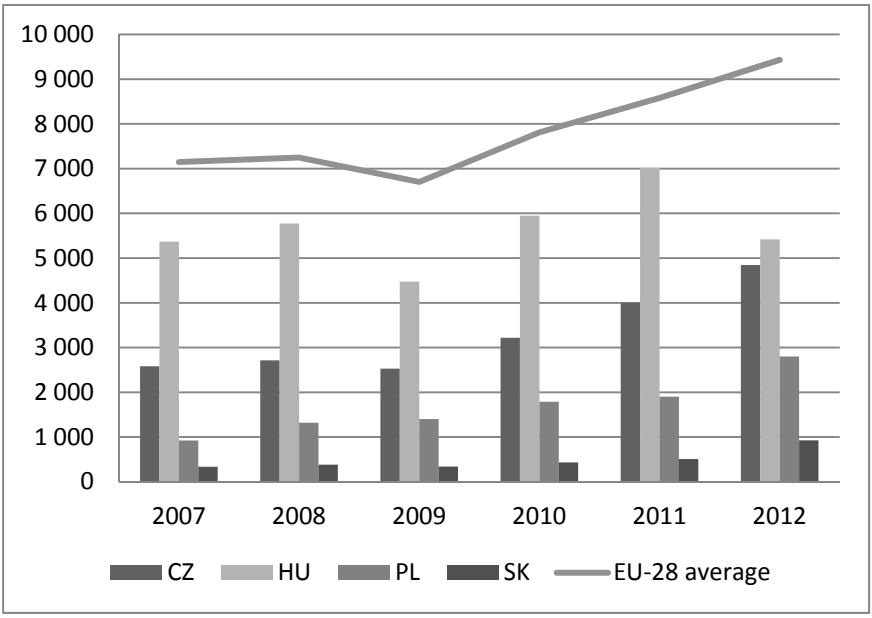

Figure 2. Export in high-tech sector from V4 countries to non-EU countries and UE-28 average in 2007-2012 period in million euros

Source: Eurostat (htec_trd_tot4).

The relatively large value of high-tech export in Hungary in extra-EU trade is confirmed by Hungary's position in the ranking of EU countries. From all of the V4 countries Hungary achieved the highest position in the ranking: the 10th in 2012, followed by the Czech Republic, which ranked 11th in 2012. The ranks of Slovakia and Poland also improved, but they ranked lower than in the intra-UE trade ranking. Slovakia ranked 17th, Poland - 14th (table 4).

Table 3. V4 countries position in the ranking of EU countries arranged according to the values of high-tech export in intra-EU trade in 2007-2012

Country	2007	2008	2009	2010	2011	2012
CZ	8	6	6	6	6	6
HU	9	9	9	8	8	10
PL	16	16	15	13	13	13
SK	17	17	17	16	15	14

source: own calculations based on Eurostat data (htec_trd_tot4).

Table 4. V4 countries position in the ranking of EU countries arranged according to the values of high-tech export in extra-EU trade in 2007-2012

Country	2007	2008	2009	2010	2011	2012
CZ	14	14	14	12	12	11
HU	10	9	9	9	9	10
PL	16	16	15	15	15	14
SK	20	23	22	21	21	17

source: own calculations based on Eurostat data (htec_trd_tot4).

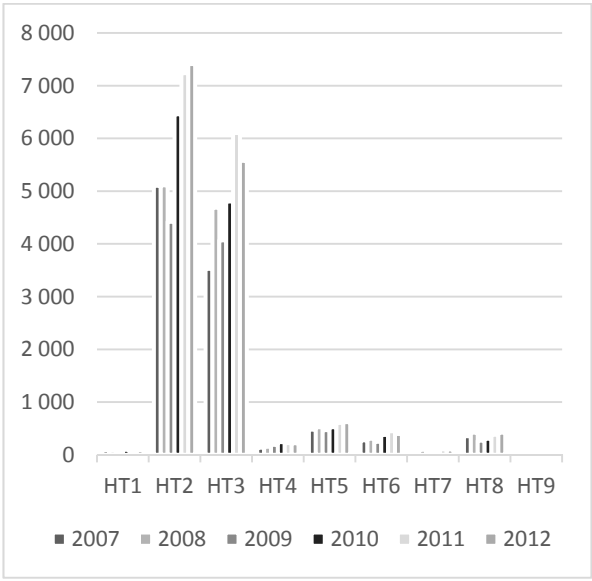

Figure 3. Export of high-tech products from Czech Republic to EU countriesin 2007-2012 in million euros

Source: Eurostat (htec_trd_group4).

The groups of high-tech products the Czech Republic exported to EU countries included mainly computers-office machines (HT2) and electronics-telecommunications (HT3). The export of products from all remaining groups in 2012 accounted for less than 15% of the total value of export of HT2 and HT3 products (figure 3). Products exported to non-EU countries included the same groups of products (figure 4), but its value was definitely lower than in intra-EU trade. In 2012, the total value of trade in high-tech sector amounted to EUR 4 849 million for extra-EU trade and EUR 14 858 million for intra-EU trade.

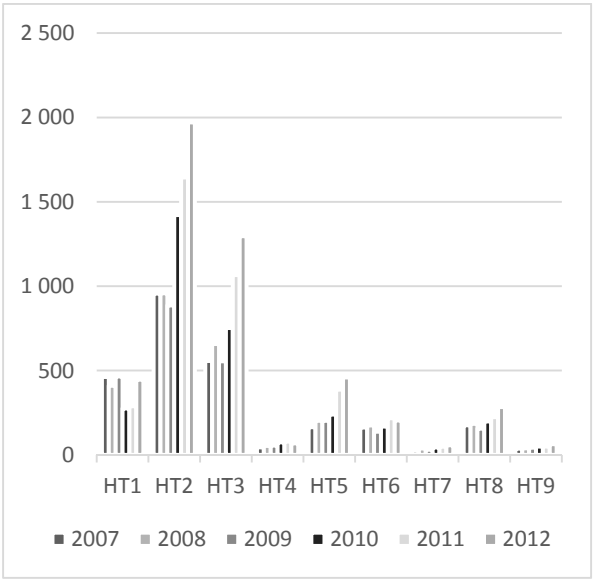

Figure 4. Export of high-tech products from Czech Republic to non-EU countries in 2007-2012 in million euros

Source: Eurostat (htec_trd_group4).

The groups of high-tech products Hungary exported to EU countries included mainly electronics-telecommunications (HT3), computers-office machines (HT2) and scientific instruments (HT5). The export of products from all remaining groups in 2012 accounted for ca. 15% of the total value of export of the HT2, HT3 and HT5 products (figure 5). Groups of products exported to non-EU countries included electronics-telecommunications (HT3) and computers-office machines (HT2) (figure 6), and its value was approximately the same as that of intra-UE trade. In 2012, the total value of trade in high-tech sector amounted to 5 417 million EUR for extra-UE trade and 8 559 EUR million for intra-EU trade.

The groups of high-tech products Poland exported to EU countries included computers-office machines (HT2), and electronics-telecommunications (HT3). The export of products from all remaining groups in 2012 accounted for almost 30% of the total value of export of HT2 and HT3 products (figure 7). Groups of products exported to non-EU countries included aerospace (HT1), computers-office machines (HT2), and electronics-telecommunications (HT3) (figure 8), but its value was noticeably lower than

that of intra-EU trade. In 2012, the total value of high-tech export amounted to 2 800 million EUR for extra-EU trade and 5 662 million EUR for intra-EU trade.

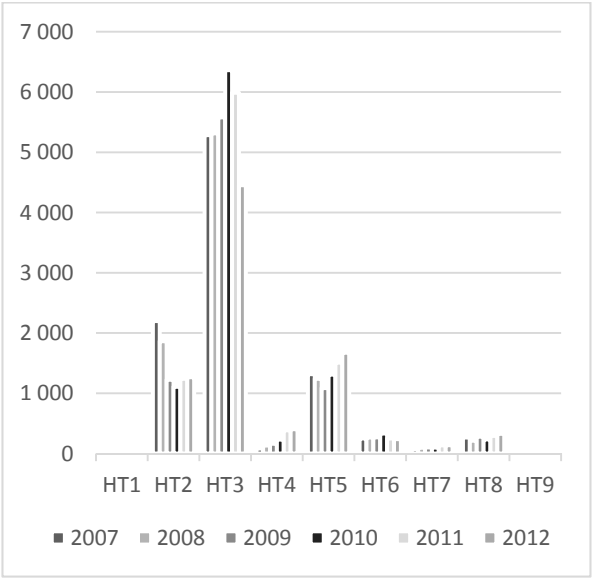

Figure 5. Export of high-tech products from Hungary to EU countries in 2007-2012 in million euros
Source: Eurostat (htec_trd_group4).

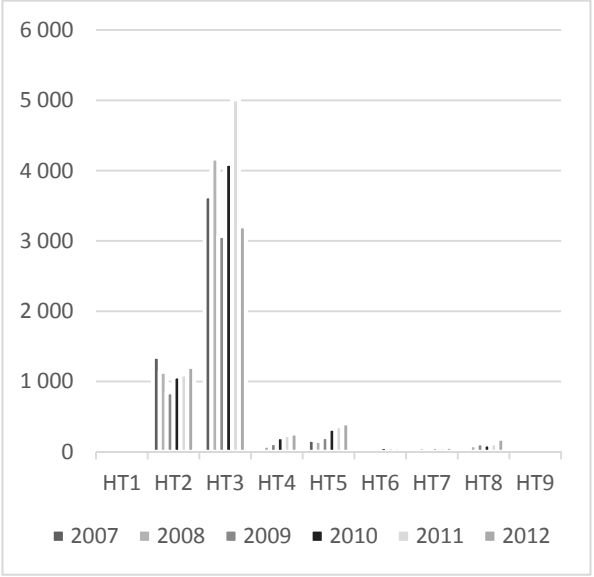

Figure 6. Export of high-tech products from Hungary to non-EU countries in 2007-2012 in million euros
Source: Eurostat (htec_trd_group4).

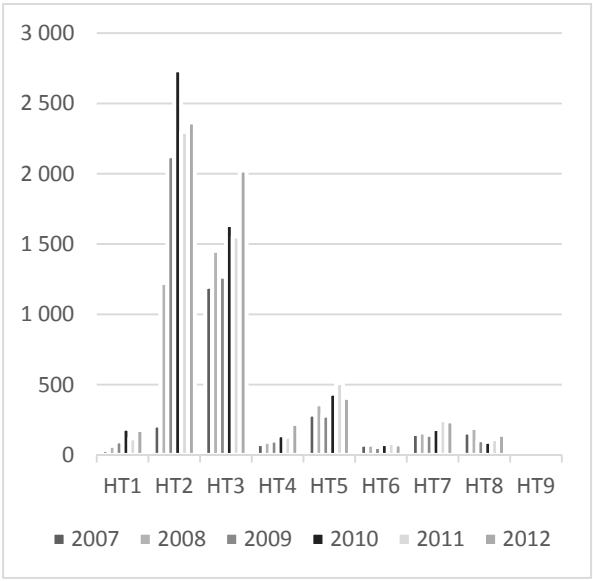

Figure 7. Export of high-tech products from Poland to EU countries in 2007-2012 in million euros
Source: Eurostat (htec_trd_group4).

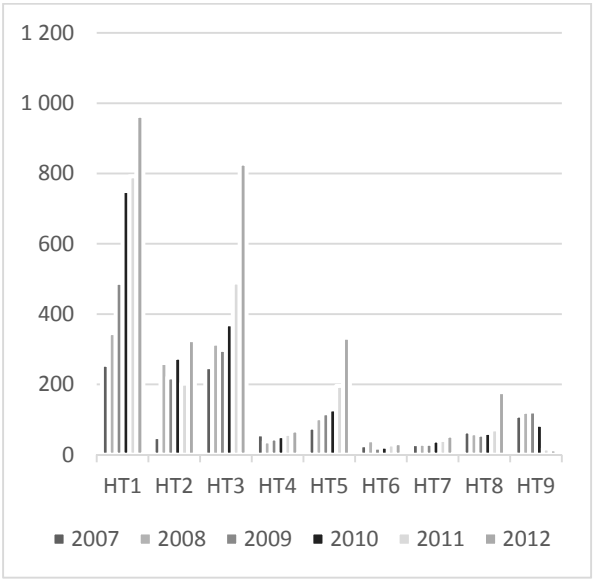

Figure 8. Export of high-tech products from Poland to non-EU countries in 2007-2012 in million euros
Source: Eurostat (htec_trd_group4).

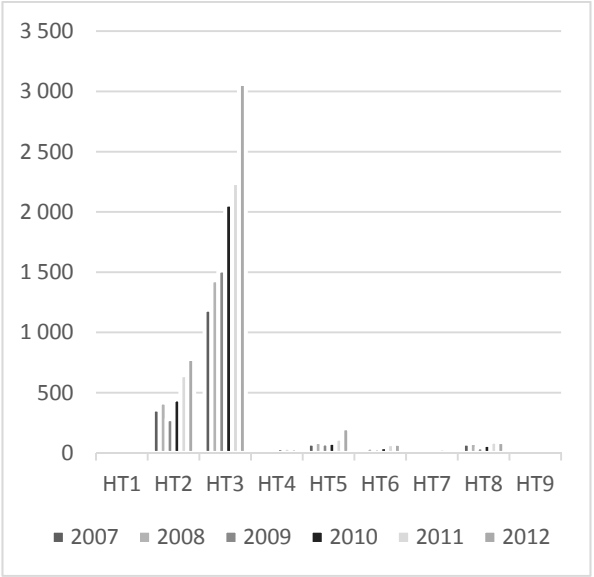

Figure 9. Export of high-tech products from Slovakia to EU countries in 2007-2012 in million euros
Source: Eurostat (htec_trd_group4).

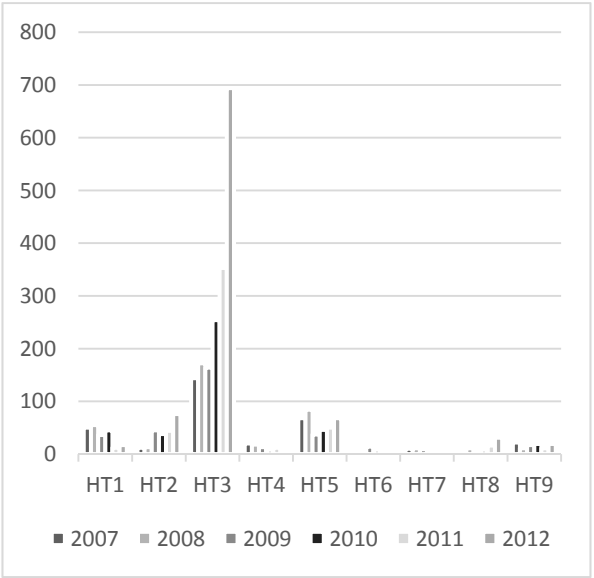

Figure 10. Export of high-tech products from Slovakia to non-EU countries in 2007-2012 in million euros
Source: Eurostat (htec_trd_group4).

The groups of high-tech products Slovakia exported to EU countries included mainly electronics-telecommunications (HT3) and computers-office machines (HT2). The export of products from all remaining groups in 2012 accounted for ca. 12% of the total value of

exports of HT2 and HT3 products (figure 9). The groups of products exported to non-EU countries included electronics-telecommunications (HT3) (figure 10), but its value was definitely lower than that of intra-EU trade. In 2012, the total value of export in high-tech sector amounted to 926 million EUR for extra-EU trade and 4 293 million EUR for intra-EU trade.

If we compare the data for all the V4 countries, the highest total value of high-tech export can be noted in the Czech Republic, and the lowest in Slovakia. However, the highest value in extra-EU trade was achieved by Hungary. Interestingly, computers-office machines (HT2) and electronics-telecommunications (HT3) had the highest share in high-tech export in all V4 countries. The remaining high-tech product groups constitute only a low percentage of the total value of high-tech export. Only Hungary exported more scientific instruments (HT5) than other V4 countries.

Intellectual Capital Assets in V4 Countries

The average value of intellectual capital asset index (ICA) for EU countries in 2012 was 0.192. In the V4 countries, this value was much lower. From all of the V4 countries, the highest value of ICA was noted in the Czech Republic: 0.043 in 2012, followed by Slovakia: -0.128 in 2012, and Hungary: -0.233 in 2012. From all of the V4 countries, Poland had the lowest value of ICA: -0.322 in 2012 (figure 11).

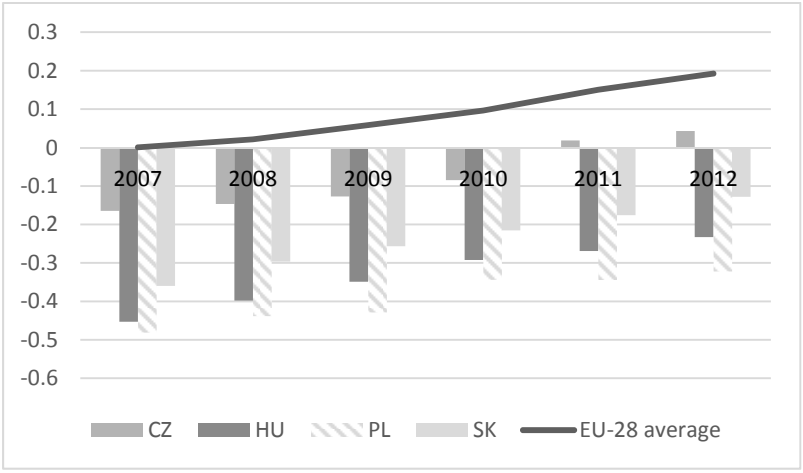

Figure 11. Value of synthetic intellectual capital assets index in V4 countries and EU-28 average in 2007-2012

Source: own calculations based on Eurostat (edat_lfse_08, trng_lfse_01, rd_p_perslf, lfsi_emp_a, htec_kia_emp and htec_kia_emp2, isoc_ci_in_h, isoc_ci_in_e and isoc_ci_in_en2, pat_ep_ntot, hrst_fl_tefor, isoc_tc_cal, tour_occ_arnat) and World Bank data (IP.JRN.ARTC.SC, IC.REG.DURS).

The ICA value gradually increased in all V4 countries. The average increase in the value of ICA from 2007 to 2012 was 0.192 for EU countries and 0.205 for V4 countries. From all of the EU countries, the highest increase in the ICA value was noted in Slovenia: from -0.255 to 0.188. In the Netherlands, the value of ICA dropped during the analyzed period from 0.661 to 0.657. From all of the V4 countries, the highest increase in the ICA value was noted in Slovakia, from -0.36 to -0.128, and the lowest was noted in Poland,

from -0.481 to -0.322. In the Czech Republic and Hungary, the increase in the ICA value during the analyzed period was on a similar level: 0.209 in the Czech Republic and 0.22 in Hungary (figure 12).

