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# PERFORMANCE AS A BASIC FACTOR OF COMPETITIVENESS OF UKRAINE AND ITS REGIONS (THE ASSESMENT IS DONE ACCORDING TO IMD-LAUSANNE METHODOLOGY)

**Urgency of the research.** The importance of performance assessment is proved by its significance among the factors of competitiveness of countries and regions.

**Goal setting.** Performance assessment is needed to establish priority areas for its improvement by strengthening international competitive capacity of the country and its regions.

Actual scientific research paper analysis. The assessment of the performance from the perspective of improving the competitiveness of Ukraine and its regions is described by experts of the fund "Effective management" and some scientists - I. Brykova, M. Butko, M. Danylovich-Kropyvnytska, O. Matveeva and others.

Defining the unresearched parts of the issue: The majority of researches on productivity assessment in the context of improving the competitiveness of the country and its regions are done according to the methodology of the World Economic Forum or the author's approach, while the assessment based on the methodology of International Institute for Management Development (IMD-Lausanne) is at the initial stage.

The research objective. The article aims to evaluate performance as a factor of the competitiveness of Ukraine and its regions according to the methodology IMD-Lausanne and find ways to improve it.

Summary of the paper. The article shows the importance of increasing the productivity of using the factors of production to ensure a high competitive status of countries and regions. According to experts of IMD-Lausanne the author suggests his own approach to evaluating performance as a factor of international competitiveness of the country and its regions. An assessment of the international competitiveness of Ukraine and its regions is given considering significant indicators of overall performance, performance for individual sectors and performance in terms of business types. The strategic direction of increasing international competitiveness of Ukraine and its regions by enhancing the productivity of the county economy is offered in the research paper.

Conclusions. The assessment of international competitiveness of Ukraine and its regions by indicators of performance (according to the methodology IMD-Lausanne) has shown that it is low entirely and on most indicators and, therefore, needs to be improved. Thus, a number of innovative approaches to modernize the economy has to be implemented.

# ПРОДУКТИВНІСТЬ ЯК БАЗОВИЙ ЧИННИК КОНКУРЕНТОСПРОМОЖНОСТІ УКРАЇНИ ТА ЇЇ РЕГІОНІВ (ОЦІНКА ЗА МЕТОДОЛОГІЄЮ IMD-LAUSANNE)

Актуальність теми дослідження. Важливість оцінювання продуктивності обумовлена її фундаментальною значимістю в системі чинників конкурентоспроможності країн і регіонів.

Постановка проблеми. Оцінка продуктивності необхідна для встановлення пріоритетних напрямів її підвищення в контексті зміцнення міжнародного конкурентного потенціалу країни та її регіонів.

Аналіз останніх досліджень і публікацій. Питанням оцінки продуктивності під кутом зору підвищення конкурентоспроможності України та її регіонів присвятили свої праці фахівці Фонду «Ефективне управління» та окремі вчені— І. Брикова, М. Бутко, М. Данилович-Кропивницька, О. Матвеєва та ін.

Виділення недосліджених частин загальної проблеми. У більшості праць оцінка продуктивності у контексті підвищення конкурентоспроможності країни та її регіонів дається на основі методології Всесвітнього економічного форуму або авторських підходів, тоді як оцінки за методологією міжнародного Інституту розвитку менеджменту (IMD-Lausanne) знаходяться на початковій стадії.

Постановка завдання. Метою статті є оцінювання продуктивності як чинника конкурентоспроможності України та її регіонів на основі методології IMD-Lausanne та в пошуку шляхів її підвищення.

Виклад основного матеріалу. У статті показано важливість нарощування продуктивності використання факторів виробництва забезпечення високого конкурентного статусу країн і Згідно з методологічними установками регіонів. IMD-Lausanne представлено авторський фахівиів підхід до оцінювання продуктивності як чинника міжнародної конкурентоспроможності країни та її регіонів. Наведено оцінку міжнародної конкурентоспроможності України та її регіонів за вагомими індикаторами загальної продуктивності, продуктивності за окремими секторами економіки та продуктивності в розрізі підприємств різних типів. стратегічні Визначено напрями міжнародної конкурентоспроможності України та її регіонів на основі зростання продуктивності економіки.

