Х. Башев, д-р екон. наук, проф.
Інститут аграрної економіки, Софія, Болгарія

ЕМПІРИЧНЕ ДОСЛІДЖЕННЯ ЗВ'ЯЗКУ МІЖ УПРАВЛІННЯМ ТА СТІЙКІСТЮ В БОЛГАРСЬКОМУ СІЛЬСЬКОМУ ГОСПОДАРСТВІ

Застосовано міждисциплінарну структуру нової інституціональної економіки, визначено різні ринкові, приватні, колективні, громадські та гібридні способи управління й оцінено їхній вплив на аграрну стійкість у Болгарії. Викладено методологічну основу дослідження, визначено домінуючі режими управління в болгарських господарствах різного юридичного типу, розмір, спеціалізацію, екологічне й географічне розташування та оцінено їхній вплив на стійкість сільського господарства і його економічні, соціальні та екологічні основи. Представлено висновки для подальших досліджень, удосконалення державної політики та формування приватної управлінської стратегії. Сільськогосподарські виробники різного призначення у своїй діяльності й відносинах використовують абсолютно не схожі комбінації ефективних ринкових, приватних, колективних і гібридних способів управління. Окремі фактори і способи, які найбільше сприяють поліпшенню аграрної стійкості на сучасному етапі розвитку, – це особисті переконання та ініціативи менеджера, ресурси фермерських господарств, інноваційний потенціал, стратегії майбутніх прибутків і вигод, рівні та динаміка ринкових цін, субсидії на основі регіонів, а також і неофіційні угоди.

Ключові слова: аграрне управління, стійкість, ринок, приватний, колективний, гібридний режими, Болгарія

Х. Башев, д-р экон. наук, проф.
Институт аграрной экономики, София, Болгария

ЭМПИРИЧЕСКОЕ ИССЛЕДОВАНИЕ СВЯЗИ МЕЖДУ УПРАВЛЕНИЕМ И УСТОЙЧИВОСТЬЮ В БОЛГАРСКОМ СЕЛЬСКОМ ХОЗЯЙСТВЕ

Применена междисциплинарная структура новой институциональной экономики, определяются различные рыночные, частные, коллективные, общественные и гибридные способы управления и оценивается их влияние на аграрную устойчивость в Болгарии. Изложена методологическая основа исследования, определены доминирующие режимы управления в болгарских хозяйствах различного юридического типа, размер, специализация, экологическое и географическое расположение и оценено их влияние на устойчивость сельского хозяйства и его экономические, социальные и экологические основы. Представлены выводы относительно дальнейших исследований, совершенствования государственной политики и формирования частной управленческой стратегии. Сельскохозяйственные производители различного назначения в своей деятельности и отношениях используют совершенно не похожие комбинации эффективных рыночных, частных, коллективных и гибридных способов управления. Отдельные факторы и способы, наиболее способствующие улучшению аграрной устойчивости на современном этапе развития, – это личные убеждения и инициативы менеджера, ресурсы фермерских хозяйств и инновационный потенциал, стратегии будущих прибылей и выгод, уровни и динамика рыночных цен, субсидии на основе регионов, и неофициальные соглашения.

Ключевые слова: аграрное управление, устойчивость, рынок, частный, коллективный, гибридный режимы, Болгария.

Bulletin of Taras Shevchenko National University of Kyiv. Economics, 2018; 3(198): 29-34
УДК 340
JEL classification: F21, F23
DOI: https://doi.org/10.17721/1728-2667.2018/198-3/2

L. Belascu, Doctor of Sciences (Economics), Professor
ORCID iD 0000-0002-7711-3746
Lucian Blaga University of Sibiu, Sibiu, Romania,
A. Horobet, Doctor of Sciences (Economics), Professor,
ORCID iD 0000-0001-5821-0244
O. Popovici, Doctor of Sciences (Economics), Assistant Professor
ORCID iD 0000-0002-0457-9190
Bucharest University of Economic Studies, Bucharest, Romania

LOCATION ATTRIBUTES OF EMERGING ECONOMIES: AN ANALYSIS USING PRINCIPAL COMPONENTS

Our paper investigates the location attributes of a large sample of emerging economies from the perspective of foreign direct investments and multinational companies' presence abroad. We use several macroeconomic variables that take into account the relevant location attributes for the decision of multinational companies to invest abroad and include them in a Principal Components Analysis to reveal the most relevant locational attributes or combination of such attributes that influence the decision of multinational companies to invest abroad. We find that only four variables had the most important contributions to the principal components: GDP per capita, international reserves, mobile phones subscriptions and labour force. Labour force is the variable that contributes the most to the first factor and its contribution grows in importance as we depart from 1994. At the same time, GDP per capita has become less important in recent years.

Key words: foreign direct investments, emerging economies, principal components analysis.