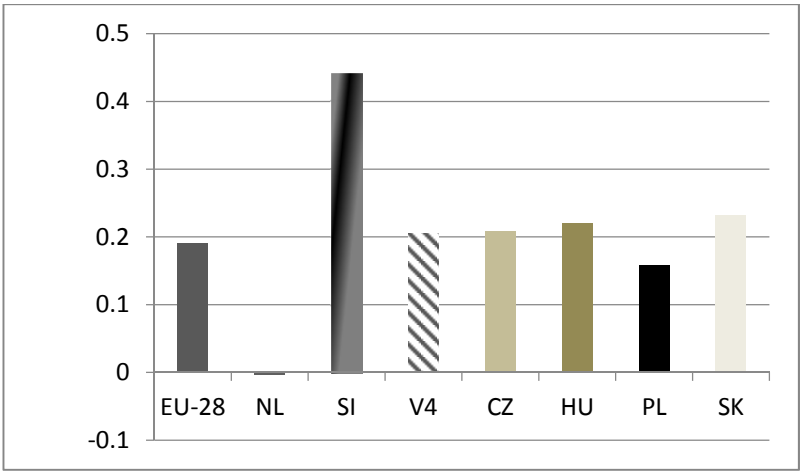

Figure 12. Value of change in synthetic intellectual capital assets index in V4 countries and EU-28 average in 2007-2012

Source: own calculations based on Eurostat (edat_lfse_08, trng_lfse_01, rd_p_perslf, lfsi_emp_a, htec_kia_emp and htec_kia_emp2, isoc_ci_in_h, isoc_ci_in_e and isoc_ci_in_en2, pat_ep_ntot, hrst_fl_tefor, isoc_tc_cal, tour_occ_arnat) and World Bank data (IP.JRN.ARTC.SC, IC.REG.DURS).

Despite of the big increase in the value of ICA during the analyzed period, the V4 countries ranked very low in the EU ranking. From all of the V4 countries, the Czech Republic achieved the highest position in the ranking in 2012: the 16th, followed by Slovakia: the 20th position, and Hungary: the 22nd position. From all of the V4, countries Poland ranked the lowest: 24th (table 5).

Table 5. V4 countries position in the ranking of EU countries arranged according to the values of ICA in 2007-2012

Country	2007	2008	2009	2010	2011	2012
CZ	16	17	17	17	16	16
HU	21	23	22	20	22	22
PL	23	24	24	23	24	24
SK	19	18	18	18	19	20

Source: own calculations based on Eurostat (edat_lfse_08, trng_lfse_01, rd_p_perslf, lfsi_emp_a, htec_kia_emp and htec_kia_emp2, isoc_ci_in_h, isoc_ci_in_e and isoc_ci_in_en2, pat_ep_ntot, hrst_fl_tefor, isoc_tc_cal, tour_occ_arnat) and World Bank data (IP.JRN.ARTC.SC, IC.REG.DURS).

Poland noted the lowest value of the following indicators: HCA_4 and RCA_3, and the highest value of the SCA_9 indicator, which was a destimulant. The SCA_5 indicator had a definitely higher value in Poland than in other V4 countries. In the Czech Republic the following indicators: HCA_1, HCA_3, HCA_5, RCA_3, RCA_5 noted the highest value compared to other V4 countries. In Slovakia, the HCA_4, SCA_1 and SCA_2 indicators reached the highest value compared to other V4 countries. In Hungary, the value of the

HCA_6 and SCA_3 indicators was higher than in other V4 countries; furthermore, Hungary noted the lowest value of the SCA_9 indicator.

The results show a large variation of the ICA value in the V4 countries. Especially the Czech Republic noted a definitely higher value of ICA than other V4 countries, and Poland can be distinguished by a much lower change of the ICA value during the analyzed period.

Relation between Value of Exports in High-Tech Sector and Level of Intellectual Capital Assets

For estimated pooled models (Table 6), the value of adjusted R^2 was no higher than 85%. ICA (X5) was a relevant variable (for α=0.05) in models for Y1 and Y2. In both cases, X5 had negative influence on high-tech export. This means that high-tech export to both EU and non-EU countries decreased as the value of ICA grew higher. After conducting tests (test for individual random effects, BP test, Hausman test), fixed effects models were estimated for all respective variables. The model for the Y2 variable had the highest value of adjusted R^2 among estimated models. Total intramural R&D expenditure (X1), labour productivity (X3) and the gross value added (X4) were relevant variables (for α=0.1) in this model. All those variables had a positive influence on the value of high-tech export to non-UE countries.

The results may have different causes and require a deeper analysis. A part of high-tech products are manufactured by foreign subsidiary companies[6] and this is the cause why one country develops the idea and the design of a high-tech product and a different country manufactures it, which is why the low ICA value in the V4 countries was not an obstacle to exporting high-tech products.

Table 6. The results of the estimation of panel models for V4 countries data

Pooled models			FE models (relevant variables for α=0.1)		
variables	**(Y1)**	**(Y2)**	**variables**	**(Y1)**	**(Y2)**
(X1)	0.014***	0.017***	(X1)	0.006	0.007
(X2)	-0.21***	-0.55***	(X2)	0.115	-
(X3)	0.006	-0.03	(X3)	0.042	0.024
(X4)	1.911***	4.890***	(X4)	-	0.945
(X5)	-3.79***	-6.63***	(X5)	-	-
adjusted R^2	**0.84**	**0.85**	adjusted R^2	**0.96**	**0.98**

Significant codes: 0.01 '***' 0.05 '**' 0.1 '*'

Source: own calculations based on Eurostat (htec_trd_tot4, lc_lci_r1_cow, nama_aux_lp, nama_r_e3vab95r2, edat_lfse_08, trng_lfse_01, rd_p_perslf, lfsi_emp_a, htec_kia_emp and htec_kia_emp2, isoc_ci_in_h, isoc_ci_in_e and isoc_ci_in_en2, pat_ep_ntot, hrst_fl_tefor, isoc_tc_cal, tour_occ_arnat) and World Bank data (IP.JRN.ARTC.SC, IC.REG.DURS).

For estimated pooled models (Table 7), the value of adjusted R^2 was 91% for Y1, and 88% for Y2. ICA (X5) was an irrelevant variable (for α=0.05) in those models. Gross value

[6] According the results of A. Weresa (2002, p. 128) survey more than 58.6% (for high-technology) and 61.9% (for medium-high-technology) companies with foreign capital in Poland were innovative, and only than 49.2% (for high-technology) and 33.3% (for medium-high-technology) companies with Polish capital in Poland were innovative.

added (X4) was the most relevant value for export to non-EU countries. After conducting tests, a fixed effects model was estimated for Y1, and a random effects model for Y2. The model for Y1 had the highest value of adjusted R^2. Labor productivity (X3) and the ICA (X5) were relevant variables in this model. Both variables had a positive influence on high-tech export in intra-EU trade. Labor productivity (X3), gross value added (X4), and ICA (X5) were relevant variables. In this case, the variables had a positive influence on high-tech export in extra-EU trade as well.

Table 7. The results of the estimation of panel models for EU countries data

Pooled model			**FE and RE models (relevant variables for α=0.1)**		
variables	**(Y1)**	**(Y2)**	**model**	**FE**	**RE**
			variables	**(Y1)**	**(Y2)**
(X1)	-0.001	0.001	(X1)	-	-
(X2)	-0.001	0.006	(X2)	-	-
(X3)	0.007*	0.006	(X3)	0.023	0.017
(X4)	0.755***	0.692	(X4)	-	0.568
(X5)	0.698*	0.023	(X5)	0.786	0.626
adjusted R^2	**0.91**	**0.88**	adjusted R^2	**0.98**	**0.95**

Significant codes: 0.01 '***' 0.05 '**' 0.1 '*'

Source: own calculations based on Eurostat (htec_trd_tot4, lc_lci_r1_cow, nama_aux_lp, nama_r_e3vab95r2, edat_lfse_08, trng_lfse_01, rd_p_perslf, lfsi_emp_a, htec_kia_emp and htec_kia_emp2, isoc_ci_in_h, isoc_ci_in_e and isoc_ci_in_en2, pat_ep_ntot, hrst_fl_tefor, isoc_tc_cal, tour_occ_arnat) and World Bank data (IP.JRN.ARTC.SC, IC.REG.DURS).

The results of the models for all EU countries show a different relation of high-tech export to intellectual capital assets than the models that only consider the V4 countries. For all of the V4 countries, ICA was not statistically significant in estimated FE models. In the case of data for all EU countries, ICA was statistically significant and had a positive impact on the level of high-tech export. Therefore, the findings of the analysis are not clear. On one hand, the Czech Republic, Hungary, Poland and Slovakia achieved fairly high positions in the rankings drawn by the level of high-tech export to the EU countries, on the other hand, the groups of high-tech products exported from the V4 countries were mainly computers-office machines, and electronics-telecommunications, whilst the V4 countries are often only the manufacturers of those products, and not their inventors and originators.

CONCLUSIONS

The analysis creates an unclear picture of the situation. The value of high-tech export is not the same in all the V4 countries. From all of the V4 countries, the highest total value of high-tech export is noted in the Czech Republic, and the lowest in Slovakia. Hungary noted the highest value in the extra-EU trade in this sector. For all the V4 countries, the value of high-tech export in the intra-EU trade is higher than in the extra-EU trade. The adoption of the intellectual capital assets as a factor of export of high-tech products seemed to be a right choice because of the specific requirements of the sector. Econometric models estimated for the EU-28 confirmed that ICA has a significant and

positive impact on the level of high-tech export. Models for the V4 countries showed the opposite situation – the value of ICA was not relevant to the level of high-tech export. M. Weresa (2012, p. 67) classified all of the V4 countries as belonging to a group of overtaking national innovation systems. M. Weresa emphasized (2012, p. 242) that international trade and foreign direct investment leads to transfer of knowledge and increasing its resources in the country. The analysed period is too short to give definite results, because it takes decades for the level of knowledge, technology or intellectual capital of the countries to become even.

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Entrepreneurship Challenges in High-Growth Companies and Consequences for SME Policy

Robert K. Gruenwald

A B S T R A C T

Objective: The objective of this paper is to identify success factors for corporate growth out of these two approaches (hidden champions research, high-growth companies research) to make the findings fertile for entrepreneurship policy and for entrepreneurship with a growth focus.

Research Design & Methods: The article is based on the literature review (theoretical background and research results on high-growth companies). The paper is a summary of recent research findings regarding SME growth drivers and success factors as well as considerations about the goals of an effective SME and entrepreneurship policy.

Findings: On the basis of the various empirical research only 6 to 10% of companies become high-growth companies. Most high-growth companies arise in niche markets in low-involvement industries and are not breakthrough innovators or technology leader. These companies produce the most jobs.

Implications & Recommendations: Therefore, it is recommended in terms of SME policy not to generally support high technology or 'trendy' industries or more or less evenly many companies, but to use research findings for better targeting the companies with the highest potential to become outperformer and 'jog engines'.

Contribution & Value Added: The paper can be treated as a unique summary of the 'state of research' about successful SMEs and the application of the research findings to an economic policy question (interdisciplinary approach).

Article type: literature review

Keywords: high-growth companies; hidden champions; entrepreneurship policy; SME policy; corporate life cycle

JEL codes: M00

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INTRODUCTION

Herrmann Simon (1990) coined the concept of hidden champions (*heimliche*/*unbekannte Gewinner*). This approach is one model for the analysis of high-growth companies, i.e. companies that outperform the market; however, only a few important empirical studies have been conducted to testify this approach, mostly focusing on German companies. There is nowhere else such a comparably high number of so-called hidden champions – usually owner-managed companies that are European or world leaders in narrow market niches and thus sustainable high-growth companies. Furthermore, in previous years, some surveys have been published on 'high-growth companies' (HGC) or 'high-growth entrepreneurship' (HGE), also analysing growth drivers of SMEs in other countries than Germany.

The objective of this paper is to identify success factors for corporate growth out of these two approaches to make the findings fertile for entrepreneurship policy and for entrepreneurship with a growth focus. The paper is based on a literature review regarding hidden champions, SME success factors, and high-growth entrepreneurship. From the perspective of SME/entrepreneurship research, the relevance of the topic is in possible answers to the questions:

- What is the state of research on managing corporate growth?
- Are there comparable success patterns in the findings of various surveys, which may be useful for entrepreneurs and entrepreneurship policy?

From the perspective of SME/entrepreneurship policy the relevance is a possible answer to the question:

- What kind of companies has the most potential to generate jobs and is therefore the Archimedean point of an effective SME/entrepreneurship policy?

LITERATURE REVIEW

Managing Corporate Growth in HGCs from the German Perspective

Concepts of growth are in frequently linked implicitly or explicitly to the model of corporate life cycle (CLC). This approach is based on a biological metaphor of living organisms, which have a regular pattern of development of 'birth', 'growth', 'maturity', 'decline' and 'death' (Sihler et al., 2004, p.3; Wach, 2012, p. 48-49). The CLC is a model proposing that businesses, overtime, progress through a fairly predictable sequence of developmental stages. Five of the more popular models are that of Greiner (1972), Churchill & Lewis (1983), Scott & Bruce (1987), Burns & Dewhurts (1996), and Sihler et al. (2004).

The CLC approach can be seen as descriptive (Dobbs & Hamilton, 2006, p. 298). It sums up the different levels of operations and financial management complementary to distinct stages of a company's growth and the use of both internal and external resources (Sautet, 2003, p. 88; Haric et al., 2013, p. 49). A more strategic and less descriptive view of growth is delivered by the success factor research following the PIMS (profit impact on market strategy/share) approach and the hidden-champions approach. Whereas the PIMS approach considers the conquest of market shares in mass markets as strategic focus for growth, the hidden champions' approach emphasizes the growth in niche markets where companies are not exposed to intense competition, but are even

protected by the narrowness of the market (in terms of market volume) against the entry of "big players", a thereby following intensified competition and price erosion through price war, and low margins.

Both approaches tend to be normative in the sense their aim is not only 'producing descriptions' but also delivering management recommendations. While the PIMS findings are mostly generated by surveying large enterprises in mature markets or on the maturity stage of the CLC (Thomas & Gup, 2010, p. 23; Woywode, 2004, p. 16), the hidden champions approach focuses on mid-sized companies (Simon 2012, p. 143).

In addition to the studies of Simon, other research on German medium-sized companies which are European or world market leaders still exists. In particular, consulting firms such as McKinsey, Ernst & Young and Droege & Company have researched in the same direction: The publications of Meffert & Klein (2008) (McKinsey), Ernst & Young (2008), Age & Kalkbrenner (2010) or of Blommen & Bothe (2008) are examples of this trend to examine success factors of German mid-sized companies. Three recent and comprehensive surveys covering German growth companies are:

a) Hidden Champions Panel in the years 1990-2012 (Simon, 1996; 2007; 2012).
b) The McKinsey SME Survey 2007 (Meffert & Klein, 2008).
c) The KfW Survey 2004 (Bindewald, 2004).

RESULTS AND DISCUSSION

SME Growth Drivers: Simon's Hidden Champions Panel (1996, 2007 and 2012)

In the 1990s, Hermann Simon (1990; 1996) conceptualized the category of companies that he called hidden champions. Since 1990, he has analysed leading companies in a panel whose sample includes approximately 1316 companies. This sample consists of firms which are (1) no. 1, 2 or 3 in their markets, in terms of their revenues in relation to the total market volume, have (2) their revenue less than 3 billion EUR, and are (3) usually not stock-listed companies (i.e. the companies' management is not subject to short-term profit interests) and are typical entrepreneurial companies (Simon, 2007, p. 29). The main findings of the Simons research in terms of growth drivers are:

- In terms of Ansoff's growth strategy matrix, hidden champions initially target usually only a single market segment with a single-product strategy: Hidden champions are in the take-off and growth phase usually a one-product company. Frequently, the market is established only by the hidden champions (Simon, 2012, p. 128).
- At the level of market stimulation strategies, hidden champions strive for lasting quality leadership in terms of customer orientation and product properties and can thus realize a price premium. Therefore, hidden champions cannot be forced into margin-reducing price wars, but can grow sustainably by profiting from profitable customer segments without margin-reducing pricing strategies (Simon, 2012, p. 143).
- The high specialization by strict market segmentation leads to a volumetrically very 'narrow' lasting market; therefore, they must pursue an internationalization strategy relatively early in the CLC to tap from quickly narrowing home markets as the growth limit (Simon, 2012, p. 187).
- Hidden champions focus not on what can be set off in the market now or what new arisen market segments offer in terms of growth rates (opportunistic behavior, me-too-strategy). They thus do not have the classic view of the management. This is

evident not at least in the fact that they even often establish markets, or that they occupy market niches that are ignored, or even regarded as unattractive and which belong to the low-involvement industries (Simon, 2012, p. 160; Rasche, 2003, p. 220).

- In the case of hidden champions, innovation means mostly not new technology, but process innovation, innovation in distribution, logistics, marketing and sales and design (Simon, 2007, pp. 191-193). So, a Hidden Champion is not 'breakthrough innovation' company.

SME Growth Drivers: McKinsey German Leading Companies Survey (2006)

The McKinsey survey on German leading companies is based on the McKinsey data base, as well as on interviews with CEOs of 800 companies out of the data set. The survey segment represents the most successful segment of the German economy. The companies of this segment are characterized by an annual sales growth of 4.6% and an average 5% return on sales in the period from 1998 to 2003.

The success of a leading company cannot be explained by the right market choice or with the selection of the right entry strategy (Meffert & Klein, 2007, p. 187). Instead, a specific company development path is typical for leading companies. McKinsey developed, out of the survey data, an own CLC model. Successful companies starting as specializers then become cost leaders or innovation leaders. From both stages, some companies manage to make the transformation to a competence leader in later phases of the CLC.

The strategy change from the specializer to the competence leader takes at least 10 years and is frequently not straight. Compared to the cost leader, the specializer, the innovation champion and competence leader have a significant higher average profit margin (Meffert & Klein, 2007, p. 70).

SME Growth Drivers: KfW Entrepreneurial Success Germany Survey 2004

The KfW is, with total assets of 495 billion EUR (2011), the third largest German bank. The banking group covers over 90% of its borrowing needs in the capital markets. The KfW Mittelstandsbank (KfW small and medium enterprises bank), the second largest business unit of the KfW group, provides assistance to German SMEs, including individual entrepreneurs and start-ups. In addition to loans, it also provides equity and mezzanine financing. Its financing totalled 24.1 billion EUR in 2012. The KfW offers financing for entrepreneurship, enterprise development and innovation covers the entire CLC. (Touché, 2013, pp. 7, 8, 10, 13)

The KfW survey findings show the following significant differences between failed and surviving companies in a 20-year period (Bindewald, 2004, pp. 57, 68-72, 74-83):

- Successful companies place much higher value on quality management, which is expressed by their significantly higher quality claim.
- Successful companies focus much more on customer loyalty.
- The success does not depend on the business experience of the company's founding entrepreneur. This is shown in particular in the fact that the segment of ages 25 to 35 is significantly more successful than the segment of ages 35 to 45.
- Start-up experience is not a success factor: 75% of the unsuccessful but only 57 % of successful entrepreneurs have had management experience in business start-up.

