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Contemporary Issues in International Economics

edited by
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Editorial: Contemporary Issues in International Economics

International dimension is at the core of modern business activity and globalization processes tighten interconnectedness also at the macroeconomic level to unprecedented levels. This is clearly demonstrated by the first two issues of our review and expressed in editorial introductions (Wach, 2013; Klich, 2013). Thus, the third issue is explicitly devoted to contemporary issues in international economics. Obviously, tackling them in the way as complete as for example in *Global Shift: Mapping the Changing Contours of the World Economy* (Dicken, 2011) is impossible, taken into consideration limits of a journal issue.

International economics intrinsically merges micro- and macroeconomic aspects. Thus, the thematic scope comprises macroeconomic issues in small open economies but also in large countries, exerting significant impact on the global economy, as well as microeconomic and entrepreneurial matters.

Small open economies face a number of significant challenges in the global environment and their governments must, be able to appropriately point them out, choose adequate tools of analysis and select the optimal solutions. In this issue, the selected challenges include the prospects of monetary integration (or the choice of optimal exchange rate regime) and economic security. Geographical scope of the analyses presented in this issue covers Visegrad Countries, Baltic States and three BRICS countries: Russia, India, and China. Thus, a careful selection of some among the most challenging problems in international economics resulted in the following list of papers:

Krzysztof Beck, Jakub Janus, PhD students and research assistants at, respectively, Lazarski University in Warsaw, and Cracow University of Economics, Poland, in their article *Aggregate Demand Disturbances in the Visegrad Group and the Eurozone* provide the evidence on the risk of asymmetric shocks which strongly influence the results of cost-benefit analysis of monetary integration. Using the structural vector auto-regression model they find, perhaps somewhat surprisingly, that the aggregate demand disturbances in the V-4 countries are more closely correlated than among the “core” countries of the euro area.

Jelena Stankevičienė (a Professor in the Department of Finance Engineering at the Vilnius Gediminas Technical University, Lithuania), Tatjana Sviderskė (a PhD student at the Vilnius Gediminas Technical University), and Algita Miečinskienė (an Associate Professor at the Department of Finance Engineering at the Vilnius Gediminas Technical University) study the *Relationship between Economic Security and Country Risk Indicators in EU Baltic Sea Region Countries*. Utilizing a recent technique of multi-objective

optimization by ratio analysis and its fully multiplicative form they find that economic security depends on country risk ratios.

Mikalai Dudko, a specialist of customs affairs at the Belarussian State University, (Belarus) in his article *Export Barriers and Stimuli in the Russian Federation*, constructs a gravity model for the Russian foreign trade to analyse its determinants. He confirms the relevance of trade policy instruments in shaping the export of the country and provides arguments for using them to further restructure the Russian export from energy resources and raw materials-oriented towards a higher share of industrial goods.

Agnieszka Witoń, a PhD student at the Cracow University of Economics (Poland) in her article studies the *Economic Effects of the Urbanization Process in China*. On the background of a comprehensive survey of the literature as well as some correlation and time series analyses she finds that urbanisation has clear beneficial effects on the economic growth in China whereas the household registration system (*hukou*), by limiting the market-driven migrations restricts the growth potential. Thus, a comprehensive reform of the *hukou* system is strongly suggested.

Oskar Patnaik, a PhD student at the Cracow University of Economics (Poland) explores *Business Opportunities in India for Polish Entrepreneurs*. Combining data from official sources and reports as well as a SWOT analysis of the Indian market as a business opportunity, he finds that geographical and cultural distance, adaptation costs and a relative unease of doing business in India are main barriers for Polish entrepreneurs and reasons for their limited engagement in the Subcontinent. Taking into consideration an enormous potential of the Indian market, the author calls for stronger public incentives and promotion mechanisms for investors willing to mark their presence in this country.

All in all, I believe that you will find the research presented in this issue stimulating and that it will spur the debate to take place in our pages in the future.

Piotr Stanek
Issue Editor

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Dicken, P. (2011). *Global Shift: Mapping the Changing Contours of the World Economy.* 6th ed., New York, NY: The Guilford Press.

Klich, J. (2013). Editorial: Modern Challenges for International Business in Europe. *Entrepreneurial Business and Economics Review*, *1*(2), 5-6.

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Aggregate Demand Disturbances in the Visegrad Group and the Eurozone

Krzysztof Beck, Jakub Janus

A B S T R A C T

Objective: The main goal of the paper is to evaluate, in a comparative manner, the degree of similarities in aggregated demand disturbances in the Visegrad Group (the Czech Republic, Hungary, Poland and Slovakia, collectively: V4) and the Eurozone economies from 1995 to 2013.

Research Design & Methods: The underlying demand disturbances are extracted using the structural vector auto-regression (SVAR) model with the long-run restrictions. The identification scheme is based on the theoretical aggregate supply-aggregate demand (AS-AD) model. The obtained approximations of unobservable demand shocks are then used to infer on their correlation structures.

Findings: The demand shocks among the four economies are described by the highest correlation among all chosen sub-samples. The dynamic approach revealed that the synchronization of the demand shocks in the V4 Group was stronger even when compared to the EMU core. The adjustments to the demand shocks in the V4 countries are relatively flexible and these economies converge to long-run equilibria at a fast pace.

Implications & Recommendations: The V4 countries fulfil substantial criteria of an optimum currency area and could benefit from adoption of a single currency, as well as a common monetary policy.

Contribution & Value Added: This comparative empirical study brings evidence on the similarities in aggregate demand shocks within the V4 and EMU countries.

Article type: research paper

Keywords: optimum currency area; economic shocks; SVAR; Visegrad Group

JEL codes: E32, F15, F44, C32

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INTRODUCTION

The recent financial turmoil and economic downturn, along with the sovereign debt crisis, exposed significant institutional weaknesses of the Economic and Monetary Union (EMU). These events, however, also affected the Visegrad Group (V4) countries. In Poland, Hungary and the Czech Republic, the crisis led to the re-emergence of debates concerning the strategic decisions of euro adoption. In Slovakia, which joined the single currency area in 2009, there has been a discussion concerning the effects of euro on the macroeconomic performance in the last year. One of the key characteristics that allows to evaluate actual and potential benefits of a monetary union is the degree of similarity of aggregate shocks among integrating economies. In particular, the evidence on aggregate demand shocks distribution in V4 economies is helpful to answer the question whether a single monetary policy (one-size-fits-all) is advisable for the V4 Group as a whole, as well as for each of the countries.

The main goal of the paper is to evaluate, in a comparative manner, the degree of similarities in aggregated demand disturbances in the V4 and EMU economies from 1995 to 2013. The shocks are identified using the structural vector auto-regression (SVAR) model with the long-run, AS-AD restrictions. The obtained approximations of unobservable shocks are then used to infer on correlation structures of shocks and to build impulse response functions of output to these shocks. We specifically test the hypothesis that the similarity of macroeconomic shocks within the V4 Group has been greater than among the EMU countries.

The paper is structured as follows. Section 2 briefly reviews the developments in the optimum currency area (OCA) theory and empirical studies on macroeconomic shocks. Section 3 outlines the model used to identify the disturbances, along with data and their properties. Section 4 reports on the empirical results and provides a discussion. Section 5 concludes and underlines our basic findings.

LITERATURE REVIEW

Most of the initial works on the OCA theory were concerned with condition which an effectively performing monetary union must fulfil (Mundell, 1961; McKinnon, 1963; Kenen, 1969). It was proved that, in the absence of independent monetary policy and flexible exchange rates, member countries must either reveal symmetrical distribution of aggregate demand shocks or possess properly working alternative adjustment mechanisms (i.e. flexible wages/prices, mobile labour force or fiscal federalism). A high degree of symmetrical distribution was firstly attributed to economic openness and diversification of production in economies. Further research, however, provided a more dynamic analysis that led to two contradicting views (de Grauwe & Mongelli, 2005). The first one, the ‘European Commission View’ (Commission of the European Communities 1990), later developed into the hypothesis of the endogeneity of optimum currency area criteria (Frankel & Rose, 1998), states that integrating economies will be characterized with more symmetrical distribution of shocks, due to an increase in intra-industry trade. Opposite argument, known as the ‘Krugman’s View’, suggests that on-going integration leads to a higher specialization in regions and causes distribution of shocks to be more idiosyncratic (Krugman, 1993).

The main body of the empirical research on the OCA has been conducted through analyses of cyclical components of real GDP, as well as various factors that influence their coherence among countries. There is evidence that the business cycles synchronization in the EMU is affected by international trade, patterns of specialization and capital mobility (Lee & Azali, 2010; Imbs, 2004; Kalemli-Ozcan, Papaioannou & Peydro, 2009; Siedschlag, 2010; Silvestre, Mendonca & Passos, 2009). Some authors indicate gravitational variables to be main drivers of cycles congruence (Baxter & Koutraparitsas, 2004; Böwer & Guillemineau, 2006), while others recognize the impact of structural similarities and congenial institutions on cycles correlation (Beck, 2014; Sachs & Schleer, 2013). It has also been concluded that an increasing business cycles synchronization in Eurozone may be mainly attributed to global rather than regional tendencies (Bordo & Helbling, 2011; Lehwald, 2012). Fidrmuc and Korhonen have identified 35 different publications that confirm a rather high correlation between business cycles in the EMU and Central and Eastern European Countrie (CEECs) (Fidrmuc & Korhonen, 2006). On the other hand, Darvas and Szapary find that among the CEECs, only Hungary, Poland and Slovakia have achieved a high degree of synchronization with the 'old' EU countries (Darvas & Szapáry, 2008) which is further confirmed by this study.

MATERIAL AND METHODS

The theoretical identification of unobservable shocks in the study is given by the aggregate supply-aggregate demand model (AS-AD). This model grasps both static (short-run) and dynamic dependencies between the aggregate production (y) and prices (p). The upward-sloping AS curve consists of the expected price level (p^e) and the natural GDP (y_n), and can be formulated as (Benigno, 2009):

$$p - p^e = \frac{(1-\alpha)\left(\sigma^{-1}+\eta\right)}{\alpha}\left(y - y_n\right) \tag{1}$$

where σ denotes an elasticity of intertemporal substitution of consumption, and η is a labour supply elasticity. The parameter ($1 - \alpha$) is interpreted as a fraction of firms adjusting prices to the profit-maximizing levels in a given period and allows for transitory rigidities (see Calvo, 1983). The downward-sloping AD curve depends on the natural levels of production and prices[1], and may be shifted by either fiscal or monetary policies:

$$y = \bar{y} + (g - \bar{g}) - \sigma\left[i - \left(\bar{p} - p\right) - \left(\bar{\tau_c} - \tau_c\right)\right] - \sigma \ln \beta \tag{2}$$

where g denotes the volume of public expenditure, i is a nominal interest rate, τ_c is a rate of consumption taxes, and β is a households utility discount factor. AS shock in this identification scheme permanently influences both output and price levels. AD shock only temporarily changes the output that gradually returns to the long-run equilibrium.

According to the mainstream economic theory and the OCA theory, monetary policy can influence only aggregated demand shocks, ergo the problem of supply shocks is

[1] Bars in the equation (2) denote natural values of particular variables.

beyond the scope of this paper[2]. The underlying AD shocks can be extracted in a specific version of the SVAR (Bayoumi & Eichengreen, 1993; Blanchard & Quah, 1989). The estimated system must be a representation of an infinite moving-average process of economic variables (X_t) and economic shocks ε_t. For a bivariate AS-AD model, vector X_t consists of the first differences of the basic variables: Δy_t and Δp_t. Using the lag operator L, it can be re-written as:

$$\begin{bmatrix} \Delta y_t \\ \Delta p_t \end{bmatrix} = \sum_{i=0}^{\infty} L^i \begin{bmatrix} a_{11i} & a_{12i} \\ a_{21i} & a_{22i} \end{bmatrix} \begin{bmatrix} \varepsilon_{dt} \\ \varepsilon_{st} \end{bmatrix} \quad (3)$$

with the underlying supply and demand shocks denoted respectively as ε_{st} and ε_{dt}. Assuming that both Δy_t and Δp_t are weakly stationary, and using the Wold's theorem, X_t can be reduced to a standard vector-autoregression, in which estimated residuals for each dependent variable are e_{yt} and e_{pt}. In order to transform this system into the structural model, we display residuals in terms of the structural shocks and impose four restrictions to properly identify the SVAR. The first two restrictions come from a regular normalization of variance of both shocks. The third one states that supply and demand shocks are independent. The fourth restriction is theory-based and comes directly from the AS-AD specification. If a demand shock only temporarily influences output, then its cumulative effect on the changes in output must be equal to zero. The last step of the specification involves additional qualitative (over-identifying) restrictions imposed on the model (Taylor, 2004).

The empirical estimation of the model covers quarterly data on real GDP and prices (GDP deflator) for the 23 European economies[3]. The data covering period 1995q2 to 2013q1 was obtained from the Eurostat Database. Based on the ADF (Said & Dickey, 1984) and KPSS (Kwiatkowski, Phillips, Schmidt & Shin, 1992) tests, we conclude that both output and prices for every country in the sample are I(1) processes[4], and the model can be estimated with four lags. Diagnostic tests applied to residuals (e.g. normality, auto-correlation) showed no clear statistical evidence to reject the models.

RESULTS AND DISCUSSION

The average values of correlation coefficient for demand disturbances were calculated for the entire period. Taking into account different geographical areas, correlation coefficients were computed for the whole sample (whole), euro area (ea), core countries[5] (core), peripheral countries[6] (per), core and periphery[7] (core-per), and V4 countries (Table 1). This analysis revealed unexpected results. The average correlation of

[2] All the results for supply shocks are available upon request.

[3] Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, the United Kingdom. The reliable time-series for Bulgaria, Croatia, Ireland, Malta and Romania do not cover the entire period of 1995-2013.

[4] All the time-series statistics are available upon request.

[5] Austria, Belgium, France, Germany, Italy, Luxembourg and the Netherlands.

[6] Cyprus, Finland, Greece, Portugal, the Slovak Republic, Slovenia and Spain.

[7] Excluding correlations within core and within periphery groups, e.g. Germany and Greece, but not Germany and France nor Greece and Spain.

shocks among V4 countries is the highest (0.243) among all considered samples. The value of this coefficient is 0.2 higher than the one for entire sample. Even core countries of the euro area are characterized by lower value of mean demand shock correlation coefficient (0.137). Demand shocks similarity among all the members of the EMU is considerably lower. The lowest value of coefficient was obtained for the EMU periphery countries (-0.028), what brings about the notion of high heterogeneity among those countries. The corresponding measure for core-periphery sample is 0.01, what suggests that monetary policy appropriate for core countries might not be in the best interest of periphery. This result implies that among the chosen sub-samples V4 countries are best candidates to form a monetary union. Very high correlation of shocks among V4 countries implies that a common monetary authority should be able to effectively implement monetary policy that may serve the interest of the entire area.

Table 1. Descriptive statistics of correlation coefficients of demand shocks for of EU countries (1996q2-2013q1)

Sample	whole sample	euro area	core	periphery	core-periphery	V4 countries
Mean	0.041	0.025	0.137	-0.028	0.01	0.243
Median	0.04	0.022	0.137	-0.043	0.002	0.259
Maximum	0.677	0.451	0.451	0.265	0.436	0.494
Minimum	-0.403	-0.287	-0.135	-0.287	-0.248	0.070
Standard Deviation	0.165	0.15	0.144	0.134	0.141	0.151
Observations	253	105	21	28	56	6

Source: own calculations.

The analysis of demand shocks similarity using pairs of countries brings about very clear-cut conclusions (Table 2). Firstly, Poland and the Czech Republic are characterized by an extremely high correlation coefficient of demand shocks (0.494), which implies that they are eligible candidates for a monetary union formation. Secondly, in the case of the Czech Republic, the two best candidates for a common currency introduction are, respectively, Poland and Hungary (0.269), and in the case of Hungary, Poland (0.264) and the Czech Republic (0.269). Taking into consideration the fact that regarding Poland, Hungary is the third country with the highest correlation coefficient, one may conclude that these three countries are eligible candidates to form an efficiently functioning monetary union. The situation, however, is different in case of Slovakia which is characterized by a relatively high correlation coefficient of demand shocks only with Poland (0.255), and by rather low ones with the Czech Republic (0.070) and Hungary (0.105).

Pairwise correlations were also calculated for 15 EMU countries in the sample, with exception of previously analyzed Slovakia. Mean values of correlation coefficient for Austria with the entire sample, the euro area and core countries are respectively 0.00, 0.01 and 0.07 (Table 3). This indicates that Austria has unfavourable perspectives for successful monetary union formation, even though it is characterized by relatively high values of coefficient with Finland, France and Germany. The situation is much more suitable for Belgium with respective mean values equal to 0.12, 0.13 and 0.17. Cyprus has a mean value of -0.01 for correlation coefficient with core countries. This indicates that optimal monetary policy for core countries may not be adequate for the Cypriot

economy. The case of Estonia is very similar to Cyprus – the country has a low capability for successful monetary union formation. The one exception is an extremely high value of correlation coefficient with the United Kingdom (0.68). Finland also presents rather poor perspectives for participation in monetary union. Highest values for this country are above 0.2 and the three top candidates are from outside of the Eurozone.

Table 2. Pairwise correlation coefficients of demand shocks of V4 with EU countries (1996q2-2013q1)

Poland		Hungary		Czech Republic		Slovakia	
Country	**r**	**Country**	**r**	**Country**	**r**	**Country**	**r**
Czech	0.494	Czech	0.269	Poland	0.494	Belgium	0.436
Denmark	0.330	Poland	0.264	Hungary	0.269	Cyprus	0.265
Hungary	0.264	Finland	0.231	Finland	0.191	Poland	0.255
Latvia	0.258	Greece	0.176	Denmark	0.183	Lithuania	0.185
Slovakia	0.255	Cyprus	0.157	Belgium	0.154	Latvia	0.153
Sweden	0.251	Sweden	0.150	Slovenia	0.148	Hungary	0.105
Finland	0.249	Latvia	0.142	Austria	0.102	Greece	0.096
Belgium	0.238	Germany	0.139	Lithuania	0.102	Denmark	0.081
Cyprus	0.237	Lithuania	0.108	Netherlands	0.086	Spain	0.081
Lithuania	0.194	Slovakia	0.105	Portugal	0.072	Finland	0.075
Greece	0.149	Denmark	0.077	Slovakia	0.070	Czech	0.070
Germany	0.134	Portugal	0.069	Germany	0.062	France	0.062
France	0.127	UK	0.066	Greece	0.022	Sweden	0.023
Netherlands	0.061	Estonia	0.029	Sweden	0.004	Netherlands	-0.010
Austria	0.040	Slovenia	-0.004	France	-0.036	Portugal	-0.019
UK	0.001	Belgium	-0.008	UK	-0.048	UK	-0.048
Spain	-0.007	Italy	-0.012	Italy	-0.064	Italy	-0.050
Luxembourg	-0.029	Netherlands	-0.078	Spain	-0.108	Germany	-0.052
Italy	-0.070	France	-0.094	Cyprus	-0.114	Austria	-0.063
Portugal	-0.088	Luxembourg	-0.119	Estonia	-0.124	Estonia	-0.082
Estonia	-0.100	Spain	-0.157	Latvia	-0.141	Slovenia	-0.132
Slovenia	-0.113	Austria	-0.193	Luxembourg	-0.151	Luxembourg	-0.179
mean	0.131	mean	0.060	mean	0.053	mean	0.057

Source: own calculations.

The average values of correlation coefficient for France with the entire sample, the euro area and core countries are respectively 0.11; 0.14 and 0.28, which indicates that France can successfully form a monetary union, particularly with the core countries (Table 4). Respective values for Spain are -0.03, 0.00 and 0.11, what leads to an opposite conclusion. Latvia has extremely high value of correlation coefficient with Lithuania, what could be explained by their proximity. Best candidates to form an optimum currency area with Germany can be found among core countries, although values of correlation coefficient are only moderate. Greece is characterized by negative correlations both with euro area (-0.02) and core countries (-0.05).

Two best candidates for monetary union formation with Italy are Slovenia and Spain, yet even in the case of this countries shocks correlations are rather small (Table 5). Mean values for Italy are close to zero, what is also true for Luxembourg. On the other hand, Luxembourg reveals a rather high shock similarity with other core countries, even though two best candidates for Luxembourg are from outside the EMU. The Netherlands is characterized by close to zero mean values with the entire sample, as well as with the

EMU, and rather high with the core countries. Taken together, the Netherlands and France seem to be exceptionally good candidates to form a monetary union. Mean values for Portugal are all negative and the country is characterized by the highest demand shock similarity with Austria (0.16). This result indicates that Portugal should not seek monetary unification with any of analyzed countries. Much like the Netherlands, Slovenia is characterized by the average values of coefficients close to zero, with the entire sample and the Eurozone, but rather high with the core countries. Two best candidates for monetary union with Slovenia are Italy and the Netherlands.