Introduction. The interest that emerging markets developed for attracting foreign direct investments (FDI) is based on the latter being perceived as drivers of sustained economic growth, through various channels – increased employment (Santos-Paulino A. and Wan G. [22], Inekwe J. [14]), higher factor productivity (Nair-Reichert U. and Weinhold D. [21], Zhou D. et al. [25]), technological spillovers (Balasubramanyam V. et al. [2], Borensztein E. et al. [6]), human capital development (Miyamoto K. [18], Majeed M. and Ahmad E. [19]) and export markets (Zhang K. and Song S. [24], Kneller R. and Pisu M. [16]). On the other hand, when one observes multinational enterprises' preference for foreign direct investments instead of exports or other internationalization forms, these companies tend to delocalize in foreign markets only if their so-called "internalization advantages" allow them to do so (Dunning J. [9]).

In this framework one should not be surprised that a permanent competition between emerging and developed markets, on one hand, and between emerging markets, on the other hand, has surfaced in the last decades. This competition is based on two types of attractiveness factors for multinational enterprises: on one hand, one can identify a number of "genuine" attributes of emerging markets, and, on the other hand, we may refer to various types of incentives and stimuli offered by emerging markets governments to multinational enterprises, in their attempts to attract higher volumes of foreign direct investments.

The "genuine" factors were divided in two main categories, according to existing academic literature: (1) the "tra-

ditional" factors, and (2) the "new" factors. Among the "traditional" factors the literature makes reference to: (1) market size and growth potential, as indicators of a country's potential to absorb outputs and/or to benefits from large production volumes in the form of economies of scale (Bevan A. and Estrin S. [4]); (2) low costs and higher availability of production factors, particularly in terms of labour and raw materials (Kinda T. [15]); (3) low and/or immature competition, which might provide a "first-mover" advantage to the multinational company (Boeri T. and Brucker H. [5], Liang Y. [17]); (d) infrastructure, as transportation and communication networks (Mollick A. et al. [20]). The "new" factors advanced by the existing literature and that have the potential to increase the emerging economies' attractiveness for foreign direct investments are: (1) macroeconomic stability, which encompasses transparent institutions (Campos N. and Kinoshita Y. [7]), the extent of private property (Carstensen K. and Toubal F. [8]), the conditions related to profit repatriation, general legislation and tax regimes applicable to foreign companies (Wei S. [23]), or the corruption level (Al-Sadig A. [1]); (2) geographic distance, particularly the establishment of closer links between industrial locations and marketplaces, with influence on transport and communication costs (Bénassy-Quéré A. et al. [3]); (3) the level and dynamics of country risk (Holland D. and Pain N. [11], Hayakawa K. et al. [10]).

The goal of the present paper resides in investigating the dynamics of location attributes of emerging markets by taking into account several of the above mentioned factors and in identifying the changing importance of these factors in time foreign direct investments. The main contribution our paper has to the academic literature in the field is to characterize in dynamics the shifting location attributes of emerging economies from the FDI perspective, thus providing support for local institutions regarding the decision-making process in favor of multinational enterprises' presence in these economies.

The paper is organized as follows: Section 1 describes the data and methodology used in the empirical analysis, Section 2 presents the most important results of our research, while Section 3 concludes and indicates directions for further research.

1. Data and research methodology. The research is undertaken on a large sample of emerging countries (41), from different regions and with various levels of development, but included in this category by BBVA Research. The emerging countries employed in our analysis are classified in three categories, based on countries' absolute growth, as follows: (1) Emerging and Growth Leading Emerging Economies (EAGLE) – these countries have an expected incremental GDP that will surpass the average G7 economies' GDP (except USA) in the next ten years: China, India, Indonesia, South Korea, Brazil, Mexico, Russia, and Turkey; (2) NEST – these are countries with an expected incremental GDP lower than the average G7 economies' GDP (except USA) in the next ten years, but higher than Italy's: Argentina, Bangladesh, Chile, Colombia, Egypt, Malaysia, Nigeria, Pakistan, Peru, Poland, Thailand, South Africa, Ukraine and Vietnam; (3) Other Emerging Markets: Bahrain, Bulgaria, Czech Republic, Estonia, Hungary, Jordan, Kuwait, Latvia, Lithuania, Mauritius, Morocco, Oman, Romania, Slovakia, Sri Lanka, Sudan, Tunisia, UAE and Venezuela.

