UDC 330.322.012

УДК 330.322.012

O. V. Lyulyov, Doctor of Economics, Associate Professor, B. A. Moskalenko, Postgraduate Student **О. В. Люльов,** д. е. н., доцент, **Б. А. Москаленко,** аспірант

# FEATURES OF ESTIMATING THE DETERMINANTS OF FOREIGN DIRECT INVESTMENT FLOWS WITHIN COUNTRY INVESTMENT POTENTIAL EVALUATION

## ОСОБЛИВОСТІ ВИЗНАЧЕННЯ ДЕТЕРМІНАНТІВ РУХУ ПРЯМИХ ІНОЗЕМНИХ ІНВЕСТИЦІЙ ПІД ЧАС ОЦІНКИ ІНВЕСТИЦІЙНОГО ПОТЕНЦІАЛУ НАЦІОНАЛЬНОЇ ЕКОНОМІКИ

**Urgency of the research.** Theoretical and empirical studies show that investment allocation has a perceptible impact on local economic development.

Target setting. Taking into consideration reasonably low quantity of high-quality investments, countries all over the world are eager to incentive foreign direct investments inflows. Therefore, realistic country investment potential evaluation is vitally important for respective government institutions within their policies getting done.

Actual scientific researches and issues analysis. The major issues of country investment potential evaluation, and investment market in general, were made by the following scientists and technicians: O. Fedonin, I. Riepina, O. Oleksiuk, S. Lieonov, B. Chub, Ie. Lapin, J. Dunning, A. Thompson., D. Kaufmann, M. De Melo, K. Berden, S. Sarno, P. Buckley, A. Fukumi and others.

Uninvestigated parts of general matters defining. At the same time, insufficient scientific works cover approaches to assessing investment potential of Ukraine, based on latest research results of foreign scientists within current topic. Current socio-economic determinants of foreign direct investment need to be studied.

The research objective is to identify key determinants of foreign direct investment inflow in the economy of Ukraine.

The statement of basic materials. The article have considered determinants of foreign direct investment inflows, which are related to country socio-economic development and state institutions indicators.

**Conclusions.** Studies of statistics of groups in transition economies have shown that the simultaneous adoption indicators of socio-economic development and quality of public institutions into the model of country investment potential evaluation allows to evaluate the elasticity of foreign direct investment to changes in each of the determinants.

**Keywords:** investments; foreign direct investment; investment potential; country investment potential evaluation; domestic economy.

**DOI:** 10.25140/2410-9576-2020-1(20)-6-11

**Актуальність теми дослідження.** Питання активізації залучення якісних інвестиційних ресурсів із закордону є актуальним для урядів багатьох країн.

Постановка проблеми. У зв'язку з обмеженою пропозицією якісних інвестиційних ресурсів, визначення факторів, що впливають на залучення прямих іноземних інвестицій та оцінка інвестиційного потенціалу національної економіки є важливим моментом здійснення внутрішньої соціально-економічної політики країни.

Аналіз останніх досліджень і публікацій. Значний внесок у розвиток теорії та практики оцінки інвестиційного потенціалу на макроекономічному рівні зробили такі вітчизняні та зарубіжні вчені: О. Федонін, І. Рєпіна, О. Олексюк, С. Лєонов, Б. Чуб, Є. Лапін, Дж. Даннінг, А. Томпсон, Д. Кауфманн, М. Де Мело, К. Берден, С. Сарно, П. Баклі, А. Факумі та ін.

Виділення недосліджених частин загальної проблеми. У той же час недостатньо наукових праць підходи до оцінки інвестиційного висвітлюють потенціалу економіки України, враховуючи останні результати досліджень зарубіжних вчених на цю тематику. дослідження Потребують актуальні соціально-економічні детермінанти руху прямих іноземних інвестицій.

**Постановка завдання.** Завданням даного дослідження є визначення ключових показників, що впливають на залучення прямих іноземних інвестицій в економіку України.