Table 3. Pairwise correlation coefficients of demand shocks of Austria, Belgium, Cyprus, Estonia and Finland with EU countries (1996q2-2013q1)

Austria		Belgium		Cyprus		Estonia		Finland	
Partner	**r**	**Partner**	**r**	**Partner**	**r**	**Partner**	**r**	**Partner**	**r**
Finland	0.207	Slovakia	0.436	Latvia	0.361	UK	0.677	Poland	0.249
France	0.200	Denmark	0.349	Slovakia	0.265	Lithuania	0.091	Denmark	0.234
Germany	0.193	France	0.339	Lithuania	0.263	Latvia	0.074	Hungary	0.231
Portugal	0.115	Netherlands	0.268	Poland	0.237	Hungary	0.029	Netherlands	0.210
Belgium	0.110	Poland	0.238	Greece	0.178	Cyprus	-0.010	Austria	0.207
Czech	0.102	Finland	0.195	Hungary	0.157	Luxembourg	-0.027	Belgium	0.195
Spain	0.084	Czech	0.154	Sweden	0.111	Greece	-0.037	Czech	0.191
Netherlands	0.060	Slovenia	0.148	UK	0.083	Germany	-0.048	UK	0.187
Poland	0.040	Germany	0.147	Germany	0.043	Finland	-0.053	Sweden	0.168
Sweden	0.030	Luxembourg	0.137	Denmark	0.033	Italy	-0.056	France	0.151
UK	-0.006	Austria	0.110	Belgium	0.031	Belgium	-0.060	Slovenia	0.142
Denmark	-0.016	Latvia	0.102	Estonia	-0.010	Sweden	-0.061	Latvia	0.139
Luxembourg	-0.020	Sweden	0.096	Portugal	-0.050	Slovakia	-0.082	Germany	0.086
Slovenia	-0.028	Portugal	0.068	France	-0.055	Poland	-0.100	Slovakia	0.075
Slovakia	-0.063	Spain	0.060	Czech	-0.114	Slovenia	-0.106	Greece	0.055
Latvia	-0.071	UK	0.038	Italy	-0.118	Netherlands	-0.111	Italy	0.051
Italy	-0.099	Italy	0.032	Slovenia	-0.118	Czech	-0.124	Portugal	0.041
Lithuania	-0.117	Cyprus	0.031	Spain	-0.122	Austria	-0.137	Lithuania	-0.041
Estonia	-0.137	Hungary	-0.008	Finland	-0.132	Portugal	-0.146	Estonia	-0.053
Cyprus	-0.179	Estonia	-0.060	Luxembourg	-0.149	France	-0.187	Spain	-0.116
Hungary	-0.193	Lithuania	-0.088	Austria	-0.179	Denmark	-0.246	Cyprus	-0.132
Greece	-0.205	Greece	-0.096	Netherlands	-0.248	Spain	-0.287	Luxembourg	-0.182
Mean	0.000	mean	0.123	mean	0.021	mean	-0.046	mean	0.095
EU mean	0.011	EU mean	0.128	EU mean	-0.020	EU mean	-0.085	EU mean	0.058
core mean	0.074	core mean	0.172	core mean	-0.097	core mean	-0.089	core mean	0.103

Source: own calculations.

The results of a dynamic approach are presented as a 9-element rolling window of correlation coefficient (Figure 1). The analysis of pairwise correlation coefficients reveals no tendencies over time with respect to demand shock similarity. Although, one can observe a sharp increase in values of correlation for early stages of the crisis and the downturn right afterwards (ca. 2007-2009). This might indicate that the economies of V4 countries reacted similarly at the beginning of the crisis, but due to differences in economic fundamentals and implemented policies they subsequently diverged. The investigation of the average values of correlation coefficients for V4 and the EMU brings clear evidence that, during the entire period, demand shock similarity among V4 countries was considerably higher than for the EMU. This indicates that the V4 is closer

to being an optimum currency area than the EMU. V4 mean correlations are characterized by a higher variability which can be attributed to relatively small size of the sample comparing with the Eurozone.

Table 4. Pairwise correlation coefficients of demand shocks of France, Spain, Latvia, Germany and Greece with EU countries (1996q2-2013q1)

France		Spain		Latvia		Germany		Greece	
Partner	**r**	**Partner**	**r**	**Partner**	**r**	**Partner**	**r**	**Partner**	**r**
Denmark	0.463	Denmark	0.205	Lithuania	0.509	France	0.342	Latvia	0.335
Netherlands	0.451	France	0.200	Cyprus	0.361	Denmark	0.205	Sweden	0.332
Germany	0.342	Slovenia	0.180	Greece	0.335	Austria	0.193	Lithuania	0.301
Belgium	0.339	Italy	0.170	Poland	0.258	Netherlands	0.174	Cyprus	0.178
Luxembourg	0.218	Luxembourg	0.128	Slovakia	0.153	Luxembourg	0.174	Hungary	0.176
Austria	0.200	Netherlands	0.091	Hungary	0.142	Belgium	0.147	Poland	0.149
Spain	0.200	Austria	0.084	UK	0.140	Hungary	0.139	France	0.123
Slovenia	0.163	Slovakia	0.081	Finland	0.139	Poland	0.134	Denmark	0.116
Finland	0.151	Belgium	0.060	Sweden	0.134	Finland	0.086	Slovakia	0.096
Poland	0.127	Portugal	0.028	Belgium	0.102	Czech	0.062	Finland	0.055
Greece	0.123	Germany	0.015	Portugal	0.086	Cyprus	0.043	UK	0.040
Sweden	0.115	Poland	-0.007	Estonia	0.074	Slovenia	0.022	Czech	0.022
Italy	0.112	Sweden	-0.032	France	-0.002	Spain	0.015	Luxembourg	0.016
Slovakia	0.062	Czech	-0.108	Luxembourg	-0.010	Italy	-0.008	Italy	0.016
Latvia	-0.002	Finland	-0.116	Denmark	-0.036	Estonia	-0.048	Estonia	-0.037
UK	-0.026	Cyprus	-0.122	Italy	-0.048	Slovakia	-0.052	Netherlands	-0.044
Czech	-0.036	Hungary	-0.157	Germany	-0.069	Latvia	-0.069	Portugal	-0.087
Portugal	-0.045	UK	-0.234	Austria	-0.071	Portugal	-0.079	Belgium	-0.096
Cyprus	-0.055	Latvia	-0.253	Czech	-0.141	Sweden	-0.097	Germany	-0.156
Hungary	-0.094	Greece	-0.259	Netherlands	-0.201	UK	-0.141	Austria	-0.205
Lithuania	-0.174	Lithuania	-0.270	Slovenia	-0.208	Greece	-0.156	Slovenia	-0.208
Estonia	-0.187	Estonia	-0.287	Spain	-0.253	Lithuania	-0.274	Spain	-0.259
mean	0.111	mean	-0.027	mean	0.063	mean	0.037	mean	0.039
EU mean	0.138	EU mean	0.000	EU mean	0.026	EU mean	0.052	EUmean	-0.018
core mean	0.277	core mean	0.107	core mean	-0.043	core mean	0.170	core mean	-0.049

Source: own calculations.

The employed SVAR model was then used to build impulse response functions of output to aggregate demand disturbances. The functions obtained both for the V4 countries and the Eurozone economies strictly fit the AS-AD framework, and confirm that demand shocks only temporarily influence output (Figure 2)[8]. Except for Slovakia, which converges towards the equilibrium substantially longer, the effects of demand shocks on output in the V4 Group gradually diminish, and GDP levels return to the steady state after around six quarters. For the remaining three economies, the strongest impacts of AD shocks to GDP is observed after 2 or 3 quarters. The demand disturbances in other EU

[8] The impulse response functions for aggregate supply shocks are not reported, and available upon request.

economies are considerably more idiosyncratic. There are examples of high sensitivity to shocks (Greece), their long-lasting persistence (France), and strong overshooting in the adjustment (Germany). Smaller countries (e.g. Austria, Finland) tend to experience shocks of significantly higher magnitude than larger economies (e.g. Italy, Germany). The values of reaction functions of these economies to demand shocks, as measured in the sixth quarter, are either above or below the level to which V4 economies converge. Altogether, even when compared to the major EMU economies, the V4 countries reveal relatively similar and flexible adjustment to demand shocks with absence of considerable volatility.

Table 5. Pairwise correlation coefficients of demand shocks of Italy, Luxembourg, Portugal and Slovenia with EU countries (1996q2-2013q1)

Italy		Luxembourg		Netherlands		Portugal		Slovenia	
Partner	**r**	**Partner**	**r**	**Partner**	**r**	**Partner**	**r**	**Partner**	**r**
Slovenia	0.282	Sweden	0.310	France	0.451	Austria	0.115	Italy	0.282
Spain	0.170	Denmark	0.222	Denmark	0.328	Italy	0.091	Netherlands	0.218
France	0.112	France	0.218	Belgium	0.268	Latvia	0.086	Denmark	0.202
Portugal	0.091	Germany	0.174	Slovenia	0.218	Czech	0.072	Spain	0.180
Netherlands	0.055	Belgium	0.137	Finland	0.210	Hungary	0.069	France	0.163
Finland	0.051	Spain	0.128	Germany	0.174	Belgium	0.068	Czech	0.148
Denmark	0.044	Netherlands	0.126	Luxembourg	0.126	Finland	0.041	Belgium	0.148
Belgium	0.032	Greece	0.016	Spain	0.091	Slovenia	0.040	Finland	0.142
Greece	0.016	Lithuania	0.012	Czech	0.086	Spain	0.028	Portugal	0.040
Germany	-0.008	Latvia	-0.010	Poland	0.061	Slovakia	-0.019	Germany	0.022
Hungary	-0.012	Austria	-0.020	Austria	0.060	France	-0.045	Hungary	-0.004
UK	-0.018	Estonia	-0.027	Italy	0.055	Cyprus	-0.050	Austria	-0.028
Latvia	-0.048	Poland	-0.029	UK	0.044	Sweden	-0.067	Luxembourg	-0.074
Slovakia	-0.050	Slovenia	-0.074	Slovakia	-0.010	Germany	-0.079	Estonia	-0.106
Estonia	-0.056	Hungary	-0.119	Greece	-0.044	Lithuania	-0.086	UK	-0.108
Czech	-0.064	UK	-0.122	Hungary	-0.078	Greece	-0.087	Poland	-0.113
Poland	-0.070	Italy	-0.135	Estonia	-0.111	Poland	-0.088	Sweden	-0.117
Austria	-0.099	Cyprus	-0.149	Portugal	-0.127	UK	-0.091	Cyprus	-0.118
Cyprus	-0.118	Czech	-0.151	Latvia	-0.201	Netherlands	-0.127	Slovakia	-0.132
Luxembourg	-0.135	Portugal	-0.156	Sweden	-0.236	Estonia	-0.146	Latvia	-0.208
Sweden	-0.149	Slovakia	-0.179	Cyprus	-0.248	Luxembourg	-0.156	Greece	-0.208
Lithuania	-0.176	Finland	-0.182	Lithuania	-0.403	Denmark	-0.172	Lithuania	-0.245
mean	-0.007	mean	0.000	mean	0.032	mean	-0.027	mean	0.004
EU mean	0.020	EU mean	-0.009	EU mean	0.061	EU mean	-0.016	EU mean	0.021
core mean	-0.027	core mean	0.061	core mean	0.145	core mean	-0.019	core mean	0.104

Source: own calculations

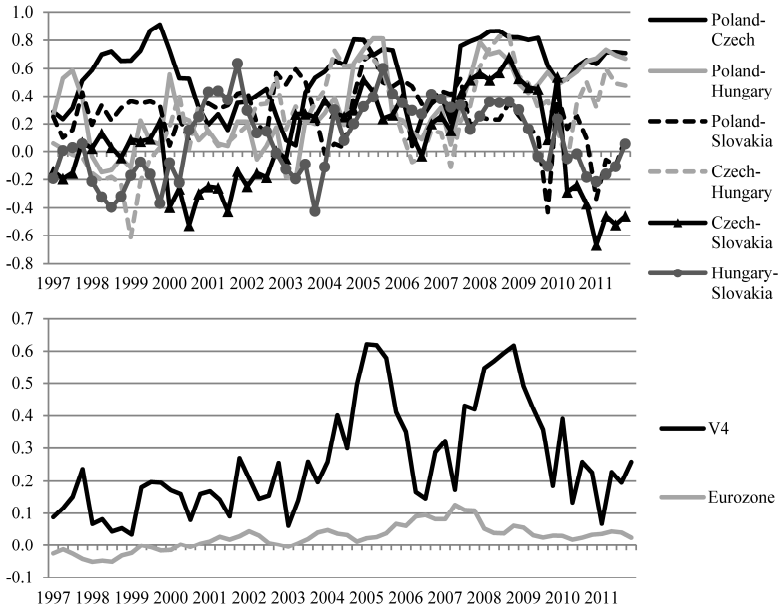

Figure 1. Pairwise correlations of demand shocks of V4 countries and average correlations of demand shocks of the Eurozone in a nine-element rolling window (1996q2-2013q1)

Source: own elaboration.

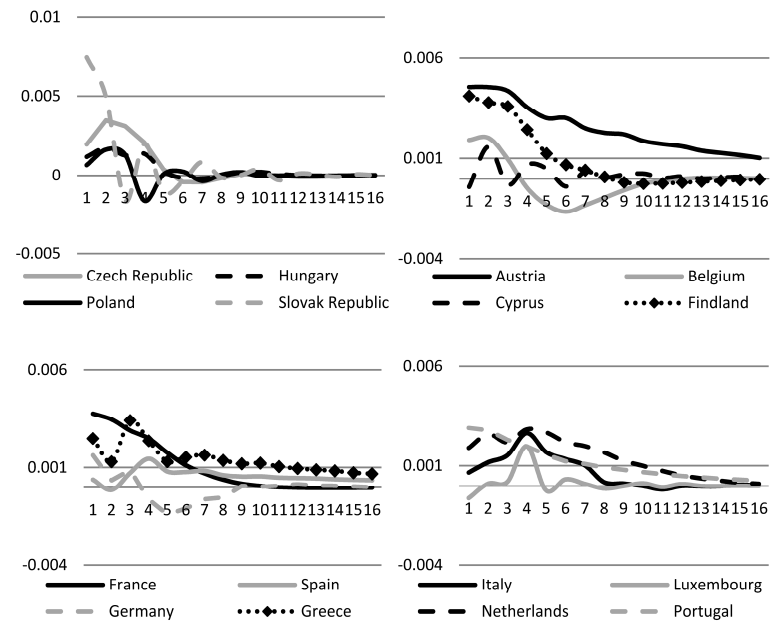

Figure 2. Demand shocks: impulse response functions of output in the V4 and selected Eurozone economies

Source: own elaboration.

CONCLUSIONS

The goal of the paper was to assess the degree of similarities in macroeconomic demand disturbances between the V4 and EMU countries from 1995 to 2013. The coherence of this types of aggregate shocks among economies is one of the leading factors indicating whether the benefits associated with the adoption of a common currency outweigh its costs. Based on the SVAR model estimated for each country, we extracted underlying demand shocks, computed their correlations and measured adjustments of output to these shocks. First of all, the results suggest that the Eurozone is far from being an optimum currency area. With the exceptions of few outlying pairs of countries (e.g. France and the Netherlands), the distribution of demand shocks across states is significantly idiosyncratic. As a consequence, the possibility of an effective performance of the Eurozone as a whole is questionable. On the contrary, the V4 countries are characterized by higher demand shock similarity. Over the entire period of 1995-2013, the average value of correlation coefficients of demand disturbances within the V4 group was higher, not only when compared to the EMU, but also to the core Eurozone countries. This, in turn, along with the evidence derived from the impulse response functions analysis, indicates that common monetary policy might be more appropriate for the V4 rather than for the Eurozone economies.

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Relationship between Economic Security and Country Risk Indicators in EU Baltic Sea Region Countries

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A B S T R A C T

Objective: The globalization phenomenon raises new challenges in terms of country risk and economic security for small open economies. The objective of this paper is to evaluate the relationship between economic security and country risk indicators in EU Baltic Sea region countries.

Research Design & Methods: This paper, after surveying definitions and typologies of risks, proposes the analysis of the relationship between economic security and country risk in EU Baltic Sea region countries based on statistical data from 2012. The results were optimized by implementing MOORA (Multi-Objective Optimization by Ratio analysis) and MULTIMOORA (MOORA plus Full Multiplicative Form) methods.

Findings: Findings provide evidence for economic security being dependent on country risk ratios. This result is robust with respect to the applied method of investigation.

Implications & Recommendations: It is crucial to identify the potential for different types of risks, security indicators as well as methods for risk evaluation and assessment. The key variables of interest include domestic economic variables, macroeconomic policy evaluation, balance of payments stability and social indicators. A general sustainability context (monetary, social and environmental indicators) should be also taken into consideration.

Contribution & Value Added: Several investigations come to strongly conclusive results, which could be used in creating a new model for country risk assessment and the derived economic security indicators for EU Baltic Sea region countries.

Article type: research paper

Keywords: Economic security; globalization; EU Baltic Sea region; MULTIMOORA

JEL codes: G11, G14, G23

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INTRODUCTION

The notion of economic security is quickly gaining attention and its importance has increased in the last years. Contemporary globalization – economic integration at the global level that is no longer limited to the industrialized countries – accelerated during the 1980s, as programs of economic liberalization spread throughout the developing world. A huge increase in capital flows to developing countries in the early 1990s reinforced positive views of globalization. Financial crises at the turn of the 21st century were caused by international effects and the United States high technology boom and its accompanying stock market bubble. They were a good push in governments' understanding of economic security. The economic crises and their repercussions occurring in an increasingly integrated global economy have spurred renewed interest in economic security and created initiatives to redefine it. This revised definition in turn has encouraged a search for policy prescriptions that will increase economic security in the new environment.

Globalization, after undermining the old definition of economic security, is at the centre of a new definition that emphasizes the risks of unexpected shocks and economic volatility. The new definition must capture the causal consequences of globalization accurately and establish explicit benchmarks for assessing globalization's effects on economic security. Economic security is not a new concern of governments. Earlier, economic instruments have long been part of the governmental strategy, as a mean to influence other states and their policies. Economic security in this traditional view was independence from manipulation by other governments that wielded these instruments.

THEORETHICAL BACKGROUND: DEFINITIONS OF ECONOMIC SECURITY

Economic security is a topic, which is quite rarely approached by researchers. Very often, the significance of this issue is fully understood only post factum, when the threats to the economic security of a country have had effect (Geršl & Heřmánek, 2006). Economic history proves that economic security should become the object of a permanent monitoring and management system (Heslop & Helen, 2009; Hlaváček, 2007).

According to Huber, Rehm, Schlesinger, and Valletta (2010) economic security could be considered as a preparation state of the economy for ensuring decent conditions for living and developing the socio-economic stability and the political-military capability of the society and the country in order to eliminate internal and external threats. Generally, there is no universal definition of the concept of economic security, because of its multilateral and multidimensional features.

After analysing of different scientific articles and different opinions of researchers (Kesternich & Schnitzer, 2010; Bordo, Meissner, & Weidenmier, 2009; Busse & Hefeker, 2006; Finnerty, 2001), it is clear that the concept of economic security is complex and dynamic. Its complexity stems from the multitude of economic, social, financial processes, as well as, from the phenomena of globalisation (Miskiewicz & Ausloos, 2010; Scheve, Kenneth, & Slaughter, 2002), seen both as a process and as a phenomenon acting systematically and permanently upon national economies. Its dynamism is caused by the quick pace of the economic processes and phenomena on both national and global level (Reuer & Leiblein, 2000).

Economic security should be understood as (Rehm & Schlesinger, 2013; Quadrini, 2011; Ausloos & Miskiewicz, 2010; Rehm & Schlesinger, 2010; Marshall, Maulana, & Tang, 2009; den Besten, 2007; Estrada, 2000; Meldrum, 2000):

- an essential factor of national security, ensuring resources and the dynamic balance of all other components of this system,
- a dimension of national, regional and global security, which is an aim of every individual, community, country, etc.,
- a priority objective of governments, regional and international organizations working to ensure and guarantee global human security,
- a state of the national economy, seen as a source and basis for eliminating poverty, famine, social and economic inequalities, both between individuals and between regions of a country.

Most of the definitions of economic security provided by researchers from various countries (Ratha, De Prabal, & Mohapatra, 2011; Schroeder, 2008; Quer, Claver, & Rienda, 2007) may be classified into three categories:

- definitions that identify economic security with its objectives,
- definitions that identify economic security with a state of the economy, which implies several favourable consequences,
- definitions that consider economic security as an element of production stability.