The empirical analysis uses ten macroeconomic variables that illustrate the relevant locational attributes for MNE's decisions to invest abroad, grouped in five categories: (1) Market size and potential attributes – this category includes three variables: (i) GDP per capita in US dollars (GDPC); (ii) domestic credit to private sector as percentage of GDP (DC); and (iii) the percentage of urban population in total population (UP); (2) Country risk attributes – this category includes two variables: (i) the inflation rate (INF), as the annual percentage change of the Consumer Price Index; and (ii) international reserves including gold (IR), denominated in US dollars; (3) Infrastructure and access to information attributes – one variable, as the number of mobile cellular subscriptions per one hundred people (MS); (4) Labour market attributes – this category includes two variables: (i) the labour force (LBF), as the number of people aged 15 and older who represent economically active population, according to the International Labour Organization, and (ii) labour force participation rate (LBP), calculated as percentage of total economically active population above 15 years, who work for the production of goods and services during a specified period; (5) World economic integration attributes – two variables: (i) trade balance in US dollars (TB) and (ii) trade openness (TO), calculated as sum of imports and exports and divided by GDP. Data on location attributes is collected for the period 1994–2011 with annual frequency from various data sources: Eurostat, Organization for Economic Co-operation and Development (OECD) Database, World Trade Organization (WTO) Database and World Bank.

Principal Components Analysis (PCA) is a multivariate data analysis method that aims at converting a set of observations belonging to probably correlated variables into principal components that represent a set of linearly uncorrelated variables. PCA was developed by Hotelling (1933) and Hotelling (1936) and is typically used as an exploratory data analysis tool and for constructing predictive models. The technique finds a set of weighted linear composites of the original variables where each composite (a "principal component") is uncorrelated with the others. The weights are identified through eigen-decomposition that generates eigenvalues (these represent the amount of variation accounted for by the composite) and eigenvectors (they give the weights for the original variables).

In our paper, PCA is used with the aim of reducing the number of variables that supposedly influence the location decision of multinational companies (MNEs), thus allowing us to identify of a smaller number of country or location attributes that are relevant for the decision of MNEs to invest abroad. PCA leads to this set of factors by developing an analysis in the N-dimensional space defined by P variables (countries' location attributes) and N cases (each emerging country is a particular case), which presumes diagonalizing of a symmetric matrix – a covariance or correlation matrix. The result consists of a set of factors that represent a linear combination of original variables and that are uncorrelated. Also, their number is reduced, while their contribution to total data variance is maximal.

In performing the PCA we are interested in identifying the countries' grouping based on the two most important factors and in observing the contribution of each variable to the first most important factor, as a way of determining which variables contribute the most to the grouping. PCA is undertaken for each year and for the entire time frame of our analysis. This approach provides us with a dynamic perspective on the shifting country attributes that influence the MNEs' decisions to delocalize abroad.

2. Results. The first step in our empirical analysis involves calculating the eigenvalue for each factor and of retaining only those factors that had a eigenvalue which is higher than 1. As Table 1 shows, the number of principal components (factors) that are significant varies between two to four, depending on the year, as well as over the entire period. At the same time, the first two factors explain more than 50% of the total variance, while the first factor is

always the most significant, regardless of the time frame of the analysis – annual or over the entire time frame.

The second step is an analysis of how much each variable has contributed to the first factor, annually (see Table 2) and overall. Only four variables have the most important contributions to the principal components, regardless of the year for which the analysis is undertaken: GDP per capita (in 1994, 1995 and 1996), international reserves (in 1999 and 2000), mobile subscriptions (in 2004, 2009 and 2010) and labour force (in 1997, 1998, 2001, 2002, 2003, 2005, 2006, 2007, 2008 and 2011). By far, labour force is the variable that contributes the most to the first factor and its contribution becomes more important as we move from 1994 to 2011. At the same time, GDP per capita becomes less important towards 2011. International reserves is a variable that displays an interesting pattern over the years, with important contributions between 1997 and 2003, and afterwards with diminishing importance in 2004 and with increasing values of its contribution until 2010. The fact that labour force is the most important variable that explains the differences between countries should not come as a surprise, given the various sizes of emerging countries' populations and, consequently, their labour force. Interesting enough, GDP per capita does not play a significant role in terms of differentiation, except for 1994 to 1996. At the other end, a number of variables hold small explanatory power for the differences between countries: domestic credit, trade balance, trade openness, percentage of urban population and labour participation.