Виклад основного матеріалу. У статті розглянуто детермінанти притоку прямих іноземних інвестицій, що пов'язані з показниками соціально-економічного розвитку країни та характеристиками державних інституцій.

Висновки. Дослідження статистики груп країн перехідної економіки показали, що одночасне врахування у моделі оцінки інвестиційного потенціалу економіки показників соціально-економічного розвитку та якості державних інституцій дозволяє оцінити еластичність притоку прямих іноземних інвестицій до змін кожного з детермінантів.

**Ключові слова:** інвестиції; прямі іноземні інвестиції; інвестиційний потенціал; оцінка інвестиційного потенціалу; національна економіка.

**Urgency of the research.** Within recent decades, the problem investment resources inflows through countries' borders has become important among both economists and business analysts researches. The redistribution process of resources depends on significant number of determinants, which varies widely by geography, type of investment, and participants.

Countries around the world are taking various measures in order to increase their competitiveness, including investment attractiveness. It is believed that the most valuable investments are those that create new jobs, increase gross domestic product (GDP), and develop infrastructure. With this in mind, governments seek to incentive foreign direct investment (FDI), especially from technologically advanced multinational corporations (MNCs).

The statement of basic materials. The process of country investment potential evaluation (CIPE) is comprehensive (includes evaluation of lower levels` potentials) and takes place in several stages. Based on recent studies analysis done by domestic and foreign scientists, it could be assumed that the most common direction of CIPE belongs within panel data analyzing. Panel data approaches work with macroeconomic indicators dynamics, infrastructure qualitative characteristics, and host country specific circumstances. The process of variables selection in this model widely depends on geographic and social characteristics of the country.

A realistic CIPE is important not only for investors and business owners, but also for respective government institutions involved in the allocation of budget funds, tax collection, and responsible for the socio-economic situation in the country in general.

Actual scientific researches and issues analysis. Dunning and Lundan [1], who proposed a new approach to understanding of FDI and described the motives of cross-border FDI spillover, made a significant contribution to the development of the theory and methodology of investment research. Thompson & Strickland [2] have built the foundation of strategic management concept that includes investment policies and decision-making processes.

Team of scientists led by Kaufmann [3] proposed Worldwide Governance Indicators Methodology for CIPE.

Globerman [4], Matura [5], Fukumi [6] and others, discussed the influence of government institutions and politic environment on investment attractiveness.

Among our Ukrainian scientists, we have to mention Fedonin, Riepin and Oleksiuk [7], who proposed a complex model for assessing investment potential at the enterprise level. Lieonov has structured modern approaches to the definition of investment potential, and proposed a model for investment potential evaluation of Ukrainian banking system [8].

Scientists such as Dawid [9], Kulczycka [10], Buckley [11], Kinoshita [12], Bouchoucha [13] and others developed econometric methods of CIPE.

Uninvestigated parts of general matters defining. Within few decades of active literature researches have evolved over time. On the other hand, the results become sometimes controversial, and they are not satisfactory or not conclusive in most cases or even ignore specific aspects such as the quality of institutions. Despite this, recent ideas from around the globe are attempting to explain this phenomenon using a strong scientific theoretical foundation and statistical data. Thus, in order to propose a new approach to understanding of the determinants of Ukrainian investment potential, evaluate their statistical significance, and identify opportunities for improvement public policies within investment market.

The research objective. Based on the understanding of investment potential as the ability to attract and utilize investment resources by domestic economy, the task of this study is to identify key indicators on which investors make decision about allocation of FDI in the economy of Ukraine.

The statement of basic materials. FDI is considered one of the least volatile forms of foreign capital flows. [14]. As usual, they are often accompanied by physical investment that is irreversible in the short run. FDI are carried out in larger amounts and for a longer period than portfolio investments. At the macro-economic level, FDI inflows could be recognized as a positive effect of FDI inflows in the past on current FDI.