The country's economic security is determined by three main components: economic security of countries, companies and consumers. The balance of the three is crucial for the security of the whole country's economy. The main objective of the country's economic security consists of ensuring basic conditions for the country's socio-economic development (Rehm, Hacker, & Schlesinger, 2012; Osberg & Sharpe, 2009).

The concept of economic security has a lot of milestones, which should be considered: it lacks the historical primacy and intellectual currency assigned to military security; it suffers from a diffuseness of both potential threats and remedies; and its content resists clear categories of threat.

Further analysis will show how important it is to distinguish the dependence of economic security on country risk indicators, as by this approach, many decisions could be made, evaluating different types of opportunities.

RESEARCH METHODS: MOORA AND MULTIMOORA METHODS

Multi-Objective Optimization by Ratio Analysis (MOORA) method was introduced by Brauers and Zavadskas (2006). This method was developed (Brauers & Zavadskas, 2010) and became MULTIMOORA (MOORA plus the full multiplicative form). These methods have been applied in different studies (Brauers, Ginevičius, Zavadskas, & Antuchevičienė, 2007; Brauers & Ginevičius, 2009; Brauers & Zavadskas 2009; Brauers & Ginevičius, 2010; Baležentis A., Baležentis, T., & Valkauskas, 2010; Brauers, Ginevičius, & Podvezko, 2010).

According to Brauers and Zavadskas (2006), MOORA goes for a ratio system in which each response of an alternative on an objective is compared to a denominator, which is representative for all alternatives concerning that objective.

MOORA method begins with the matrix X where its elements x_{ij} denote j-th alternative of *i*-th objective (*i* = 1, 2, …, *n* and *j* = 1, 2, …, *m*). In our case we have m=8 alternatives (EU

Baltic Sea region countries) and $n = 23$ objectives (indicators). MOORA method consists of two parts: the ratio system and the reference point approach.

The Ratio System of MOORA

The ratio system defines data normalization by comparing alternative of an objective to all values of the objective (1):

$$x_{ij}^{*} = \frac{x_{ij}}{\sqrt{\sum_{j=1}^{m} x_{ij}^{2}}} \tag{1}$$

where:

x_{ij} – response of alternative j on objective i,
$j = 1, 2, \ldots, \mathrm{m}$; m – number of alternatives,
$i = 1, 2, \ldots, \mathrm{n}$; n – number of objectives,
x^{*}_{ij} – a dimensionless number representing the normalized response of alternative j on objective i.

These responses of the alternatives on the objectives belong to the interval [0; 1]. These indicators are added (if desirable value is maximal) or subtracted (if desirable value is minimal) and summary index of a country derives according to the formula (2):

$$y_{j}^{*} = \sum_{i=1}^{i=g} x_{ij}^{*} - \sum_{i=g+1}^{i=n} x_{ij}^{*} \tag{2}$$

where:

$i = 1, 2, \ldots, g$ as the objectives to be maximized,
$i = g + 1, \mathrm{g} + 2, \ldots, \mathrm{n}$ as the objectives to be minimized,
x^{*}_{j} – *the normalized assessment of alternative j with respect to all objectives.*

The Reference Point of MOORA

This reference point theory starts from the already normalized ratios as defined in the MOORA method. The j-th coordinate of the reference point can be described as $r_j = \max x^{*}_{ij}$ in maximization case. Every coordinate of this vector represents maximum or minimum of certain objective. Then every element of normalized responses matrix is recalculated and final rank is given according to the deviation from the reference point and the Min-Max Metric of Tchebycheff (3):

$$\min_{i}(\max_{j} | r_j - x_{ij}^{*} |) \tag{3}$$

The Full Multiplicative Form of Multiple Objectives and MULTIMOORA

Brauers and Zavadskas (2010) proposed updated MOORA with the Full Multiplicative Form method embodying maximization as well as minimization of purely multiplicative utility function. Overall utility of the j-th alternative can be expressed as dimensionless number (4):

$$U'_j = \frac{A_j}{B_j} \tag{4}$$

where:

$A_j = \prod_{g=1}^{i} x_{gi}$,

$j = 1, 2, \ldots, m$,

m – number of alternatives,

i – number of objectives to be maximized,

$B_j - \prod_{k=i+1}^{n} x_{kj}$,

n-i – number of objectives to be minimized,

U'_j – utility of alternative j with objectives to be maximized and objectives to be minimized.

Thus MULTIMOORA summarizes MOORA (which includes Ratio System and Reference point) and the Full Multiplicative Form.

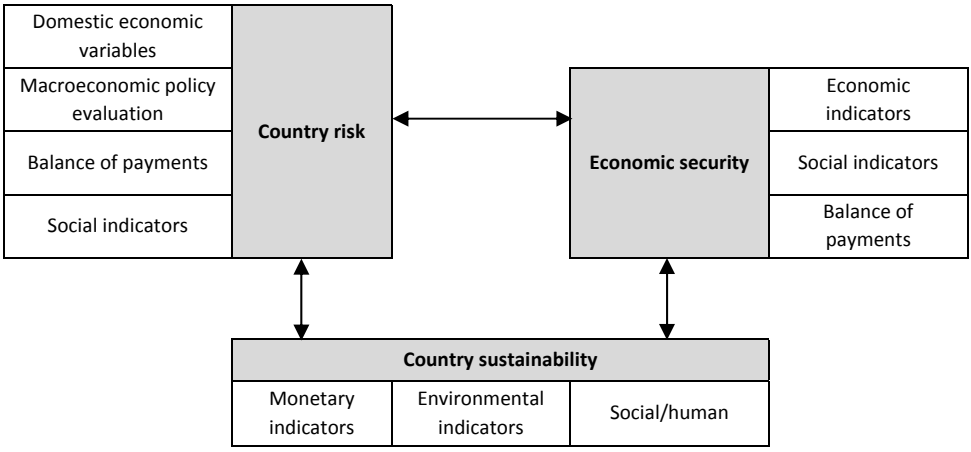

Figure 1. Interdependence between ratios
Source: own study.

ANALYSIS OF COUNTRY RISK AND ECONOMIC SECURITY VARIABLES

The main goal of this study is to determine the relationship between country risk, economic sustainability and economic security (Figure 1). In this article relationship between country risk and economic security ratios will be analysed. There is an assumption, proposed by the authors, that all three variables are interrelated with each other in one or another direction/dependence. This hypothesis has been already proved by several scientific researches (Stankevičienė, Sviderskė, & Miečinskienė, 2014; Stankevičienė & Sviderskė, 2012).

After consolidating different types of variables', different groups of country risk and economic security indicators were created (Table 1 and Table 2).

Table 1. Grouping of indicators for country risk evaluation

Domestic economic variables	Macroeconomic policy evaluation	Balance of payments	Social indicators
Gross domestic investment (% of GDP)	Inflation (End of Year Change %)	The current account balance (% of GDP - 3 year average)	Unemployment Rate (% of Labour Force)
GDP (PPP - billion USD)	Real effective exchange rate	Balance of trade (million EUR)	Natural population change
Private consumption (% of GDP)	Current taxes on income, wealth, etc. (% of GDP)	Exports of goods and services (% of GDP)	Employment (annual averages)

Source: created by authors.

Table 2. Grouping of indicators for country's economic security evaluation

Economic indicators	Social indicators	Balance of payments
◦ Total intramural R&D expenditure (GERD) (EUR/inhab.). ◦ High-tech exports (% of exports). ◦ Gross fixed capital formation (investments) MEUR. ◦ General government deficit/surplus (% of GDP). ◦ General government gross debt (MEUR).	◦ Long-term unemployment rate (more than 12 months) (%). ◦ At-risk-of-poverty rate (%). ◦ Inequality of income distribution (Income quintile share ratio).	◦ Balance of international trade in goods (% of GDP). ◦ Market integration by type of trade activities (%). ◦ Share of import from EU in total imports (%).

Source: created by authors.

For country risk, four main groups of variables were distinguished – domestic economic variables, macroeconomic policy evaluation, balance of payments and social indicators. Each group includes a set of three indicators, which mostly describe country risk.

For economic security, three main groups of variables were distinguished – economic indicators, social and balance of payments. Each group includes a set of indicators, which describe countries' economic security (Saisana & Saltelli, 2010; Saaty, 2010).

RESULTS AND DISCUSSION

All data for analysis was received from European Statistics Database (Eurostat) and International Monetary Fund for EU Baltic Sea region countries. The data therefore covers eight EU Baltic Sea region countries, year 2012 (latest available data) and 23 structural indicators, 184 observations in total. The indicators used for calculations are presented in Table 3 and Table 4.

Table 3. Country risk indicators for EU Baltic Sea region countries for 2012

Countries	Domestic economic variables			Macroeconomic policy evaluation		
	Gross domestic investment (% of GDP)	GDP (PPP - USD, billions)	Private consumption (% of GDP)	Inflation (End of Year Change %)	Real effective exchange rate	Current taxes on income, wealth, etc. (% of GDP)
Denmark	17.32	210.15	49.50	1.96	96.20	30.40
Estonia	27.63	29.09	51.80	3.76	111.30	7.00
Finland	18.74	197.48	56.30	3.45	95.00	15.90
Germany	17.22	3 197.07	57.60	2.04	93.70	12.10
Latvia	25.89	37.27	62.10	1.60	116.10	7.70
Lithuania	17.10	65.01	64.20	2.93	109.30	4.90
Poland	21.08	800.93	61.20	2.40	100.60	7.20
Sweden	18.54	392.96	48.20	1.04	100.80	18.30

Countries	Balance of payments			Social indicators		
	The current account balance (% of GDP - 3 year average)	Balance of trade (million EUR)	Exports of goods and services (% of GDP)	Unemployment Rate (% of Labour Force)	Natural population change	Employment (annual averages)
Denmark	5.60	585.40	54.50	7.55	1.00	2 688.60
Estonia	1.30	-203.50	92.50	9.77	-1.10	624.40
Finland	-0.60	-527.90	39.70	7.68	1.40	2 483.20
Germany	6.50	16 097.60	51.60	5.46	-2.30	40 062.10
Latvia	-0.30	-135.90	61.10	14.94	-4.50	885.60
Lithuania	-1.40	40.30	84.20	13.25	-3.50	1 278.50
Poland	-4.50	-788.20	46.20	10.35	0.00	15 590.70
Sweden	7.00	459.90	48.70	7.90	2.20	4 657.10

Source: own study.

Table 4. Economic security indicators for EU Baltic Sea region countries for 2012

Countries	Economic indicators				
	Total intramural R&D expenditure (GERD) (EUR/inhabitant)	High-tech exports (% of exports)	Gross fixed capital formation (investments) MEUR	General government deficit/surplus (% of GDP)	General government gross debt (MEUR)
Denmark	1 311.50	9.50	42 638.50	-4.10	110 980.20
Estonia	284.90	14.10	4 392.00	-0.20	1 712.10
Finland	1 264.90	7.30	37 868.00	-1.80	103 145.00
Germany	951.00	13.90	470 550.00	0.10	2 160 192.50
Latvia	71.70	6.30	5 072.80	-1.30	9 038.00
Lithuania	98.90	5.80	5 483.60	-3.20	13 333.10
Poland	89.00	5.90	72 981.60	-3.90	217 691.00
Sweden	1 464.90	12.90	77 454.90	-0.20	158 000.30

Countries	Social			Balance of payments		
	Long-term unemployment rate (more than 12 months) (%)	At-risk-of-poverty rate (%)	Inequality of income distribution (Income quintile share ratio)	Balance of international trade in goods (% of GDP)	Market integration by type of trade activities (%)	Share of import from EU in total imports (%)
Denmark	2.10	13.10	4.50	2.20	32.40	70.70
Estonia	5.50	17.50	5.40	-4.30	76.10	80.00
Finland	1.60	13.20	3.70	0.10	29.20	62.80
Germany	2.50	16.10	4.30	6.70	41.00	63.50
Latvia	7.80	19.20	6.50	-9.80	49.50	78.20
Lithuania	6.60	18.60	5.30	-3.20	71.80	56.80
Poland	4.10	17.10	4.90	-1.40	39.20	67.20
Sweden	1.50	14.10	3.70	2.10	32.00	67.10

Source: own study.

Table 5. Country risk indicators for EU Baltic Sea region countries, normalized by MOORA

Countries	Domestic economic variables			Macroeconomic policy evaluation		
	Gross domestic investment (% of GDP)	GDP (PPP - US $,billions)	Private consumption (% of GDP)	Inflation (End of Year Change %)	Real effective exchange rate	Current taxes on income, wealth, etc. (% of GDP)
Denmark	0.29	0.06	0.31	0.27	0.33	0.71
Estonia	0.47	0.01	0.32	0.52	0.38	0.16
Finland	0.32	0.06	0.35	0.48	0.33	0.37
Germany	0.29	0.96	0.36	0.28	0.32	0.28
Latvia	0.44	0.01	0.39	0.22	0.40	0.18
Lithuania	0.29	0.02	0.40	0.41	0.37	0.11
Poland	0.36	0.24	0.38	0.33	0.34	0.17
Sweden	0.32	0.12	0.30	0.14	0.35	0.43
Countries	**Balance of payments**			**Social indicators**		
	The current account balance (% of GDP - 3 year average)	Balance of trade (mil.EUR)	Exports of goods and services (% of GDP)	Unemployment Rate (% of Labour Force)	Natural population change	Employment (annual averages)
Denmark	0.46	0.04	0.31	0.27	0.15	0.06
Estonia	0.11	-0.01	0.52	0.34	-0.16	0.01
Finland	-0.05	-0.03	0.23	0.27	0.20	0.06
Germany	0.54	1.00	0.29	0.19	-0.34	0.92
Latvia	-0.02	-0.01	0.35	0.53	-0.66	0.02
Lithuania	-0.12	0.00	0.48	0.47	-0.51	0.03
Poland	-0.37	-0.05	0.26	0.36	0.00	0.36
Sweden	0.58	0.03	0.28	0.28	0.32	0.11

Source: own study.

Table 6. Economic security indicators for EU Baltic Sea region countries, normalized by MOORA

Countries	Economic indicators				
	Total intramural R&D expenditure (GERD) (EUR/inhab.)	High-tech exports (% of exports)	Gross fixed capital formation (investments) MEUR	General government deficit/surplus (% of GDP)	General government gross debt (MEUR)
Denmark	0.52	0.33	0.09	-0.60	0.05
Estonia	0.11	0.50	0.01	-0.03	0.00
Finland	0.50	0.26	0.08	-0.26	0.05
Germany	0.37	0.49	0.97	0.01	0.99
Latvia	0.03	0.22	0.01	-0.19	0.00
Lithuania	0.04	0.20	0.01	-0.47	0.01
Poland	0.03	0.21	0.15	-0.57	0.10
Sweden	0.58	0.45	0.16	-0.03	0.07
Countries	**Social**			**Balance of payments**	
	Long-term unemployment rate (more than 12 months) (%)	At-risk-of-poverty rate (%)	Inequality of income distribution (Income quintile share ratio)	Balance of international trade in goods (% of GDP)	Market integration by type of trade activities (%)	Share of import from EU in total imports (%)
Denmark	0.16	0.28	0.33	0.16	0.23	0.36
Estonia	0.43	0.38	0.39	-0.32	0.54	0.41
Finland	0.12	0.29	0.27	0.01	0.21	0.32
Germany	0.19	0.35	0.31	0.50	0.29	0.33
Latvia	0.60	0.42	0.47	-0.73	0.35	0.40
Lithuania	0.51	0.40	0.38	-0.24	0.51	0.29
Poland	0.32	0.37	0.36	-0.10	0.28	0.35
Sweden	0.12	0.31	0.27	0.16	0.23	0.35

Source: own study.

The initial data was normalized according to formula (1) for Ratio System of MOORA, and then formula (2) was used for obtaining ranks of the Ratio System of MOORA. Formula (3) was applied for the ratios obtained according to formula (1) for Ratio System of MOORA. At the end, initial data was computed according to formula (4),

providing ranks of the Full Multiplicative Form. Final ranks were obtained through the dominance theory (Brauers, 2004). The results are presented in Table 5 for country risk indicators and in Table 6 for economic security indicators[1].

After data is normalized, the correlation analysis (Mirkin, 2011; Miskiewicz, 2012) could be presented in order to understand the relationship between each variable for each country risk and economic security group (Table 7).

Table 7. Correlation matrix between country risk and economic security indicators for EU Baltic Sea region countries

Indicators				Economic security								
		Intramural R&D expenditure (EUR/inhab.)	High-tech exports (%)	Gross fixed capital formation MEUR	Government deficit/surplus (% of GDP)	Government gross debt (MEUR)	Long-term unemployment rate (%)	At-risk-of-poverty rate (%)	Inequality of income distribution	Balance of international trade in goods	Market integration (%)	Share of import from EU i (%)
Country risk	Gross domestic investment (% of GDP)	-0.558	0.083	-0.391	0.314	-0.358	0.604	0.538	0.675	-0.744	0.491	0.863
	GDP (PPP - US $,billions)	0.177	0.438	0.992	0.359	0.989	-0.330	-0.052	-0.289	0.684	-0.237	-0.293
	Private consumption (% of GDP)	-0.755	-0.699	0.009	-0.283	0.059	0.660	0.722	0.549	-0.440	0.332	-0.316
	Inflation (End of Year Change %)	-0.295	-0.069	-0.241	-0.073	-0.191	0.164	0.110	0.059	-0.179	0.514	-0.031
	Real effective exchange rate	-0.744	-0.230	-0.556	0.104	-0.511	0.915	0.811	0.869	-0.909	0.733	0.507
	Current taxes on income, wealth, etc. (% of GDP)	0.832	0.220	0.039	-0.216	-0.003	-0.712	-0.858	-0.552	0.524	-0.670	0.001
	The current account balance (% of GDP - 3 year average)	0.742	0.766	0.491	0.482	0.461	-0.548	-0.515	-0.455	0.624	-0.316	0.046
	Balance of trade (mil.EUR)	0.211	0.519	0.979	0.458	0.990	-0.260	-0.028	-0.220	0.640	-0.126	-0.244
	Exports of goods and services (% of GDP)	-0.568	0.156	-0.311	0.116	-0.255	0.671	0.614	0.584	-0.464	0.968	0.272
	Unemployment Rate (% of Labour Force)	-0.789	-0.644	-0.617	-0.252	-0.576	0.910	0.785	0.845	-0.920	0.538	0.228
	Natural population change	0.753	0.263	-0.096	-0.084	-0.168	-0.860	-0.877	-0.827	0.535	-0.626	-0.107
	Employment (annual averages)	0.104	0.367	0.966	0.281	0.960	-0.306	-0.013	-0.263	0.656	-0.243	-0.294

Source: own study.

As we can see from Table 7, there are both – positive and negative correlations between variables. The relationship between indicators is quite strong, the strongest correlation is between macroeconomic policy evaluation (country risk group) and social indicators (economic security group), as well as between social indicators (country risk group) and social indicators (economic security group). Domestic economic variables and balance of payments for country risk are also correlating with economic, balance of payment and social indicators for economic security. The strongest negative correlation is between real effective exchange rate (country risk ratio) and balance of international trade in goods for economic security, as well as between unemployment rate (social indicator of country risk) and balance of international trade in goods for balance of payments in economic security. If one indicator increases, another one will be decreasing and vice versa. Positive correlation is between GDP in domestic economic variables and

[1] All calculations are available from the authors upon request.

balance of trade in balance of payment (country risk) and gross fixed capital formation and general government gross debt (in economic indicators for economic security). As well, strong positive correlation is between exports of goods and services (balance of payments for country risk) and market integration by type of trade activities (balance of payments for economic security). Ratios of country risk such as inflation do not present a strong correlation with all economic security ratios.

CONCLUSIONS

The system of 23 indicators for eight EU Baltic Sea region countries for country risk and economic security was introduced. It includes four groups for country risk: domestic economic variables (gross domestic investment, GDP, private consumption), macroeconomic policy evaluation (inflation, real effective exchange rate, current taxes on income, wealth, etc.), balance of payments (current account balance, balance of trade, exports of goods and services) and social indicators (unemployment rate, natural population change, employment rate). Economic security is based on three groups of indicators: Economic indicators (Total intramural R&D expenditure, high-tech exports, gross fixed capital formation, general government deficit/surplus, general government gross debt), social indicators (long-term unemployment rate, at-risk-of-poverty rate, inequality of income distribution) and balance of payments (balance of international trade in goods, market integration by type of trade activities, share of import from EU in total imports).

Both MOORA method and its updated model MULTIMOORA could be perfectly used while evaluating and standardizing country risk and economic security, as a ratio system, reference point and multiplicative form appropriately suit for cases, where there are several alternatives (EU Baltic Sea region countries) and several objectives (indicators, which directly show country risk and economic security).