***Table* 1. Eigenvalues and total variance explained by the significant principal components**

Year	Value Number	Eigenvalue	% Total Variance	Cumulative Eigenvalue	Cumulative %	Year	Value Number	Eigenvalue	% Total Variance	Cumulative Eigenvalue	Cumulative %
1994	1	2.681	26.812	2.681	26.812	2006	1	3.014	30.139	3.014	30.139
	2	2.515	25.154	5.197	51.966		2	2.500	25.001	5.514	55.140
	3	1.417	14.171	6.614	66.138		3	1.427	14.267	6.941	69.407
	4	1.100	10.999	7.714	77.136	2007	1	3.137	31.373	3.137	31.373
1995	1	2.751	27.511	2.751	27.511		2	2.433	24.331	5.570	55.704
	2	2.309	23.088	5.060	50.599		3	1.337	13.369	6.907	69.073
	3	1.512	15.117	6.572	65.715	2008	1	3.045	30.448	3.045	30.448
1996	1	2.770	27.700	2.770	27.700		2	2.438	24.376	5.482	54.825
	2	2.384	23.835	5.154	51.535		3	1.309	13.091	6.792	67.916
	3	1.315	13.149	6.468	64.684		4	1.031	10.310	7.823	78.226
	4	1.149	11.489	7.617	76.173	2009	1	3.021	30.212	3.021	30.212
1997	1	3.073	30.733	3.073	30.733		2	2.925	29.255	5.947	59.467
	2	2.453	24.527	5.526	55.260		3	1.347	13.470	7.294	72.937
	3	1.198	11.981	6.724	67.241	2010	1	3.038	30.378	3.038	30.378
	4	1.107	11.075	7.832	78.316		2	2.777	27.771	5.815	58.149
1998	1	2.852	28.521	2.852	28.521		3	1.464	14.642	7.279	72.791
	2	2.718	27.184	5.571	55.705	2011	1	2.790	27.900	2.790	27.900
	3	1.325	13.245	6.895	68.951		2	2.528	25.282	5.318	53.182
1999	1	2.678	26.777	2.678	26.777		3	1.565	15.655	6.884	68.836
	2	2.510	25.099	5.188	51.876		4	1.030	10.299	7.914	79.135
	3	1.385	13.855	6.573	65.731	1994-2011	1	48.753	27.085	48.753	27.085
	4	1.170	11.697	7.743	77.428		2	43.365	24.092	92.118	51.176
2000	1	2.554	25.543	2.554	25.543		3	22.636	12.575	114.753	63.752
	2	2.496	24.956	5.050	50.499		4	15.130	8.405	129.883	72.157
	3	1.356	13.561	6.406	64.060		5	10.323	5.735	140.206	77.892
2001	1	2.673	26.733	2.673	26.733		6	7.253	4.029	147.458	81.921
	2	2.491	24.914	5.165	51.646		7	6.010	3.339	153.468	85.260
	3	1.304	13.045	6.469	64.691		8	4.675	2.597	158.143	87.857
	4	1.093	10.925	7.562	75.616		9	3.469	1.927	161.613	89.785
2002	1	2.876	28.757	2.876	28.757		10	3.016	1.676	164.629	91.461
	2	2.578	25.784	5.454	54.541		11	2.305	1.280	166.934	92.741
	3	1.444	14.445	6.899	68.985		12	2.075	1.153	169.009	93.894
2003	1	2.813	28.127	2.813	28.127		13	1.522	0.845	170.531	94.739
	2	2.610	26.097	5.422	54.225		14	1.373	0.763	171.904	95.502
	3	1.596	15.964	7.019	70.188		15	1.255	0.697	173.158	96.199
2004	1	2.864	28.643	2.864	28.643		16	1.084	0.602	174.243	96.802
	2	2.605	26.054	5.470	54.697						
	3	1.523	15.230	6.993	69.927						
2005	1	2.910	29.101	2.910	29.101						
	2	2.651	26.505	5.561	55.606						
	3	1.514	15.141	7.075	70.747						

Source: Authors' calculations.

For the entire period, the results uncovered by the annual analysis are confirmed: cumulatively, labor force contributes to the first component by 29.20%, followed by international reserves (22.25%) and the percentage of urban population (11.45%). The variables with the lowest cumulative importance are inflation rate (0.31%), domestic credit (1.13%) and labour participation (3.63%).