Using VOSviewer software let us confirm a bibliographic analysis of publications related to CIPE topic among review articles.

Regarding to this aim, we selected 1000 most relevant articles using keywords «investments», «foreign direct investment», «investment potential», «country investment potential evaluation «, and «domestic economy». The results are shown on Fig. 1.

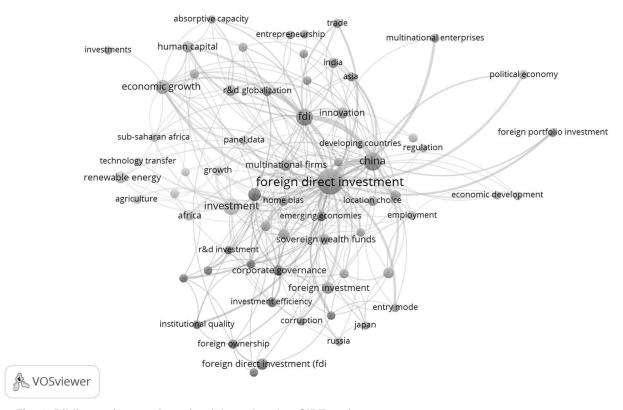


Fig. 1. Bibliometric overview of articles related to CIPE topic *Source*: [formed by the authors]

Fig. 1 shows that the most researched phenomena within CIPE agenda is FDI. It has to be mentioned, that the most popular object of studies is emerging market economies such as China and India, and Africa region. Another important point finds panel data analysis widely performed method of CIPE process. It was found that the most prevalent researches on this topic are related to FDI spillovers to developing countries. Additionally, MNCs and their motives are widely discussed in studies dealing with investment process.

Investors make decisions based on expected return associated with the location of the investment object [12]. Certainly, return of investments depends on a large number of specific factors and investment motives.

Dunning [1] identifies the motives of foreign investors and, which of three types of FDI they are undertaking:

- market-seeking;
- resource-seeking;
- efficiency-seeking.

Market-seeking FDI are supposed to serve local and regional markets. It also involves replication of production facilities in the host country. This type of FDI attracts investors to countries with large GDP and emerging market. Investors pay attention to countries where resources are extracted or created with minimal added value, as usual that are countries with weak economies and poor infrastructure. The third type of FDI, called efficiency-seeking, occurs when investor can gain from the common governance of geographically dispersed activities in the presence of economies of scale and scope.

This encourages investors to focus on geographical proximity of host and investment origin countries in order to optimize the costs.

Overall, the issue of FDI spillovers directly depends on host country competitive advantages, which could provide an acceptable profitability level for investors. The FDI literature has identified a number of economic determinants for FDI allocation such as the market size, growth, the labor costs, the quality of the socio-economic, infrastructure and the degree of liberalization of the financial system.

As follows, the determinants of FDI inflows could be separated into two categories: traditional determinants, which are related to the macro-economic feature, and non-traditional determinants, which are related to host country governance institutions.

Some scientists [15; 16; 17; 13] within the traditional determinants of attracting FDI focus on GDP per capita, GDP growth rate, gross nominal wage, unemployment rate, exports and imports, government expenditure, as a percentage of GDP. The source of data could be statistics provided UN [18], World Bank [19], statistical publications of central banks etc.

Unsurprisingly, one of the indicators of country investment attractiveness is abundance of natural resources. This indicator is relative and conditional, thus De Melo [20] proposes to use it in the model of evaluation using following concepts: «poor» (country is poor in natural resources), «moderate» - the average level of security; «rich» - a surplus of natural resources.

In current world economy conditions, good infrastructures as well as level of knowledge-intensive production and quality of labor resources are necessary conditions for gaining some competitive advantages.