After implementation of MOORA method for EU Baltic Sea region countries, it could be concluded that the data was correctly normalized, standardized and optimized. The results are as follows: the correlation between country risk and economic security does exist. The strongest negative correlation is between real effective exchange rate (country risk ratio) and balance of international trade in goods for economic security, as well as between unemployment rate (social indicator of country risk) and balance of international trade in goods for balance of payments in economic security. Strong positive correlation is observed between GDP in domestic economic variables and balance of trade in balance of payment (country risk) and gross fixed capital formation and general government gross debt (in economic indicators for economic security). Strong positive correlation can also be noticed between exports of goods and services (balance of payments for country risk) and market integration by type of trade activities (balance of payments for economic security). Such elements of country risk as inflation are not very influencing all economic security ratios (no strong relationship was detected). It was proved that economic security was related to / dependent on country risk ratios.

For future investigations, new methods for country risk assessment and economic security evaluation could be used (for example, utilizing S&P ratings) and results compared to those received by using MULTIMOORA method. Furthermore, a new

investigation on interrelationship between economic security and economic sustainability could be introduced, implementing a three-dimensional analysis.

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Export Barriers and Stimuli in the Russian Federation

Mikalai Dudko

A B S T R A C T

Objective: The purpose of this article is to identify and analyse existing export barriers and stimuli in the Russian Federation.

Research Design & Methods: The gravity model is used to identify and assess impact of informal export barriers and stimuli. Qualitative approach and statistical analysis is used to identify and assess the impact of formal barriers and stimuli.

Findings: Russian export value depends on several informal conditions, such as distance between trading countries, economic size of a partner country and its historical heritage. Moreover, there is a wide range of instruments (both international trade and domestic policies) which are used or can be used in the Russian Federation to influence export performance of particular types of goods.

Implications & Recommendations: Present combination of instruments used suggests that Russia attempts to restructure its export – to reduce the share of energy resources and raw materials and increase the one of industrial goods.

Contribution & Value Added: Understanding of current export policies in the Russian Federation may be useful for short and medium term forecast of Russian economy development.

Article type: research paper

Keywords: Russia; export; WTO; export subsidy; export tariff; export quotas; informal export barriers; informal export stimuli

JEL codes: F13, F14

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INTRODUCTION

The Russian Federation, being one of the world largest and most influential economic players with the 7th place in GDP PPP rating according to the CIA open database, recently has become even more intriguing object of economic research after entering the World Trade Organization. While specialists in WTO are working hard to compile the Trade Policy Review for Russia (which might be much more difficult to do than for Vietnam or Costa Rica), others try to provide their own basic analysis of Russian trade – specifically of export, concentrating on barriers and stimuli.

The main aim of the article is to analyse current export-affecting tools which are used in Russia. According to the main purpose the following research tasks were established:

- To build a gravity model of Russian export to identify and analyse informal barriers.
- To identify and assess influence of formal barriers on Russian export.
- To identify and assess influence of formal stimuli on Russian export.

LITERATURE REVIEW

Among works dedicated to the topic of export barriers one should mention Anderson and Wincoop (2004) who concentrated on describing trade costs impact on international trade using gravity model. As trade costs authors name transportation cost, tariff and non-tariff barriers, legal obstacles and others. Kneller and Pisu (2011) analyse export barriers for British small and medium enterprises, which tend to export or already have some international trade experience.

Usage of gravity models has recently become a very widespread method for empirical studies of international trade in emerging markets. Especially, some works should be mentioned here: Suvankulov and Guc (2012) – gravity model of trade (panel data approach) for the Central Asia; Felipe and Kumar (2012) – gravity model of trade (standard approach) for the Central Asia with the LPI index introduced as a dummy variable; and Rahman (2003) – gravity model (panel data approach) applied to the Bangladesh's trade. Iwasaki and Suganuma (2013) and Weckström (2013) should be mentioned as authors of works dedicated to Russian international trade.

MATERIAL AND METHODS

Taking the main purpose and research tasks into consideration and based on the literature study, the following research hypotheses were assumed:

H1: There is a negative relation between implementation of export barriers and Russian export.

H2: There is a positive relation between implementation of export stimuli and Russian export.

H3: The actual combination of barriers and stimuli has been oriented on restructuring of Russian export.

With respect to defined operational aims and hypotheses the following research approaches and methods were used:

a) Quantitative: statistical analysis, specifically regression analysis (gravity model – cross-sectional approach) and trend analysis, performance data.
b) Qualitative: document data.

The reason why the aforesaid methods are chosen hides in the nature of export barriers and stimuli – while the influence of some trade policies' tools (e.g. tariffs) is relatively easy to trace, the impact of others (e.g. quotas) is more profound and in the current paper only a set of tools and the practice of their implementation can be described according to the documents available.

RESULTS AND DISCUSSION

Export Overview

Basic information about the Russian economy condition are provided in Figure 1. In 2012 Russian GDP (constant 2012 prices, fixed 2012 exchange rate) reached 2 trillion USD thereby exceeding the pre-crisis level. Concerning export, one can see that starting from 1998 its value was significantly higher than the import value.

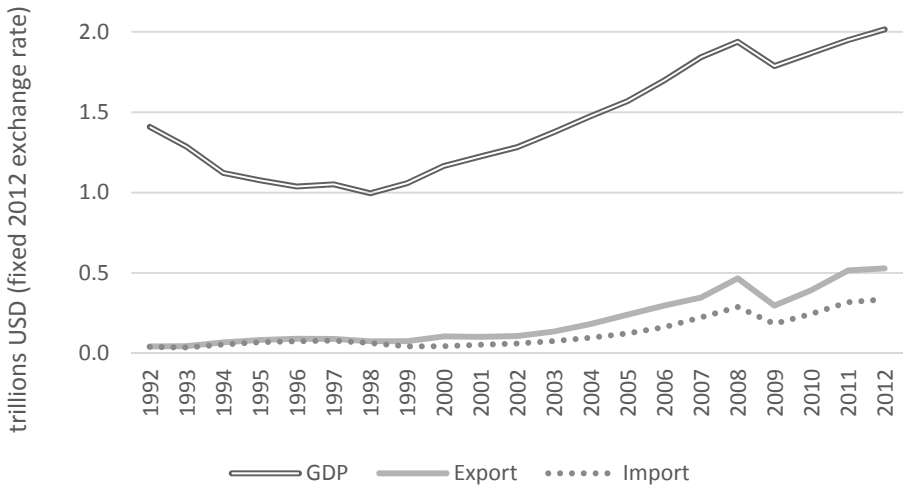

Figure 1. Russian GDP (constant 2012 prices), export and import,1992-2012
Source: own studies based on statistics database of Passport GMID.

For more detailed export analysis the monthly data 2000-2012 were used (Figure 2a). The dotted line indicates linear trend EX=3009.075+265.281*t. The application of natural logarithm of export value with the following examination of detrended data – the autocorrelation analysis – suggests that there is a repeatable annual pattern of Russian export (see Figure 2b).

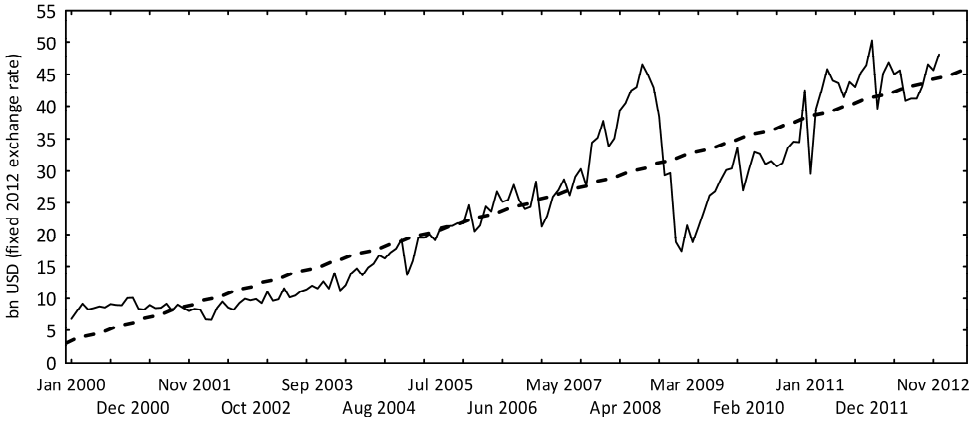

Figure 2a. Export performance, January 2000-December 2012
Source: own studies on the basis of based on Passport – statistics database.

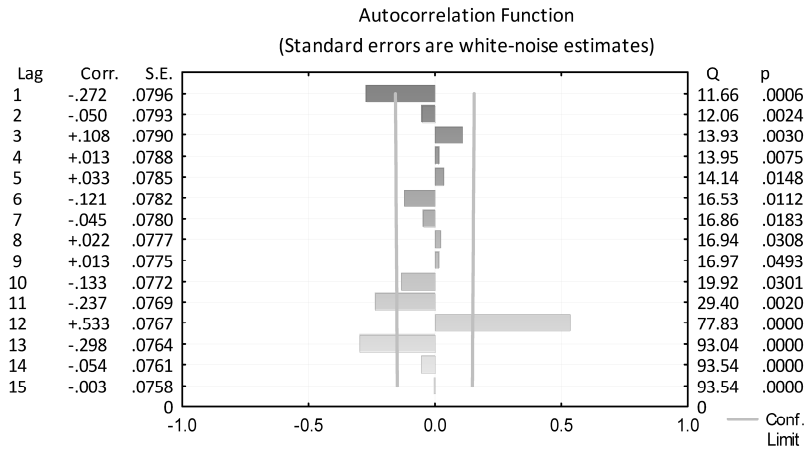

Figure 2b. Export performance – Autocorrelation analysis results
Source: own studies on the basis of based on Passport – statistics database.

Concerning export's structure by country, it must be admitted that distribution of the largest shares has not changed a lot in the past three years - the Netherlands, Italy and Germany are traditionally the largest export partners (Figure 3). However, the Herfindahl–Hirschman Index calculated for 0.5 indicates a low market concentration. A significant share of export also goes to Commonwealth of Independent States (hereafter referred to as CIS). Additionally, it is necessary to mention an increased goods flow to China – this tendency may be continued in the light of the latest progress in gas contract negotiations.

Export structure by type of good also has not changed much: circa 70% is energy resources, 4-5% – iron, steel and their products and 3-4% constitutes for an unknown SS category in the Harmonized System (HS) of tariff nomenclature which is presumably introduced for some special goods withdrawn from usual circulation. Since in the Russian

Customs Statistics of Foreign Trade that code is described as a "secret code" the assumption above seems to be the most probable explanation.

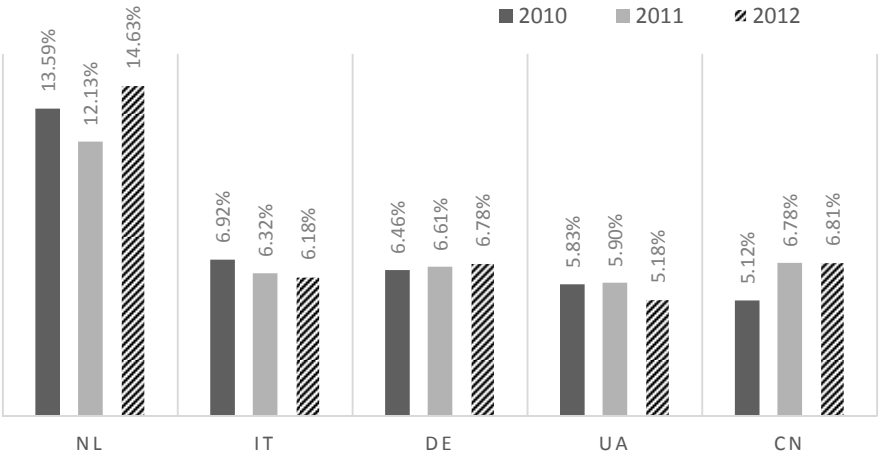

Figure 3. Export structure by country – main trade partners
Source: own studies based on data from Customs statistics of foreign trade.

Gravity Model of Russian Export: Informal Barriers/Stimuli

To provide more detailed analysis of Russian export trends and to identify existing informal barriers it was decided to build a simple gravity model of Russian export. Scientific works of Rahman (2003) and Felipe and Kumar (2012) were used to create this model. Due to the mathematical nature of the research any possible barrier with the opposite sign can be also considered as a stimulus and vice versa. The export value from Russia to a country *k* was chosen as a dependent variable, X_{Rk}. The set of independent variables was the following: Y_k – GDP of country k; y_{Rk} – difference between GDP per capita in Russia and in a target country; INF_k – inflation rate in a target country; DIS_{Rk} – the distance between the capital an importing country and Moscow (because of the fact that the level of development of Russian infrastructure, cities etc. is not homogeneous it would be unwise to use distance from some state to the border of the largest country in the world), retrieved from DistanceFromTo website; HER_k – 1 if the importing country was formerly one of the Soviet Union Republics, 0 – otherwise, this dummy variable integrates all such features as sharing common language, resembling culture and legislation; WTO_k – being a member of the WTO, 1 if true, 0 if false; LPI_k – (Logistics Performance Index) – this variable was chosen to describe the ease of movement of goods per se; the Index defined by the World Bank is based on survey of international trade operators. BOR_k – sharing the common border with country *k*, 1 if true, 0 if false.

Such dummy variable as participation in regional trade organizations (e.g. CISFTA) was not included, because all the countries, which had been in the USSR, participate in regional trade agreements.

The initial model had the following form:

$$\ln X_{Rk} = \beta_0 + \beta_1 \ln Y_k + \beta_2 \ln y_{Rk} + \beta_3 INF_k + \beta_4 DIS_{Rk} + \\ + \beta_5 HER_k + \beta_6 WTO_k + \beta_7 LPI_k + \beta_8 BOR_k + \varepsilon_k \quad (1)$$

The sample included 88 countries with which Russia was trading in 2012. Initial hypotheses were that:

1. variables Y_k, HER_k, LPI_k, and BOR_k would have a positive effect on export,
2. variables INF_k and DIS_{Rk}, were expected to have negative effect on export,
3. variable y_{Rk} could be either positive or negative.

Table 1. Regression results for dependent variable $\ln X_{Rk}$

Regression Summary for Dependent Variable: lnXRk (Gravity) R= .80813335 R^2= .65307950 Adjusted R^2= .61794831 F(8,79)=18.590 p<.00000 Std.Error of estimate: 1.0456						
Variables (N=88)	**b***	**Std. Err. of b***	**b**	**Strd. Err. of b**	**T(78)**	***p*-value**
Intercept	-	-	-2.0870	1.2123	-1.7216	0.0891
$\ln Y_k$	**0.4807**	**0.0951**	**0.4814**	**0.0952**	**5.0572**	**0.0000**
y_{Rk}	**0.3029**	**0.1062**	**0.0000**	**0.0000**	**2.8530**	**0.0055**
INF_k	0.0412	0.0809	0.0078	0.0152	0.5093	0.6120
DIS_{Rk}	**-0.4382**	**0.0758**	**-0.0002**	**0.0000**	**-5.7809**	**0.0000**
HER_k	**0.2720**	**0.0884**	**1.3329**	**0.4333**	**3.0761**	**0.0029**
WTO_k	0.0160	0.0850	0.0696	0.3705	0.1878	0.8515
LPI_k	**0.4658**	**0.1329**	**1.3856**	**0.3955**	**3.5038**	**0.0008**
BOR_k	**0.1782**	**0.0809**	**0.8734**	**0.3964**	**2.2035**	**0.0305**

Source: own study based on the Statistica software.

Results of multiple regression analysis are presented it the table 1. Significant variable are in bold. Accordingly, variables INF_k and WTO_k were found insignificant. Their consecutive elimination did not change significance of other variables. However, the multicollinearity testing showed that there was a strong correlation between LPI_k and $\ln Y_k$ and y_{Rk} – thus variable LPI_k was also eliminated from the model. This step caused a subsequent elimination of y_{Rk} and BOR_k, both marked as insignificant. Hence, in the end only three independent variables were found to have significant influence on Russian export (see Table 2).

The final model had the following form:

$$\ln X_{Rk} = \beta_0 + \beta_1 \ln Y_k + \beta_4 DIS_{Rk} + \beta_5 HER_k + \varepsilon_k \quad (2)$$

The results received may be interpreted in the following way:

– There is a strong positive relation between Russian export value and the size of economy of partner country – Russian export to country *k* will augment by 0.651% if GDP of trade partner increases by 1%. It seems logical that Russia tends to trade with

larger countries or it may happen that larger countries try to buy more goods from Russia.

- Distance has a negative impact on export – an increase in distance between trading countries by 1% leads to 0.0002% drop in export. This dependence seems to reflect the influence of transportation costs.
- Sharing the common Soviet heritage was also found to be significant – export from Russia to post-soviet countries is more than four times higher [exp(1.621652)-1=4.06]. Presumably, the economic relations that were established during the Soviet era between countries proved to be stronger than political ones.
- The WTO membership of partner country, however, does not influence Russian export – i.e. does not facilitates the trade as it was expected. The possible explanation is that with those few countries which are not in the WTO Russia have bilateral trade agreements and, besides, Russia is an economic player serious enough not to pay much attention to the fact that its trading partner is not in the WTO (e.g. Belarus).
- Inflation rate does not influence the bilateral trade flow.
- The difference between GDP per capita was not defined as significant as well, suggesting that personal welfare level in the country does not influence the trade.
- Common border also does not play any significant role. The possible reasons are firstly, the fact that Russia is large but not homogenously developed country and, secondly, participation in international trade agreements with neighbour countries which nullifies effect of having/not having common border.

Table 2. Final regression results for dependent variable lnX_{Rk}

Regression Summary for Dependent Variable: lnXRk (Gravity) R= .75396427 R^2= .56846212 Adjusted R2= .55305005 F(3,84)=36.884 p<.00000 Std.Error of estimate: 1.1309						
Variables (N=88)	**b***	**Strd. Err. of b***	**b**	**Strd. Err. of b**	**T(78)**	***p*-value**
ln_{Yk}	-	-	0.3158	0.9913	0.3185	0.7509
DIS_{Rk}	**0.6505**	**0.0790**	**0.6513**	**0.0791**	**8.2382**	**0.0000**
HER_k	**-0.4816**	**0.0763**	**-0.0002**	**0.0000**	**-6.3089**	**0.0000**

Source: own study based on the Statistica software.

In summary, one can conclude that the size of the economy and sharing common legal, cultural and language heritage can be stimuli for Russian export, while the distance between trading countries is an obstacle for the goods flow. Thus, Russia tends to develop the export to near abroad countries or to ex-partners from USSR. Adjusted R^2 = 0.55, which is a strong figure for this type of models, means that the model explains 55% of original variability. However, it is possible that usage of a panel data approach may result in more reliable model and make some of aforesaid variables significant, as far as variable fluctuations over time will be taken into consideration.

Formal Barriers – Tariffs

The general rule is that there are no export taxes within the Eurasian Customs Union (except oil and its products). Export tariffs to the CIS countries are also reduced or cancelled (Agreement on the Creation of a Free-Trade Area of 2011). In case the good which is an object of export restriction in other member of Customs Union and originated from this state is exported from the Russian Federation, the appropriate tax will be levied (Agreement on the Common Customs-Tariff Regulation with Respect to Third Countries of 2008). It must also be mentioned that any tariff rate can be a subject of negotiations between countries – according to some bilateral agreements export tariffs can be reduced. The example of such exception was export tariff for gas to the Ukraine (Decision of the Government of the Russian Federation No. 291 of 2010).

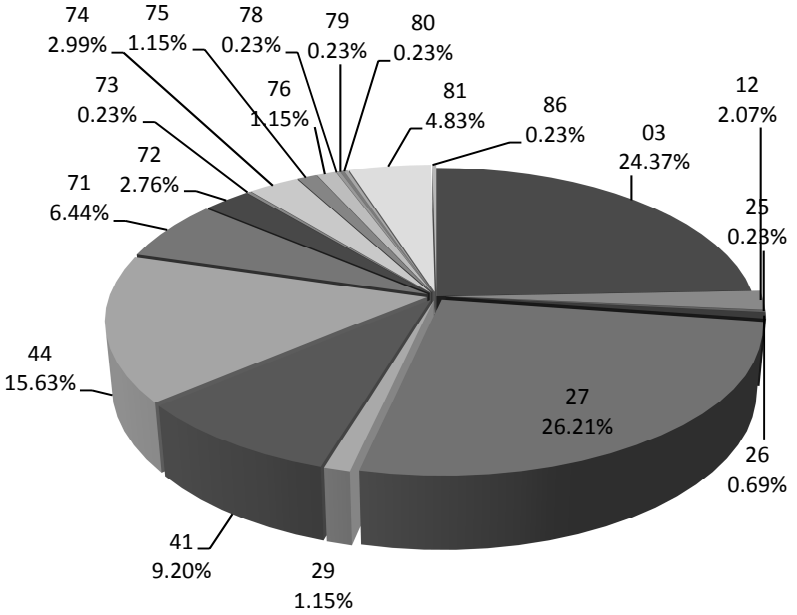

Figure 4. Tariff structure by type of good (2 digit HS codes) (30.08.2013)
Source: own studies based on Decision of the Government of the Russian Federation No. 754 of 2013.