- The same goes for leadership experience: Former senior executives are even less often successful than former staff employees.
- Successful entrepreneurs also differ significantly in whether they make use of external consulting: About 90% of the successful company has included external consultants, in the group of failed entrepreneurs, this is true of only about 65%. Therefore, the KfW binds lending to the accompaniment of start-up coaches or to the involvement of management consultants. From the successful entrepreneurs, only 7% have never taken advice; however, 31% of unsuccessful companies have never taken advice.
- The entrepreneur's personality traits seem to be insignificant for the company's success. In contrast, corporate planning is an important success factor: Successfully founding companies is highly dependent on sufficient preparation and quality of a business model (business plan).

SME Growth Drivers: Recent International Studies on High-Growth Companies

In particular, the surveys of McKinsey (Meffert & Klein, 2007) and Simon (1996; 2007; 2012) have studied success factors of companies that are more advanced in the CLC and have already overcome some barriers to growth. The relatively new concept of "High-Growth Companies" research deals mainly with start-ups and companies in the early growth phase. Two recent meta-analyses summarize the status of research on high-growth companies (Henrekson & Johansson, 2010; Daunfeld, Elert & Johansson, 2010): The total of 28 studies on high-growth companies (1988-2007) is largely based on statistical data from the end of the 70s until the mid-2000s. Many surveys deal mainly with the issues of the employment effect of high-growth companies and less on the causes of high growth. Therefore, 10 studies were selected and evaluated, out of the total 28 surveys from 2000 until now (table 1). Further findings of listed surveys are as follow:

- Fast-growing companies generate, on average, significantly more jobs (all studies).
- Fast growth is a rather temporary phenomenon within the CLC (Hölzl, 2009; Acs et al., 2008). Smaller companies have the tendency to grow faster, due to size-related efficiency disadvantages. Therefore, the higher-growth companies are, on average, younger than the slower-growing companies. By contrast, 'young' means not necessarily start-ups: 70% of the companies with a growth rate of at least 20% over a 3-year period are at least 5 years old (Acs et al., 2008); instead, companies that have doubled their revenue over 3 years are, on average, 25 years old. Fast-growing companies are not necessarily young companies or start-ups.
- Fast-growing, young companies can be found in all sectors – not just in technology or knowledge-intensive areas (Hölzl, 2009).
- High-growth companies are, on average, older than growth companies in the start-up phase (Acs et al., 2008). It can be assumed there is no positive relation between productivity, company age and growth. The assumption that due to the rising learning curve, older companies should be more productive than younger ones, turns out to be questionable. The results of López-Garcia & Puente (2009) show fast-growing companies in the start-up phase have up to 30% higher productivity than comparable companies of the sector.

- Internationalizing companies grow faster (Henrekson & Johansson, 2009).
- Better access to debt capital is associated with higher growth (López-Garcia & Puente, 2009).
- Subsidies are of meaning for kick-starting the founding of a business, but not for initial business growth (Koski & Pajarinenin, 2010).

Table 1. Selected Studies and Surveys on High-Growth Companies in the years 2000-2010

Autor/Year	Time Period	Region	Sample Group and Control Group	Main Findings
Almus (2000)	1990-1999	Germany	Existing and no longer existing companies	In the field of the 10% fastest growing companies, technology companies and knowledge-based service providers are not significantly more successful than companies with established products of the "old economy."
Autio et al. (2000)	1994-1997	Finnland	Existing companies	Fast growing companies (sales growth of 50% in three years) increase the number of employees by approximately 400% in three years.
Brüderl & Prisendörfer (2000)	1985-1990	Germany	Since 1985, established companies with the exception of handicraft businesses, law firms, farms and architects	About 4% of all companies have achieved a growth in staff of more than 100% in the survey time period. Conclusion: Only a small part of all start-ups creates a significant effect on employment.
Acs & Müller (2008)	1990-2003	USA	Companies founded during the investigation period	High-growth companies develop mainly in metropolitan regions, since they obviously find the skills needed for the fast growth here.
Acs et al. (2008)	1994-2006	USA	Companies persistent and liquidated during the research period	About 3% of all companies have doubled their sales over a period of 3 years. These companies are responsible for almost all new jobs created in their region. The average age of these companies is 25 years. Older companies tend to weaker job growth.
López-Garcia & Puente (2009)	1996-2003	Spain	Existing small- and medium-sized enterprises	Low labor costs increase growth probability. High-growth companies have relatively more long-term debt.
Anaydike-Danes et al. (2009)	1998-2008	UK	Existing small- and medium-sized enterprises	6% of all existing companies are growing fast, which means they have a sales or employee growth of 20%. 70% of high-growth companies are at least 5 years old.

Amat & Perramon (2010)	1994-2007	Spain	Companies with a minimum turnover of 2.4 million EUR and a return of 7% on average per year over a three-year period	Quality management, innovation focus and pro-active human resource management are key success factors, as well as conservative, long-term oriented financial management.
Koski & Pajarinen (2011)	2003-2008	Finland	The 10% of the fastest growing start-up companies from the group of all companies	Subsidies are not critical to the growth of companies in the sample, but are important in the start-up phase. Therefore, the assumption is that subsidies and loans increase the probability of establishing start-ups.
Daumfeldt, Elert & Johanson (2010)	1998-2007	22 European countries, USA, Canada	Evaluation of 28 studies on high-growth companies	Young growth companies create proportionally more jobs than older ones. The group of larger growth companies generated higher percentage growth.

Source: own compilation.

CONCLUSIONS

High-Growth Entrepreneurship and Implications for SME Policy

Efficiency in entrepreneurship policy and SME policy is, at first, simple to define: to achieve with a given amount the highest outcome. In terms of the topic of this paper, the recommendation may be to find the 6% to 10% of the companies with the highest growth potential (high-growth companies), or companies that sustainably outperform the market (hidden champions) or have the potential to sustainably outperform the market (specialisers, innovation champions), because they produce the most jobs. Born Globals or technology leaders are not part of the group of companies that create many jobs. Growth motivation is a necessary factor for actual firm growth.

High-Growth Entrepreneurship is characterised by growth motivation that is determined by the perceived ability, need and opportunity for growth (Davidsson, 1989). Although some objective factors directly affect actual growth, the entrepreneur's perception of the ability, need and opportunity for growth is of major importance for explaining motivation-mediated effects on growth. Therefore, several potential crucial differences between generic entrepreneurship policies (SME policies) and high-growth entrepreneurship policies should be noted (Table 2).

However, scientific study of growth companies is not and will not be an exact science, if it is meant in terms of clear cause-effect relations. Referring, however, to the preliminary considerations on the normativity of economic policy, the findings of recent research on growth companies suggest the impact of the current EU SME policy may be relatively weak and has room for improvement. This means, the conclusion of this paper is not that the EU SME policy is right or wrong, but seems to be inappropriate in terms of the macro-level targets. In the perspective of the analysis executed and presented above, the EU SME policy gives the impression of a scattered bundle of activities, whereas the main topics of the job growth agenda (internationalisation but not world market strategy, high-growth in niche markets but not mass market cost leadership, innovation leadership but not technology leadership) are completely underrepresented. Beside this, technology-focused SME policy seems questionable.

Table 2. Trade-Offs between SME and High-Growth Entrepreneurship Policies

Criteria	SME Policy Generic Entrepreneurship Policy	High-Growth Entrepreneurship Policy
Policy Goals		
Objectives in relation to entrepreneurship	Entice more people to become entrepreneurs	Entice the right people to become entrepreneurs
Objectives in relation to entrepreneurial firms	Increase the number of new entrepreneurial firms	Increase the growth of entrepreneurial firms
Objectives in relation to operational environment	Facilitate the environment for small business operation	Facilitate the environment for entrepreneurial firm growth
Resource Provision		
Source	Mostly from public sources	Combination of public and private sources
Type of financial resources	Grants, subsidies, soft loans	R&D loans and innovation grants, business angel finance, venture finance, IPOs
Dominant service	Basic (standard) advice for firm creation, business planning, small business operation	Experienced-based advices for venture finance, strategic planning; internationalisation; organisational growth
Resource distribution principle	Ensure equal access for everyone (resource spread)	Select promising recipients (resource focus)
Regulatory Emphasis		
Lifecycle focus	Remove bottlenecks to new business entry	Remove bottlenecks to entrepreneurial firm growth
Compliance bottleneck addressed	Reduce cost of compliance for small business	Smooth compliance requirements for growing firms
Fiscal regulations	Reduce VAT for small firms	Accommodate dramatic changes in firm scale; treat share options neutrally
Attitude towards failure	Avoid failure, bankruptcy	Accept firm failure and bankruptcy, but reduce the economic and social cost of these
Links to other policy domains	Industrial policy, social policy, labor policy	Industrial policy, innovation policy, labor policy

Source: (Autio, 2007, p. 38).

According to several findings on high-growth companies, the period of 5 to 25 years seems to be the decisive age of a company (Acs et al., 2008; Anaydike-Danes et al., 2009). At this stage of a company's CLC, it is decided more or less whether a company has the potential to become a high-growth specialiser and innovation champion, and thus grow into a Hidden Champion, or will only follow business and market cycles without steady revenue and job growth. This time period can be referred to as the Archimedean point for SME subsidies, loans, grants, etc. Afterwards, when the shift to the sustainable growth company is completed, a growth company has better access to debt capital (López-Garcia & Puente, 2009), so that the market may be the better 'expert' to decide what is 'right' or 'wrong' to invest in, as it can be done by regional, national or transnational 'experts'. Additionally, it can be asserted that the pre-start-up phase is also an Archimedean point (mostly neglected by funding institutions on the

national level (see e.g. Institut für KMU-Management, 2012, p. 10). Subsidies are meant for kick-starting the founding of a business, but not for initial business growth (Koski & Pajarinenin, 2011). At these two points of the CLC, subsidies and loans may be most efficient. Thereafter, it should be 'the market as Hayek's discovery process', which selects 'good' from 'bad'.

The same applies to technology funding. A growing specialiser is the best proof of a correct assumption on what the market needs and is willing to pay for. Therefore, a technology-dependent loan (thematic funding) or subsidy is, seemingly, not the best way to promote high growth in terms of the free market paradigm. Additionally, the fact that most growth companies arise in low-involvement industries supports this view. This is especially true for the Born Globals. Fast-growing technology companies are precisely not the companies that should be promoted, because they do not create jobs at home. Therefore, it is to ask, whether it is just the high-tech or rather low-involvement industries companies (hidden champions) that should be supported.

Financing Entrepreneurship and SME Policy in the European Union

The current European Union's support to SMEs is available in different forms such as grants, loans and guarantees. The focus on activities is very interesting. It is apparent the largest part of the budget is for regional convergence activities and will be assumedly allocated very fragmentally (probably in thousands) small regional projects with the focus on levelling regional disparities. In contrast, internationalisation and high-growth companies are funded in negligible portions.

The second largest share is for supporting 'non-thematic' innovation (means: not for innovations in the field of environment, energy, or transport), which is primarily technological innovation (i.e., not sales, business models, or other non-technological innovations). Aside from the question of whether only technology innovation drives growth, the question arises here regarding who decides and on what basis the decision is made about whether a proposed innovation is truly marketable at the end of the R & D process and should therefore be encouraged by loans, subsidies, grants, etc. The answer is: regional authorities. The question then is: Has there been any regional administration expertise in business development, or is there rather a significant risk expected that only particularistic interests of political parties prevail here? This may be the main issue to evaluate the efficiency of the policy approach: Can the regional focus really produce efficient allocation of resources? (OECD, 2007, pp. 78, 93; Wach, 2008, pp. 397-406) Finally, regional disparities are an expression of market developments. Can it be useful to counter this politically, or rather to accept the structural change and to strive for an appropriate re-allocation and focusing of resources on the new or existing regional growth centres, rather than on structurally weak areas and prolonging only decline with tax money? At least, it becomes clear that SME policy needs a more strategic approach. This is at least the conclusion of an Organisation for Economic Co-operation and Development (OECD) evaluation on the impact of SME policies in different countries (OECD, 2007, p. 93). Concerning the EU, this evaluation is supported by further studies (Tödtling–Schönhofer et al., 2011, p. 71).

It is possible, that particularistic interests on the level of regions and party-bound industrial policy biases may prevent an allocation into growth-sectors and industries or

growth companies and may, for instance, support mature industries and companies. This assumption is also supported by the fact that the decision for allocating the budget is made on regional and national levels. In any case, it is not the 'market' that decides. Additionally, it is remarkable that no comparative or quantitative targets are given anywhere in the "European Union Support Programmes for SMEs" (European Commission 2012a).

However, it is evident, that EU SME policy has no clear vision why and what kind of companies should be supported. Instead, the EU SME policy gives the impression that the budget is only distributed in terms of equal distribution without any focus.

Final Remarks and Recommendations

High-Growth Companies are job engines. Two recent meta-analyses summarise the status of research on high-growth companies (Henrekson & Johansson, 2010; Daunfeld, Elert & Johansson, 2010). A total of 28 studies on high-growth companies (1988-2007) are largely based on statistical data from the end of the 1970s until the mid-2000s. Definitions of high-growth companies can be distinguished in terms of criteria growth indicators, measurement methods, time period considered and the introduction of additional criteria. The two most common economic growth indicators are the number of employees and turnover (OECD, 2007, 2008; Fritsch & Weyh, 2004; Autio, Arenius & Wallenius, 2000).

The type of growth measurement differs, such as absolute, relative and a combination of absolute and relative growth used as benchmarks. Regarding the measurement period, definitions differ only slightly. The growth period is three years with the majority of the investigations. However, all surveys since 2000 have come to the same results: Fast-growing companies generate, on average, significantly more jobs (Autio, Arenius & Wallenius, 2000; Brüderl & Prisendörfer, 2000; Schreyer, 2000; Halabisky et al., 2006; Acs et al., 2008).

Other studies, however, do not make precise quantitative statements, but also come to the result that high-growth companies have a significantly disproportionate share in the creation of new jobs (Ahmad & Petersen, 2007; Fritsch & Weyh, 2006; Littunen & Tohmo, 2003; Davidsson & Delmar, 2003, 2006).

Efficiency in entrepreneurship policy is, at first, simple to define: to achieve with a given amount the highest outcome. In terms of the topic of this paper, the recommendation may be: find the 6 to 10% of the companies with the highest growth potential, because they produce the most jobs. However, the scientific study of entrepreneurship is not and will not be an exact science, if it is meant in terms of clear cause-effect relations. The reason for this is neither the entrepreneur nor the firm is a clockwork-like trivial machine. Therefore, correlations between diverse factors are not calculable, and input-output relations with high probabilities of occurrences are not to be expected – a problem, that is also well known from market or economic development forecasts. Therefore, and despite the research on high-growth companies, it is still difficult to identify these 6% to 10% of the companies.

However, some indications are given by the compiled research. First, entrepreneurship should be promoted before the company is legally established, and after it has established itself in the market and has shown that the business model is

really running. In contrast, in the start-up stage, no outcome forecasts are valid. However, the findings show, in particular, that a kick-start for establishing a company depends more on money than on a convincing business model.

Thereafter, it must be 'the market as discovery process' (Hayek), which selects 'good from bad'. However, when the market has valuated the business model and the one-product-company and a company becomes a specializer and not only an 'operator' of existing 'product-money circuits', the possibility is higher that a company can make the next leap to becoming an innovation leader or realizes growth, but with a lower rate and the market or product cycle as a cost leader. However, if the premise of entrepreneurial policy is to be efficient, then only the innovation leader should be the target of loans and subsidies, due to these companies having more sustainable futures with higher independence from market cycles and the fact that it they become high-growth companies that generate more jobs.

According to recent study findings on high-growth companies, the entrepreneurial crossroads for future growth beyond a cycle of an established market will be reached after at least 5 years. The period of 5 to 25 years seems to be the decisive age of a company. At this stage of the CLC, subsidies and loans may be most efficient. The main instrument for allocating subsidies and loans may be the financial and strategic analysis to answer the question on the average growth rate in the last 3 to 5 years, as well as the financial health and the economic value added to the company and soft facts (e.g., customer relationship status, customer loyalty, customer price elasticity, level of customer care, quality management level, etc.).

The question than is what to promote. First, support should target the promotion of product development and the establishment of professionalism in processes for continuing innovation, strategy controlling, and – maybe most important – internationalization.

Concerning loans and subsidies for innovation, the findings compiled above suggest that the question of what an innovation is should not be defined be policy – the market proof is here the better expertise. And a growing company is the best proof of a correct assumption on what the market needs and is willing to pay for. Therefore, a technology dependent loan or subsidy seems not the best way to promote high growth in terms of the free market paradigm. Additionally, the fact that most growth companies arise in low-involvement industries supports this view.

To summarize these short considerations on entrepreneurship policy in light of the findings presented here, it seems necessary to base the promotion of high-growth companies, not on assumptions on technology development and innovation or technology assessments. High-growth companies are neither breakthrough innovation nor high-tech champions. Additionally, research on high-growth companies and success factors will never deliver any forecast models. However, dynamic systems, such as markets or companies, may never be the standard case for causality, but only of pattern and pattern recognition. Therefore, it seems one of the most important desideratum that the big data approach – as it was demonstrated in the case of the KfW survey – will become the bases for better decision-making in entrepreneurship policy. Additionally, this may be the reason why the KfW follows this two-step approach: loans and subsidies for kick-starts and for companies on a latter growth stage. In this sense, the KfW may be

regarded as a model for CLC-compliant promotion of businesses with high-growth potential.

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The Internationalization Process – A Case Study of PWPW S.A.

Remigiusz Lewandowski, Grażyna Rafalska

A B S T R A C T

Objective: The purpose of the paper is to present the implementation process of internationalization using the example of Polish Security Printing Works (PWPW) and to examine whether the process follows leading internationalization theories.

Research Design & Methods: The paper is based on a literature review and a case study of PWPW. The methodology of a case study allows showing the researched process of a single firm's internationalization more precisely and thoroughly than quantitative research. The case study presents the whole internationalization process of PWPW, including a selection of its foreign activities.

Findings: The paper leads to the conclusion that the internationalization of PWPW generally remains in accordance with the revitalized Uppsala model. Nonetheless, there are some deviations from the model. They may result from the specificity of the business sector of PWPW. An example of such deviations is pushing customers actions towards a specified mode of supplier's internationalization.

Implications & Recommendations: Empirical knowledge resulting from thoroughly studied behaviour of a required number of companies may significantly improve understanding of the internationalization process and point out the best solutions as well as solutions that should be avoided in business practice. It seems that the internationalization pattern of PWPW S.A. may be perceived as successful and therefore be applicable by other companies from the industry.