Among the evaluation models based on panel data analysis, several theoretical research studies showed that fixed telephone subscriptions index (per 100 people) could be applicable to evaluation process [12; 13]. Nowadays, the business infrastructure is highly depended on Internet access quality. Accordingly to that, we assume, the indicator of mobile internet penetration, which is defined as the share of the population using smartphones, could replace fixed telephone subscriptions index in panel data models.

The non-traditional determinants of CIPE include a set of socio-political characteristics of the host economy [13]. Thus, Kaufmann et al [3] proposes six worldwide governance indicators (WGI): government effectiveness (GE), the control of corruption (CC), the rule of law (RL), political stability (PS), voice and accountability (VA), and the regulatory quality (RQ).

In the same context, Berden et al. [21] have used a panel data set covering 128 countries around the world to examine the impact of governance indicators on FDI inflows and outflows. The results have shown that political stability and the quality of regulation stimulate FDI inflows. On the other hand, increasing the voice and accountability index reduces FDI inflow. By the way, it is believed that high GDP growth rate, abundance of natural resources, well-developed infrastructure, and macroeconomic stability have positive and significant impact on FDI inflows, while other studies found the opposite.

**Conclusions.** Within this study, we reviewed the theoretical framework on the location determinants of FDI. The analysis of international experiences within CIPE process reveals possibility of combining quantitative and qualitative characteristics of the host-country economy.

It is worth noting that some studies of statistics in transition economies have shown that market size, natural resources, infrastructure, macroeconomic stability and the quality of public institutions have a statistically significant positive impact on FDI, while other studies have shown the opposite.

Thus, further studies of economic, political and institutional determinants of FDI flows should be done accordingly to specific features of areas they belong to. CIPE in conditions of political instability and shocks in host-country economy needs constant amendment, so it is important to study the possibilities of new determinants and forecast future FDI inflows.

#### References

- 1. Dunning, J. H., Lundan, S. M. (2008). *Multinational Enterprises and the Global Econom*. (2nd ed.). Cheltenham: Edward Elgar [in English].
  - 2. Thompson, A. & Strickland, A. (1999). Strategic

#### Література

- 1. Multinational Enterprises and the Global Economy, 2nd ed., John H. Dunning, Sarianna M. Lundan Edward Elgar, Cheltenham, UK (2008).
  - 2. Thompson A. & Strickland A. (1999). Strategic

management – Concept and Cases. (11th ed.). New York: McGraw-Hill Companies [in English].