In the Russian Federation export tax is imposed on around 435 10-digit goods groups (temporary tariffs were counted, several different tariffs within one 10-digit group was counted separately) (see Figure 4) against 426 in May 2012 – several months before the entry to the WTO; 5% of implemented taxes are specific, 46% are ad-valorem and 49% - combined.

The comparison with the previous period before the entry of Russia to the WTO reveals that share of implementation of specific tariff decreased while combined tariff became more frequently used.

For a more detailed analysis of export tariffs one group of goods was chosen, namely crude oil and some of its products. These goods are part of 27 and 29 HS 2-digit group which together represent 70% of Russian export; 27.36% of implemented export

taxes fall at these two groups. These export tariffs are controlled more strictly and changed every month. Moreover, the foreign demand on these products is very high, which may suggest that in this case export tariffs will not be able to influence negatively the export. The sample used for the analysis covers monthly data of all tariffs implemented for all dutiable 10-digit goods that fall into category of oil and its products for the period from December 2009 to September 2013. Hence, the sample consists of 46 cases and 99 variables. For the simplicity export taxes 10-digit groups were transformed into average export tax for each 4-digit group.

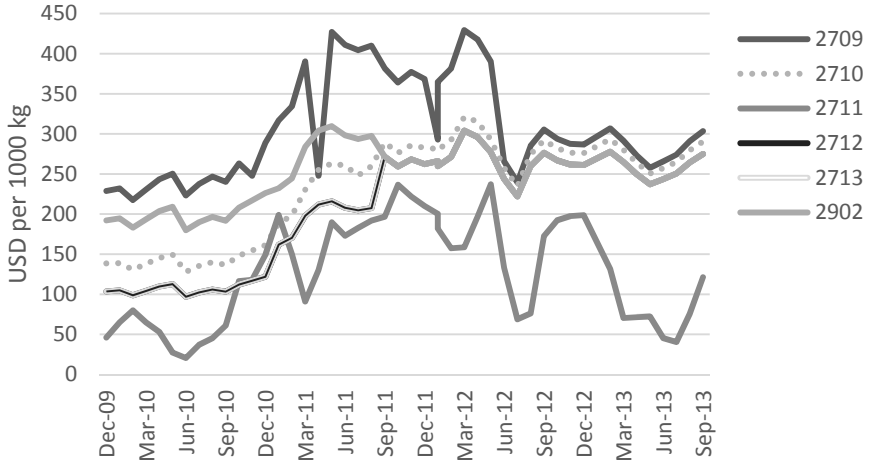

Figure 5. Monthly values of export tax on oil and its product from December 2009 to September 2013

Source: own studies based on Decision of the Government of the Russian Federation No. 695 of 2006.

The convergence can be distinctly seen on the graph (Figure 5). One can see that systematic work on the unification of export tariff rates started in September 2011. The largest simultaneous decrease reflects the period directly preceding the accession to the WTO. The suggestion may be provided that the sharp lowering of export tax for all goods described and especially for crude oil (2709) was too much artificial and demonstrative – to meet the WTO requirements. One may suggest that tariffs may not go down but will only grow in the future. However, the export tariff for oil may be interesting for research because it is seems to be not a trade barrier in the classical meaning. In principle, export tariff should reduce export, but for such product as oil this relation may not be valid.

The regression analysis where lagged (*t-1*) export tariff for oil and its products was chosen as an independent variable and the export value in month *t* (the tariff is usually introduced at the end of the month and, consequently, might influence export in the following month) was provided with the following assumptions:

– Export tax for 4-digit groups of goods (2709, 2710, and 2711) was an average tax calculated only for all dutiable 10-digit goods that are included in this 4-digit group, not taking into consideration 10-digit goods that are not dutiable.

– Export value of 4-digit group of goods was a sum of export value of all 10-digit goods, dutiable and not dutiable, within current 4-digit group. As far as dutiable 10-digit products represented either entire 4-digit group or its significant part, such level of specification was assumed to be reliable.

The analysis brought interesting results – the correlation was positive (see Table 3). The conclusion that export tariffs stimulate export seems to be highly implausible. It is, however, possible that the rise in oil products export causes an increase of export tax value. Confirmation of this can be also found in the latest versions of law concerning export tax calculation methodology – the tariff depends directly on international oil price (Decision of the Government of the Russian Federation No. 276 of 2013). Hence, it is possible to affirm that in the Russian Federation export duties for oil and its products do not play the role of export barriers, but have a fiscal function.

Table 3. Regression results for crude oil and its products (4-digit HS groups)

Dependent variable – export value (N=45)	Independent variable – export tariff	Significance
ln 2709ExUSD	ln 2709T b=0.549	significant
ln 2710ExUSD	ln 2710T b=0.61	significant
ln 2711ExUSD	ln 2711T b=0.361	significant

Source: own study based on the Statistica software.

Concerning other widely exported goods, the tariffs for them can be implemented because of:

a) Legal reasons – export tariff for ferrous and non-ferrous scrap is imposed on 24 goods from 72, 75, 76, 78, 79, 80 and 81 HS group. Russia, being one of world largest exporters of ferrous and non-ferrous scrap (Karpenko, 2013), implements the tax to reduce the profitability of this activity – making primary purchase price less attractive for the population and, subsequently, preventing the crimes and damages to enterprises and infrastructure.
b) Raising additional capital for certain sector of production – timber, 44 HS group. Moreover, tax for timber export in some sense favours the ecology by reducing volumes because of lower profitability.

Formal Barriers – Non-Tariff Barriers

In Russia non-tariff export restrictions can be divided into: prohibitions, restrictions of export per se of particular good and quantitative restrictions of export of particular good. It is prohibited to export: certain ozone damaging products; data carriers which contains extremist information or other information that can cause moral damage; several kinds of personal weapon and its parts, ammunition (Resolution of the Collegium of the EurAsEc Economic Commission No. 134 of 2012).

To export restricted goods (by quantity or by nature of good) an exporter needs to have a license from the state or international organization, which controls movement of such kind of goods (Federal Law No. 164-FZ of 2003). A license can be general or valid for one occasion (Agreement on the Rules for Licensing in the Sphere of Foreign Trade in

Goods of 2009). The general license allows an economic player to export certain quantity of goods during a period of time no longer than one year, while valid for one occasion license is given on the basis of a contract and allows to export once the quantity specified in it.

Certain types of goods originated from Russia are restricted to export: certain ozone damaging substances; dangerous waste products; mineralogy and palaeontology collections and their parts; living wild animals and plants (including endangered species), and some of their products (e.g. caviar); some precious metals and precious stones (including waste products, fragments and raw materials); mineral raw materials; narcotics, psychotropic substances and their precursors; poisonous substances; facilities for secret access to information and cryptographic hardware; historical and cultural values; parts of human body, blood and its components; personal weapon and its parts, ammunition (Resolution of the Collegium of the EurAsEc Economic Commission No. 134 of 2012); and others, which can be defined by Russian government or international agreements. Moreover, the Russian Federation controls movement of goods which are objects of export control – goods that can be directly used as weapons of mass destruction or means of delivery and dual-purpose goods. The majority of aforesaid restrictions come from the world practice of restrictions and prohibitions for defined range of goods; hence the change in flow of denoted goods will be limited and connected rather with some other factors than trade policies.

Quantitative restrictions are in a form of quotas. Distribution of quota on goods is put into practice in a form of equal, non-discriminating auction among economic agents. For all the members of the Customs Union there are the same rules of implementation of quotas to the third countries. The most general of them is the rule of non-discrimination – restrictions must concern only certain types of goods (Trade in Goods on the Common Customs Territory with Respect to Third Countries of 2009), unless the restrains result from some bilateral agreement between Russia and the third country (Agreement on the Common Measures of Non-Tariff Regulation with Respect to Third Countries of 2008). Generally, all the measures connected with quantitative restrictions of export are elaborated in cooperation with all member states of the Customs Union. However, there are also possibilities of unilateral implementation of quotas or prohibitions for a six-month period. The following economic reasons can be behind unilateral or mutual implementation of export restrictions: prevention of exhaustion of natural resources, fighting deficit of foodstuff or any other goods that are found crucial for the domestic market (Trade in Goods on the Common Customs Territory with Respect to Third Countries of 2009). As far as raw materials play an important role in Russian export structure, one can conclude that any export restriction connected to them can be easily justified by the state.

Quantitative restrictions of export are not implemented officially in Russia in 2013. However, there are voluntary export restrains of some steel products to European Community (Agreement between the Russian Federation and the European Community on Trade in Certain Steel Products of 2005) and to the USA (Agreement Suspending the Antidumping Investigation on Certain Hot-Rolled Flat-Rolled Carbon-Quality Steel Products from the Russian Federation of 1999). This and the fact that steel products (72-group) are included into the list of crucial products may make one think that even though

Russia participates in the agreement that unifies and restricts implementation of export quotas, it has a relative freedom for providing its own export policy. Quantitative restrictions can be implemented in Russia at any time if the state finds it indispensable to do so.

There can be also established a monopoly on export of certain goods (Federal Law No. 164-FZ of 2003). In that case exceptional license is given to an economic agent (Agreement on the Rules for Licensing in the Sphere of Foreign Trade in Goods of 2009). At present, there is a monopoly of trade for two types of goods – petroleum gases and other gaseous hydrocarbons; liquefied/in gaseous state natural gas – which is realized by JSC Gazprom (Protocol Resolution of Economic Council of the CIS on the Review of Trade Policy of the Russian Federation of 2012).

For several goods the tariff quota is established with the obligation of having license – Spruce fir "Picea abies Karst" and noble fir "Abies alba Mill" and Archangel fir "Pinus sylvestris L." (Decision of the Government of the Russian Federation No. 779 of 2012).

Another special type of restrictions that should be mentioned is "setting up the surveillance". According to the law the surveillance is used to scrutinize flows of particular goods for which other method of recording is inapplicable. However, in reality it means that economic parties must have not a license, but a permission to export a certain quantity of these particular goods (Agreement of the Procedure for the Introduction and Application of Measures Dealing with Foreign Trade in Goods on the Common Customs Territory with Respect to Third Countries of 2009). Even though the permission must be given to any economic agent that applies for it (Agreement on the Rules for Licensing in the Sphere of Foreign Trade in Goods of 2009) the additional paperwork may complicate the export.

It is important to admit, that for some types of goods there are no direct restrictions of export, but at the same time there are some hidden restriction. The example is licensing for production and storage of alcohol (Federal Law No. 171-FZ). These requirements indirectly impede exports as far as export usually implies earlier production and storage. The same situation is with ferrous and non-ferrous scrap – there are no direct restrictions for export, but at the same time storage, recycling and sale of these goods requires a license (Decision of the Government of the Russian Federation No. 1287 of 2012).

Another hidden barrier for export can be an obligation of export of certain goods through the particular custom offices. This may augment the price – distance and waiting time increases transportation costs. Before 2004 Russia was quite actively using this tool for ferrous and non-ferrous scraps (Order of the State Customs Committee of the Russian Federation No. 1219 of 2000) and several sorts of timber (Order of the State Customs Committee of the Russian Federation No. 184 of 2000). At present this kind of barrier is not used, though still there is a legal option of its implementation for any type of goods (Federal Law No. 311-FZ of 2010).

Concerning domestic policies that may negatively influence export one should mention domestic tax for mining operations – specifically applied to fossil fuels (oil, gas, peat etc.), ores and some other raw materials (Tax Code of the Russian Federation of 2000).

Stimuli – Guaranties and Crediting from the Eximbank

Since 2003 for facilitation of export to emerging markets the Russian Federation has been providing measures to lower risks for involved economic agents who export industrial goods. The term "industrial goods" includes goods from more than three hundred 4-digit groups of goods (Order of the Government of the Russian Federation No. 1222-r of 2004). For that purpose the special bank, Eximbank of Russia, was created as an agent bank. The bank targets goals concerning export stimulation such as issuing of government guaranties and crediting. The guaranties include:

1. Government guarantee to Russian exporters to secure payment obligations.
2. Government guarantee to banks (foreign or national) to secure credit payments obligations resulting from banks' export crediting activities.
3. Government guarantee to Eximbank of Russia to secure debts and guarantees issued by the bank; to secure its obligations of transactions connected with export supporting activity; to secure its obligations of bank guaranties towards Russian exporters (Order of the Government of the Russian Federation No. 1493-r of 2003).

Table 4. Government guarantees: list of countries and limits

Country	% of contract price	Millions of USD
Algeria, Belarus, Brazil, Vietnam, Egypt, Indonesia, Peru	95%	1 000
Angola, Venezuela, Jordan, Columbia, Turkey, Philippines	90%	500
Argentina, Iran, Yemen, Macedonia, Namibia, Morocco, Serbia, Tunisia, Nigeria	85%	200
Albania, Bosnia and Herzegovina, Gabon, Guatemala, Kenya, Costa Rica, Maldives, Panama, Paraguay, El Salvador	85%	100
Azerbaijan, Armenia, Bangladesh, Belize, Georgia, Cuba, Tajikistan, Lebanon	85%	50
Kirghizia, Moldova, Turkmenistan, Uzbekistan, Ukraine	85%	10

Source: prepared by the author on the basis of Order of the Government of the Russian Federation No. 566-r of April 25, 2008 and Order of the Government of the Russian Federation No. 1493-r.

The volume of the Government support is defined in the annual Federal Budget. Guarantees without individual limits can be given if goods are exported to any country with credit rating higher than BBB. Additionally, there is in a list of countries with lower credit rating for which guaranties are also provided (see Table 4). The limit of guarantee amount depends on which group the country belongs to.

It is necessary to admit that adding to the aforesaid gravity model a possibility of government guaranties as a dummy variable shows no significant correlation, suggesting the guaranties have no impact on total export. However, it can be explained by the fact that that share of the goods to which this instrument is applied in total export is very small.

Credits are also widely used to augment export of industrial goods. Credits can be granted for the period from 5 to 20 years (Eximbank Annual Reports) and may cover 85% of the contract price (100% in exceptional cases – priority export projects) (Order of the Government of the Russian Federation No. 1493-r of 2003). The credits are financed

from the Federal budget (completely or partially) and granted to foreign importers, foreign banks or governments of foreign states (Order of the Government of the Russian Federation No. 1493-r of 2003).

For Russian exporters (especially of industrial goods, but not necessarily) special pre-export credits are also provided.

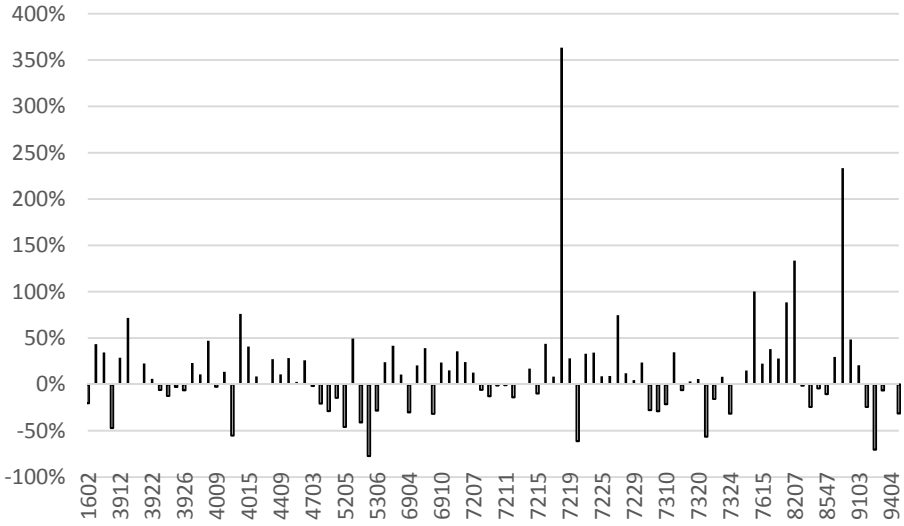

Figure 6. Changes of export value of goods for which export guaranties and crediting were implemented

Source: own studies based on Customs statistics of foreign trade and Order of the Ministry of Industry and Trade of the Russian Federation No. 518 of 2012.

To check if the guarantees and crediting stimulate export it was decided to compare the export performance of goods for which these stimuli were implemented in different periods. The model had the following assumptions:

1. The sample included goods for which only guaranties and export crediting are applied. It means that industrial goods with high level of processing were excluded from the list of industrial goods. That must allow assessing the pure influence of this stimulus on the export performance.
2. The quality of export data did not allow to use deeper specification than 4-digit goods group. Thus the final sample represents export only for 102 4-digit groups.
3. Timeframe is 3 years – 2010-2012. The difference will be shown between the first and the third years of observation.

Figure 6 shows that for the large part of industrial goods which were stimulated by government guaranties export increased in the last two years. At the same time export of some goods supported in this way decreased. Comparing total performance it was found that in observed period export of the target groups of goods increased by 16%. However, the share of export of the aforesaid groups of goods in the total export

decreased from 7.56% to 6.68%. The latter implies that probably in the observed period such stimulus as government guaranties was not as efficient as it should be.

Stimuli – Export Subsidies

Concerning export subsidies it must be admitted that they are realized in the form of repayment of interest on export credit which was taken from any Russian institutional lender to finance export of Russian industrial high-value-added goods. This group of goods is more specified – it intersects with the group of industrial goods for the most part (Order of the Ministry of Industry and Trade of the Russian Federation No. 518 of 2012) and corresponds to goods which production is more advanced technologically and economically. The share of these goods in total Russian export is insignificant – only 5% in 2011 (Vnesheconombank Annual Report-2011). The subsidies can be given to: national exporters – winners of tendering, foreign governments which import Russian production, foreign companies which import Russian production (Protocol Resolution of Economic Council of CIS on the Review of Trade Policy of the Russian Federation of 2012; Order of the Government of the Russian Federation No. 1493-r of 2003).

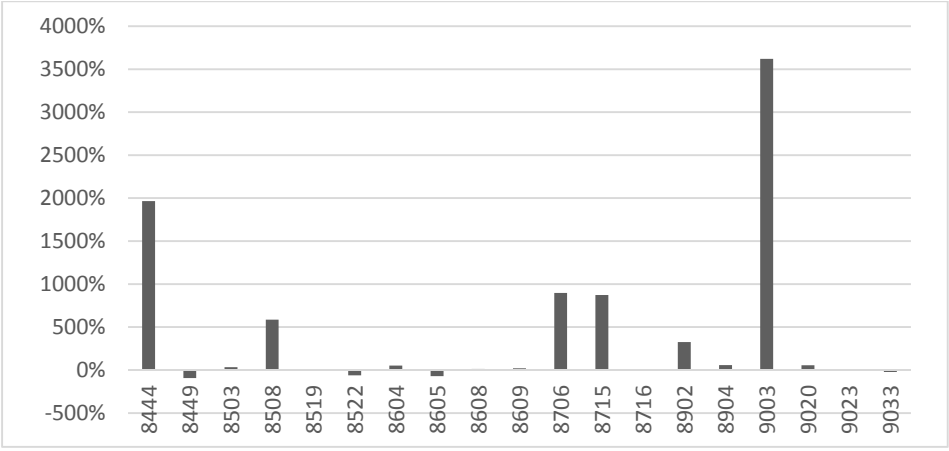

Figure 7. Change in value of export of goods for which export subsidies were implemented
Source: own studies based on Customs statistics of foreign trade; Order of the Ministry of Industry and Trade of the Russian Federation No. 518 of 2012.

To assess the effectiveness of this particular kind of stimuli it was decided to compare export of some industrial high-value added goods in different periods. The sample includes 16 4-digit goods groups for which only subsidies where implemented in 2011 and 2012 (see Figure 7).

One can see the strong export performance for which the subsidies were implemented. Total export of industrial high-value-added goods (included the aforesaid outlier) increased by 52.46% - from 567.5 million USD in 2010 to 865.2 million USD in 2012. Relatively to the total export their share also augmented – 0.14% in 2010 against 0.16% in 2012. One can conclude that export subsidies effectively stimulate export.

Customs Payment by Instalments and Crediting

In the Russian Federation there is also some kind of stimuli that can be provided only if a barrier is implemented – it is crediting or giving possibility of payment by instalments of sums of export duty that economic agents are obliged to pay to customs office (Customs Code of the Customs Union, Appendix to the Treaty on the Customs Code of the Customs Union Adopted by Resolution of the Interstate Council of the Eurasia Economic Community No. 17 of 2009). In this case the interest rate which has to be paid (Federal Law No. 311-FZ of 2010) is equal to the refinancing interest rate of the Central Bank of the Russian Federation. That latter fact implies that the interest rate will be lower than any other proposed by commercial banks. The period of time for the aforesaid measures is from one to six months. However, the only technical chance for exporters to receive this credit or possibility to pay in instalments is to have a delay in government financing due.