Contribution & Value Added: The paper delivers new empirical evidence on internationalization practices pursued by PWPW, a company that delivers products having a critical influence on the state security.

Article type: research paper (case study)

Keywords: internationalization; exports; Uppsala model; PWPW S.A.

JEL codes: F23, M16

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INTRODUCTION

International expansion is one of corporate strategies of development. It usually aims at additional revenues and margins from international markets. Sometimes it brings additional value based on extra knowledge acquired on such markets. If it is the case, such knowledge (in terms of technology, service, sales etc.) should be effectively utilized both on domestic and foreign markets. Nowadays the global economy conditions generate large opportunities for foreign entry. The legal and political entry barriers gradually decline, which generates expansion possibilities. Central and Eastern European companies also take part in this expansion process. They possess some competitive advantages such as low costs. In order to retain or strengthen their position it is necessary to create more durable competences. International expansion requires a mix of right competitive advantages and a strategy of entering foreign markets. This paper is focused on the internationalization process and the sequence of commitment decisions concerning internationalization.

LITERATURE REVIEW

When a company decides to enter foreign markets, it faces a range of options when choosing its internationalization strategy. The contemporary literature in the field presents numerous internationalization theories. The most important ones include: the technology gap theory and product life cycle theory, Dunning's eclectic paradigm, network approach, stage theories. The theory of technology gap and the theory of product life cycle belong to the group of neo-technology theories. These theories link the reasons and directions of international expansion of companies with some differences in technological development of different countries, i.e. with a technology gap. According to the technology gap theory (Posner, 1961; Krugman, 1979), more technologically developed countries have an easier access to foreign markets and mainly export innovative products and new technology knowledge. Less developed countries (in terms of technology) export non-innovative products and they use lower manufacturing costs as the base of their competitive advantage.

Vernon's concept of product life cycle (Vernon, 1966) shows the model of international expansion as a three-stage process that includes a stage of the new (innovative) product, a stage of the maturing product and a stage of the standardized product. The model assumes that each stage of internationalization has different requirements in terms of the location of manufacturing, exports and imports. Consequently, producers in advanced countries are closer to the markets than producers elsewhere and therefore the first production facilities are located in these advanced countries. Together with growing demand a certain degree of standardization takes place and economies of scale as well as production costs are becoming more important. Therefore, less developed countries with lower production costs can offer a competitive advantage for these products and that is why production locations change.

Vernon's approach has been modified both by Vernon (1979) himself and other researchers (e.g. Hirsch, 1975; Williamson, 1975) in such a way that it took into account the development of global networks of subsidiaries by leading multinational enterprises (MNEs) as well as the fact that the US market was no longer unique among national markets either in size or factor cost configuration.

Dunning's eclectic paradigm is based on an assumption that a full explanation of the firm's internationalization needs to draw on several strands of economic theory. According to Dunning (1988) the firm's propensity to go international increases if there are three advantages met: ownership, locational and internalization. Ownership advantages take place when a firm which owns foreign production facilities has bigger ownership advantages compared to firms of other nationalities. Locational advantages (low wages, special taxes or tariffs, existence of raw materials) refer to the alternative countries or regions for undertaking the value adding activities of MNEs. Internalization advantages (advantages coming from own production rather than producing through a partnership arrangement such as licensing or a joint venture) are based on an assumption that the greater the net benefits of internalizing cross-border intermediate product markets, the more likely a firm will prefer to engage in foreign production itself rather than license the right to do so.

The model has been criticized due to very strict assumptions concerning instant and complete information possessed by the firm, unlimited information processing capacity and perfect qualifications for evaluating information (Daszkiewicz & Wach, 2012, p. 69). That is why it is more suitable for large rather than small companies. Empirical findings confirm that the theory is suitable for the US market of service industry (Agarval, 1994) as well as Central and Eastern European markets (Nakos & Brouthers, 2002).

The network approach is based on business relationship networks. There are many types of networks and different criteria of their classification. However, the basic mechanism of network internationalization is based on a process in which relationships are continuously established, developed, maintained and dissolved with the aim of achieving objectives of the firm (Daszkiewicz & Wach, 2012, p. 81). According to Johanson and Matts (1988) the process of internationalization should be analysed from two perspectives: a degree of internationalization of the network and a degree of internationalization of the firm. Such an analysis enables us to identify four types of companies, i.e. the early starter, the late starter, the lonely international and the international among others.

There is empirical evidence supporting the network approach, yet usually limited to certain types of industry (e.g. software industry, Zain & Ng, 2006). Therefore, the results should not be generalized.

Among many theories and models of internationalization the stage theories have been one of the most influential and popular in studying the process of the firm's internationalization (Gorynia & Jankowska, 2007; Malhorta & Hinings, 2010; Przybylska2010). The most famous stage model, often regarded as the pioneering one is Johanson and Vahlne's proposal from 1977 (Daszkiewicz & Wach, 2012, p. 65), named "Uppsala model" after the researchers' place of academic work, i.e. the Uppsala University.

The Revisited Uppsala Model

According to the Uppsala model (Johanson & Vahlne, 1977; Johanson & Vahlne, 2009) foreign expansion of firms begins with ad hoc export activity and then progresses to exporting into neighbouring markets, followed by the stage of gradual penetration of other markets and an increased range of expansion forms as such. The implementation

of each internationalization stage is a consequence of generating certain capabilities required for further international expansion. This capability is the function of all variables shaping the given stage (phase) of internationalization: knowledge, opportunities and position in a network of relationships, which in turn affect the organization's learning process, trust-building and the decision to proceed with expansion and relationship- and/or network-building. Such an incremental approach to internationalization based on the revitalized Uppsala model is presented in table 1.

Table 1. The internationalization of the firm – the incremental approach

Mode of expansion / Market (country)	Ad hoc exports	Export sales through own sales representatives	Exports sales through local sales representatives and agents	Strategic alliances	Foreign branches and divisions	Foreign production and sales
Market A		Growing market engagement →				
Market B		↓ Growing geographical diversity		Growing internationalization →		
Market C						
...						
Market N						

Source: adopted from (Hollensen, 2001, p. 48).

The model is dynamic. The outcome of one cycle of internationalization events constitutes the input of the next. There are two aspects of internationalization variables in the basic mechanism of internationalization: state and change aspects. The state aspects cover the resource commitment to the foreign markets (market commitment) and knowledge about foreign markets and operations. The change aspects are decisions to commit resources and the performance of current business activities. The original Uppsala model of 1977 (Johanson & Vahlne, 1977) has been revisited. In their new model of 2009 (Johanson & Vahlne, 2009) researchers adjusted the model to the current economic environment. Therefore, they have added "recognition of opportunities" to the "knowledge" variable and replaced "market commitment" with "network position" as they assumed that the internationalization process is pursued within a network. Moreover, they changed the original variable of "current activities" to "learning, creating, and trust-building" to make the outcome of current activities more explicit. Finally, the "commitment decisions" variable was extended to "relationship commitment decisions" variable in order to clarify that commitment is related to networks of relationships. The revisited basic mechanism of internationalization is illustrated in Figure 1.

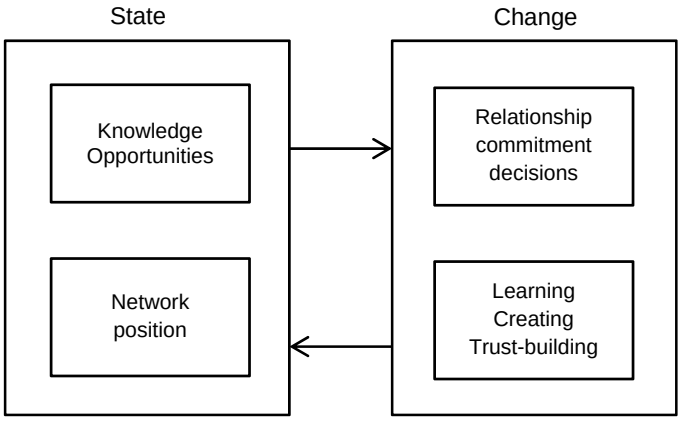

Figure 1. The basic mechanism of internationalization
Source: (Johanson & Vahlne, 2009, p. 1424).

There are mixed empirical findings concerning the Uppsala model. Some of them support the incremental approach provided by the Uppsala School (e.g. Johanson & Wiedersheim-Paul, 1975; Juul & Walter, 1987). However, other studies suggest alternatives to incremental behaviour of firms that go international (e.g. Bonnaccorsi, 1992; Knight & Cavusgil, 1996; Loane & Bell, 2006; Zahra, Ireland & Hitt, 2000). Numerous researchers identified the so-called leapfrog approach in terms of internationalization (e.g. Hedlund & Kverneland, 1984; Nordström, 1990) and many others - born global firms (e.g. Simon, 1999; Miesenbock, 1985).
What is more important, scholars have questioned some of assumptions of the Uppsala model, such as one-directional process (Gorynia & Jankowska2007) or narrow and rigid nature of its specification of the pattern that characterizes the incremental process (Petersen & Pedersen 1997). Research on internationalization of Polish companies also does not give conclusive results. According to Maleszyk (2007) internationalization of Polish firms start with exports and then gradually transforms into more advanced modes, such as foreign branches and sales through local distributors on foreign markets. On the other hand Przybylska's (2010) case study leads to the conclusion that internationalization of Polish firms does not apply to the Uppsala model.

The mixed empirical results suggest that the Uppsala model is not universal. According to Bridgewater (2000) the model is not applicable in cases of certain products and services. Other studies show that internationalization strategies of manufacturing firms may differ from those of service firms due to unique characteristics of the latter and different strategic challenges (e.g. Goerzen & Makino, 2007; Barkema & Drogendijk, 2007; Capar & Kotabe, 2003). Erramilli (1991) argued that service firms have greater latitude than manufacturing companies in establishing high resource commitment modes of operation since they incur lower overheads and can redeploy resources easily.

Role of Distance in Internationalization Attempts

Practical experience and scientific research confirm that distance between the parties to a given business transaction plays an important role in the internationalization process. In this case distance can be understood both in geographical and cultural terms, which, to some extent, is also connected with physical distance. Hence, the choice of directly neighbouring countries as the target market comes naturally.

In the case of Poland, foreign expansion to neighbouring markets may go in two directions. The first direction is Central and Eastern Europe. This is connected with relative weakness of local companies (as compared with Polish and Western European firms) and a high absorption of the economy consuming imported products and services. In the aforementioned part of Europe, Polish companies have strategic advantage over Western European and non-European businesses competing in this region, based on the cultural and geographical proximity. As Domarecki (2012, p. 18-19) points out, this proximity facilitates movement within the local environment of the region and affects transportation and maintenance costs. The second direction of Polish exports is Western Europe. This market is far more challenging than CEE due to the stable and strong position of local firms. Nevertheless, statistical data on the structure of Polish exports indicates that European countries remain the core export recipients, with the developed countries at the top of the list.

Table 2. Foreign trade turnover of Poland

Specification	1H2013 (million PLN)	% share
Total exports	307 036	100.0
Developed countries	250 418	81.6
of which EU	228 247	74.3
of which Eurozone	155 830	50.8
Developing countries	27 528	9.0
Eastern and Central Europe	29 090	9.5

Source: Polish Central Statistical Office, http://www.stat.gov.pl/gus/wyniki_wstepne_PLK_HTML.htm (accessed July 30, 2013).

As shown in Table 2, Polish export to developed EU economies represents 74.3% of total value. Export to European developing economies is much lower and account for just 9.5% of total value. Major recipients of Polish exports include Germany, which accounts for 25% of total export. The other importing countries have much lower shares. For instance, the second largest recipient of Polish exports purchased goods and services amounting to 19.6 bln PLN or 6.4% of total exports in 1H 2013. The countries with shares of 2 to 5% include some developing economies such as the Czech Republic (6.1%), Russia (5.3%),Ukraine (2.7%) and Slovakia (2.6%). Detailed information is presented in Table 3.

Table 3. Foreign trade turnover of Poland broken down into major importing countries

No.	Country	1H2013 (million PLN)	% share
1	Germany	76 679	25.0
2	UK	19 554	6.4
3	Czech Republic	18 684	6.1
4	France	17 858	5.8
5	Russia	16 328	5.3
6	Italy	13 878	4.5
7	Netherlands	11 940	3.9
8	Sweden	8 446	2.8
9	Ukraine	8 321	2.7
10	Slovakia	7 955	2.6

Source: Polish Central Statistical Office, http://www.stat.gov.pl/gus/wyniki_wstepne_PLK_HTML.htm (accessed July 30, 2013).

Concentration on European countries, in particular Poland's neighbours, is also reflected in the structure of foreign entities of Polish companies. In 2011 business entities located in Poland invested capital in 94 countries and there were 3187 Polish entities abroad. The legal form of invested capital covered mainly shares in companies, divisions and facilities. The chief countries hosting Polish entities abroad are Germany, Ukraine and the Czech Republic. Details are presented in Figure 2.

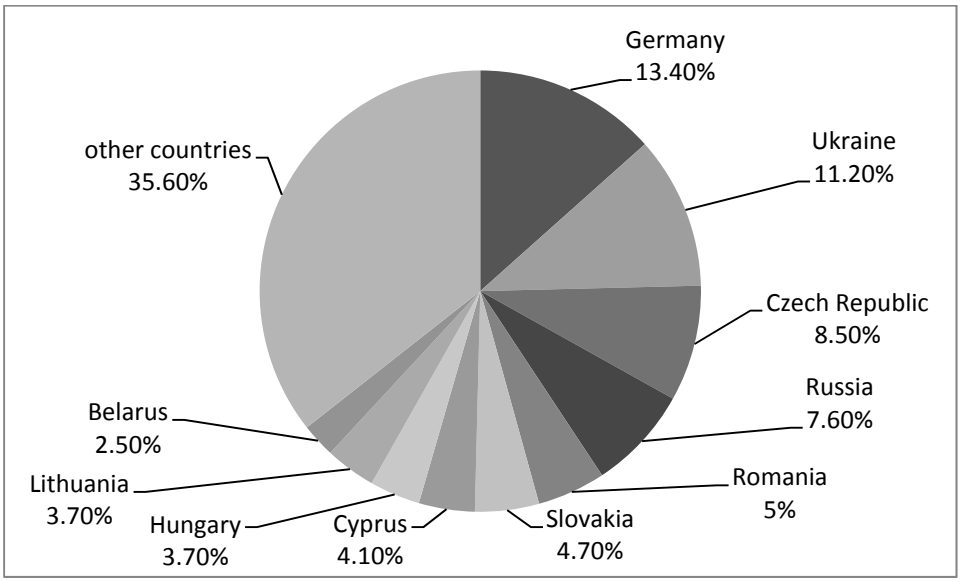

Figure 2. Structure of Polish business entities abroad

Source: Polish Central Statistical Office, http://www.stat.gov.pl/gus/wyniki_wstepne_PLK_HTML.htm (accessed July 30, 2013).

Yet for some sectors distance is moderated by political and national security interests in which case geographic proximity plays a secondary role. For example, on the Western European market the sector dealing with documents and associated telecommunication and information systems is closed to external entities and new players. In countries with

national printing works, the markets are often protected by legal monopolies, which are established for national security reasons (e.g. France, Spain, Portugal). In some countries (such as Germany) the prevailing status quo means that the national producer is the obvious and natural supplier of documents for public administration. This policy is reflected in the statement made by a German MP, Hans-Peter Uhl, who in 2008 demanded that "production of our [German] documents remain in German hands", in fact speaking on behalf of all political groups represented in the German Parliament (Die Welt, 2008).

MATERIAL AND METHODS

The presented leading theories of internationalization most often rely on research conducted in developed countries. They are usually based on findings concerning countries with a significant experience with international trade and free market economy. Even so, the theories confronted with empirical findings, surprisingly, produce mixed results. There is no universal internationalization model that applies to each country or even industry. Therefore, the patterns of the firm's internationalization in developing countries, e.g. of Central and Eastern European, as well as schemes of decision making processes in terms of internationalization, are an interesting and necessary field of research.

When analysing various concepts of the internationalization process of the firm, it is particularly important to confront theoretical models with the business practice. In this context, cross-sectional research, covering various companies or (what enhances the value of such studies) various sectors of the economy, plays an important role. However, case studies of individual firms give a highly useful, detailed view of corporate internationalization strategies. Authors point out that information collected with case study methodology are more detailed and precise than data collected with the use of statistical methods (Przybylska, 2010, p. 149). This type of research provides a thorough analysis of the internationalization process and its cause-and-effect components. Moreover, as Adamkiewicz-Drwiłło (2008, pp. 138-139) points out, a management theory should aim not only to describe the reality but also to provide problem solutions and, to present examples of wrong management and best practice. The findings of such research should not be generalized but rather seen as deeper justification of the general conclusions drawn from cross-sectional studies. Thus, this paper is based on a case study methodology, with the use of Polish Security Printing Works (PWPW) as a researched subject of internationalization.

The case study is based on the authors' professional knowledge on PWPW's foreign operations. Both authors work at PWPW, one as International Sales Director and the other as Strategy Director. The data used in the case study has been collected from internal sources of PWPW, both published and unpublished documents.

The objective of the study described in this paper is to present the internationalization process of PWPW. For the purpose of this study internationalization is understood as the process of a company's expansion into foreign markets. The form of the expansion includes exports, licensing, franchising, joint ventures, as well as foreign branches, divisions, facilities and companies. Relatively often, internationalization takes

the form of strategic alliances formed by trade companies in the course of foreign expansion or shared procurement initiatives (Komor, 2011, p. 74).

The research assumption is that internationalization activities of PWPW remain in accordance with the revisited Uppsala model. Companies that manufacture products, which are important from the point of view of national security, need time to establish international relationships with end customers based on trust and reliability. Customers like central banks and governments, need to be sure that a producer from a foreign market ensures that their national security will not be violated through insufficient quality of ordered products or misuse of products/technology specifications. Therefore, one may expect that security printing industry develops its international activities gradually in accordance with the stage theories of internationalization.

The choice of PWPW as a subject of the case study results from two reasons. First of all, it allows drawing conclusions on the internationalization process taken by a manufacturer of secured products of critical influence on the state security. Research on the internationalization process of such companies is not very common. Secondly, it is a state-owned enterprise. This feature helps to analyse whether the shareholders' nature (private or state) is a factor which influences the internationalization process. Thus, it seems that the case study of PWPW's internationalization may bring new evidence on a unique type of industry represented by this company.

RESULTS AND DISCUSSION: INTERNATIONALIZATION ON THE EXAMPLE OF PWPW S.A.