Висновки. Оцінка міжнародної конкурентоспроможності України та її регіонів за індикаторами продуктивності (згідно методології IMD-Lausanne) показала, що вона в цілому й за більшістю індикаторів є невисокою, а отже, потребує покращення. Для цього необхідною є низка заходів із інноваційної модернізації економіки.

**Keywords:** productivity; competitiveness (country; region) methodology IMD-Lausanne; factors (sub factors) and an indicator of competitiveness; IMD ranking.

**Ключові слова:** продуктивність; конкурентоспро-можність (країни, регіону); методологія ІМD-Lausanne; фактор (субфактор) та індикатор конкурентоспро-можності; рейтинг ІМD.

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**Urgency of the research.** The main objective of socially oriented economic system – is to provide a high standard of living. And this can be achieved, according to M. Porter, based on high economic productivity [1, p. 212].

So, high performance is not just support income country and regions high, but also ensures the growth rate of the population which is a final characteristic for competitiveness of countries and regions. Therefore, the concept of competitiveness at the country level and its regions based on productivity of using production factors.

**Goal setting.** In this context, the performance evaluation has not only scientific but also practical importance. It is, on the one hand, points to the importance of productivity as a key factor in the competitiveness of the country and its regions, and on the other - to determine the strategic direction of its increase, particularly in the context of improving living standards and strengthen the competitive potential of the country and its regions in globally competitive space.

**Actual scientific research paper analysis.** The experts of Fund "Effective management" [2] and some scientists - I. Brykova [3], M. Butko [4].

M. Danylovych – Kropyvnytska [5], O. Matveyeva [6] and others devoted their labor to the assessment of overall performance and productivity using certain inputs from the perspective of improving the competitiveness of Ukraine and its regions.

**Defining the unresearched parts of the issue.** It should be noted that most of the works the performance evaluation in the context of improving the competitiveness of the country and its regions is done based on the methodology of the World Economic Forum or the author's approach, while similar assessment methodology International Institute for Management Development (IMD-Lausanne - Lausanne, Switzerland) are just at an early stage.

The research objective. The article is to evaluate the performance as a factor in the competitiveness of Ukraine and its regions based on the methodology IMD-Lausanne and find ways to improve it.

**Summary of the paper.** The factors of competitiveness of the country and its regions - these are the driving forces that ensure they reach certain competitive advantages compared to other countries and regions. They are usually based on performance using classical factors of production, including such as land (natural resources), labor and capital.

Productivity - the ratio between the number of goods or services produced and used for this production factors.

Productivity of use the factors of production, according to the methodology IMD-Lausanne is seen as sub factors "Productivity and efficiency" and refers to that factor in the competitiveness of countries and regions as "efficiency business", measured by indicators of overall performance (of product per worker) productivity individual sectors (industry, agriculture, services) and performance in terms of different types of businesses - small, medium and large, foreign capital etc [7].

In order to discover, how the indicators characterizing productivity, contribute to the process of improving the competitiveness of the country and its regions, we used a special technique [8, p. 114-118]. According to which, assessment of indicators of competitiveness in performance is obtained based on the ratio (percentage) of actual and maximum values of indicators (leading-countries for each of the indicators).

B Besides, our approach to evaluating performance in areas provided for the use of procedures "international testing" of national competitiveness indicators - the ratio of their values and the values of leading countries indicators.

The value of an aggregate index of competitiveness of the country and regions was calculated by the productivity as a simple arithmetic mean of all partial factors.

According to this method we obtained evaluation of the competitive potential of Ukraine and its

regions by indicators of performance. For calculations used indicator framework IMD-2012 [7]. It was given the advantage that in the future on terms of the competitiveness of Ukraine and its regions affected by events related to Dignity Revolution (2013-2014) and the annexation of Ukrainian territories (from 2014). Note that assessment, except material IMD [7] draws the State Statistics Service of Ukraine [9], the International Institute of Management (IIM-Kyiv) and the Foundation "Effective Management" [2, p. 102-207].