- 3. Kaufmann, D., Kraay, A., & Mastruzzi, M. (2011). The Worldwide Governance Indicators: Methodology and Analytical Issues. *Hague Journal on the Rule of Law, 3(02),* 220–246 [in English].
- 4. Globerman, S., & Shapiro, D. (2003). Global foreign direct investment flows: the role of governance infrastructure. *World Development*, *30*, 1899–1919 [in English].
- 5. Mathur, A., & Singh, K. (2013). Foreign direct investment, corruption and democracy. *Applied Economics*, 45(8), 991–1002 [in English].
- 6. Fukumi, A., & Nishijima, S. (2010). Institutional quality and foreign direct investment in Latin America and the Caribbean. *Applied Economics*, 42(14), 1857–1864 [in English].
- 7. Fedonin, O. S., Riepina, I. M., Oleksiuk, O. I. (2003). Potentsial pidpryiemstva: formuvannia ta otsinka [Enterprise potential: formation and evaluation]. Kyiv: KNEU [in Ukrainian].
- 8. Lieonov, S. V. (2009). Investytsiinyi potentsial bankivskoi systemy Ukrainy [Investment potential of the banking system of Ukraine]. Sumy: DVNZ "UABS NBU" [in Ukrainian].
- 9. Dawid, H., & Reimann, M. (2005). Evaluating Market Attractiveness: Individual Incentives Versus Industry Profitability. *Computational Economics*, 24(4), 321–355 [in English].
- 10. Kulczycka, J., Nowaczek, A., Hałasik, K., Whirt, H., Szkop, R (2017). The analysis of factors, barriers and conditions that affect the attractiveness of mining investment in Poland own research. *Mining Science*, 24, 209–226 [in English].
- 11. Buckley, P. J., Clegg, J., & Wang, C. (2007). Is the relationship between inward FDI and spillover effects linear? An empirical examination of the case of China. *Journal of International Business Studies*, *38*(3), 447–459 [in English].
- 12. Kinoshita, Y., & Campos, N. F. (2004). Estimating the Determinants of Foreign Direct Investment Inflows: How important are sampling and omitted variable biases? *BOFIT Discussion Paper No. 10.* Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=1015209 [in English].
- 13. Bouchoucha, N., & Benammou, S. (2018). Does Institutional Quality Matter Foreign Direct Investment? Evidence from African Countries. *Journal of the Knowledge Economy*, 11, 390–404 [in English].
- 14. Sarno, L., & Taylora, M. P. (1999). Moral hazard, asset price bubbles, capital flows, and the East Asian crisis. *Journal of International Money and Finance*, *18(4)*, 637–657 [in English].
- 15. Marcel, D. T. A. (2019). Impact of the Foreign Direct Investment on Economic growth on the Republic of Benin. *Financial Markets, Institutions and Risks, 3(2),* 69-78 [in English].
- 16. Agnihotri, A., Arora, S. (2019). Study of Linkages Between Outward Foreign Direct Investment (OFDI) and Domestic Economic Growth: an Indian Perspective. Financial Markets, Institutions and Risks, 3(1), 43-49 [in English].
- 17. Bhowmik, D. (2018). Financial Crises and Nexus Between Economic Growth and Foreign Direct Investment. Financial Markets, Institutions and Risks, 2(1), 58-74 [in English].
  - 18. Handbook of Statistics 2019. (2019). UNCTAD.

- management Concept and Cases 11th ed. *McGraw-Hill Companies*, 1088 p.
- 3. Kaufmann, D., Kraay, A., & Mastruzzi, M. (2011). The Worldwide Governance Indicators: Methodology and Analytical Issues. *Hague Journal on the Rule of Law*, 3(02), 220–246
- 4. Globerman, S., & Shapiro, D. (2003). Global foreign direct investment flows: the role of governance infrastructure. *World Development*, 30, 1899–1919.
- 5. Mathur, A., & Singh, K. (2013). Foreign direct investment, corruption and democracy. *Applied Economics*, 45(8), 991–1002.
- 6. Fukumi, A., & Nishijima, S. (2010). Institutional quality and foreign direct investment in Latin America and the Caribbean. *Applied Economics*, 42(14), 1857–1864.
- 7. Федонін О. С. Потенціал підприємства: формування та оцінка: навч. посібник / О. С. Федонін, І. М. Рєпіна, О. І. Олексюк. К.: КНЕУ. 2003. 316 с.
- 8. Інвестиційний потенціал банківської системи України: монографія / С. В. Лєонов. Суми : ДВНЗ "УАБС НБУ", 2009. 375 с.
- 9. Dawid, H., & Reimann, M. (2005). Evaluating Market Attractiveness: Individual Incentives Versus Industry Profitability. *Computational Economics*, 24(4), 321–355.
- 10. Kulczycka, J., Nowaczek, A., Hałasik, K., Whirt, H., Szkop, R (2017). The analysis of factors, barriers and conditions that affect the attractiveness of mining investment in Poland own research. *Mining Science*; 24, 209–226.
- 11. Buckley, P. J., Clegg, J., & Wang, C. (2007). Is the relationship between inward FDI and spillover effects linear? An empirical examination of the case of China. *Journal of International Business Studies*, 38(3), 447–459.
- 12. Kinoshita, Y., & Campos, N. F. (2004). Estimating the Determinants of Foreign Direct Investment Inflows: How important are sampling and omitted variable biases?, September 2007. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=1015209.
- 13. Bouchoucha, N., & Benammou, S. (2018). Does Institutional Quality Matter Foreign Direct Investment? Evidence from African Countries. *Journal of the Knowledge Economy*.
- 14. Sarno, L., & Taylora, M. P. (1999). Moral hazard, asset price bubbles, capital flows, and the East Asian crisis: *Journal of International Money and Finance*, 18(4), 637–657.
- 15. Marcel, D. T. Am. (2019). Impact of the Foreign Direct Investment on Economic growth on the Republic of Benin. *Financial Markets, Institutions and Risks, 3*(2), 69-78.
- 16. Agnihotri, An., Arora, Sh. (2019). Study of Linkages Between Outward Foreign Direct Investment (OFDI) and Domestic Economic Growth: an Indian Perspective. Financial Markets, Institutions and Risks, 3(1), 43-49.
- 17. Bhowmik, D. (2018). Financial Crises and Nexus Between Economic Growth and Foreign Direct Investment. *Financial Markets, Institutions and Risks*, *2*(1), 58-74.
- 18. UNCTAD (2019). Handbook of Statistics 2019. Retrieved from: https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2591.
- 19. World Bank (2019). World Development Indicators 2019. World Bank. Retrieved from https://data.worldbank.org/indicator.
- 20. De Melo, M., C. Denizer, A. Gelb, and S. Tenev, 1997, "Circumstance and Choice: The Role of Initial Conditions Policies in Transition Economies," World Bank Policy Research Working Paper 1866 (Washington: The World