Scope of Activities

Today, PWPW is mainly engaged in two business areas: support of identification processes and support of transaction processes. These two areas of PWPW's activities comprise both traditional and electronic/computerized security features. It is PWPW's mission to enhance the reliability of transaction and identification processes through its products and services. This mission is pursued in PWPW's current operations. Production of blank identity cards, passport booklets, driving licenses or vehicle registration cards are the most prominent examples of the company's presence in the identification area. The company also integrates traditional identification products with IT solutions, such as the digital signature. Modern personalization technologies enable PWPW to fully own the value chain of transport documents. It should be emphasized that PWPW competencies include not just perfectly-secured physical carriers of identification information, but also IT systems for the administration and management of such carriers and data transfer. The combination of all competencies required in document processing in one value chain, as offered to PWPW customers, is a big challenge facing global companies aspiring to act as IT system integrators for the state.

Apart from supporting identification processes, PWPW is also an active player on the market for transaction support services. As previously explained, the company's activities cover both transaction carriers and the services required for their implementation. PWPW produces banknotes, cheques, postal stamps, payments cards and is developing a range of services to ensure the reliability of transaction processes. This is reflected in the initiative implemented at PWPW's subsidiary, Polskie ePłatności

S.A., to create networks for the acceptance, authorization and settlement of non-cash payments (i.e. with the use of cards, through POS) all around Poland.

PWPW is the only company in Poland capable of ensuring a full range of services to the state with regard to the delivery of banknotes and documents and the associated IT systems, covering very specific and sensitive solutions for the personalization of citizen personal data, cryptography or biometric methods.

The above examples prove that the company is actively pursuing its mission and, as an enterprise based in Poland, it is strengthening its position with regard to ensuring reliability of identification and transaction processes. PWPW's expansion into economic sectors which it has not explored on the domestic market and the creation of new markets (through innovations) is motivated by the need to take certain anticipatory actions due to progressing life cycles of existing products and aging traditional markets. At the same time, as the core domestic market of PWPW's operation is limited, the company is also expanding into foreign markets. These are mainly countries without their own banknote or security printing entities, due to their small size or lower economic advancement.

Incremental Internationalization of PWPW

Polish Security Printing Works has produced Polish banknotes and the most important public documents for over 90 years. However, at the beginning of the 21st century export contracts were still an exception rather than a rule in its daily operations. These were mainly ad hoc orders, often executed in cooperation with other producers of security prints or as a subcontractor for large players on a given market. At this stage of PWPW's internationalization there was hardly any real export activity. It was rather a form of (limited) readiness to process certain foreign orders submitted at the ordering party's initiative. This ad hoc export activity covered countries such as Ukraine or Belarus and was carried out as a part of technological cooperation with companies of a similar business profile and less manufacturing experience. At the same time, PWPW was a trusted subcontractor of German companies, without the possibility of obtaining references or enhancing its reputation with end customers. The concept of trust is crucial in the business of banknote and ID manufacturing, which is a part of national security (Lewandowski, 2014). The relationship between the customer (the government or the central bank) and the producer of banknotes, passports or ID cards can be established only when the producer confirms that the national security of the client is ensured. It takes time to establish such a position on the international market which has been built on trust and reliability.

Period of ad hoc Export Activity

As PWPW's activity was focused on the domestic market, it had no internal unit responsible for foreign exports. However, the sales representatives and technology experts engaged in foreign orders were knowledgeable about the specifics of the given foreign market. This covered not only different expectations and solutions in terms of technology, quality and deadlines, but also differences in relationships and culture. It should be emphasized that such trade contracts were executed mainly with other banknote and document producers (on a subcontract basis) and not with the end

customers (public administration bodies or central banks). As a result, PWPW formed its first relationships with representatives of entities which were in fact its competitors on the foreign market.

Nevertheless, it was only after Poland's EU accession that there appeared real opportunities for extensive export development. This was mainly due to profound changes in Polish legislation and regulations concerning the issue of documents and banknote printing, opening of new sale markets (Poland and EU member states) and creation of new standards of international trade. For PWPW the year 2004 was also important due to its acquisition of Drukarnia Skarbowa S.A. and expansion of its product range by identity cards, passports and other products.

The above period, starting from the company's commercialization in 1996 up until 2007, can be seen as the first step into the internationalization of the firm and its sale operations. During that period, four key factors were at stake:

1) knowledge and opportunities,
2) network position,
3) learning and trust-building,
4) decisions on further engagement in the relationship and/or network-building.

The knowledge factor has been an important element in the process of building PWPW's international position. This knowledge has included mainly:

1) technological expertise and know-how,
2) logistical issues,
3) knowledge of financial conditions and financial risk management.

The knowledge factor is very dynamic. It is subject to changes, as the company gains new practical experience, generating (acquiring) knowledge per se, e.g. as result of education and appropriate knowledge management within the organization. Apart from knowledge, the recognition of export opportunities is another necessary element of successful internationalization. This factor is strictly correlated with available knowledge. Good recognition of expansion opportunities is based on the company's knowledge of its own capabilities as well as on familiarity with foreign markets and their needs. These elements all played a role in the initial internationalization of PWPW.

Moreover, the mode of internationalization applied by PWPW has been largely dependent on very specific customer expectations. A specific form of activity on foreign markets (such as a foreign branch or foreign production) is tied to and results from concrete order specifications. It is a common practice on the market for banknotes and security prints. Therefore, the form of internationalization was not chosen as a result of the producer pushing towards the target solution, which is a popular scenario, but resulted from pulling actions of the ordering party.

In the case of PWPW the experience gained on the domestic market with public administration bodies and adjustment of Polish documents to EU and international standards has also played an important role. Examples include the production of security prints in 2004 ("blank EU visas"), first for Poland and then Austria, Latvia, Switzerland, Greece, Portugal, Slovenia, Netherlands or UK, in the form of ready blank visas or security paper based on EU templates, to be printed-over by local producers.

In the turn of the century, the company was also building its network of international relationships. As previously emphasized, the relationships were formed

both with companies of a similar business profile and with suppliers of specialist equipment, technologies and materials, mainly from Western Europe. PWPW's relationships and network position were an important factor enhancing the international recognisability of PWPW's brand, enabling the company to learn from other entities in the sector and solve practical technological problems by the processing of specific orders. It also enhanced confidence in PWPW. As a result, the network of mutual relationships based on jointly performed contracts, experience sharing during fairs and international conferences and informal interpersonal meetings, helped the company to acquire new foreign contracts.

The learning process is particularly important in the context of PWPW 's internationalization. On one hand it is based on already possessed knowledge, on the other hand it catalyses new value in the knowledge area. The learning process, not only in the area of internationalization, includes acquiring knowledge through education and raising formal qualifications (specialist training, post-graduate studies etc.) as well as practical experience and experience sharing both within the company, the entire industry and on a cross-industry basis. In the sector of security products and services and in many other sectors there has been some experience-sharing and collaboration with regard to combining IT competencies required for software and IT solutions development (IT companies) with companies experienced in the functionality of national documents and issuance systems as well as physical security features for documents and production security (producers of security prints). Certain investment decisions, such as the purchase of a machine for banknote production with the additional application of state-of-the-art optically variable security features, enabled PWPW to enhance its competencies and expand its offer. Based on its knowledge and position in the network of relationships and assuming the continuous improvement and enhancement of its own, broadly-understood personal and organizational skills, the company has built its image of trust, so important to banknote and document producers. The available technologies, know-how, machine park and high-class specialists are a necessary, but not the only condition of obtaining foreign contracts in PWPW's industry. An additional condition is the customers' trust and – in some cases – also on the part of suppliers of raw materials, specialist machines or technologies. Producers of special security inks or optical security features such as holograms, verify not only the buyer but also the end customer and the product type to which the given security feature is applied. Security and observance of high-quality of security products is the primary objective. Another example of a method used to screen trusted partners is the EU list of producers authorized to deliver Schengen visas.

Apart from the above factors, the decision to proceed with a given form of foreign activity was for PWPW of key importance. The decision is connected not only with the assessment of real production capacities, choice of engagement form and financial efficiency analysis, but also – especially at the stage of international position building – with the analysis of impact on the company's relationships and network position. The activity on international markets (and not only there) may weaken or strengthen the existing ties with trading partners or create new ones. Caution in this respect is particularly important at the initial state of the internationalization of the firm. An attempt to enter entirely new markets may elicit direct reactions. If there are network

relationships between companies and specific companies fulfil dual functions, acting as customers in some contexts and as competitors in others, the decision on engaging in, and on the extent of, internationalization, may and often will affect the relationship between the parties concerned. Examples include sale of security paper (for banknotes or passports) to other banknote or security print producers and competition with producers that also supply microchips to some key products of PWPW. At the initial stage of internationalization PWPW's decisions accounted for the competitive forces on the markets and avoided confrontation with PWPW's partners. At the same time, export was chosen as the safest form of internationalization at that stage of development, as it did not require long-term engagement (including financial engagement).

Stage of Broader Foreign Expansion and Long-Term Relationships

PWPW decided to build its first long-term relationship with a foreign customer in Lithuania. Export exchange with Lithuania was an example of development based on acquired know-how and market knowledge. It was also a form of expanding business relationships enhancing the company's image. PWPW began actual collaboration with Lithuania in 2003, with delivery of security paper for the Lithuanian market, for a local producer of security prints. In the course of further cooperation both with government administration and local partners the company processed small orders for paper and security prints. In 2007 PWPW was awarded a contract (together with its Lithuanian partner) for the delivery of Lithuanian biometric passports, together with associated personalization system. Over the next years, as international regulations and customer requirements were changing, the product was gradually modified – e.g. the second biometric feature (EAC standard) was implemented in passports in 2009. At present, apart from security components to passports, PWPW also delivers its own IT solutions and electronic components for new identification documents in Lithuania. Its success in the 2007 tender for delivery of Lithuanian passports and associated issuance systems was a breakthrough in the company's approach to its own internationalization. The award of the contract was preceded by many months of commercial and marketing efforts, consisting in the analysis of opportunities, creating and maintaining relationships with Lithuanian government authorities, promotion and image creation as well as technical and technological consulting services. Those activities were strongly supported by Polish diplomatic services. There were also various initiatives with potential partners and local producers.

Based on the Lithuanian experience, the company initiated steps to export its products and services on the international market. In order to develop new export operations PWPW had to reorganize its internal structures and previous procedures as well as adopt a new customer and product approach and change the sale process. The most important factors determining further development of PWPW's internationalization were represented by three of the four groups present in the Uppsala model:

1) knowledge and opportunities,
2) learning and trust-building,
3) network position.

The fourth factor of the Uppsala model, relationship commitment decisions, was used with cautions since the company did not want to take risk of large financial consequences of such commitments. The crucial factors of success were knowledge of particular markets and the rules of their functioning as well as promotion and trust-building with regard to PWPW's brand. Credible references in international trade were a key to winning public procurement procedures.

After gaining experience and obtaining recommendations, PWPW began its export development activities and new market acquisition with its feature product – security paper. Up until today it has been successfully selling banknotes, passports, visas and high security paper both to end customers and security print producers. Since the beginning of its activity the company has produced security paper with cylinder mould watermarks, security threads, fibres as well as other security features embedded in paper, both cotton and cellulose, through rotary screen printing. Foreign customers' various requirements and standards have led to substantial product development, expanded range of security features, available paper types and improved product parameters. PWPW began producing paper with wider threads and with several security threads embedded within one banknote, paper with window threads, with very small borates (the so-called stardust), with special markers added to the paper pulp, with different parameters of paper surface processing. In the current year alone the company has produced banknote paper for five different global currencies and several passports.

The ability of perfect portrait mapping – facial images, based on drawings, pictures or the existing watermark – became a real challenge in the process of banknote paper manufacturing for other countries. There were certain difficulties with mapping facial features of unknown or exotic persons so that they were recognizable on the watermark by users of the end product. In the case of export paper there was also the element of ethnographic analysis, in particular with regard to characteristic facial features of specific nations, decorative elements or national head coverings unknown in Poland. Source materials provided by customers were supplemented with on-line resources and increased number of trials before the final presentation and acceptance. Issues of correct graphic design mapping have proven to be of key importance in the case of PWPW's banknotes, e.g. the recently printed banknote of 10 000PYG for Paraguay. Perfect mapping of a banknote already in circulation was possible on the basis of the original banknotes, as the customer did not provide any additional materials.

Apart from previous technological documents created for the purposes of internal organization of production, the company developed new standards of technical and delivery documentation on the customer's request. Product quality plans defining the technical parameters, tolerance and methodology of the product as well as control and research measures were particularly important. Apart from the quality plans the company also creates detailed packaging specifications and manufacturing descriptions – the so-called product tracking, or detailed assignment of particular ready reams or sheets to the given production batch. Apart from product manufacturing as such, appropriate organization of transport is also an important issue. The paper produced by PWPW often travels many thousands kilometres to the place of destination by road, sea or air. The product is sensitive to weather conditions and its target parameters, such as humidity, are important for future printing. This should be considered by packaging and

transport organization so that each batch is safely received by the end customer. Logistic and formal issues related to contract performance also entail strict requirements concerning shipment and customs documents as well as security, until the products are deposited at the customer's (central bank's) treasury. On-going projects allow PWPW not only to improve its production and delivery quality and efficiency, but also to gain better knowledge of specific markets and trading specifics.

The next important category of export products includes identification documents: passports and ID cards as well as other cards with security features – documents for public administration bodies, such as cards for digital tachographs, which are adopted by a growing number of countries. PWPW produces electronic passports and identity documents with biometric data designated for exports. These documents use the widest range of PWPW's competencies. The biometric passport is the best example. The preparation process begins with designing the document, taking into consideration its functions, purpose, conditions of target application and allowing for the customer's requirements as well as international norms and standards. In this way the optimal technical specification of the document and its security features is created. This refers both to the physical and electronic aspects of the document. the physical layer, the design of all foreign documents must include the given nation's symbols, events, traditional art or ornaments, which must be included in the graphic design and the security features of the document. The electronic layer of the document and implementation of the associated issuance system, there is a separate designing process for the entire micro-chip software and system architecture, depending on government requirements, in particular in the case of centralization of the document issuance system. The production of this type of modern solutions requires the company to harness its various capabilities, beginning with the production of security paper and traditional printing with the use of varied printing techniques: offset printing, steel engraving or screen printing. Other required skills include IT development and programming, application of biometry to modern documents, securing electronic data or development of decentralized data capturing systems, personalization system as well as integration of solutions implemented by the customer (e.g. with regard to data base management).

Newly developed solutions must be adjusted to legal as well as statutory regulations on international and local level. Implementation requires close cooperation with customers and local contractors to ensure appropriate logistic management equipment assembly, software implementation, system testing, staff training – enabling smooth system operation and maintenance. In this case PWPW, apart from its traditional role of a document manufacturer, also acts as integrator of the entire solution and manager of the entire implementation project. Management of complex, multifaceted projects (involving many internal units of the company, external partners, subcontractors, the customer) is a great challenge and a complicated undertaking. PWPW has a track record of these implementations producing passports for Lithuania, Bangladesh and Armenia.

New Forms of Internationalization

The international activity of PWPW as described above covers both direct and indirect exports. As the company acquired new competencies and strengthened its position on

foreign markets, the scope of various forms of internationalization enlarged by licensing on foreign markets and foreign divisions.

The Armenian project was one of the most complex ever managed by PWPW. The project covered not only manufacturing biometric passports and electronic identification cards (ID card) but also implementing specific IT functions to the ID cards and passports as well as building and servicing the whole physical and software infrastructure in 60 locations in Armenia. This infrastructure enabled to collect citizens' data (including biometric data), personalize and issue ready documents. Such a project required intensive co-operation with local partners and establishment of own branch in Armenia.

Currently it is impossible to separate documents from their management systems. Modern document systems have a complex electronic layer. A vast scope of knowledge encourages the company to continue its education on different fields. What is important, in the case of PWPW S.A., the producer of public security documents, the role of a public document and its functions both for the citizen and government administration is clear and superior to other aspects of project implementation.

The experience gained by the company by the implementation of new identification documents is commonly used not only by the production of passports and ID cards. PWPW S.A. is successfully combining the sphere of card production with broadly-understood sphere IT in other cards, security IDs and identification cards. Customers are offered individual solutions for card security, such as the PCP technology embedded in the card structure. Examples of completed implementations and currently used products are digital tachograph systems for Armenia and Azerbaijan. Systems issuing digital tachograph cards were implemented in both those countries. PWPW S.A. also produces the tachograph cards and deals with its personalization.

CONCLUSIONS

The case study of PWPW allows us to conclude that the internationalization process of the company is generally consistent with the revitalized Uppsala model. The process of internationalization is gradual and based on four interrelated aspects, i.e. 1) knowledge and opportunities; 2) network position; 3) relationship commitment decisions; and 4) learning, creating and trust-building. Although certain deviations from the model assumptions are evident. The deviations are connected with the specific nature of the company's business activity concerning banknotes and security prints. It must be emphasized that the choice of the mode of internationalization resulted from pulling actions of the ordering party and not from the producer pushing towards the target solution. It seems that this special form of relationship between the contractor and the ordering party requires further empirical research covering markets other than banknotes and security prints.

The analysis of PWPW's internationalization process shows that it is incremental. Any business relationships with foreign customers (central banks or governments) in the industry of banknotes, IDs and related IT solutions can be only built when the producer ensures that the manufacturing process and distribution will not violate the national security of the client. This condition of trust and reliability requires time. This is one of the reasons for choosing the incremental process of internationalization of PWPW. We can expect that this incremental approach refers to the whole business of banknotes, IDs

and related IT solutions or even more general, i.e. the all the industries where delivered products or services have a significant influence on the state security.

As it was stated above, PWPW S.A. is currently at a transitional state from "structured export" to "export with strong local engagement" through local representatives, consortia, alliances or its own divisions. The internationalization process, divided into forms and countries of foreign activity is presented in Table 4.

Table 4. The internationalization process of PWPW divided into stages and countries of foreign activity

Stage I: ad hoc exports	Stage II: "structured" exports	Stage III: exports with local engagement – alliances and divisions
Ukraine, Belarus, Sweden, Germany, the Czech Republic	USA, Austria, France, the Czech Republic, Germany, Lithuania, Netherlands, Portugal, Ecuador, Slovenia, Turkey, Bangladesh, Kirgizstan, Armenia, Azerbaijan, Georgia, Ecuador, Greece, Lithuania, France, Switzerland, Latvia, Germany, Hungary, Australia, Belgium, Slovakia, Georgia, Paraguay, Guatemala	Bangladesh, Lithuania, Armenia, Turkey, Belarus

Source: own study.

The choice of an appropriate model and business profile is currently determined by two major factors:

1) market knowledge (acquired experience on the given market, knowledge of market structure, distribution channel, competition and created image of PWPW (recognisability and branding)),
2) type of offered and conducted business including end-customer requirements.