The most general indicator of use of factors of production in Ukraine and its regions is the overall performance - the average individual performance are calculated in terms of gross domestic and gross regional product (GRP and GDP), per country and region, per employee. As the total capacity (according to purchasing power parity [PPP], which is based on the ratio of the average price of Big Mac (hamburger) in the US and in a country whose currency is measured) Ukraine is below the rating IMD (54th place among 59 countries, 15,958 dollars / person) and this indicator is 8.5 times lower than the leader - Qatar (135,523 USD. / person). Note that PPP UAH against USD in 2011 was 1,963. About a third part (30.8%) from the best indicator only in Kiev (41,686 dollars / person - at the level of -41591 USD/ person 41th place in the ranking IMD), 16.6% (US \$ 22,417 /person) - Dnipropetrovsk region, 15.2% (20,561 dollars / person) - Donetsk region. Next in the ranking are: Poltava, Kyiv, Kharkiv and Zaporizhzhya regions (20 to 15 thousand USD /person). Significantly behind is Chernivtsi region (7550 dollars / person), Transcarpathian (8618) and Ternopil (9151 USD / person), which is approximately 5 times lower than in Kiev, and even less than in India (9,759 dollars / person), which closes the rating.

By the general performance indicator (excluding PPP) Ukraine ranks is even lower (56th) in the ranking of IMD, as has its value is much lower - 8130 dollars / person, in 23,4 times less than in Norway (190,108 dollars / person). Even Kyiv comparison to the best international rate is more than 10% (21236 dollars / Person) - a level below the 48th place in the ranking of IMD, which covers Kazakhstan (22,457 dollars / person). As for inter-regional differentiation for this indicator, it is clear that it follows upon differentiation indicator.

The positive fact is that Ukraine is slowly recovering from a deep financial crisis in 2011, have had a positive overall productivity growth (previous year), which was 104.9% (8th rank IMD). The best dynamics of growth of overall performance this year showed Donetsk (111.6%, which corresponds to the second place in the ranking IMD), Kiev (110.7) and Lugansk (110.1%) regions. Instead, overall performance in the Poltava region decreased (98.1%), Crimea (98,8 %), Rivne (99,4 %) and Odessa (99.6%) regions.

By the productivity indicator (PPP) - GRP production per worker for 1 hour. - Ukraine occupies one of the last places (54th) in the ranking of IMD (8,14 dollars), in 8,2 times lower than Luxembourg (67,13 dollars). As for the overall performance ranking first in the region is Kyiv (20,4 USD, taking 44th place in ranking - after Romania – 20,2 USD), Dnipropetrovsk (11,1) and Donetsk region (10,5 dollars), and the last - Chernivtsi (4,0 dollars). Transcarpathian (4,6) and Kherson (4,8 dollars).

However, the rate of labor productivity growth (PPP) in Ukraine is quite high (104.9% - 9th place in ranking IMD), though 2,9 times less compared to Qatar (114,3%). It is the biggest in Donetsk (109,6%, which is the 2nd place), Luhansk (108,9%), and Kiev (108.0%) regions. Very slowly increasing productivity in Poltava and Odessa regions and Crimea (about 101% per year, 41st place in the ranking of IMD, Singapore).

By the productivity in agriculture (PPP) - production per employee (US.) - Ukraine with its unique black earth soils, unfortunately, takes only 48th place in the ranking of IMD - 7600 dollars per 1 employee to 138,892 dollars in the Netherlands, giving them 18,3 times. Even the capital - Kyiv – the region with developed suburban area of intensive agriculture significantly inferior in many countries this indicator. It's index (24,576 dollars) 29th place (after Korea). The second and third position in the ranking regions of Ukraine take Dnipropetrovsk (15,709 dollars.) and Poltava (12,920 dollars) regions. In the bottom of the ranking are located all Carpathian region (from 3615 USD in the Transcarpathian region to 4562 dollars in Chernivtsi). This level of Thailand - 57th place in ranking IMD.