***Table* 2. Contributions of variables to first factor (principal component) – annual 1994–2011**

Year	DC	TB	TO	GDPC	IR	UP	INF	MS	LBP	LBF
1994	0.0020	0.0268	0.1170	**0.2049**	0.0692	0.1632	0.0203	0.1581	0.0500	0.1886
1995	0.0148	0.0001	0.1319	**0.2667**	0.0181	0.1830	0.0183	0.2626	0.0034	0.1011
1996	0.0086	0.0071	0.1203	**0.2454**	0.0398	0.1872	0.0136	0.2444	0.0078	0.1257
1997	0.0069	0.1213	0.0604	0.1039	0.1920	0.1241	0.0017	0.0956	0.0514	**0.2427**
1998	0.0730	0.1681	0.0097	0.0346	0.2663	0.0763	0.0016	0.0048	0.1002	**0.2654**
1999	0.1415	0.2017	0.0013	0.0056	**0.2975**	0.0050	0.0086	0.0235	0.1121	0.2032
2000	0.1311	0.1430	0.0002	0.0120	**0.2940**	0.0037	0.0445	0.0090	0.1396	0.2228
2001	0.0167	0.0598	0.0696	0.0846	0.1983	0.1286	0.0000	0.1280	0.0377	**0.2767**
2002	0.0418	0.1412	0.0492	0.0409	0.2481	0.0654	0.0003	0.0715	0.0584	**0.2832**
2003	0.0078	0.0543	0.1060	0.1119	0.1759	0.1047	0.0110	0.1663	0.0266	**0.2354**
2004	0.0018	0.0108	0.1305	0.1739	0.0870	0.1468	0.0441	**0.2453**	0.0070	0.1528
2005	0.0011	0.0926	0.0828	0.0762	0.1961	0.0954	0.0193	0.1521	0.0414	**0.2430**
2006	0.0118	0.1913	0.0376	0.0213	0.2717	0.0440	0.0013	0.0759	0.0661	**0.2789**
2007	0.0040	0.1996	0.0450	0.0376	0.2532	0.0516	0.0002	0.0936	0.0453	**0.2700**
2008	0.0002	0.1675	0.0625	0.0445	0.2577	0.0558	0.0015	0.1047	0.0312	**0.2744**
2009	0.0458	0.0063	0.1821	0.1759	0.0608	0.1355	0.0563	**0.2158**	0.0021	0.1195
2010	0.0529	0.0014	0.1596	0.1854	0.0224	0.1409	0.1094	**0.2430**	0.0143	0.0706
2011	0.0012	0.0031	0.0816	0.1563	0.1468	0.1388	0.0407	0.2107	0.0033	**0.2175**
Average	**0.0313**	**0.0887**	**0.0804**	**0.1101**	**0.1719**	**0.1028**	**0.0218**	**0.1392**	**0.0443**	**0.2095**

Source: Authors' calculations.

When we project countries on the plane defined by the first and second factor identified in the PCA, a number of results are noteworthy. First, China is individualized in all years, as it always seem to cluster separately from all the other emerging markets. Second, there is an agglomeration of countries around the intersection of the two factors that show small differences among them depending on one or the other of the two principal components. Third, some countries do not seem to belong to the main cluster of countries, as they depart from the main agglomeration, mainly depending on the second principal component (Malaysia, Bahrain, Kuwait, South Korea, Thailand, UAE, and India). For the overall period (see Figure 1) this clustering pattern is maintained, and we also observe that the second principal component is able to provide more differentiation between countries compared to the first principal component.

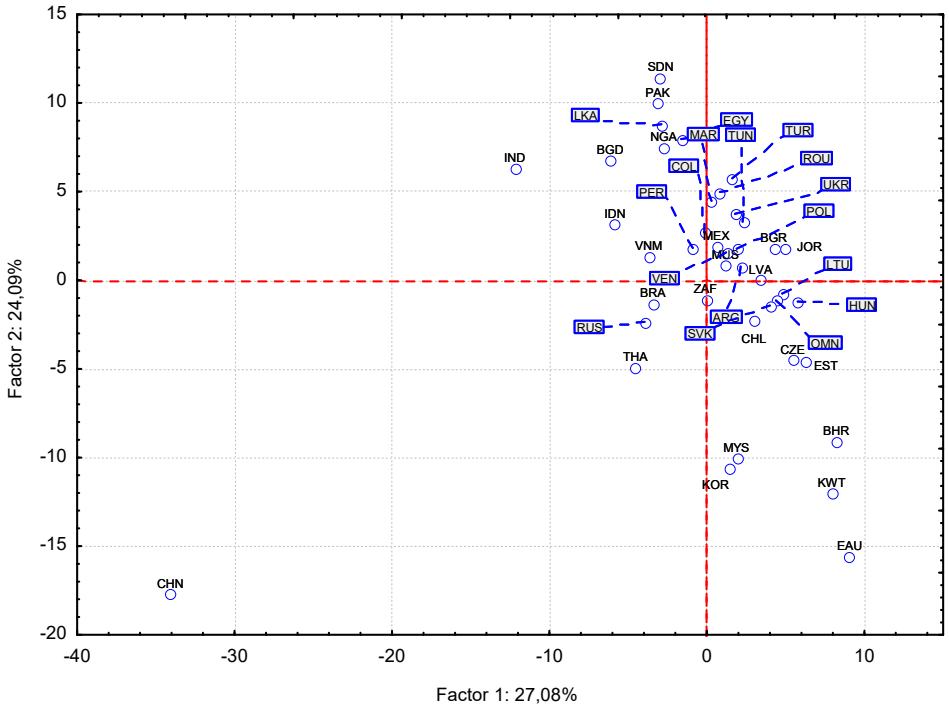

Fig. 1. Projections of countries on factor 1 against factor 2 plane, 1994–2011

Source: Authors' calculations.