In the case of comprehensive contracts, not only for the delivery of security products but also for the implementation of associated, complex and extensive IT systems as well as maintenance and technical support of such systems during contract term, the supplier must be continuously present on the given market. Very often this is directly related to customer requirements, e.g. terms of tender specification, or other conditions, such as technical support response time or good practice in the sector. The above indicators and geographical distance and existing relationships and cooperation determine the ultimate business model for export sales.

Analysis of international activity of specific sectors of companies is not only an interesting object of study, but also a potential contributor of new guidelines for the internationalization process and good practices of firms. PWPW is an example of successful internationalization and thus its experience and chosen patterns can be used by other companies of a similar profile. The position of PWPW on international markets shows that companies from Central and Eastern Europe can effectively compete with Western firms which, are much more experienced in international trade. Moreover, the state nature of ownership, as in case of PWPW, is not necessarily an obstacle in the internationalization process. Moreover, in the business of documents and banknotes production state-owned enterprises such as PWPW have a competitive advantage over private firms. The state as an owner and at the same time the major customer of a domestic banknotes and documents producer provides additional credibility and trust.

The study reveals critical areas of knowledge and skills possession for banknote and security papers producers in internationalization context. These are important factors of successful attempts of foreign market entry. First, in the market for banknotes and documents, the producer needs to possess knowledge of statutory solutions, in particular those determining the issue of documents and other products as well as organization of public administration, identification of distribution channels for particular products, as well as knowledge of trade and tax law, on local and international level, and customs law. Second, market analysis should also account for the political and economic situation and stability. It is not an easy task, given the current uncertainty. The company must carry out its own, detailed analysis and draft reports from continuous market and customer monitoring. Polish diplomatic services, local partners and sometimes even competitors have supported PWPW's internationalization efforts. The company must also monitor individual countries and their situation in terms of needs, plans and development of specific products and services and current tender procedures. The whole procedure of bid placement in international tender also requires specific knowledge and practical experience. Individual public administration bodies have their own requirements, norms and regulations, and many formal documents, descriptions, presentations, bank guarantees, designs and product templates are required. PWPW must also secure itself local support (business partners, agents, consultants), collaborate with local representatives in opportunity identification and appropriate bid placement. PWPW has been consistently expanding its commercial network for the past few years. Local partners are necessary by contract performance, e.g. in the IT sector, by system implementation and maintenance.

Furthermore, another crucial area of knowledge and skills in the sphere of trade relationships is an appropriate preparation of the export staff due to differences in language, culture and religion. Even casual talks, development of offers and negotiations provide opportunities for improving specific selling skills applicable to the given country and customer, each time adjusted to prevailing standards. For example, English, which seems to be the natural tool of business communication on European markets, is not appropriate for communication in Caucasus, Asia or South America, for instance in Paraguay. In order to serve the entire region of South America, the competencies of PWPW were supplemented with fluency in Spanish. Linguistic alignment is a necessary, but not the only requirement. It is equally important to learn the customs, culture, historical and traditional contexts, geography, politics and international relations of our customers and to understand their mentality and behaviour. While it seems obvious, it is in fact quite difficult to adopt a new perspective and a new perception of the world. Rooted stereotypes rarely prove true. Hence, the specialists employed by export contracts need to have an open mind, knowledge, erudition, long-term experience and should strive towards self-improvement. Errors in business contacts can jeopardize even the best offer. This why the customer or market executives should be specialized in the given market. The company has already organized a separate place of prayer for its Muslim guests or organize warm jackets for Asian customers who came to Warsaw in October in their summer suits. In such situations the company can learn how to arrange all details of trade relationships and to prepare for visits. Anticipation and flexibility is crucial.

All the presented attempts have resulted in successful internationalization. It could be concluded that after several years of international activity PWPW is sufficiently noticeable both to customers and other companies in the sector (competitors and partners). Not only does PWPW participate in industry exhibitions, seminars, discussion panels, international commissions and decision-making groups, but it also acquires and performs more and more contracts, thus expanding its reference list. Those contracts, orders and references help it to change and strengthen its global image. PWPW is still building its reputation and recognition on the international market. But it is also expanding its range of products and services, technological, commercial competencies and completeness of the offer (integration of traditional manufacturing with IT systems). More and more often, PWPW opts for permanent presence on third markets, both through collaboration with local representatives and through potential local divisions or production facilities. The company is developing proprietary, unique solutions, and export activity motivates it to continuous technological and commercial development. This is beneficial not only for foreign customers, but also for the national public administration, which still is and always will be the key recipient of PWPW's products and services, and may benefit from its achievements, development, experience and capacities.

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Opportunities for Doing Business with Countries Neighbouring V4 – The Case of Ukraine

Jana Gálová

A B S T R A C T

Objective: The main objective is to present the business environment of Ukraine in terms of the possible association with the EU or joining the Customs Union, with expectations for V4 countries, regarding trade relations, potential business opportunities and barriers.

Research Design & Methods: The paper is discussing the opinions of researchers, current trade indicators, information from managed interviews, completed with some statistical data. Using qualitative methods of analysis, synthesis, comparison and deduction the knowledge is summarized and limitations concluded.

Findings: As the main finding we can conclude the fact that the value of mutual trade between V4 and Ukraine shall continue to grow, with limitation due to the EU common trade policy and trade barriers.

Implications & Recommendations: By signing the Association Agreement in November 2013, the EU was to become the main trade partner for Ukraine. Not signing it resulted in protests and political instability, with difficulties in predictions of mutual (trade) relations. Nevertheless, preserving close trade links with Russia as well as deepening those with the EU is equally essential for Ukraine.

Contribution & Value Added: The paper presents rather a unique topic of the cooperation of businesses within the Eastern Partnership of the European Union. The emerging markets of the Eastern European Countries (EECs) offer a lot of opportunities from European businesses, especially these from Central Europe.

Article type: research paper

Keywords: Visegrad countries (V4); Ukraine; international business; business; trade; cooperation

JEL codes: F18, F23, F64, M31

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INTRODUCTION

Currently we observe intensive changes in business environment both at regional and worldwide level. The reasons of these changes are political, scientific, technological, economic and educational factors brought by the globalisation process. Globalisation can be seen as an opportunity for economic growth, social development and progress, on the other hand it can be a threat to the current world. It must be considered that both possibilities are well founded. The close geographical connection among countries in Central and Eastern Europe gives opportunities for regional cooperation and for the establishment of international relations. Similarities due to common historical, political and cultural background form the first supposition for better understanding of intercultural differences and business distance, and consequently contribute to further trade development. The main objective of the paper is to present viewpoint on the business environment of Ukraine in terms of the possible association with the European Union and connection with the Russian Federation: what are the expectations and what could it bring for the Visegrad (V4) countries, especially for the Slovak Republic, regarding trade relations and potential business opportunities limited by the continuously changing conditions due to political instability from November 2013.

LITERATURE REVIEW

When choosing a foreign market in the process of internationalization, for most companies the first step tends to be activity towards neighbouring countries when an enterprise initially expands its activities to neighbouring countries with similar cultural, ethnic and consumer conditions and background, states Ubrežiová (2008). From the beginning of doing business on the foreign market the company has to analyse the compatibility of its activities with the interests of the particular country, add Gálová & Horská (2013). Paluchová & Benda Prokeinová (2013) continue that decision-making about doing business on a foreign market starts with analysis of the internationalization potential of the company which is followed by a detailed analysis of the foreign market, and the final selection of methods and forms of entry. Different forms of entry on foreign markets are characterized by different efficiency, but also different costs of entry. Wach (2011) highlights the fact that the choice of internationalization methods depends on many objective endogenous as well as exogenous factors which define the given target market. Among internal (corporate) factors Horská (2007) includes company behaviour and activities, the contribution of the company to the development of the national economy, use of local resources, and dependence on the parent company. On the other hand, external factors are the home country of the company, characteristics of the product or industry, size and location of facilities, degree of visibility on the market, and political situation in the country of operation (Horská, 2008).

We should not forget that, particularly in the past several years, according to Kotabe & Helsen (2010), many political and economic events have affected the nature of global competition. The demise of the Soviet Union, the establishment of the EU and the North American Free Trade Agreement, deregulation, and privatization of state-owned industries have also changed the market environments around the world. Furthermore, the emerging markets of Eastern Europe and the rapidly re-emerging markets of Southeast Asia also add promise to international businesses. Kleinová & Ürgeová (2011)

continue that marketing in these emerging markets is contextually different from marketing in developed countries. Companies that have succeeded in developed countries may or may not be able to approach those emerging markets the same way if they underestimate the aforementioned factors. As Doole & Lowe (2008) add, lesser developed countries and emerging markets pose particularly high political risks, even when they are following reforms to solve the political problems they have. This risk comes from the political environment of international marketing and includes any national or international political factor that can affect the organisation's operations or its decision making. Unstable political regimes expose foreign businesses to a variety of risks that they would generally not face in the home market. This often means that the political arena is the most volatile area of international marketing. Horská, Nagyová & Felixová (2010) emphasize that due to the unstable political situation in many parts of the world it is essential to continuously monitor the environment, analyze the situation, and try to estimate the degree of possible political risk (i.e. the extent of possible political changes) in a particular situation.

We can agree with Wach (2012) that the enlargement of the European Union (EU) in 2004 with Central and Eastern European countries, but also in 2007 with East-South European Countries, has become a strong impulse to intensify competition in all business areas and led to changes in relationships between the EU and Ukraine. The EU has enlarged to 27 member states, with Poland, Slovakia, Hungary and Romania all directly bordering Ukraine, states Zhemoyda (2008). We also share the opinion of Szmagalska-Follis (2008) that today the boundary line on the Eastern side of the enlarged European Union remains a key site in the geopolitics of Europe, when this area represents the sense of being closer to Europe for Ukraine but at the same time a real border by EU itself. Ukraine with its 604.000 square kilometres, 46 millions of people, some of the best soil in the world and a cheap but generally well-educated labour force is simply too big to ignore.

In the last five years, Ukraine's future was discussed as a choice between three possible ways: direction towards the expanded EU signing the Association Agreement, returning back to the group of post-Soviet countries next to Russia in a Customs Union or staying aside in the gray (neutral) zone. The third option was immediately rejected, but discussions remained regarding the first and second possibility.

Szmagalska-Follis (2008) carried out a research among people in Ukraine in 2007 about their attitude towards the country's further orientation. The author states that the political uncertainty still persisted when shortly after EU enlargement in 2004 the Orange Revolution came in Ukraine. The vast majority of the country's voting population in the western part passionately supported the pro-EU candidate V. Yushchenko against V. Yanukovich who represented closer ties with Russia, more favoured in the East. However, there was the third group of people – placing themselves outside of these two parties where both were seen as a renewed dependence. Wira (2012) confirms that at the outbreak of the Orange Revolution Ukrainians strived democratic change and willingness to integrate with Western organization. This preference towards West remained in the business community, my experience from visiting Ukrainian companies in September 2013 showed the same opinions, businesses were looking forward to

opportunities given by the association to the EU, but at the same time aware of the difficult adaptation to new high standards.

Ukraine has chosen European integration as its strategic priority and was aiming to create preconditions to meet requirements enabling joining the EU. The country's accession to the WTO in 2008 meant the liberalization of the trade regime between Ukraine and the EU – at the same time it was a small step towards the associate membership. Astrov (2013) viewed Ukraine's membership in a Customs Union (CU) with Russia, Belarus and Kazakhstan as rather unlikely because of the WTO membership. The reason is that if Ukraine would raise its customs duties for imports from third countries to the current CU level, these (mostly WTO members) would surely demand compensations. Of course, this problem would not arise if the import tariffs of the CU were adjusted to the Ukrainian level but this is highly unlikely to happen. Under the current circumstances, a full membership of Ukraine in the CU (as suggested by Russia) would be incompatible with its free trade regime with the EU.

On the other hand, a lot of other factors (not only economic, but also demographic) prevent Ukraine's accession to the EU – it lags behind in the development of science and engineering, industry, main social indicators and with its numerous population it cannot be so rapidly integrated into the EU as small Central European countries.

In 2011, negotiations between Ukraine and the EU about the Association Agreement (AA) were concluded. As a part of it the agreement about the Deep and Comprehensive Free Trade Area (DCFTA) has been prepared. DCFTA would offer Ukraine a framework for modernising its trade relations and for economic development by opening markets via progressive removal of customs tariffs and quotas, and by an extensive harmonisation of laws, norms and regulations in various trade-related sectors, creating the conditions for aligning key sectors of the Ukrainian economy to EU standards (European Commission, 2013). However, it is pending signature from 2013 because meanwhile Russia has made attempts to discourage Ukraine from the association and offered to join the newly formed trilateral Customs Union instead. And Ukraine continues to seek the appropriate way of cooperation with the CU.

On August 27, 2012 Ukraine signed a memorandum of cooperation with the Eurasian Economic Commission. During the meeting of the Commonwealth of Independent States (CIS) Council of Heads of State in Minsk, Russian President V. Putin said that in case of signing the AA between the EU and Ukraine it will be impossible for Ukraine to join the CU of the Russian Federation, Belarus and Kazakhstan. He also expressed concern about the impact of the signature on the trade between Russia and Ukraine. Ukraine's president V. Yanukovich responded that the signature will not be a threat and proposed the creation of a joint Consultative Committee of the EU, Russia and Ukraine to clarify relevant issues.

Zhemoyda already in 2008 stated that Ukraine's orientation towards the EU accession prevents to develop international relations within the framework of the CIS (mainly with Russia) and that it is quite evident that it is impossible at the same time to be both in economic union with Russia (or in Eurasian Economic Community) and in the EU.

As opposite, Astrov (2013, p. 34) comes up with an interesting scenario where he focuses on the fact that under the current circumstances Ukraine's membership in a free

trade area with the EU and in a Customs Union with Russia appears to be mutually exclusive, but this does not need to be the case forever. Clearly, closer trade integration between Russia and the EU would relieve Ukraine from having to make a difficult choice with respect to the direction of integration. For instance, should Russia and the EU enter a free trade agreement, the possibility of which is envisaged in the current EU-Russia Partnership and Cooperation Agreement (PCA), Ukraine's participation in both DCFTA and CU could become perfectly feasible in the longer run. However, for that to become possible, a number of difficult problems – including those of political nature – would have to be solved.

Ukraine has to choose its path alone, but it is just natural that the Visegrad countries are interested in Ukraine's successful European integration, with preference of signing the AA. The first attempt in Vilnius in November 2013 failed which caused unexpected range of protests throughout the country and the situation now is an example of political uncertainty and instability. We now take a look at the business relations between Ukraine and the Visegrad countries and how they would be affected by predicted further development.

MATERIAL AND METHODS

The methodology of the paper is based on discussing and comparing the opinions and studies of various researchers about the business environment of Ukraine from the perspective of its relations with Visegrad (V4) countries, with the aim of evaluating the current trade relations and predicting further development in terms of signing the Association Agreement with the European Union or joining the Customs Union with the Russian Federation. The paper contains own primary information from managed interviews with business representatives and experience from the research stay in Kyiv during September 2013. This is completed with data gathered from external sources such as scientific literature of well-known authors from the field, specialized online publications and statistical data about mutual trade development among V4 countries and Ukraine during last five years (2008-2013). These have been gained from the ministries of foreign affairs and statistical offices of these countries (namely Central Statistical Office of Poland, Czech Statistical Office, Hungarian Central Statistical Office and Statistical Office of the Slovak Republic as well as the State Statistics Service of Ukraine) as a base for predicting further trends in trade relations among mentioned countries. Using the qualitative methods of analysis, synthesis, comparison and deduction the knowledge from the field is consequently summarized and it shall be a source of comprehensive information for (mainly) Slovak and V4 companies, interested in entering the emerging market of Ukraine. We conclude with a mention of the study's limitations and suggestions for further research.

RESULTS AND DISCUSSION

The Visegrad group (also known as V4) is represented by four Central European countries, (the Czech Republic, Hungary, Poland and the Slovak Republic) and exists from 1991. V4 countries are members of the EU from 2004. The main objective of the Group was collaboration with the EU and NATO on the issue of accession to the structures of

these organizations, to consult, coordinate and support each other's efforts in the international arena, says Wira (2012).

Collaboration between Ukraine and V4 conducts annually in many forms such as intergovernmental contacts, different events in the format "V4 + Ukraine" (in political and security sphere, military, energy, sociocultural, educational and regional). Collaboration is taking place on different levels and different spheres, but internal political problems in Ukraine make it less efficient. Regional and transboundary cooperation takes place in forms of euro regions activity, neighbourhood programmes (European Neighbourhood Policy), activity of international regional organizations and interregional cooperation (agreements on transborder cooperation), such as through the International Visegrad Fund or Visegrad 4 Eastern Partnership Program (V4EaP 2013).

Ukraine and the V4 countries maintain developed trade relations among each other. The Ukrainian market represents considerable potential for companies from all Visegrad countries, its full use depends on the implementation of economic reforms by the Ukrainian government, the pace of standardization of business and investment environment of Ukraine, and the process of European integration which at the moment seems as a distant idea. Ukraine is for the Visegrad group an important and strategic partner also as a supplier of raw materials for further processing. The following Tables 1–4 tell us about the mutual trade among Ukraine and the V4 countries and enable to compare these trade flows during last five years.

Table 1. Mutual trade between Ukraine (UA) and the Czech Republic in the years 2008–2013

Year	2008	2009	2010	2011	2012	1-11. 2013
Export to UA (in m EUR)	1 009.7	541.6	708.9	989.7	1 328.8	1 237.1
Import from UA (in m EUR)	775.3	421.9	824.0	1 010.5	885.9	901.6
Turnover (in m EUR)	1 785.0	963.5	1 532.9	2 000.2	2 214.7	2 138.7
Balance (in m EUR)	+234.4	+119.7	-115.1	-20.8	+442.9	+335.5

Source: own calculations based on data from the Czech Statistical Office 2013 and BusinessInfo.cz 2013.

The export of the Czech Republic to Ukraine amounted 1.1 % from the total export flow and 0.8 % from the total import flow of the country in 2012. As seen in Table 1, the trade among these countries is developing, therefore in 2012 Ukraine ranked on the 17th place in exporting countries, but regarding imports it fell from the 20th to the 23rd rank (BusinessInfo.cz 2013). Based on the existing trade relations, perspective areas are e.g. the energetic sector, agricultural and agri-food sector, ecology, machinery, metallurgy and chemical industry.

Table 2. Mutual trade between Ukraine (UA) and Hungary in the years 2008–2013

Year	2008	2009	2010	2011	2012	1-11. 2013
Export to UA (in HUF)	366 829.9	250 660.8	401 517.4	455 992.4	514 631.8	.
Export to UA (in m EUR)	.	806.0	1 413.3	1 636.0	1 772.2	1 806.4
Import from UA (in HUF)	262 536.5	139 713.5	182 355.6	275 321.4	351 994.6	.
Import from UA (in m EUR)	.	449.2	641.9	985.9	1 219.2	1 141.3
Turnover (in m HUF)	629 366.4	390 374.3	583 873.0	731 313.8	866 626.4	.
Turnover (in m EUR)	.	1 255.2	2 055.2	2 621.9	2 991.4	2 947.7
Balance (in m HUF)	104 293.4	110 947.3	219 161.8	180 671.0	162 637.2	.
Balance (in EUR)	.	+356.8	+771.4	+650.1	+553.1	+665.0

Source: own calculations based on data from Hungarian Central Statistical Office 2013 and KSH [1] 2012-2013.