Hence, the current stimuli can be assumed as a supplementary one in the irrational situation when tariffs and subsidies are implemented. It must be admitted that such a situation exists at the present time – for the goods from 8607 19 100 1 HS group combined export tax is levied and, at the same time 8607 HS group is included in the list of industrial high-added value group.

Domestic Subsidies

Generally, subsidies can be used in Russia including cases of stimulation of production of goods (Budgetary Code of the Russian Federation No. 145-FZ of 1998). The implementation of domestic subsiding which can influence export depends on Russian international agreements.

Concerning the Customs Union Russia has no right to implement the domestic subsidies for industrial goods which will influence export to other member state if such subsidizing is the main condition for the occurrence of export of the goods. In other cases the subsidies can be implemented (Agreement on the Single Rule of Industrial Subsiding of 2012). The term “industrial goods” does not include the same goods as industrial goods which were mentioned before while analysing export subsidies - it is much broader – 25–97 HS group with few exceptions. Hence, basically the subsidies must not allow helping exporting enterprises to reach the breakeven point. The WTO does not prohibit domestic production subsidies, but at the same time insists that they may have a negative impact on the trade flow between countries and condition the introduction of countervailing measures by the trade partners (Agreement on Subsidies and Countervailing Measures). Moreover, there are exceptional rules for subsidizing agricultural products.

As one can see in Russia there is a possibility to use domestic subsidies as an instrument of export stimulation. However, it seems to be very difficult to examine any effect, positive or not, of these subsidies on export performance – their use is not widely announced and, moreover, quite decentralized – these subsidies can be given from the local budget. The best indicator, that country actively uses domestic subsidies will be the existence of antidumping investigation in relation to Russian goods. Generally, there

were three antidumping investigations against Russia in recent times (Zubtchenko, 2013).

CONCLUSIONS

Relying on the research provided, it is possible to conclude that Russia actively uses a wide range of instruments to influence its export. This includes not only standard trade policies, usage of which is rather limited right now because of necessity of the WTO obligations fulfilment, but also some domestic policies, which, while not being directed exactly at export, nevertheless indirectly influence the export performance. Moreover, it is possible to assume that the WTO membership does not restrict Russia so much in choosing trade policy instruments – almost anything can be justified using national legislation.

Concerning informal barriers it was established that such informal barriers as distance, not sharing the common Soviet Union heritage and small economic size of the trade partner significantly negatively influence the export value. At the same time the analysis of the influence of such formal barriers as oil export duties on oil export did not show any negative dependence. However, this result probably comes from the specificity of the good. Concerning quantitative restrictions, their impact on the export is basically defined by their nature. Hidden barriers, in their turn, with high probability negatively influence the export, but this influence is almost untraceable – e.g. one can only suppose how the export would grow if the mining tax was abolished.

The examined sample of goods for which such stimulus as export subsidy was implemented showed that in observed three years period the export of this goods shown a strong growth in absolute value (52.46%) and in the export share (0.02%). In the same period other goods, for which the state offered government guaranties and export crediting showed a moderate growth (16%) and decrease in total export share (-0.88%). That makes doubtful the idea of effectiveness of government guaranties as a stimulus for Russian export. However, it may happen that in a long term this instrument will be more efficient.

The final conclusion is that following the combination of the barriers and stimuli has a macroeconomic aim to restructure Russian export. This conclusion is drawn from the comparative analysis of structure of barriers and stimuli by type of good – barriers are implemented mainly to the raw materials and some other not technology-intensive goods, while export subsidies are used to encourage exporters of industrial and high-value added industrial goods. One may suppose that Russia seeks to reduce its dependence on petrodollars.

Further research must be dedicated to more advanced trade model which would be possible to use for Russian export development forecast in a short and medium term.

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Economic Effects of the Urbanization Process in China

Agnieszka Witoń

A B S T R A C T

Objective: The aim of the paper is to present and combine selected aspects of China's economic development: the agricultural reform, the household registration system, internal migration, and urbanization. Its further objective is to test the hypothesis that urbanization positively influences the economic growth in China whereas the *hukou* system has a negative impact on growth.

Research Design & Methods: The main method chosen for verification of the hypothesis is the critical analysis of existing literature of the topic. Some basic statistical analysis is also used. The relationship between variables is tentatively explored with correlation analysis.

Findings: The hypothesis positing the beneficial influence of the urbanization process on economic growth in China may be verified positively. This occurs through the increase of productivity in the rural areas, the increase of the internal demand, and the utilization of labour surpluses. The hypothesis positing the negative effects of the *hukou* system on the economic growth can also be confirmed. Through limiting the free flow of migration, the *hukou* system lowers the pace of modernization and efficiency of the agricultural sector and also decreases the quality of the human capital by depriving people of social care.

Implications & Recommendations: The urbanization process requires a fair amount of control and planning if it is to be considered one of the most important factors in Chinese economic growth. A reform of the *hukou* system is also crucial. Naturally, further research is needed. The suggested fields of analysis are as follows: the restraints of the continuous rapid economic growth in China, the relation between the accelerating urbanization and the income level, and the regional income disparity.

Contribution & Value Added: The paper adds to the literature by combining concepts and presenting them as one multidimensional problem.

Article type: conceptual paper

Keywords: China; economic growth; migrant workers; urbanization

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INTRODUCTION

China is a country that for more than the last three decades has been characterized by unprecedented economic growth. Since 1978, the initiation of the change in politics taking the form of reforms by Deng Xiaoping, which laid the foundations for economic growth, the average yearly growth of GDP amounted to almost 10%. This phenomenon is explained by conscious design of the development path as well as less tangible reasons, such as cultural causes. External conditions are also not without merit, among them the development of financial markets, liberalization of capital flows, and high prices on global commodity markets.

The aim of the paper is to present and combine selected aspects of China's economic development: the agricultural reform, the household registration system, internal migration, and urbanization. Its further objective is to verify the hypothesis that urbanization positively influences the economic growth in China and that the *hukou* system has a negative impact on said growth. The method chosen for verification of the hypothesis is the critical analysis of existing literature and statistical data.

This article contributes to the existing literature by combining concepts and presenting them as one multidimensional problem. Through an application of an interdisciplinary approach, urbanization, primarily a social and demographic phenomenon, is considered in an economic context. This allows to answer the questions that determine the relevance of the topic: What is the relation between the urbanization and economic growth? Does the urbanization influence the economic growth rate? Does internal migration accelerate or impede the economic growth? Are changes in the household registration system (*hukou*) necessary?

MATERIAL AND METHODS

Urbanization is a phenomenon closely related to Chinese economic growth. Similarly to economic growth, urbanization's dynamic also can be described as unprecedented. The aim of this paper is to present some aspects of the development, namely agricultural reform, internal migration, and the rise of the number of inhabitants of the cities; it also aims to answer the question about the feedback loop between economic growth and urbanization as well as about the role of the *hukou* system in modern China.

This aim and the existing literature allows for a proposed hypothesis that posits a positive influence of urbanization on accelerating economic growth in China and a negative influence of the *hukou* system on said growth.

This hypothesis will be verified by using critical analysis of the literature and statistical data. The character of the analysis will be in the prevalent part qualitative. The time-series data concerning China was collected from the World Bank database for the period of 1960-2012.

The research process consisted of the following stages:

- an analysis of the literature concerning the background of the research topic: the Chinese development paradigm and the *hukou* system,
- an analysis of the process of urbanization in China, its dynamics and characteristics, based on the statistical data and literature,

- an identification and analysis of phenomena related to the urbanization process: the internal migration and rural-urban inequalities,
- proposing the hypotheses,
- an identification of the economic effects of the urbanization process in China,
- an analysis of the influence of the *hukou* system on the economic growth,
- the verification of the hypotheses and the proposition of future actions.

LITERATURE REVIEW

The Chinese development paradigm is analyzed in numerous publications, among them works of Liberska (2010), Gawlikowski (2004), Kowalik (2005), and Góralczyk (2012). It would be prudent to mention also the monumental work of Fenby (2008), which covers the Chinese history in a most complex manner. Naughton (2007) in his book 'The Chinese Economy. Transitions and Growth' also gives a thorough overview of Chinese history, as well as its economic reforms and current economic issues. Interesting approach to Chinese reforms can be found in the work of Ramo (2004). Chinese economy in the light of recent challenges is discussed by Prasad and Rajam (2006), and in the report 'China 2030. Building a Modern, Harmonious, and Creative Society' published by the World Bank (2013). A key aspect of Chinese development process, the emerging middle class, is also an important topic of many publications, among them the work of Farrell, Gersch, and Stephenson (2006). They consider the emergence of the middle class from the enterprises' point of view. Kharas and Geertz (2010), on the other hand, predict that the Chinese middle class will serve as an engine of growth not only for the Chinese economy, but a global one as well. Finally, a complex overview of China's growth drives can be found in the work of Lin (2012).

The Chinese have named their economic model a "social market economy", but the capitalism directed by leaders of the communist party hardly corresponds with the western understanding of the term. The Chinese development model is also called a scientific approach to development. It consists of rational economic planning based on experiences of other countries with consideration for local specifics: geographic, demographic, politic, and cultural determinants of growth (Liberska, 2010). Specifically, this comes in the form of Chinese reforms framed within an ongoing globalization process, the gradual opening up of the economy, an approach in which it is the state who decides on the range, speed, and tools that are used in active participation in globalization. This is what Stiglitz (2006) calls “managed globalization”. It allows to avoid boom and depression periods. This model, known as the Beijing Consensus, has proven to be more effective than the heavily promoted neoliberal model, the Washington Consensus.

The groundwork of China's economic success was laid in 1978 by Deng Xiaoping in the form of a modernization project. Reforms concerned five key aspects: gradual introduction of market economy rules, abandoning Maoist ideology in favor of rebuilding proper administrative structures, implementing law and order coupled with democratizing social and political life, opening up the country to the world, and finally reinstituting respect for tradition and old Chinese culture (Gawlikowski, 2004).

Góralczyk (2012) lists the main elements of the Chinese development paradigm:

- pragmatic, non-ideological approach of the government to reforms;

- objective assessment of their own strengths and opportunities;
- active participation of the state in economic processes;
- strong state, led by well-educated elites;
- conscious use of the "market before democracy" rule, focusing on economic changes rather than social-political ones;
- acceptance of human rights treated as providing for the basic needs in a material sense, as opposed to the different aspects of individual freedom emphasized in Western countries;
- neoauthoritarianism derived from patriarchal Confucian rules mixed with communitarianism;
- opening up to the world and participation in globalization process, which is unprecedented in Chinese history;
- in international relations, the adherence to the rules of peaceful coexistence (respecting independence, territorial integrity and self-determination of the nations).

Effects of the Chinese economic policy can be seen not only in the country's dynamic economic growth. It is often posited that history has never witnessed the case of so many people enriching so much in so little time (Fenby, 2008). Almost 400 million Chinese people have been raised out of poverty: in 1984 as much as 84% of the population belonged to the group living under the poverty line (with income under 1 USD daily); in 2005 this group amounted to only 16% (Liberska, 2010).

China's urbanization process is investigated in various contexts. Zhu (2012) examines the evolution of China's city size. His findings show that in the long-run the city size growth is parallel to the model typical for developing countries. Also Kojima (1995) finds that patterns of China's urbanization are similar to those found in other developing countries. In his work he examines the relation between migration and urbanization and the regulations concerning the migration. Zhang and Song (2003) investigate the factors behind the migration boom. Their main findings are as follows: the rural-urban migration made dominant contribution to urban population growth, the causal link runs from economic growth to migration, and that the amount of intra-province migrants is positively related to the rural-urban income gap. Inequalities caused or increased by the urbanization process are the main topic of the work of Park (2008). An entirely different approach to urbanization is applied in the work of Chen (2007). The urbanization process is considered there in the context of the problem of land scarcity. Having expressed concerns over soil availability for grain production and soil quality degradation, Chen finds that China's cultivated land is shrinking and the urbanization process, unless backed with policy changes, is a threat to food security.

It is hard to analyze the urbanization process in China without mentioning the *hukou* system. A throughout analysis of this household registration system, as well as its impact on rural-urban migration, can be found in the work of Fan (2008). Also Chan and Buckingham (2008) investigate the functions of the *hukou* system. They examine the reforms of this system, finding that instead of abolishing the limitations, the reforms actually made migration harder than before, and that the *hukou* system is a major divide between rural and urban population.

RESULTS AND DISCUSSION

Changes in the Agricultural Sector

The basic challenge that China had to face, a problem that has remained relevant, was to provide all citizens with adequate living conditions. This problem pertained mainly to rural areas. In 1978 less than 24% of the population was employed in cities. The rest of the inhabitants worked in the countryside, usually in the inefficient agricultural sector. Together with the mining sector, agriculture employed 75% of the labour force while generating only 28% of GDP (Kowalik, 2005).

In this situation the logical step was to start economic reforms with the agricultural sector. It meant gradually abandoning a collectivistic model of life and work. Basic decisions regarding production were given to the rural households, which were supposed to prepare them for functioning in market economy conditions. In 1979 and 1983 agricultural procurement prices were increased significantly. This caused increased efficiency and returns in rural households. Through various people's mobility limitations, the government encouraged them to "leave the land without leaving the village", to change their professional activity profile from agricultural to non-agricultural without changing their place of residence. In 1983 rural residents were given permission to leave the village in commercial purposes. For the first time farmers were able to undertake commercial activity outside of their home villages (Arrighi, 2008). Nonetheless, despite a substantial surge in the size of free exchange on the agricultural products market, the state still maintained a significant amount of control over supply. It was accomplished by introducing state reserves and export quotas (Kowalik, 2005).

Reforms of the agricultural sector have caused a significant increase in productivity in this type of economic activity. The beginning of the eighties was marked by dynamic growth of value added generated in agriculture. In 1981 this value rose by 7%, in 1982 by 11.5%, in 1983 by 8.3%, and in 1984 by almost 13%. The average yearly growth of value added in 1981-1990 amounted to 6.2%, in the following decade 3.8%, and in 2001-2012 value added in agriculture increased by 4.2% a year on average (see Figure 1).

The productivity growth in agriculture can be in part attributed to Township and Village Enterprises (TVEs). In 1984 regulations regarding people's mobility were once again loosened. Farmers were allowed to work in nearby towns in emerging TVEs. These entities engaged part of the rural labour force surplus, moving it from agricultural activity to labour-intensive industrial activities. The scale of this phenomenon was substantial. In 1978 rural residents not employed in agriculture amounted to 28 million; in 2003 this number increased to 176 million, with most of these people employed in TVEs. In 1990 TVEs were subjected to more rigorous regulations; the collective ownership of the TVEs was assigned to all inhabitants of the town or village, but it was the local government who made management decisions. Regulations concerned also the reinvestment of profits, which was supposed to encourage modernization of the enterprises and the development of local society. Further regulations were not successful. Many differences between Township and Village Enterprises remain, but it cannot be denied that they have influenced China's economic success and improved the living conditions in rural areas through decreasing hidden unemployment, increasing income of the rural

households and partially lowering the burden of local taxes placed on households (Arrighi, 2008).

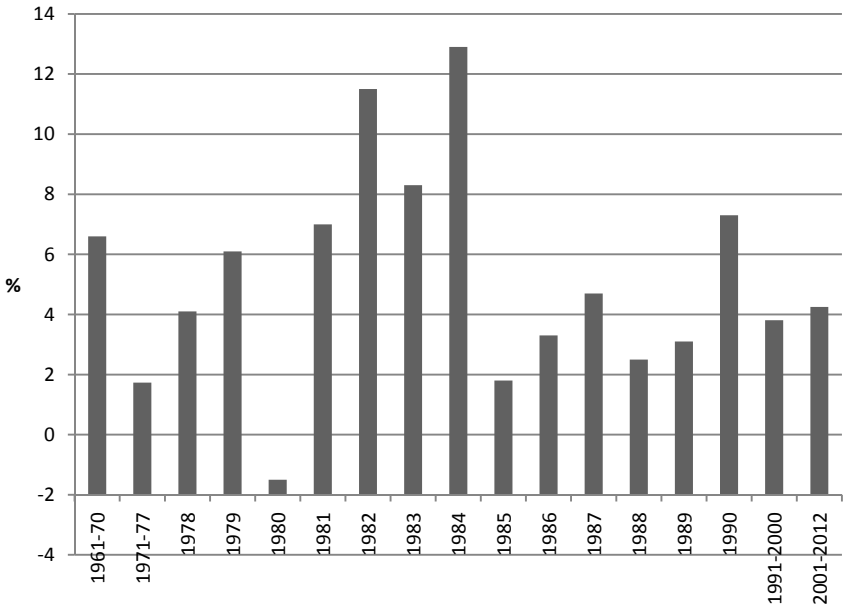

Figure 1. The growth of value added in agriculture in China in the years 1961-2012 (in %, yearly average)
Source: Own compilation and calculations based on the World Bank data.

In spite of the improvements of conditions on the Chinese countryside, however, the standard of living is still poor. In 2006 21.5 million rural residents lived in absolute poverty as defined by Chinese government (their annual income was less than 693 yuan, which is about 0.67 PPP USD a day), and the income of another 35.5 million people was less than 958 yuan a year (Liberska, 2010). In this situation mass migration from villages to cities is no surprise.

The Hukou System

The *hukou* system is a household registration system. When it was first implemented in the times of the Xia Dynasty (approx. 2070-1600 B.C.), it served as a family registry, but later it developed and acted as a differentiation between clans and tribes. Throughout Chinese history the authorities used it as a foundation for taxation systems.

The *hukou* system was reintroduced in the communist period in 1958. Its function was to serve as an internal passport. A citizen was tied to the specific urban or rural area in which he or she was born and was supposed to remain for the duration of his/her life. Those with rural *hukou* were provided with land, and those with urban *hukou* were provided with a place of employment. *Hukou* defined the place where a person was entitled to social security benefits that could not be moved from location to location. In this way, internal migration was limited (Fan, 2008). Of course, there were exceptions to

the no-migration rule: rural residents could relocate to a city for educational purposes or urban resident could be relocated to the countryside as a form of repression.

Along with economic reforms and ongoing industrialization, new workplaces were created in the cities, which enticed poor rural residents. The *hukou* system was gradually changed; solutions such as temporary migrant status, selling the urban *hukou*, and regulations loosening in the smaller cities were introduced (Fan, 2008). The system's function of limiting mobility was practically abolished. However, it still remains a serious problem for the migrants. Direct factors limiting mobility are no longer viable, but the indirect limitations are valid even today.

A person leaving his or her region is in fact a no-class citizen, not belonging to the social stratification structure. It was already mentioned that the *hukou* system does not allow social benefits to be brought along when relocating to another area. Any basic form of free education, health care, or retirement benefits is not available to migrants. The social status of people changing their place of residence parallels the status of illegal immigrants, but they are illegal immigrants in their own country.

Despite those drawbacks numerous people decide to change their place of residence from rural to urban areas. China is facing the biggest flow of migrants from rural to urban areas in modern history. The number of migrants amounts to as much as 20 million people a year. It is estimated that in the 2010-2020 decade, as many as 300 million people will move from the countryside to cities (Liberska, 2010). Urban areas are therefore full of second-class citizens as codified by the *hukou* system.

Some of the negative effects of the *hukou* system are as follows:

- migrants relocating to cities, devoid of the chance to acquire an adequate place to live, settle on the outskirts, causing chaotic, unplanned, and undesired growth of the cities;
- growth of income inequality (Chan & Buckingham, 2008) – the rural-urban gap has increased 26% since 1997 and 68% since 1985;
- decrease in economic efficiency: not being able to leave their region, migrants cluster in small artificial towns, where productivity is much lower than that of big cities developed according to plans, due to the lack of economies of scale, lack of specialization, and not being able to reach the critical point of human capital necessary for innovation (Zhu, 2012).

The World Bank analysts emphasize the necessity of *hukou* system reforms. They estimate that free relocation of 10% of the rural residents to the cities would cause additional GDP growth by about 6.4%. If the *hukou* system was abolished or dramatically reformed the labour force could move in accordance to the needs of the market, causing productivity increase, inequality decrease, and calming the social unrest (World Bank, 2013).

Urbanization in China

In 1800 only 2% of the global population lived in the urban clusters; this had not changed for thousand previous years. As of 2008, the percentage of people living in the cities has broken the 50% barrier. There are more people living in the cities around the world than there are living in the countryside. The dynamic development of urban clusters in emerging and developing markets in Africa and Asia contributed greatly to this

phenomenon. It is estimated that by 2050 even as much as 75% of the global population will live in the cities. The process of urbanization does not slow down. Quite the opposite.

China's contribution to this global trend is significant, which is reflected in its economy. According to the World Bank, in 2012 (though some Chinese sources claim it was in October 2011) half of the Chinese population lived in urban areas. The urbanization index reached 51.8% then. Until 1981 the percentage of people residing in cities has remained under 20%. The 30% barrier was breached in 1994, and the 40% barrier was broken ten years later, in 2004 (Figure 2).