3. Conclusions and discussions. Our paper investigates the location potential of 41 emerging countries from the perspective of MNEs' decision to invest abroad, by analyzing some of their attributes that may be considered location attractiveness factors between 1994 and 2011. The empirical approach considered attributes that are proxied for market size and its potential, country risk, infrastructure and ease of access to information, labour market features and world economic integration level of host countries. The methodology employed was Principle Compo-

nents Analysis, with the purpose of identifying of a smaller number of location attributes that are relevant for MNEs' decision to delocalize abroad.

The empirical analysis revealed that a number of only four variables had the most important contributions to the principal components, regardless of the year for which the analysis is undertaken: GDP per capita, international reserves, mobile subscriptions and labour force. By far, labour force is the variable that contributes the most to the first factor and its contribution becomes more important as we depart from 1994. At the same time, GDP per capita became less important in recent years.

Further research on this topic is intended, as follows. First, a larger panel of emerging markets is to be included in the analysis, differentiated according to their development level and volume of inward FDI. Second, the number of variables employed in the analysis needs to be enlarged, as to reflect in a more comprehensive and accurate manner the characteristics of emerging host economies. Third, these attributes need to be connected with the existing level of foreign direct investments and other investigation methods to be used in order to reveal the connection between those attributes and the multinational enterprises' decision to invest abroad.

References

1. Al-Sadig, A. 2009. The Effects of Corruption on FDI Inflows, Cato Journal, Vol. 29, pp. 267-294.
2. Ballasubramanyam, V.N., Salisu, M., Sapford, D. 1998. Foreign Direct Investment and Growth in EP and IS Countries, Economic Journal, Vol. 106, pp. 92-105. Available at: http://dx.doi.org/10.2307/2234933.
3. Bénassy-Quéré, A., Coupet, M., Mayer, T. 2007. Institutional Determinants of Foreign Direct Investment, The World Economy, Vol. 30, pp. 764-782, DOI: 10.1111/j.1467-9701.2007.01022.x
4. Bevan, A., Estrin, S. 2000. The Determinants of Foreign Direct Investment in Transition Economies, Discussion Paper 342. [Online], William Davidson Institute, 2000. Available at: http://wdi.umich.edu/files/publications/workingpapers/wp342.pdf
5. Boeri T., Brucker, H. 2000. The Impact of Eastern Enlargement on Employment and Labour Markets in the EU Member States, Report under contract SOC-97-102454. [Online], European Integration Consortium, 2000, http://www.diw.de/documents/dokumentenarchiv/17/38468/eic_employment.pdf
6. Borensztein, E., De Gregorio, J., Lee, J-W. 1998. How does foreign direct investment affect economic growth? Journal of International Economics,. Vol. 45, pp. 115-135, https://doi.org/10.1016/S0022-1996(97)00033-0.
7. Campos, N., Kinoshita, Y., 2003. Why Does Foreign Direct Investment Go Where It Goes? New Evidence from the Transition Economies, Working Paper Number 573. [Online], William Davidson Institute, 2003. Available at: http://deepblue.lib.umich.edu/bistream/handle/2027.42/39959/wp573.pdf
8. Carstensen, K., Toubal, F. 2002. Foreign Direct Investment in CEE countries: a dynamic panel analysis, Journal of Comparative Economics, Vol. 32, pp. 3-22. Available at: https://doi.org/10.1016/j.jce.2003.11.001
9. Dunning, J. 2001. The Eclectic (OLI) Paradigm of International Production: Past, Present and Future, Journal of the Economics of Business, Vol. 8. pp. 173-190. Available at: https://doi.org/10.1080/13571510110051441.
10. Hayakawa, K., Kimura, F., Lee, H-H. 2013. How Does Country Risk Matter for Foreign Direct Investment?, The Developing Economies, Vol. 51, pp. 60-78. DOI: 10.1111/deve.12002.
11. Holland, D., Pain, N. The Determinants and Impact of Foreign Direct Investments in the Transition Economies: A Panel Data Analysis [Online]. Available at: https://www.researchgate.net/publication/228972963_The_determinants_and_impact_of_foreign_direct_investment_in_the_transition_economies_a_panel_data_analysis
12. Hotelling, H. 1933. Analysis of a complex of statistical variables into principal components, Journal of Educational Psychology, Vol. 24, pp. 417–441 and 498–520. Available at: http://dx.doi.org/10.1037/h0071325
13. Hotelling, H. 1936. Relations between two sets of variates, Biometrika, Vol. 28, pp. 321–77. Available at: https://doi.org/10.1093/biomet/28.3-4.321.
14. Inekwe, J. N. 2013. FDI, Employment and Economic Growth in Nigeria, African Journal of Development, Vol. 25, pp. 421-433. DOI: 10.1111/1467-8268.12039.
15. Kinda, T. 2010. Investment Climate and FDI in Developing Countries: Firm-Level Evidence, World Development, Vol. 38, pp. 498-513. Available at: https://doi.org/10.1016/j.worlddev.2009.12.001.
16. Kneller, R., Pisu, M. 2007. Industrial Linkages and Export Spillovers from FDI, World Economy, Vol. 30, pp. 105-134. DOI: 10.1111/j.1467-9701.2007.00874.x
17. Liang, Y. 2007. FDI, Competitive Menace, and the Evolution of Labor Practices in China, The Chinese Economy, Vol. 40, pp. 21-51, DOI 10.2753/CES1097-1475400502
18. Miyamoto, K. 2003. Human Capital Formation and Foreign Direct Investment in Developing Countries, Working paper 211. [Online], Organisation for Economic Co-operation and Development (OECD), 2003. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=668505.
19. Majeed, M. T., Ahmad, E. 2008. Human Capital Development and FDI in Developing Countries, Journal of Economic Cooperation, Vol. 29. pp. 79-104.
20. Mollick, A. V., Ramos-Duran, R., Silva-Ochoa, E. 2006. Infrastructure and FDI flows in Mexico: A Panel Data Approach, Global Economy Journal, Vol. 6. pp. 1-27. Available at: https://doi.org/10.2202/1524-5861.1094.
21. Nair-Reichert, U., Weinhold, D. 2001. Causality Tests for Cross-Country Panels: a New Look at FDI and Economic Growth in Developing Countries, Oxford Bulletin of Economics and Statistics, Vol. 63., pp. 153-171, DOI: 10.1111/1468-0084.00214.
22. Santos-Paulino, A. W., Wan, G. 2009. FDI, Employment, and Growth in China and India, Review of Development Economics, Vol. 13, pp. 737-739, DOI: 10.1111/j.1467-9361.2009.00512.x
23. Wei, S. 2000. How Taxing Is Corruption on International Investors, Review of Economics and Statistics, Vol. 82, pp. 1-11. Available at: https://doi.org/10.1162/003465300558533.
24. Zhang, K. H., Song, S. 2002. Promoting exports: the role of inward FDI in China, China Economic Review, Vol. 11. pp. 385-396. Available at, https://doi.org/10.1016/S1043-951X(01)00033-5.
25. Zhou, D., Li, S., Tse, D. K. 2002. The impact of FDI on the productivity of domestic firms: the case of China, International Business Review, Vol. 11, pp. 465-484. Available at: https://doi.org/10.1016/S0969-5931(02)00020-3.