Difficulties in evaluating the trade relations between Hungary and Ukraine (Table 2) occur as many data are available only in the value of national currency (Hungarian forints – HUF) and due to the exchange rate fluctuations the calculation to Euros is not easy what makes the comparison with other three V4 countries in earlier years difficult. However, data in national currency shows clearly positive development and rise in case of both exports and imports.

Poland is the largest from the V4 countries and has the closest relations with Ukraine. As expected, the export of Poland to Ukraine is the highest among the mentioned countries (Table 3) and amounts 2.8 % from the total export flow and 1.1 % from the total import flow of the country as for the period January-November 2013.

Table 3. Mutual trade between Ukraine (UA) and Poland in the years 2008–2013

Year	2008	2009	2010	2011	2012	1-11. 2013
Export to UA (in m EUR)	4 345.3	2 462.7	2 979.9	3 377.2	4 096.9	3 178.3
Import from UA (in m EUR)	1 583.4	817.4	1 384.4	2 011.8	1 978.9	1 199.1
Turnover (in m EUR)	5 928.7	3 280.1	4 364.3	5 389.0	6 075.8	4 377.4
Balance (in m EUR)	+2 761.9	+1 645.3	+1 595.5	+1 365.4	+2 118.0	+1 979.2

Source: own calculations based on data from the Central Statistical Office 2008-2013.

The export of Slovakia to Ukraine amounted 0.7 % from the total export flow and 1.0 % from the total import flow of the country in 2012 when total exports decreased by 6.7 % compared to 2011, but it seems they grew again in 2013. Ukraine in 2012 imported goods to Slovakia worth 593.3 m EUR (Table 4) which means a decrease of 2.4 % compared to 2011.

Table 4. Mutual trade between Ukraine (UA) and Slovakia in the years 2008–2013

Year	2008	2009	2010	2011	2012	1.-11. 2013
Export to UA (in m EUR)	504.7	252.3	368.9	472.0	442.1	439.5
Import from UA (in m EUR)	665.9	291.8	446.7	607.8	593.3	577.9
Turnover (in m EUR)	1 170.6	544.0	815.6	1 079.8	1 035.4	1 017.4
Balance (in m EUR)	+161.2	+39.5	-77.8	-135.8	-151.2	-138.4

Source: own calculations based on data from the Statistical Office of the SR 2013 and MZV 2013.

Now we take a look at the commodity structure of foreign trade among these two countries. The main items of Slovak export to Ukraine in 2012 were road vehicles worth 62.8 m EUR (14.2 % of the total export of the SR to Ukraine), iron and steel worth 52.5 m EUR (11.9 %), equipment for telecommunications, sound recording and reproducing valued at 51.4 m EUR (11.6 %), nuclear reactors, boilers, machinery worth 54.2 m EUR (12.3 %), plastics worth 37.8 m EUR (8.6 %), paper, paperboard and articles thereof worth 23.6 m EUR (5.3 %) and others. The main items of import to Slovakia from Ukraine were iron ore and metal scrap worth 308.0 m EUR (51.8 % share of total imports), natural gas 47.8 m EUR (8.1 %), means for distributing electric energy 45.3 m EUR (7.6 %), iron and steel worth 42.3 m EUR (7.1 %), coal 40,4 m EUR (6.8 %), garment products worth 10.8 m EUR (1.8 %), veneer, plywood, particle board in the amount of 9.2 m EUR (1.6 %) and others (MZV 2013). Slovakia registered negative balance of mutual foreign trade with Ukraine for 2012 in the amount of 151.2 m EUR, compared with the same period in 2011 higher by 11.8 %.

Slovak export to Ukraine for the period from January to November 2013 reached 439.5 m EUR according to the Statistical Office of the Slovak Republic (2013) while Slovak import from Ukraine for the same period reached 577.9 m EUR. This leads us to the conclusion that fourth year in row Slovakia has negative balance of mutual foreign trade with Ukraine, given the import of raw materials needed for manufacturing and energetic sector of the Slovak Republic as well as the import of products for distribution in the EU market.

To summarize this part, an essential feature of the mutual trade of Ukraine and V4 countries is the ability of these countries to continuously increase the value of mutual trade. The growth of mutual trade has a similar rate as that of every analysed country's total trade and this growth will continue (as will grow the growth rate of the economy, estimated e.g. by Peng 2014). As a result, each country has a constant position in each other's territorial trade structure and therefore there is still interest to develop and improve mutual trade relations. In addition, we must agree with Svatoš & Smutka (2008) as they state that Ukraine is a traditional trade partner of all the Visegrad group members. Three of them share a common border together with Ukraine (the Slovak Republic, Hungary and Poland) and the last one, the Czech Republic, also maintains very good relationship with this post-Soviet country. However, in spite the fact that the Ukrainian share in the total value of mutual trade is stable, the values of exports and imports are not adequate for a country with 46 million people. On the other hand, it

must be emphasised that mutual trade between the V4 countries and Ukraine is limited by the EU common trade policy and EU trade tariff and non-tariff barriers.

Nevertheless, it is still necessary to explain the reasons of differences among the above mentioned countries regarding trade relations with Ukraine. The difference is especially in the size of economies and different size of markets. Whilst the Czech and Slovak Republics and Hungary are small countries with highly concentrated manufacturing industries (where considerable part of the production is produced by foreign owners to be exported) with population of 26 million consumers together, Ukraine and Poland are in a different situation. Their markets are bigger (85 million consumers) and also the concentration of the manufacturing industry is not as high, therefore the high amount of production is produced for their domestic markets and not for exports. Other reasons include the localisation of individual countries within the framework of Europe and of the EU, with different current political, economic, social and legal frameworks in every analysed country.

Regarding the territorial division of Ukraine, its economic potential focuses on six regions: Kiev, Doneck region, Dniepropietrowsk region, and regions luganski, charkowski and zaporowski, with 60 % of the industrial production and concentrating investments and creates opportunities for the country's development as well as becomes a determinant of the socioeconomic development (Susfal 2012). Appearing differences among the regions' structure, which result from historical and geographical conditions, caused that individual regions of Ukraine were assigned to three groups: eastern (most industrialized, with deposits of raw materials), central (with the capital Kyiv, mainly farming) and western (industrial and agricultural production, but low level of the cropland, future focus on the sphere of services).

According to the data from the report of PwC (2013), Ukraine's main export products are metals and agriculture products (together accounting for 40 % of exports). The main items imported are mineral fuel, petroleum and petroleum distillation products, machines with equipment and chemicals. CIS and European countries account for more than 70 % of Ukraine's foreign trade. In recent years, the export of Ukraine to Europe and CIS is approximately on the same level (about 35 %), but speaking about import nearly 45 % goes to CIS (mainly Russia) and just 38 % to Europe (mainly EU). Regarding export to CIS, to Russia the share is about 25 % (Astrov 2013) and probably more importantly, Russia is the principal export market for Ukraine's more sophisticated products such as machinery and equipment, thanks to the technological links inherited from the Soviet times. In contrast, Ukraine's exports to the EU are heavily concentrated on raw materials and manufactured goods with low value-added, such as basic metals and fertilizers.

The prerequisites for doing business in Ukraine include the market size, geographical proximity, competitiveness of goods and services, common border (all Visegrad countries except the Czech Republic), still relatively unsaturated market, many similarities between the language and mentality (all Visegrad countries except Hungary), and the implementation of economic reforms. Until November 2013, the real prospect of European integration was considered among the reasons in favour of doing business here.

The disadvantages of doing business in Ukraine include the concentration of state and public authority, possible corruption especially in state and municipal entities, the complexity of the administrative procedures of doing business, and the shadow economy.

Škurla as the representative of the General Consulate of the Slovak Republic in Uzhgorod and Krajčová from the Embassy of the Slovak Republic in Ukraine, Kiev processed economic information about the territory of Ukraine in 2013. They give advice Slovak companies regarding the entry to the Ukrainian market. First of all, if the company wants to successfully penetrate the market, it should conclude a strategic decision to process opportunities for doing business on this perspective market. Here, great asset is the linguistic and professional preparedness of responsible staff, with the opportunity to complete a series of personal discussions in Ukraine. Patience is needed in trade negotiations whereas no initial failures should discourage firms from Slovakia from their strategic plan to enter the Ukrainian market (Škurla & Krajčová 2013).

As in any other foreign market, it is necessary first to gather basic information about the market and to carry out marketing research in relation to the selected product which the particular company wants to export, including a review of regulatory measures, customs formalities, domestic producers, market potential, size, diversity and target groups. Useful is visiting specialized trade fairs and exhibitions where it is possible to meet potential customers, but also future competitors and to get to know potential competition.

Marketing strategy when exporting to the territory is closely linked with trade practices in the territory. One of the most important aspects of successful business in Ukraine is finding a reputable and reliable Ukrainian partner. Experience shows that without the use of local representative it is very difficult to penetrate the market of Ukraine. It is essential to realize that Ukraine is a country with a high concentration of state power, complex administrative procedures (which are slowly simplifying), and decision-making processes largely based on personal relationships. In this sense, a reliable local business partner with good links to local government and local authorities is a huge benefit. Finding a reliable partner in Ukraine is usually the result of concentrated efforts after negotiations with several potential partners in order to reach the right decision. In any case, it is desirable to somehow verify the seriousness of the Ukrainian partner, his financial and economic stability and references. It is therefore highly recommended to have direct personal contact with potential business partner in Ukraine, rather than sending written materials, or promotion information by post or e-mail. Of course, such forms can be used for communication, but the result and efficiency is questionable in the early stage of business relations.

Foreign firms are operating in the territory in the form of joint stock companies, limited liability companies and foreign representations. In some cases it may be an advantage to set up a subsidiary in Ukraine, e.g. in order to build a distribution warehouse, to participate in electronic auctions or in public procurement of state and municipal entities in the country.

Regarding the foreign direct investment saturation Ukraine still lags far behind the developed countries of the world, therefore, it offers plenty of scope for the implementation of investment projects. If a company is interested in investing in

Ukraine, it needs to carefully consider the potential risks and guarantee options given the current state of the investment climate in Ukraine. Analysis of potential risks needs attention especially during early stages in the decision-making process. Thorough calculation and knowledge of market, competition, but also own business and financial opportunities are essential part of this process. Certainly, as with all trade and business activities, it is necessary to consider the business risk and consequently the willingness to bear the loss in case of failure.

One of the most promising sectors for investment in Ukraine is agriculture and animal production. The farming sector of Ukraine gained the status of the leading sectors of Ukrainian economy over the last two years. Perspective areas of investment in Ukraine are also constructing urban infrastructure, streamlining municipal economy and increasing energy efficiency of Ukrainian industrial and agricultural enterprises (Škurla & Krajčová, 2013).

Given the needs of the Ukrainian economy, promising sectors and possibilities of cooperation between Slovakia and Ukraine are: modernization of the production base (new technologies in housing and municipal services, heat and water supply, energy conservation, waste recycling), energetics, transport infrastructure, agricultural and agri-food complex, the field of ecology, engineering, metallurgy, chemical industry, tourism and services.

On the other hand, we should not forget that Ukraine still has a high degree of bureaucracy and corruption. This is certainly reflected in the business field, in the registration process, communication and handling of various endorsements and statements. In the field of justice, the priority of rights is still at a low level, let alone assessing the lawsuit of a foreign company against the domestic entity. Currently, in both sectors the government promises changes, but the current situation is still non-transparent and challenging with many difficulties. The specifics of doing business in Ukraine further include challenges in legislation when it is just slowly adapting to standard international conditions and there are large gaps within the legal and institutional framework. In addition, common breach of negotiated contracts and the low purchasing power of the population (where the middle class is small in quantity and weak) also can discourage foreign companies.

To sum up, major problems of the Ukrainian market remain the high level of corruption, uncertainty about the political situation and the ability to ensure the stability of doing business, state intervention in the economy, asserting the interests of monopoly structures linked to the government, unresolved privatization of enterprises, insufficient protection of intellectual property rights, high level of bureaucracy, barriers to import and certification, imperfect executive legislation, and the related complex law enforcement.

CONCLUSIONS

The dynamism of Central and Eastern European countries economic development enables us to state that without any doubts this territory and these countries are continuously improving their position within the scope of the globalisation process and mutual relations.

We were expecting the signing the Association Agreement by Ukraine in November 2013 in Vilnius and consequently the EU to become the most important market for Ukrainian goods and the main trade partner for Ukraine. At least, the information from Ukrainian companies said so. However, not signing the mentioned agreement caused an unprecedented range of protests throughout Ukraine and the current political development makes it incredibly difficult to come up with exact predictions of mutual (trade) relations.

The topic's limitation therefore lies in the daily changing situation in Ukraine, on the other hand, it enables future research about how is the current instability going to influence the growing trade indicators and the willingness of foreign companies to invest in this country. V4 countries were always focusing on maintaining good relations with Ukraine and we cannot predict what kind of impact will have this uncertainty on trade balance.

We should not forget that preserving close trade links with Russia (as well as deepening those with the EU) is essential for Ukraine. It would ensure the best solution for Ukraine not only in economic, but also in political terms, as it would reduce incentives for the geopolitical competition between Russia and the EU on the post-Soviet space.

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Export Platform FDI as a Concept for Growth – Selected Global Experiences

Mariusz Omelańczuk

A B S T R A C T

Objective: The main idea presented in the paper is based on the research devoted to interrelations between foreign direct investments (FDI) and export activities that result in the development of the specific form of foreign direct investment – Export Platform (EPFDI).

Research Design & Methods: The paper is based on literature review. The main body of the paper constitutes the geographical review and the listing of the determinants that influence the decision to launch an EPFDI.

Findings: The research brings the working hypothesis that the role of the EPFDI is increasing and free trade zone is a determinant for EPFDI creation.

Implications & Recommendations: As exports are a GDP component, the issue of export platforms is important from macroeconomic and microeconomic perspective, for politicians and entrepreneurs respectively. The existing literature about EPFDI is limited and calls for growth.

Contribution & Value Added: The paper constitutes the first review of the EPFDI from a Polish perspective.

Article type: literature review

Keywords: exporting; export platform; FDI; EPFDI; cluster; free trade zone; free trade area

JEL codes: F14, F21, F41, N70, O24

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INTRODUCTION

The paper includes basic terms related to the issue of Export Platform (EPFDI) as a specific form of foreign direct investment (FDI). Subsequently it presents examples of previous experience on the various continents: Europe, America and Asia with special focus on Poland. One of the chapters presents key determinants associated with the initiation of activity in the form of Export Platform and the determinants that affect the location of business activity in this form in a specific geographical location. Finally, conclusions and recommendations for further research are suggested.

The main goal of this paper review is related to the specific form of foreign direct investment already defined in some papers as Export Platform Foreign Direct Investment (EPFDI). There is much academic effort dedicated to export, foreign direct investment and in general devoted to globalisation or internationalisation, but there is limited literature devoted to the specific form of foreign direct investment that supports export activity – Export Platforms.

MATERIAL AND METHODS

According to Sprinz and Wolinsky-Nahmias et al. (2004) the main research methods in international relations are: descriptive (historical) analyses, quantitative, case studies, formal modelling and combinations of the above excluding descriptive. The qualitative (statistical) method is frequently combined with formal modelling. The increasing role of qualitative methods is accompanied by decreasing role of descriptive one. In general the international relations constitute the research area related to broad interactions between countries, societies and organisations. According to the authors the qualitative methods are mainly employed to research trade and there is relatively little research devoted to international finance, FDI, foreign aid. The research method used for the paper is the literature review and the research of descriptive statistics related to Polish exports. It enables to find the introductory findings related to the future research area and assists to find directions for the research including the formulation of working and supporting hypothesis. With reference to the papers that are incorporated in this literature review, it was explored that the majority of authors use quantitative method frequently combined with the modelling. The quantitative method is mainly based on regression analysis. Nevertheless, there are also papers that use descriptive method including literature review.

LITERATURE REVIEW

Foreign direct investments (FDI) occur in the horizontal form, as market seeking, or vertical form, as resources-seeking, for example natural resources, cheap energy, low cost labour (Helpman & Krugman, 1985). FDI occur also through Export Platform understood as a venture that is not selling for the local market or to the country of origin of the investors but is dedicated to service third markets (other than country of location and country of investors' origin). Tadesse and Ryan (2005) show examples of the Export Platforms frequently combined with classical forms of foreign direct investments such as horizontal (market-seeking) devoted to service local market or vertical dedicated to utilise cheap local resources. The vertical form (resource-seeking) is usually related to

the specialisation in the production of specific components, products or production processes. The authors conclude that it is often in practice - a combined model of two or more types of FDI. An example of this combination is the production of components in Ireland by Intel which are exported not only to the US (the country of investors' origin) but also to the customers located in EU countries (in similar quantities). In this specific case we have an example of resources-seeking model combined with Export Platform.

Cholimoniuk-Przeździecka (2011) depicts a new form of foreign direct investment - skills-seeking. This is a variation of resources-seeking FDI. Skills are a specific resource more sophisticated in comparison to the natural resources, low-cost labour or low taxes. Another specific characteristic is the nature of these resources - relatively long time of formation by education or training. The emergence of this new form is associated with the development of business services sector in the form of shared service centres. This phenomenon is linked to the rapid development of telecommunications and the Internet.

Determinants

One of the concepts explaining the advantages of doing business in the form of foreign direct investment is OLI paradigm (ownership, location, internationalization) as suggested by Dunning, Vernon's life cycle theory, Kojima's theory of comparative advantage, Alibera's theory of currency areas and Dunning's theory of economic development (Wawrzyniak, 2010). Chang and Gayle (2009) suggest that the motivation to conduct business in the form of direct investments is to provide better service for the demand of target markets, which may represent significant variability in the time. It enables investors to achieve the minimization of costs related to the optimal response time and change in the risk matrix in terms of risk type as well as weight of the particular risks in their business activity. In particular this applies to the model of Export Platform and horizontal market-seeking FDI. Filatotchev et al. (2001) indicate the issue associated with the acquisition of specific knowledge related to the local market (in the regional or national scale) for example in a different cultural environment (personal communication, priority in personal relations). In the case of the need to acquire such knowledge it is alternatively possible to conclude a long-term agreement with a local partner or establish a local FDI entity, which will be managed by local managers.