from: https://unctad.org/en/pages unctad.org. Retrieved /PublicationWebflyer.aspx?publicationid=2591 [in English].

19. Development Indicators 2019. (2019). World Bank. data.worldbank.org. Retrieved from https://data.worldbank. org/indicator [in English].

20. De Melo, M., Denizer, C., Gelb, A., and Tenev, S. (1997). Circumstance and Choice: The Role of Initial Conditions Policies in Transition Economies. *World Bank* Policy Research Working Paper, 1866 [in English].

21. Berden, K., Bergstrand, J. H., & van Etten, E. (2013). Governance and Globalisation. The World Economy, 37(3), 353-386 [in English].

Bank).

21. Berden, K., Bergstrand, J. H., & van Etten, E. (2013). Governance and Globalisation. The World Economy, 37(3), 353-386.

Received for publication 25.05.2020

#### Бібліографічний опис для цитування :

Lyulyov O. V., Moskalenko B. A. Features of estimating the determinants of foreign direct investment flows within country investment potential evaluation. Науковий вісник Полісся. 2020. № 1 (20 )., С. 6-11.

доктор економічних наук, доцент, завідуючий кафедри маркетингу, Навчально-науковий Олексій Валентинович

інститут фінансів, економіки та менеджменту імені Олега Балацького, Сумський державний

**університет**: https://orcid.org/0000-0002-4865-7306;

e-mail: alex\_lyulev@econ.sumdu.edu.ua;

Lyulyov Doctor of Economics, Associate Professor, Head of the Department of Marketing, Oleksii Valentynovych

Oleg Balatskyi Academic and Research Institute of Finance, Economics and Management,

Sumy State University;

https://orcid.org/0000-0002-4865-7306; e-mail: alex\_lyulev@econ.sumdu.edu.ua;

аспірант кафедри маркетингу, Навчально-науковий інститут фінансів, економіки та Москаленко Богдан Андрійович

менеджменту імені Олега Балацького, Сумський державний університет; https://orcid.org/0000-0003-3972-1705;

e-mail: b.mos.sumdu@gmail.com

Moskalenko Postgraduate Student at the Department of Marketing, Oleg Balatskyi Academic and Research **Bogdan Andriiovych** 

Institute of Finance, Economics and Management, Sumy State University;

https://orcid.org/0000-0003-3972-1705; e-mail: b.mos.sumdu@gmail.com.