Received: 30/01/2018
1st Revision: 10/05/2018
Accepted: 01/06/18

Author's declaration on the sources of funding of research presented in the scientific article or of the preparation of the scientific article: budget of university's scientific project

Л. Беласку, д-р екон. наук, проф.
Університет імені Лучіана Блага, Сібіу, Румунія,
О. Хоробет, д-р екон. наук, проф.,
О. Поповичі, д-р екон. наук, доц.
Бухарестський економічний університет, Бухарест, Румунія

ЛОКАЛЬНІ АТРИБУТИ КРАЇН, ЩО РОЗВИВАЮТЬСЯ: АНАЛІЗ ВИКОРИСТАННЯ ОСНОВНИХ КОМПОНЕНТ

Досліджуються атрибути розташування великої вибірки країн з економікою, що розвивається, в аспекті прямих іноземних інвестицій та присутності міжнародних компаній за кордоном. Використовуються кілька макроекономічних змінних, які є гіпотезами, щоб ілюструвати, як саме відповідні атрибути місцеположення включати в аналіз основних компонент для рішень міжнародних компаній, щоб виявити найбільш релевантні географічні характеристики або комбінацію таких атрибутів, які впливають на рішення багатонаціональних компаній інвестувати за кордон. Виявлено, що основні компоненти складаються лише із чотирьох змінних: ВВП на душу населення, міжнародні резерви, підписки на мобільні телефони та робочу силу. Робоча сила – це змінна, яка найбільшою мірою залежить від першого фактора, і її внесок зростає, оскільки початковою є позиція 1994 року. Разом із тим, ВВП на душу населення останнім часом став менш важливим.

Ключові слова. Прямі іноземні інвестиції, перехідна економіка, аналіз основних компонент.