Typical factors affecting the location of foreign investment in general are: the size of the market and its potential for growth, the labour cost and its quality (skills), openness of the economy, geographic distance (the specific case is existence of common border), tax rates, political and macroeconomic risks as well as corruption. In the case of investments in the form of Export Platform the most important factor is the free trade zone, which is an element of the openness of the economy. Other factors relevant to the Export Platforms are legal and tax regulations and the institutional environment, which includes the tax system, the mechanisms of the labour market, openness of the economy, political and macroeconomic risks as well as anti-corruption countermeasures. Specific factors that favour Export Platform are industrial clusters and benefits of economy of scale.

Various factors influence the decisions regarding FDI in the form of Export Platforms. Ito (2012) considers free trade zone existence as a decisive factor contributing

to the decision to invest. On the other hand, Geishecker et al. (2008) define low trade barriers (customs tariffs) as a decisive factor in the choice of the destination country for direct investments in the form of Export Platform. Tomohara and Yokota (2009) also indicate a zone of free trade as a factor that has influence on the strategic decisions made by transnational corporations with respect to location of production units. The factor classified as globalization of the economy represents particular importance for Export Platform. Specific regulations that have influence on the high level of internationalization of the economy affect the success of projects in the form of Export Platform. Nowara (2008) states that political integration of countries into groups results in the increase of foreign direct investment flow, boost effect of investment creation and a small shift effect (relocation of existing investments). The biggest benefits of FDI are achieved by countries that offer favourable economic conditions and a good investment climate. The author observes that in the past two decades the number of agreements establishing free trade zones significantly increased.

Barry (2004) indicates that the factors determining the location of foreign direct investments are the system of tax regulations in the host country (as experienced in Ireland due to competitive tax rates), the system of salaries (Ireland's social partnership model provides an efficient market at relatively low non-wage labour costs) and transparent legal regulations in general. Numerous authors point to Ireland as an example of successful strategy to attract FDI. In 1956 Ireland introduced special preferential tax regulations relating to export sales (Export Profits Tax Relief). Ireland executed the tax policy that provided the lowest corporate tax rates in the European Union (effective tax rate in 1997 was 9.1%). Moreover, they introduced more favourable regulations for determining the tax base as well as more favourable depreciation rules (accelerated depreciation of fixed assets purchases within investment programs). Barry (2004) defines the shape of tax system in Ireland as a decisive factor that led to the birth of the 'Celtic Tiger'. The author also makes references to significantly decreased number of commercial disputes as a result in the optimised legal regulations, as well as the correct operation of the institutions of justice (courts, chambers conducting arbitration proceedings). Ugur and Ruane (2006) suggest that the direct investments have a positive impact on economic growth if the economy has an appropriate level of openness for bilateral trade, including business support and properly developed financial markets. Barry (2004) also indicates that the optimised public administration is a factor contributing to the increase in the number of foreign investors who implemented the projects in Ireland. The author points out that the local agency responsible for promoting Ireland as the most attractive destination for foreign investments (IDA - Industrial Development Agency) as an important factor affecting the outstanding results in this area. The agency responsible for creating and managing investment climate coordinated long-term efforts to attract industry leaders and "flagship project" that brought decisive contribution for the clusters's creation that constituted the nucleuses of future industrial innovative development. The complex strategy management of the number of issues important at strategic level through various agencies influenced the development of systemic solutions favouring development of foreign direct investment's inflow. These agencies implemented the policy of the Irish Ministry of Labour, Enterprise and Innovation. Considering Ireland's achievements it is worth to mention also the other

institutions that acted in related areas: County & City Enterprise Boards (agency that supports micro-enterprises with employment of less than 10 people), Enterprise Ireland (agency dedicated to support the Irish companies at foreign markets), InterTradeIreland (agency supporting regional cooperation between small and medium-size enterprises within Ireland). Grosse and Trevino (2005) report that the institutions affecting reduction of uncertainty risk for investments in the destination country have a significant impact on the prospects of attracting foreign direct investments. According to the authors the increased risk for investments is associated with high inflation, unclear regulations, courts' proceedings delays, inefficient judicial system and an inefficient financial system, which Ireland was able to minimize.

Ugur and Ruane (2006) indicate that direct investments in the form of Export Platform frequently take place in clusters which attract multinational corporations in particular. Dietz (1985) indicates that the objective of direct investment is not only to create jobs and generate cash flow for taxation, but also to create amicable environment for interactions between diversified types of entities, in particular participation of local businesses, entities representing different industries as well as science and research units.

Tadesse and Ryan (2005) indicate that the decision related to the location of foreign investment is also based on the estimation regarding potential sales on the local market (or to the country of investor's origin depending on the model of foreign direct investment) and sales to third countries aimed to achieve the optimised scale of production that ensure adequate profitability of the project. Geishecker et al. (2008) shows economy of scale as one of the main factors affecting the development of direct investment in the form of Export Platform.

Tadesse and Ryan (2005) in their article cite the example of the United States' companies that have overseas branches or daughter companies abroad that for the period of 1993-1994 sold 26% of production to third countries. Ekholm, Forsild and Markusen (2003) based on data from 1993 to 1994 regarding the sale of FDI located outside of the US in Canada and Mexico, amounted on the local market respectively 54% and 66% of production and exported to the US (parent country) respectively 43% and 31% (the export sales to third countries was insignificant). Quite different results in terms of sales were achieved by direct investments located in Europe where sales units were located mainly in Ireland, Belgium and the Netherlands. In these countries export sales to third countries (outside the country of incorporation of the parent entity and also outside the local market) amouts respectively to the level of 76%, 60% and 59% (1993-1994). The US direct investment entities located in Asia exported mainly to the USA and reached, with respect to Singapore and Malaysia, the rates of 50% and 41% respectively (1993-1994). In the case of Hong Kong the largest share was 45% of local sales (exports to the US amounted to 21%) (1993-1994).

The regional specificity shows the impact of geographical distance between the parent entity and FDI on the preferred type of foreign investment (horizontal market-seeking, vertical resources-seeking, export platform). Tomohara and Yokota (2009) conclude in their paper that the origin of the invested capital plays an important role in relation to the preferred region of its investments. Direct foreign investments carried out

by the Japanese capital are implemented in Asia, while the US capital is invested mainly in Europe.

The location of a direct investment in the form of Export Platform is also determined by factors such as the intensity of existing bilateral cooperation between the country of the investor and the country of location of the investment as well as the volume of bilateral trade (Markusen 1990). The level of global integration of country for potential investment location, number of existing direct investments, subsidies and preferences for foreign investors, the countermeasures against corruption, interest rates and roads network plays also role for the decisions related to the location of FDI (Kaufmann, Kraay & Zoido-Lobaton, 1999). Ekholm, Forsild and Markusen (2003) suggest that one of the important factors in the location of direct investment is the prisoner's dilemma. If competition invests in low-cost production location, their competitors will believe that they should do the same.

As noted above, numerous factors influence the location of FDI. Barry (2004) listed in his paper as success factors for Ireland: the agglomeration effect, availability of adequately educated and qualified personnel, the effect of the technology spread in clusters. The author also describes other factors favouring the increase of incoming foreign investments not related to formal regulations: cultural ties, better communication related to the use of the same language (English), fast and efficient transport networks. Good public infrastructure developed thanks to the European Union funds is also indicated as a positive factor. Barry (2004) defines incoming foreign investments as incubators for local entrepreneurs. The studies brought data confirming that many former employees of foreign companies continued their professional activity on their own account. Approximately one third of former employees started own business immediately after the departure. Therefore Ireland serves as leading example of successful FDI management.

RESULTS AND DISCUSSION

The Export Platform occurs worldwide in America, Europe and Asia. In the consecutive subsections, the main focus is on Europe, thus evidence related to America and Asia is presented as an introduction.

American Experience

Tadesse and Ryan (2005) present an example of Mexico as a location of Export Platforms type of FDI that are devoted to service the US market as a target market. The authors conclude that Japanese investments in Mexico are oriented to support a larger geographical area than only Mexico. Ekholm, Forsild and Markusen (2003) describe Mexico as a typical example of the investment destination of European companies that want to create a production base supplying the US market (or the entire North American market). After the creation of NAFTA (North American Free Trade Agreement) the inflow of Export Platform FDI is intensified not only in Mexico but also in the second neighbouring country with one of the largest economy in the world, Canada.

Asian Experience

Ito (2012) describes Singapore and Hong Kong as Asia's largest recipients of foreign direct investments, in the form of Export Platform, from the USA (the share of exports to the third countries in total sales for the year 2008 amounted to 40-70%). Ugur and Ruane (2006) wrote about the example of Singapore, a former British colony with cultural similarities in language (English), administration structure, as well as multiplied trade links with the British Empire. The country for decades served as an important regional commercial exchange port. A specific solution observed in Singapore was the promotion of direct investments in the form of joint ventures with the participation of local capital also representing the state, which reserved the influence on strategic decisions and participation in profits, what as a result minimized the duality in terms of the governmental approach to foreign and local companies. Tomohara and Yokota (2009) provide the example of Toyota's strategic decision regarding the relocation of production in the Asian region, which moved specific car brands (Camry, Corolla and Vios) from Indonesian and Philippine' factories to Thailand in the period of 2003 - 2004 as a result of a political decision on the creation of AFTA (ASEAN Free Trade Area). The decision about free trade zone establishment reduced the national strengths and changed the geographical preferences. After free trade zone creation the national custom barriers disappeared and other factors than custom tariffs between the member countries of the free trade zone started to play a more prevailing role. The creation or extension of free trade zone can also result in the industry relocation within the zone.

European Experience

Tadesse and Ryan (2005) as other authors, report in relation to Europe, that Ireland is a country specialized in the attracting of foreign investments in the form of Export Platform. In Ireland entities representing the direct investments in this specific form executed as average 76% of export sales to third countries (1993-1994). The Netherlands are the second example, where the export to third countries executed by EPFDI amounted to 59% (1993-1994) of total sales (the main destination markets were located within the European Union). Tadesse and Ryan (2005) indicate a strengthening trend of the growing interest of investors from Japan in the countries of Central and Eastern Europe as a location of Japanese origin Export Platforms that would service the European Union. Ito (2012) gives the example of Switzerland that hosts many of the tobacco companies. The third example is the Japanese manufacturer of plastic (Vinyl Chloride Monomer), which placed the production in Portugal (there is one production site within EU that supplies all European Union countries).

This author also presents his findings relating to investments made by companies from the US. Most investments of Export Platform type made by the US companies in Europe are located in the UK (the share of exports to third countries in total sales in 2008 amounted to 20-30%). US investments in the form of Export Platform within Europe took place in the Netherlands, Luxembourg, Ireland, Switzerland and Belgium (share of exports to third countries in total sales for the year 2008 was in these countries within the range 40-70%).

Ekholm, Forsild and Markusen (2003) are also among the authors who present Ireland as a flagship example of a country where direct investments are carried in the

form of Export Platform within the European Union. They draw attention to the low production costs as a decisive factor. Tomohara and Yokota (2009) with reference to the European Union also point out the example of Ireland as a country with low tax imposed on legal entities' income and low labour cost in comparison to the EU's averages. However, the authors make the above mentioned conclusion conditional because the extent of final impact of the free trade zone may vary depending on the country or industry. In Ireland the following industries are indicated as examples: office equipment, computing machines, measurement and control equipment, consumer electronics, telecommunication equipment and other electro-machinery and equipment which requires a relatively well- qualified workforce and economy of scale (Barry 2004). In particular, with respect to the products which require economy of scale, the business model of Export Platform was predominant. As a result of such an approach clusters of IT companies (IBM, Intel, HP, Dell, Microsoft) and pharmaceutical companies (Glaxo, Johnson & Johnson, Pfizer, Merck) were formed in Ireland (Barry 2004). The author shows greater participation of foreign companies in the globalized production processes in Ireland. Foreign companies used 57% of the components from imports, while export sales had an average share of 92% in the turnover of the companies, where for comparison the local companies imported only 27% of the ingredients and their exports achieved an average of only 31% of sales (2002). Such a situation results in limited competition between foreign investors and local businesses for the reason of diversification of markets; foreign companies deal with outside markets where the local companies service local markets.

With respect to the economic policy Majeed and Ahmad (2006) cite the example of Turkey in the period 1983 - 1990 which changed the structure of exports through incentives for companies, also with foreign capital, in the form of export credits, tax credits, premium support, price stabilisation mechanism (Price Stabilisation Fund), duty-free imports of supplies used for export products' manufacture, exemption from value added tax, grants for foreign trade, exemption from corporate tax as well as export subsidies. These export support instruments attract and favour not only local export oriented production but also the foreign direct investment devoted to export.

Polish Experience

Geishecker et al. (2008) list the following factors that have influence on the development of export oriented FDI in Poland: low wages, highly skilled workforce, preferential trade agreements which contributed to the creation of manufacturing facilities servicing Western Europe. Poland as the largest country in Central and Eastern Europe is an attractive location for market-seeking horizontal type FDI oriented to service local market (Motta & Norman, 1996). The authors suggest that Poland within the period 1994-2002 increased exports of finished products due to the presence of direct investments. The Export Platform model proved its important role in Poland within the researched period while the vertical resources-seeking model of FDI, oriented to supply components to the country of origin of the investor , played a minor role in the reported period. The direct investments in the form of Export Platforms were accompanied by contracting of components and services from subcontractors on the local market (outsourcing). Bernaciak and Scepanovic (2010) noted that the south-western Poland,

western Slovakia, the Czech Republic, north-western part of Hungary created production clusters of automotive industry. Hardy (2007) notes that Poland, in terms of the international division of labour, in which the decisive role is played by knowledge and innovation, became an exporter of less advanced products in terms of technology as well as basic materials. The reason for such position, despite a well-educated Polish workforce, is low spending on research and development.

On the basis of available data for 2012 (Lista 2000 polskich przedsiębiorstw i eksporterów – ranking Rzeczypospolitej 2013; Lista 500 Polityki – ranking największych polskich firm 2013) we can observe that the group of biggest exporters consist of, in a large part, the entities created as incoming direct investments (from the group of the 100 largest exporters in Poland, 57% were created as FDI). This population of FDI entities reports the export sales at the level of 77.7% of total sales on average. The considerable majority (48 entities) of this population (classified as FDI due to at least 10% foreign stake in capital, defined as power of votes in the authority) achieve from export sales more than 50% of its income. More than 90% of revenues from export sales are achieved by 20 largest exporters which are foreign direct investments in Poland. The three largest exporting entities with foreign capital generate respectively 89%, 99% and 91% of their revenues from export sales. This could mean a significant role in the Polish economy of incoming FDI in the form of Export Platform or hybrid forms of Export Platform combined with vertical resources-seeking model.

Karaszewski et al. (2009) in their study of Polish enterprises revealed that 38% of investment projects carried out by Polish companies abroad were purely sales supporting, 24% services oriented, 14.6% of production and sales nature, 6.8% sales and services oriented, while only 11.7% manufacture dedicated (2006-2009). The majority of direct investments made by Polish companies abroad are complementary to export sales. The authors examined the prospects for expansion of Polish companies in the form of foreign investment within the period of 2006-2009: 61% intend to develop currently held overseas companies and branches, 31% plan to start operations of new ventures in the form of foreign direct investment abroad. The main directions of expansion are EU-12 countries and other countries of Central and Eastern Europe.

Implications and Recommendations

In the era of globalization, many companies have operations in several countries. The types of economic relationships are becoming more complex and among others are determined by the specificity of local legislation that create favourable conditions for entrepreneurship or FDI and exports. The increasing availability of advanced telecommunication infrastructure and the increasing popularity of the spreading worldwide mobility, as well as an increase in the share of services in the final value of products, we observe the progressive process of substitution of export sales with more complex forms of satisfying foreign and local demand. Aside from the classic forms of foreign direct investments: horizontal market-seeking or vertical resources-seeking, we have distinguished a growing share of Export Platforms (EPFDI). As indicated by the article, in practice there is domination of hybrid models: horizontal market-seeking combined with the Export Platform (final products), vertical resource-seeking (based on

the market research we can define homogenous subgroup: skills-seeking) combined with the Export Platform (components, separated manufacturing or business process).

While in the area of incoming FDIs in Poland the business model of Export Platform is broadly implemented, the past experience of Polish companies in direct investment abroad shows the use of simple forms of investments such as horizontal market-seeking mainly used as activity complementing exports. With regard to Polish companies investing abroad, the near future may bring an increase in the terms of value of foreign investments in the form of vertical resource-seeking as well as the Export Platform or hybrid forms. Direct investments implemented by Polish entrepreneurs abroad result in the export of capital and the export of demand for labour, which constitute unfavourable consequences for countries with reduced financial resources and high unemployment. This trend may be supported by the relatively lower attractiveness of business environment in Poland (high non-wage labour costs, complicated tax system, complicated law regulations, unstable law regulations, high tax rates, high cost of energy) or the lack of incentives to implement export production. An important stimulant for Polish companies could be to increase the value of the company through the execution of their direct investments abroad and utilisation of cheap resources.

CONCLUSIONS

The increasing labour cost in China and rising purchasing power of the middle class (domestic demand) in this country can be perceived as factors favouring decisions to make direct investment in one of the ASEAN (Association of South-East Asian Nations) countries in the form of Export Platform. Also the creation of the Customs Union in Belarus, Russia and Kazakhstan may be a stimulant to initiate projects in the form of Export Platform within the new free trade zone. At the same time it should be considered that the enlargement of the European Union may change the *status quo*, the dynamics and direction of the above described processes.

Globalization processes are reflected in final products, which are assembled from components manufactured in several countries, manufactured in another country and marked with the brand (trademark) of the parent entity (headquarter) of a third country. In addition, identification of origin of added value could be complicated by the issue of transfer pricing broadly practised by multinational corporations.

The Export Platform is not an entirely new form of foreign operations on a global scale but for Polish entities it is the challenge for the future. Due to on-going process of globalization, this form of activity may have increasing importance. The optimized management of the "mix" of exports and direct investments in the form of Export Platform, horizontal market-seeking or vertical resources-seeking, as well as the management of life cycle of projects can play an important role for companies as well as economies as a growth factor.

Based on Zhilin et al. (2006), we can learn more about recent trends in international business research methodologies and this paper brings recommendations related to the future research design. Their paper based on 1296 articles published in six leading international business journals from 1992 to 2003 brings data related to: data collection methods, sample sources including sampled countries and subjects, sampling methods, sample sizes, and response rates. The results of the research are as follows: mail

questionnaire surveys dominate, 60.9% of the studies use a one-country sample (88.9% from western countries), 33.7% of the studies are based upon sample frames provided by third parties, the median sample size is 180, an average response rate is 40.1%. The data concerning the countries we can treat as the identification of the niche.

The suggestions for the future research concerns data collection related to the EPFDI's exports to third countries. The data concerning the exports in general is available but the problem is related to identification of the share in the EPFDI's exports that are shipped to countries other than the country of their headquarters. Due to the increasing volume of the international industrial cooperation issue arise concerning the value added measurement or precise estimation due to the transfer prices applied by multinational corporations.

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