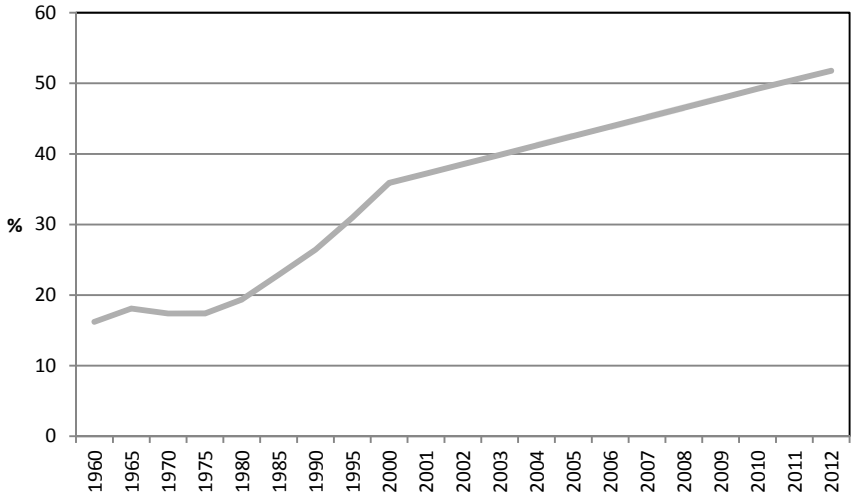

Figure 2. Urban population in China in years 1960-2012 (Urbanization index, in %)
Source: Own compilation based on the World Bank data.

This unprecedented growth (in Europe the period of rapid growth of urban population resulting in urbanization index reaching 50% lasted 100 years, in Japan 50 years, while in China only 30 years) is said to be greatly influenced by economic reforms conducted under direction of Deng Xiaoping. Many factors facilitating rapid urbanization are brought forth by the researchers: demographic changes, internal migration, changes in categories of some areas, and changes in definitions (Park, 2008). Nonetheless, the main driver of the Chinese urbanization was, and still is, the migration of masses from rural to urban areas. Additionally, it can be observed that the prevalent direction of the migration is from inland to the coast (Zhang & Song, 2003).

Economic reforms initiated in 1978 can be counted among the main motives of the migrants. The loosening of the migration policy in the eighties, connected with the *hukou* system, contributed to more people deciding to change their place of residence in search of better living conditions. However, simply loosening the policy was not equal to completely abolishing limitations, which is the reason why urbanization has always been one step behind the country's industrialization (Chen, 2007).

The rural-urban income inequality is a huge factor determining the migration. It partially derives from the favoritism of the communist leaders towards the urban areas.

Their residents were provided with the so-called "iron rice bowl" that comprised of a workplace, housing, healthcare, and retirement benefits. Income in rural areas amounts to less than a half of the average urban income, even after having taken into consideration the differences in the cost of living between cities and villages. The average real income in the rural areas in 2005 was equal to 39% of the average urban income. In 2003 rural-urban inequalities were responsible for 40% of total income differences in China (Park, 2008).

A serious challenge faced by rural residents is the lack of arable land. The area of land suitable for farming in China for one person is less than 0.1 ha. It is much less than the global average (0.2 ha per person). China feeds 22% of the global population while having only 9% of the global arable land (Chen, 2007). The lack of land is a particularly acute problem since it is not reflected in the prices of agricultural products. Typically, the scarcity of the resources increases their value. However, in the Chinese countryside it does not apply due to the state controlling the prices, even if it does not do so directly. Farmers are not able to earn higher profits from their products to compensate for the small area of arable land.

The large scale of rural-urban migration is explained by the labour surplus model (Todaro, 1969). Masses of people follow job creation – workplaces are created in the cities, in industry and services sectors that display higher productivity than the agricultural sector. The labour force surplus relocates to areas with higher productivity (Zhang & Song, 2003).

Effects of Urbanization

Kevin Honglin Zhang and Shunfeng Song used econometric modeling to prove that the connection between China's economic growth and its dynamic urbanization is one-sided. It is the economic growth that influences urbanization, not the reverse (Zhang & Song, 2003). Obviously it cannot be denied that the economic growth can positively impact the development of urban areas. Industrialization, a key element of the level of China's development in the last three decades, as well as changes in the structure of the economy from agriculture-based to industry- and services-based, are creating new workplaces. The majority of these workplaces are created in the cities, because it is where enterprises usually decide to locate their activities. As was already mentioned, in decisions concerning migration the labour force is motivated not only by the availability of jobs, but also by the potential income. Industry and services sectors tend to achieve higher efficiency than agriculture, thus allowing for higher income.

However, the reverse hypothesis, positing the influence of urbanization on economic growth, does not lack convincing arguments. The growth of urbanization positively impacts the economy's efficiency through:

- the economies of scale,
- easier spillover effects between companies,
- higher density of people in a specific area, which improves efficiency by lowering the cost of investment per person and by increasing higher return per person (mainly concerning public services),
- the possibility of achieving the critical point of human capital, which is the amount of cumulated human resources necessary for innovation.

Interrelatedness of GDP growth, urbanization and changes in the agricultural sector can be observed while analyzing the correlation between these variables (Table 1). The correlation coefficient for all the combinations of variables is high. Naturally, correlation alone does not yet prove causal relations between GDP, urbanization and changes in the agricultural sector, nor does it show the direction of the hypothetical relation. However, it strongly suggests that such relations may exist.

Table 1. Correlation between GDP, urban population, and value added in agriculture in China in years 1960-2012

Pairs of variables	Correlation coefficient	Value of the significance test	p-value
GDP (current US dollars) and the percentage of urban population	0.8608	12.081	<0.0001
GDP (current US dollars) and the value added in agriculture (current US dollars)	0.9942	66.018	<0.0001
Value added in agriculture (current US dollars) and the percentage of urban population	0.8983	14.602	<0.0001

Source: Own calculations based on the World Bank data.

By creating urban workplaces the economy strengthens the rural-urban migration. This phenomenon causes the increase in rural income by decreasing hidden unemployment, often occurring in the agricultural sector. It also raises productivity in rural areas. As a result, the gap between rural and urban income becomes narrower. The World Bank estimates that the ratio of disposable income in cities to that in villages will decrease to 2.4 before 2030 (World Bank, 2013). The important factor will be of course the *hukou* system reform, without which this prognosis may not come true.

It can be argued that the limitations resulting from the *hukou* system had some positive influence on the Chinese economy. First of all, finding a job is the only way for the migrants from rural areas to survive in the city, so their work-related demands are rather low. They are treated as a cheap labour force that can be removed and replaced by new workers without significant difficulties (Fan, 2008). It is estimated that the Chinese economy needs at least 7% GDP growth a year to absorb labour surpluses in rural areas and state-owned companies (Michalczyk, 2007). Obviously, the more developed the economy, the more qualified the workforce needs to be.

Additionally, migrants relocating to the cities contribute substantially to savings accumulation that later transforms into investment. Without social care benefits they are forced to save money in case of disease, old age, or for children's education individually.

JP Morgan Chase analyst Haibin Zhu claims that urbanization is one of the most important factors that will impact China's sustainable development in the next decade or two (Al Jazeera, 2013). Urbanization is said to increase internal demand, which is the key to further economic development of the country. The demand for infrastructure and the quality of public services available in the cities will rise. The aim is to strengthen the Chinese middle class, especially if it will be achieved along with decreasing income inequalities. It is the middle class that is believed to help the economy by increased consumption.

The current size of the Chinese middle class is estimated by Brookings Institute analyst Homi Kharas to be about 18.2% of the population, which amounts to roughly 247 million people. It is expected that the growth of urbanization will help the middle class to reach the level of 607 million people in 2020 (Al Jazeera, 2013). A member of governmental think tank Han Jun estimates that the urbanization process will increase the internal demand by 30 billion yuan by 2030 (World Bank, 2013).

Unsurprisingly, the urbanization process has its negative effects, among them (Fan, 2008):

- poverty spreading in the cities,
- the spread of diseases,
- unemployment in the cities, caused by maladjustments between the inflowing labour force and the demands of the labour market,
- increased crime rates,
- traffic congestion,
- pollution, among it the pollution of soil,
- the decrease in the already small area of arable land.

However, the prevailing consensus is that the inflow of the migrants to the cities causes more positive effects than the negative ones (Jiao, cited in Fan, 2008). The majority of the problems mentioned above can be solved by intelligent planning of the cities' expansion, by improving the quality and range of available public services, and by better policies, especially fiscal ones, of the local authorities. The key factor is also the already mentioned *hukou* system reform.

CONCLUSIONS

Modern China is a country characterized by a dynamic urbanization process. In the span of the last three decades, masses of people migrated from rural to urban areas, resulting in more than half of the population living in the cities in 2012.

In the face of substantial income inequalities, the rural residents relocate to urban areas hoping to improve their financial standing. An important factor is also the deficit of arable land. According to the labour surplus model, it is the difference in productivity between the agricultural sector and what is typical for the city industry and services sectors that motivates people to change their place of residence.

The *hukou* system, which registers and ties people to a specific area, is the main obstacle preventing free migration. Despite the fact that the regulations were loosened since their introduction and the *hukou* system stopped being a direct limitation to changing a person’s place of residence, it still functions as an indirect limitation due to the inability to keep one’s entitlement to social benefits after migrating. This way, a quasi-class of immigrants in their own country is created. Without the *hukou* system reform full utilization of the positive effects from the urbanization process will not be possible. Recently, Chinese authorities seem to acknowledge the problem, which has resulted in announcements claiming plans for a profound reform of the system, including granting social benefits to the migrants (China Daily, 2013).

Basing on critical analysis of the literature and statistical data, the hypothesis positing the beneficial influence of the urbanization process on accelerating economic

growth in China may be verified positively. Among the phenomena resulting from the urbanization, one can mention the increase of productivity in the rural areas, the increase of the internal demand, and the utilization of labour surpluses. The hypothesis positing the negative effects of the *hukou* system on the economic growth can also be confirmed. Through limiting the free flow of migration, the *hukou* system lowers the pace of modernization and efficiency of the agricultural sector and also decreases the quality of the human capital by depriving people of social care.

Naturally, further research is needed to fully understand ongoing changes and developments. The suggested fields of analysis are as follows: the restraints of the continuous rapid economic growth in China, the relation between the accelerating urbanization and the income level, and the regional income disparity.

Urbanization and economic growth can be considered to be interrelated processes. Growth and industrialization have created new workplaces that encourage people to migrate from rural to urban areas, which in turn has increased productivity in agriculture. The development of urban areas stimulates internal demand through the increase in the demand for infrastructure and the increase of income. Urbanization is supposed to help create the Chinese middle class that will increase the share of consumption in GDP and additionally spur growth. Nonetheless, a fair amount of control and planning is necessary for this process to result in positive outcomes. Otherwise, China will be forced to face the challenge of the rising number of slums, and the negative effects of urbanization will outweigh the positive ones.

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Business Opportunities in India for Polish Entrepreneurs

Oskar Patnaik

A B S T R A C T

Objective: The objective of this paper is to evaluate attractiveness of Indian market and to assess the gap between potential profit opportunities and the current value of Polish exports to India.

Research Design & Methods: It was decided to conduct empirical analysis based on secondary research where data is collected from the World Bank and by the Ministry of Commerce and Industry of India. SWOT analysis has been carried out to identify future steps for businesses planning to achieve success on the Indian market.

Findings: Although investment decisions are made upon evaluation of the economic profits and factors such as size of the market, level of competition, cost effectiveness, and market potential value, the geographical distance, new environment, adaptation costs and ease of doing business are the negative factors and the main obstacles in exploring Indian market by Polish companies

Implications & Recommendations: It is recommended to create a more effective investment promotion mechanism and to advertise the business potential that lies within the Indian market with regard to increasing liberalization and to rapid growth that implicates huge demand on import of certain goods and direct investments.

Contribution & Value Added: The originality of this work lies in in-depth analysis of key aspects of Polish investment on Indian market, revealing the conservative attitude of Polish entrepreneurs towards Indo-Polish trade cooperation.

Article type: research paper
Keywords: Internationalisation; India; Poland; trade
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INTRODUCTION

India is a country of great traditions, rich culture and a mother land of such many inventions and discoveries in the world of science that it is hard to believe that India has emerged as an economic power very recently, just about two decades ago. Nevertheless, after three hundred years of colonial India and the Raj, forty years of recovery and struggle tied to internal and neighbourhood conflicts and twenty years of liberalisation process, India is seen as a rising economic powerhouse of the world.

This paper, being an initial work in research on Indian economy and business challenges, is based on the macroeconomic analysis, with some elements of bottom up presentation of opportunities and threats related to starting a new business in India.

The paper contains analysis of decision-making process that takes place behind the internationalization and of the main factors that affect this process. I will present the dynamics of export from Poland to India comparing the results between Poland and leading European investing countries. The research hypothesis is that although India is a highly attractive market for European countries, the current value of Polish exports to India does not meet the potential effective level of exports what results in the loss of opportunities. Effective level of export is reached when entrepreneurs make full use of and derive benefit from the export opportunities that lie within the Indian market.

The ultimate goal of this research is to reveal the niches and opportunities on Indian market and, by reaching that objective, to provide arguments that India is worth investing and enlarging presence of Polish companies on its market, despite many economic and non-economic obstacles.

LITERATURE REVIEW

Economic expansion beyond the domestic market is not just about getting access to a new market, but it is a necessary step to keep and sustain competitive advantage of the firm (Daszkiewicz & Wach, 2012, pp. 7-20), to seek new opportunities and to improve cost advantage that arises with increased output (economies of scale). Internationalisation allows industries to optimise costs and gives better access to a larger choice of quality and price of raw materials, capital, labour and technology. Additionally, internationalisation gives opportunity to shift the production from the high-cost home country to the relatively low-cost developing country, either to leverage profits or to fulfil its destiny according to Vernon's product life cycle model (Vernon, 1966).

Offshore investing and the internationalisation of business are considered key factors that determine the long-term success in the era of boosting globalisation (EC, 2011, p. 12). Following the EC survey (2011, p. 12) as of 2009 nearly 25% of SMEs in EU27 were involved in export and another 3% planned to start such activity. Offshoring is mostly popular among US companies being an effective solution to minimize costs in labour-intensive service industry, as well as in research and development (McKinsey & Co., 2003, p. 11). Wach (2012, p. 192) states that offshoring can be perceived in two ways. In economics it is based on the localisation change from the old traditional manufacturing regions to new low-cost regions, while in management it is treated like the new combination of employment within a firm. Furthermore, existing literature depicts two forms of offshoring, namely offshore in-house sourcing as well as offshore

outsourcing known also as out of house offshoring (Wach, 2012, p. 194). Dossani & Kenny (2004) argue that the combination of low labour costs, good project management skills and technological sophistication make India a particularly attractive candidate for outsourcing.

Still, India offers much more market opportunities than the above ones and that are hard to find in any other economies. Many authors and researchers believe that in the recent future American and European companies will compete not only with each other, but also with Asian (especially Indian) and African companies (Wach, 2013, p. 5; Wach, 2012, pp. 298-299).

Being an emerging market with a rapidly increasing demand and high GDP growth rate, India is already the third largest economy in the world in terms of GDP measured in purchasing power parity. Quah (2011, p. 3) projected the world's economic centre of gravity to locate by 2050 literally between India and China. India is currently seeking policy and resources that would enable it to get back to more than 8% GDP growth after the slowdown caused by the global financial and economic crisis. The country desperately needs land, labour and capital market reforms, as well as better infrastructure to restore India's competitiveness and to attract the investment and technology (Pratiyogita Darpan, 2014, p. 101). And companies that will take the risk, overcome obstacles and take advantage of the opportunities given by the huge market being exposed to liberalisation, on which the competition even on the mass markets is still very limited, will be definitely getting extreme profits out of their investments.

Interesting point of view is presented by Bagla (2008), who has a strong background as the consultant and author of many market research articles, some of which have been published in *Harvard Business Review*, *Businessworld* or *Bloomberg Businessweek*. Bagla provides a practical guidance based on the experience of many companies and gives an overview of Indian economy, culture and traditions and many other non-economic factors, but from the business perspective.

A comprehensive study of the Indian market by the World Bank and the International Finance Corporation (IFC) provides quantitative indicators on business regulations and the protection of property rights, comparing the results with 188 economies of the world (World Bank, 2013a). The study presents the economic indicators, their relationship with economic outcomes and presents main business regulatory reforms.

Although research on doing business and on benefits of investing in India for Polish entities gained a lot of interest as a subject of economic forums, yet it has not become the subject of academic papers.

A wide review of research over doing business in India in leading International journals was made by Rienda et al. (2011), who formulated the conclusion that the potential avenue for further research would be to undertake an in-depth study of foreign companies in India, their influence on local companies, and how they can help Indian companies break into foreign markets (Rienda et al., 2011, p. 25). In their opinion the most popular research topics are cultural influence and comparison between countries, business practices, studies which focus on one sector or company in India, and the business operations and management of foreign companies in India. As for business environment in India, authors conclude that general characteristics which are present in

different aspects of Indian companies are of greater preference for bureaucratic structures than in developed countries, the key role of culture in performance, and, that culture, ownership control and trust need to be carefully considered in any endeavour to establish a joint-venture with an Indian company (Rienda et al., 2011, p. 24).

As Forbes (2001) noted, after the decade of liberalization the visibility of foreign brands has increased dramatically, and, more importantly, there has been a dramatic increase in competition across the country (Forbes, 2001, p. 16). From the macroeconomic point of view, it is worth highlighting that total investment in technology by Indian industry has increased, with a rise in spending on both technology import and in-house development (Forbes, 2001, p. 18). From the micro-view, Forbes concluded, that many Indian firms have responded to liberalization in three ways: by improving manufacturing efficiency, by restructuring and increasing volume of import of the technology (both in the form of increased foreign investment and technology licensing) and by increasing in-house investment. The fact which can't remain unnoticed is that 48 out of the top 100 firms for 1999 are companies created in 1991, which was the initial year for the liberalization process in India (Forbes 2011, p.18). Sebastian et al. (2006) concluded that, (1) the Indian business management has different degrees of modernization, (2) the skilled labour supply is sometimes less than the demand for it, (3) the degree and type of technological development is uneven with some industry sectors having cutting edge technologies and others poorly served by financial, technical and infrastructure requirements (Sebastian et al., 2006, p. 35). They also suggest, that the same Indian company may behave differently when dealing with companies from different countries, religions and other backgrounds, therefore a particular culture, regional business context should be analysed individually.

The above findings and recommendations are taken into account in the analysis of the specification of business relations between Poland and India. The analysis will give an overview on the mutual trade and provide analysis of opportunities for Polish investors, the advantages that give a chance for progress and the obstacles that may hold up the desired growth.

MATERIAL AND METHODS

This paper evaluates the attractiveness of Indian market for Polish entrepreneurs and assesses the gap between potential profits and the current value of Polish exports to India. The hypothesis is that although India is a very attractive trading partner for European countries and the share of European exports in Indian imports is very significant, the current value of Polish exports to India does not meet effective level of exports which results in the loss of opportunities. The research questions are: what is the relation between the dynamic of growth of Indian imports and growth of Polish exports? And: what is the current value and the potential value of exports from Poland to India?

An empirical analysis is based on secondary research data collected by the World Bank, by the Ministry of Commerce and Industry of India. The analysis begins with a review of the directions of Polish trade, further focusing on the trade relations with India. This is followed by the analysis of Indian trade and the gap between potential and actual gains for Polish economy related to exports to India.

Since the ultimate goal of the research is to reveal the niches and opportunities on Indian market and, by reaching that objective, to convince readers that India is worth the investment and the increased Polish companies participation, a SWOT analysis has been carried out to identify further steps in business planning to achieve success on the Indian market.

RESULTS AND DISCUSSION

Among 15 most important markets for Polish export, 12 countries are the EU member states, and the key markets are Germany and Great Britain. Based to the data from the report on the international trade in 2013, prepared by the Ministry of Economy of Poland (2013, p. 37), Polish entrepreneurs achieved the highest growth of intra-EU acquisition, with Lithuania, Slovakia, Great Britain, the Netherlands and the Czech Republic. The export basket (including intra-EU acquisition) is mainly composed of items from electro-mechanical engineering sector – 40.7 billion EUR (37.3%), chemical industry – 14.9 billion EUR (13.6%), agri-food production – 13.8 billion EUR (12.6%) and metallurgy – 13.3 billion EUR (12.2%).

It has been also emphasized that trade cooperation with Asian countries is barely visible. In the analysed period, the trade deficit with Asian countries amounted to 19.8 billion EUR. It is mostly the result of the trade deficit between Poland and its three major trading partners in Asia: China, Korea and Japan.