Л. Беласку, д-р экон. наук, проф.
Университет имени Лучиана Блага, Сибиу, Румыния,
О. Хоробет, д-р экон. наук, проф.,
О. Поповичи, д-р экон. наук, доц.
Бухарестский экономический университет, Бухарест, Румыния

ЛОКАЛЬНЫЕ АТРИБУТЫ РАЗВИВАЮЩИХСЯ СТРАН: АНАЛИЗ ИСПОЛЬЗОВАНИЯ ОСНОВНЫХ КОМПОНЕНТ

Исследуются атрибуты расположения большой выборки стран с развивающейся экономикой с точки зрения прямых иностранных инвестиций и присутствия международных компаний за рубежом. Используется несколько макроэкономических переменных, которые являются гипотезами, для иллюстрации того, как именно соответствующие атрибуты местоположения включать в анализ основных компонент для решений международных компаний, чтобы выявить наиболее релевантные географические характеристики или комбинацию таких атрибутов, которые влияют на решение многонациональных компаний инвестировать за границу. Установлено, что основные компоненты состоят лишь из четырех переменных: ВВП на душу населения, международные резервы, подписки на мобильные телефоны, рабочая сила. Рабочая сила – это переменная, которая в наибольшей степени зависит от первого фактора, и ее вклад растет, поскольку исходной является позиция 1994 года. В то же время, ВВП на душу населения в последнее время стал менее важным.

Ключевые слова. Прямые иностранные инвестиции, переходная экономика, анализ основных компонент.

Bulletin of Taras Shevchenko National University of Kyiv. Economics, 2018; 3(198): 34-39
УДК 330
JEL classification: F02, F1, F2, F6
DOI: https://doi.org/10.17721/1728-2667.2018/198-3/3

S. Burnete, PhD, Professor
Lucian Blaga University, Sibiu, Romania

TRANS-ATALANTIC INTEGRATION: A CRUCIAL PACE TOWARD A GLOBALIZED WORLD

In this paper we deal with the much "touted and taunted" upcoming transatlantic economic integration. We scrutinize the issue through the prism of both economic theory and historical development, in an attempt to contend that economic integration is no less lucrative on a transcontinental level than it used to be on a regional level. We use theoretical and historical arguments to emphasize the necessity and opportunity of a trade and investment agreement between the United States and the European Union, which is likely to turn the Atlantic into a redoubtable economic pole. We show that Europe and America are full readiness to enter into this paramount agreement.

Key words. trans-Atlantic integration, international trade, regional blocs, investment, partnership.

Introduction. Contrary to popular belief, globalization did not speed up but slowed down the advance toward freer international trade. Mobility of capital across national borders and the attendant increase in the power of multinational companies are acting rather as disincentives to nations' willingness to further open their markets to international trade. Moreover, conventional trade in merchandise and services is increasingly being blamed for many evils of today's world such as environment degradation, labor standards infringement, domestic firms' exposure to unfair competition from abroad etc. As a consequence, regional and bilateral agreements have been proliferating lately, not as surrogates but as interim solutions to the halting progress in multilateral negotiations aimed at fully liberalizing international trade. In this context, trans-Atlantic integration should be perceived as a natural and necessary step toward a truly globalized world. The mere fact that two huge trade blocks are involved therein makes it appear as one of the most prominent challenges the world has been facing in its entire history.

Trans-Atlantic integration is by no means a sui generis phenomenon even though it involves the union of two tectonic plates, separated by an ocean. Yet the geographic gap is ever less a barrier to trade and investment flows between the two. In fact, integration has been steadily advancing on both sides of the Atlantic after World War 2: the European Union (EU) is more than sixty years old, while North American Free Trade Agreement (NAFTA) has a quarter of a century of existence. In all this time, the bonds between the two blocs have kept tightening. Now they are poised for a big step forward: the Trans-Atlantic Trade and Investment Partnership (TTIP).

1. Economic integration: a few theoretical and historical considerations

From among the founders of economic integration theory, perhaps Jacob Viner and Bela Balassa are most noteworthy. Viner's "Customs Union Issue" as well as Balassa's "Theory of Economic Integration" was a solid bedrock on which the first integration organizations were built after World War II. The former is preoccupied by (even concerned about) the conditions under which customs unions are compatible with basic principles of international trade such as most-favored nation treatment [8], which lead him to the conclusion that free trade areas are a second best optimum. Balassa follows the same logic, defining economic integration as "abolition of discrimination within an area" [13]. Clearly, both scholars are focused upon the discriminatory nature of regional blocs: customs unions eliminate discrimination within the trade among member-countries on the one hand, yet they discriminate against outside nations on the other hand. Lipsey R. [19] tackles "empirical evidence relating to the gains from European Economic Union", asking to what extent customs union-type arrangements are welfare-improving. The 1990s bring about a slight change of approach in that scholars (e.g. Panagariya A. and Findlay R. [25]) begin to take into consideration an important dimension of the economic integration issue, which is the endogeneity of trade policies. The idea is also emphasized by Krugman P. [16] according to whom, "in a fundamental sense, the issue of the desirability of free trade areas is a question of political economy rather than of economics proper. In practice, the reputed Nobel prize-winner economist contends, the move toward free trade zones will continue because the benefits of freer trade within regions largely outweigh the discrimination against third parties (aka trade diversion) downside. "The real objection is a political judgment: fear