In 2012, according to the Ministry of Commerce and Industry of India (Export Import Data Bank), the value of common trade was 1.4 billion USD, which constitutes a 34% growth compared to 2011. Export to India totalled 624.25 million USD, and import value was 787 million USD, thus Poland recorded a trade deficit of 162.75 million USD. Although the figures are proportionally very positive compared to 2011 and to the negative growth from 2010, the share of India in Polish foreign trade is very low in relation to the economic potential that lies in this mutual cooperation. In 2012, India's share in Polish trade amounted to 0.21% in exports and 0.55% in imports. Looking at Indian records, Poland has only 0.13% share in India’s total imports, and 0.26% share in India’s total exports (Export Import Data Bank). Thus, considering the fact that India is becoming one of the major players on the global market and a rapidly growing economy with quickly growing economic needs, the results of Indo-Polish cooperation can be very disappointing. Not to mention that India has been ranked second place in global foreign direct investments in 2010 and has continued to remain among the top five attractive destinations for international investors during 2010-12 according to United Nations Conference on Trade and Development (UNCTAD). As presented in Figure 1, Indian GDP indicates a long term high level growth despite the recent slowdown resulted from the aftermath of the global crisis. Figure 1 presents GDP growth for BRIC countries, the European Union, the US and the world (World Bank, 2013b).

Despite the fact that India has been experiencing an economic boom for the last two decades, government and the Reserve Bank of India still need to tackle many critical issues head on. The GDP growth rate has declined mainly because the largest component of the economy, the service sector, recorded a poor growth, estimated just at 6.2% against the 11.2% estimated earlier (Pratiyogita Darpan, 2014, p. 32).

The Economic Situation in India

After gaining independence, Indian foreign trade has made a cumulative progress both qualitatively and quantitatively, however that increase cannot be considered satisfactory, as Indian share in global trade has remained relatively low. In 1991, the government under the leadership of the finance minister, Manmohan Singh, adopted the policy of economic liberalization and a series of economic reforms have initiated the process of market opening.

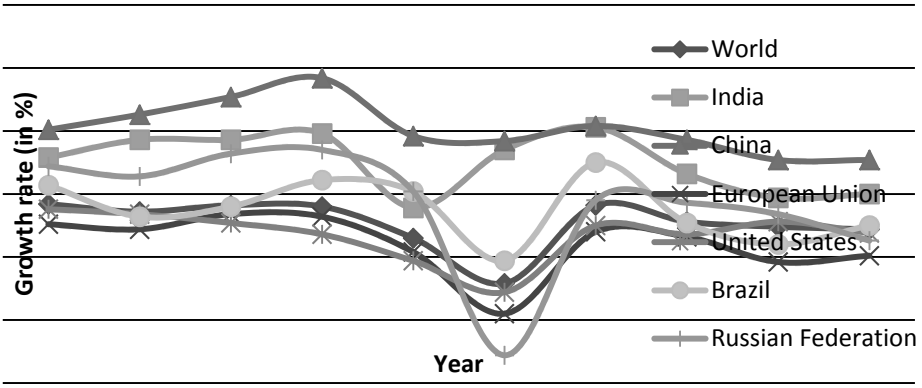


Figure 1. GDP growth rate for India and selected countries and regions in 2004 – 2013 (in %)
Source: World Bank, (2013b), database NY.GDP.MKTP.KD.ZG.

Table 1. Top trading partners of India in 2012 (in million USD)

Rank	Country	Export	Import	Total Trade	India's Trade Balance
1.	China P RP	18 076.55	55 313.58	73 390.13	-37 237.02
2.	U Arab Emirates	35 925.52	36 756.32	72 681.84	-830.80
3.	USA	34 741.60	23 454.92	58 196.52	11 286.68
4.	Saudi Arabia	5 683.29	31 817.70	37 501.00	-26 134.41
5.	Switzerland	1 095.34	34 758.96	35 854.30	-33 663.62
6.	Singapore	16 857.71	8 388.49	25 246.19	8 469.22
7.	Germany	7 942.79	15 601.13	23 543.93	-7 658.34
8.	Hong Kong	12 931.90	10 408.71	23 340.61	2 523.18
9.	Indonesia	6 677.99	14 765.93	21 443.92	-8 087.94
10.	Iraq	763.97	18 918.47	19 682.44	-18 154.50
62.	Poland	787.00	624.25	1 411.24	162.75

Source: own calculations based on DGCI&S data (http://commerce.nic.in/eidb/iecnttopn.asp).

Unlike in many emerging countries, the liberalization process in India is being conducted at a much slower pace, hence India is called the Asian elephant rather than the tiger. Yet, the liberalisation process is constantly improving. Along with the dynamic growth and enormous needs generated by the domestic demand, especially on energy supply and vast infrastructure development, opportunity exist to achieve profits that would be more difficult to obtain in a relatively saturated and competitive European or

American markets. For example, in September 2013 Indian government gave approval for infrastructure projects worth more than 27 billion USD realized by foreign investors (Trade & Investment Promotion Section [T&IPS], 2013a). The program has been designed to increase the amount of foreign investments in order to reduce the current account deficit and to avoid further depreciation of the Indian currency. As presented in table 1, India's top trading partners are China, UAE, US, Saudi Arabia and Switzerland. Poland is on the 62nd position in the rank, with around 162.75 million USD India's surplus trade balance (Table 1).

Gap Between Potential and the Current Value of Polish Export to India

Polish exports cover a wide range of electromechanical and chemical products. Share of electromechanical industry amounted to approximately 194 million USD (37.1%). Next on the list are chemical products and organic chemicals (25.1%). On the third spot are metal products, mostly iron and steel, that account for about 24% of the total exports.

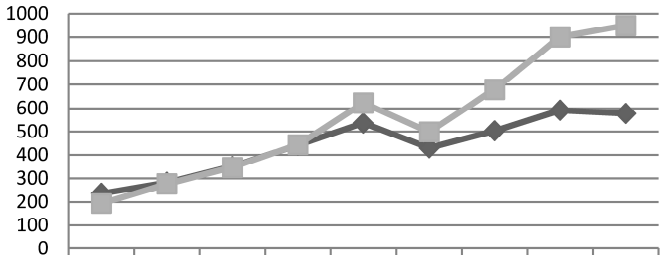
Table 2. Top imported goods from Poland to India and their share in total Indian import value in 2012 (in million USD)

Rank (by import value from Poland to India in 2012)	Rank (by total import value to India in 2012)	Commodity	Import from Poland	India's total import value	Share of imports from Poland in %
1	2	Natural or cultured pearls, precious or semiprecious stones, precious metals, clad with precious metals and articles thereof; artificial jewellery, coins	128.45	91 075.99	**0.14**
2	20	Rubber and articles thereof	94.71	3 860.34	**2.45**
3	6	Iron and steel	86.3	13 646.01	**0.63**
4	3	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	63.78	37 552.37	**0.17**
5	4	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers and parts	61.29	32 865.33	**0.19**
6	1	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes.	41.31	172 753.97	**0.02**
7	5	Organic chemicals	24.84	14 443.01	**0.17**
8	15	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof.	15.08	5 163.77	**0.29**
9	23	Copper and articles thereof	12.14	2 688.63	**0.45**
10	14	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, or radioactive elements or of isotopes	10.83	5 794.88	**0.19**
Total			**624.25**	**489 319.49**	**0.13**

Source: own calculations based on DGCI&S data (http://commerce.nic.in/eidb/ecomq.asp, http://commerce.nic.in/eidb/icntcomq.asp).

If we analyse figures in table 2, all listed products covered by Polish export play a major role in Indian import and are ranked top 20, including all top 5 imported goods. Considering the fact that total share of goods imported from Poland represents only 0.13% of Indian import, potential business opportunities appear to be obvious.

Trends in aggregated value of India's imports growth as compared to aggregated value of Polish exports growth are illustrated in Figure 2. This reveals the relation between both indicators and evaluates whether the gap is increasing or decreasing over the last few years.



	2004	2005	2006	2007	2008	2009	2010	2011	2012
Aggregate value of export from Poland (2000r = 100)	236.7	282.5	349.7	442.2	536.4	430	503.1	591.4	577.8
Aggregate value of import to India (2000r = 100)	193.7	277.2	346.4	443.9	622.6	499.2	679.8	901.5	949.8

Figure 2. Aggregate value of India's import growth in comparison to aggregate value of Polish export growth in the years 2004 – 2012 (2000 = 100)

Source: own calculations based on World Bank (2013b) database TX.VAL.MRCH.XD.WD, TM.VAL.MRCH.XD.WD.

Although, growth of Polish exports is minimally flatter than growth of Indian import, one can say that the two indexes are quite correlated, therefore more than proportional growth in bilateral trade would bear a positive effect. Over the last decade imports of goods into India have grown at a similar pace to Polish export, with the exception of the last two years, when growth rate of Indian imports was slightly higher than that of Polish exports. Therefore, a growth of Polish exports is relatively below the pace of growth of Indian imports. In such case any positive growth in Polish import to India would be an improvement in trade relations.

The increase in Polish exports to India was relatively high as compared to other EU countries (Poland is ranked on the 6th place with 61.71% increase). On the other hand, Polish exports to India in terms of value of growth is relatively low, comparing to the top exporters as well as to the bottom ones. Germany has gained nearly 4 billion USD growth which is more than a third of the total growth of exports of the entire European Union, whereas former outsiders like Portugal or Estonia have boosted their export in getting the enormous 255.7% and 416% growth respectively. Both examples show, that Indian market can be a great partner not only for “hitherto” leaders, but also for countries representing a much lower share in the trade.

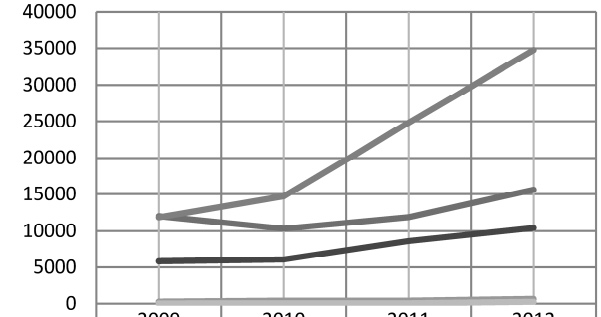
Table 3. India oriented export value and export growth rate among EU countries in the years (in mln USD)

No.	Country	2010	2011	Rate
1	Germany	11 891.4	15 601.1	31.2
2	Belgium	8 609.8	10 401.4	20.8
3	UK	5 396.8	7 134 .3	32.2
4	Italy	4256	5 121.7	20.3
5	France	3 704 6	4 332.8	17.0
6	Netherlands	1 853.1	2 618.5	41.3
7	Finland	1653	2 103.6	27.3
8	Sweden	1 619.4	1 940.8	19.9
9	Spain	1 487.6	1 809.8	21.7
10	Austria	817.1	1 081.1	32.3
11	Czech Republic	676.8	718.9	6.22
12	Poland	386	624.3	61.7
13	Denmark	472.82	614.29	29.9
14	Romania	237.45	455.43	91.8
15	Hungary	343	437 .3	27.5
16	Ireland	259	411 .4	58.7
17	Portugal	85	303.6	255.7
18	Estonia	45	231.7	416.1
19	Lithuania	125	203.4	62.1
20	Slovenia	92	157	70.6
21	Latvia	196	143.2	-27.1
22	Greece	93	110.9	18.8
23	Bulgaria	58	101.1	75.6
24	Slovakia	88	88	-0.1
25	Luxembourg	37	56	53.0
26	Malta	36	42.3	18.1
27	Cyprus	20	27.61	35.3
Total		**44.5**	**56 871.5**	**27.7**

Source: http://commerce.nic.in/eidb/irgncnt.asp.

Table 3 is a breakdown of the total export value from EU to India. If we analyse only EU countries Poland is situated on the 12th position, right behind Austria and the Czech Republic (Table 3).

The total value of exports from the EU in 2012 was calculated at 56871.5 million USD (Table 3). This means that Polish export represents only 1.1% of the total export to India from the EU. The highest increase, by 416%, was achieved by Estonia. This export performance is more than a third of value of Polish export (Table 3), despite the fact that Polish economy is much larger than the Estonian one.

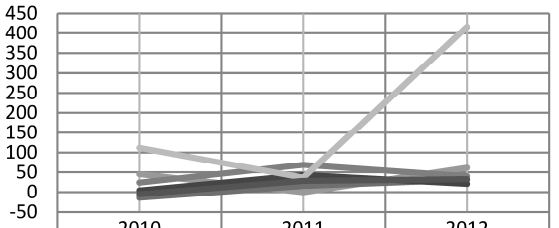


	2009	2010	2011	2012
Import from Poland	266.12	387.29	386.04	624.25
Import from Germany	12006.02	10318.18	11891.37	15601.13
Import from Belgium	5776.77	6019.2	8609.82	10401.43
Import from Switzerland	11869.5	14698.43	24802	34758.96
Import from Estonia	15.55	32.94	44.9	231.74

Figure 3. India's import value from Poland and selected European countries in 2009 – 2012 (in million USD)

Source: own calculations based on DGCI&S data (http://commerce.nic.in/eidb/iecnttopn.asp)

Figures 3 and 4 present the trends of value growth (in USD millions) and of the percentage growth rate comparing Polish results with the top European exporters and with Estonia. These figures show that in terms of exports value Poland is ranked close to EU countries with low exports value, whereas in terms of exports growth Poland achieves similar results as the top traders, which are large exporters that are achieving lower growth rates than small exporters. Such evaluation is rather far from satisfactory.



	2010	2011	2012
Import from Poland	45.53	-0.32	61.71
Import from Germany	-14.06	15.25	31.2
Import from Belgium	4.2	43.04	20.81
Import from Switzerland	23.83	68.74	40.15
Import from Estonia	111.76	36.33	416.09
India's total import	-5.05	28.23	32.33

Figure 4. Annual rates of change in Indian imports from Poland and selected European countries in the years 2009 - 2012 (%)

Source: own calculations based on DGCI&S data (http://commerce.nic.in/eidb/iecnttopn.asp).

The results show that Polish presence on Indian market is very low despite the high potential and great opportunities for Polish entrepreneurs. The chances to strengthen the position of Polish entities and products on the Indian market will certainly rise if Polish companies will follow the trends and determine the sectors that offer the greatest opportunities and the highest profits. Such areas include manufacturing, defence, infrastructure, consumer goods and knowledge based services, the industry in which Polish presence is hardly noticeable in India.

Opportunities

Rapid increase of production in India has caused many companies to owe their success to the global opening of factories in that country. The best example is the Korean Hyundai. The factory in Chennai established in 1996 is currently a key manufacturing plant where around 250 000 vehicles every year manufactured for exports (Bagla, 2008, p. 11). India offers not only low labour costs with easy access to modern technology, but also a huge investment of local and foreign companies, refineries, mining and steel manufacturers, which provides solid resourcing opportunity for the suppliers of raw materials, equipment or services related to the core production.

India also has the world's largest military that is being supplied by foreign companies that is a market worth 2.5% of Indian GDP per year, which is around 46 billion USD a year (World Bank, 2013b).

Extensive infrastructure plans are huge opportunities for foreign direct investment (FDI) and joint venture, however the potential investors need to deal with a number of restrictions on FDI or to win public sector contracts what is very difficult in the current legal situation.

'Westernization' and a progressive change of Indian culture impacts the demand on 'western' products and services. This is the result of globalization and the compromise between tradition and modernity, the needs of young Indian generation, the world of business and the world of fashion.

And the last but not the least, high profitable business opportunity in India is within the knowledge-based service industry. India, as an offshore "giant", is a perfect location for foreign companies from financial and technology industry (Omelańczuk, 2013, p. 97). Many Indian companies, like Infosys, Wipro, Zensar, Genpact and HCL (Puls Biznesu, 2013), not only leverage labour force and provide services to the largest companies in the world, but they also establish offices worldwide, e.g. in the United States, Australia, Ireland, as well as in Poland, hiring local university graduates and professionals.

Obstacles

Despite many temptations that Indian market has to offer, Polish entrepreneurs are often discouraged by the investment conditions and environment that requires more effort and ability to adapt than the regional market.The quality has to be built into every element of the process before taking investment decision. Still, poor knowledge of market realities and a very low number of companies that have succeed in India, like Can-Pack, TZMO,VTS, or Geophysics Torun, can be a demotivating experience for Polish entrepreneurs (T&IPS, 2013b).

Many non-tariff barriers, such as FDI foreign entity share limits and regulations that are created to protect domestic industry, hinder foreign entities access to Indian market. According to the recent "Ease of Doing Business" rank created by the World Bank in collaboration with the IFC India has a very distant, 134th position, with a relatively high score in terms of "access to credit" and "protecting investors". The results are even worse when speaking of ease of starting a business or the execution of contracts (Table 4).

Table 4 Ease of Doing Business in India according to DB 2013 ranking

Fields	DB 2013 Rank
Starting a Business	177
Dealing with Construction Permits	183
Getting Electricity	110
Registering Property	91
Getting Credit	24
Protecting Investors	32
Paying Taxes	159
Trading Across Borders	129
Enforcing Contracts	186
Resolving Insolvency	119

Source: http://www.doingbusiness.org/data/exploreeconomies/india.

SWOT Analysis

Getting all the factors together and based on the recent analysis of Indian trade potential made by the Department of Commerce (Ministry of Commerce and Industry of India, Department of Commerce, undated), a SWOT analysis has been carried out to identify key steps in business planning to achieve success on the Indian market (Table 5).

Table 5. SWOT Analysis of Indian business environment for foreign entrepreneurs

STRENGTHS	WEAKNESSES
– Availability of most natural resources and long coastline. – Diversified Industrial base. – Skilled manpower including entrepreneurial ability. – English language skills. – Growing middle class and disposable incomes represent a robustly growing domestic market. – Low wages compared to all developed and emerging developing countries like China and Brazil. – Younger population as compared to all developed countries and China. – Huge needs of energy supply related to rapid development. – Ease of getting credit to finance direct investments.	– Major infrastructural deficit in terms of power, ports, roads, and railways. – Lack of state of the art technology in many manufacturing sectors. – Low investments in Research and Development. – Low literacy levels and poor quality of technical education (except few colleges). – Low productivity and high morbidity burden on labour. – High transaction costs and cost of lending. – Red tape procedural delays (including in the judicial proceedings). – A Common VAT (Goods and Services Tax) yet not implemented in India. – High level of corruption. – Small number of significant agreements on economic cooperation between Polish and Indian Government.
OPPORTUNITIES	**THREATS**
– Good combination of skilled manpower and comparatively low wage costs can act as a catalyst to attract FDI for a wide range of manufacturing activities provided India bridge infrastructural deficit. – Improvement in farm productivity and establishment of cold chain could transform into an agro-products exporting power especially in fruits and vegetables. – Large ageing population among wealthier countries would compel them to outsource many of their activities to lower cost suppliers like India. – The Central Government in accordance with the commitments made to WTO has announced relaxations in imports of a number of goods. The major work has been done in 2000 and 2001 when the government has removed quantitative restrictions on imports of respectively 714 and 715 products. – The availability of large numbers of skilled IT professionals could be leveraged to turn India into the global back-office.	– The unpredictability of the duration of administrative procedures. – Cultural differences multi-ethnic environment and strong influence of Hindu and Muslim religions on the society requires strong understanding of Indian reality before entering the market. – Restrictions on the import of various goods e.g. on cosmetics perfumes luxury goods medical products food and dairy products. Difficulties in enforcing patent law.

Source: based on own conclusions and on DGCI&S data (http://commerce.nic.in/ann/StrategicPlan.pdf).

CONCLUSIONS

Economic cooperation between Poland and India does not reflect the potential opportunities offered to Poland by the liberalization of the Indian market and its dynamic economic growth. Although the EU zone will obviously remain the substantial Polish trade destination, domestic entrepreneurship should seek more opportunities in emerging markets and become more enthusiastic about investing in India, as there is a huge business potential for Polish entities.

Neither the big distance, nor the small experience on the market, can explain low trade activity and turnovers of Polish companies in India. In terms of value of exports to India, Poland is ranked close to EU countries with low exports value. In terms of dynamics of exports growth to India, Poland achieve similar results as the top traders with high exports value, for which growth rates naturally tend to be low.

In view of the fact that products exported from Poland export play a major role in Indian import and are ranked top 20, including all top 5 imported goods, and that total percentage of goods imported from Poland represents only 0.13% of Indian export, it may seem obvious that the profits could be much higher.

It is recommended to create more effective investment promotion mechanisms and to advertise the business potential that lies on Indian market with regard to increasing liberalisation and to rapid growth, that implicates huge demand on import of certain goods and direct investments. The subject calls for more attention as the existing literature about opportunities for Polish entrepreneurs for doing business in India and the reasons of their low activity is limited. For further research, it is recommended to focus on strategy how to leverage export of commodities that play a key role in India imports.

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