For labor productivity in industry (PPP) Ukraine is even lower rating IMD, than labor productivity in agriculture - 57th place (18 710 dollars per employee, while Norway - 200 732 USD, that is 10,7 times

more). Among the regions of Ukraine, even the leader of the ranking - Poltava region - is very modest at the international level (28,881 dollars, 54th place in ranking - after Indonesia). More than 20 000 USD per industry worker are produced in all industrialized regions - Dnipropetrovsk, Donetsk, Zaporozhye and Luhansk regions. It is the low productivity in the industry Chernivtsi, Transcarpathian and Zhytomyr regions and in Sevastopol. (Less than 10 000 USD per 1 employee). This is even worse than in India, which closes the rating IMD.

For labor productivity in the services sector (PPP), which in the post-industrial countries decided to include all economic activities except industry and agriculture, Ukraine also applies to countries outsiders rating IMD - 55th place (15,852 dollars per 1 worker versus 136,504 dollars in Luxembourg that is 8,6 times more). Among the regions only Kyiv has high enough performance in the services sector (81,969 dollars per1 employee - 15th place ranking - after Austria - 82 822 USD). Other regions - Donetsk, Kiev, Odessa and Dnipropetrovsk region - is much inferior to it (from 27,5 to 10 500 dollars.). Instead, none of the countries in rating has so low productivity in the service sector as Khmelnytsky, Rivne and Zhytomyr region (less than 1 400 USD per 1 employee).

The effectiveness of large enterprises (corporations) of Ukraine international standards are generally low - 49th place in the ranking of IMD (5,76 points on a 10 point scale to 8,71 in Sweden). At the regional level, it can be expressed in terms of productivity in large enterprises (PPP). It is the highest in the Ternopil (21262 USD per 1 employee) and Donetsk (19520 USD) regions and in Kyiv (18,598) and the lowest - in Sevastopol, Kherson and Chernivtsi regions (from 6.7 to 7.5 thousand dollars per 1 employee).

The efficiency of small and medium enterprises in Ukraine by international standards is higher than large ones - 44th place in the ranking of IMD (5,02 versus to 8,40 in Germany). Although, the overall productivity of small and medium-sized enterprises (PPP) per one employee is below 1,4 times (14927 dollars / 10854 dollars.) than large ones. Higher productivity in large enterprises predetermined mass scale production for greater stability range of their products. But we should not forget that SMEs largely increase viability of large, their competitiveness since they occupy market niches where large enterprises unprofitable work; they quickly respond to market needs, often take the risk of development and innovation (venture business) and more. The highest production output per worker in SMEs is observed in Kiev (22 024 dollars), Donetsk (19520) and Dnipropetrovsk (14 778 dollars). And they have seen quite a close relationship between productivity in small and medium-sized enterprises, on the one hand and large enterprises on the other. Rating regions seats are distributed as follows: 1st Region - 1: 3, 2nd - 2: 2, 3rd - 3:6. A similar pattern is observed at the bottom of the ranking table in Zhytomyr region (4155 dollars; 27:20), Sumy (4233 dollars; 26:15), Chernivtsi (4448 dollars; 25:25).

The arrival of foreign companies on the domestic market leads to a displacement or replacement of less efficient domestic companies, causing a redistribution of internal resources between more and less profitable companies and boosts the average level of productivity and advance global strategies. Performance of companies using global strategies (of supply, off shoring, outsourcing, etc.), especially foreign and joint (with foreign investment) companies, experts estimated at 4,78 points SOURCE (47th place in the ranking IMD) to 7,95 points SOURCE in Germany, meaning it is 60,13% of the performance of the same German companies. As per employee in 2011 in Germany produced products and services to 76,885 USD, It means that labor productivity in Ukrainian companies with foreign capital of 46,231 dollars. Considering this value by a factor, share of companies with foreign capital (the number of business entities), we obtained the estimated productivity for them in the regions. The most marked its importance in Kiev (166,4 thousand USD per employee), Donetsk (74,9) and Luhansk (65,100 Dollars) Regions and the lowest - in Chernihiv (12.700 USD), Khmelnytskyi (15.600) and Kirovograd (17.500 dollars).

In general, by the sub factors "Productivity and efficiency" of Ukraine in the ranking of IMD-2012 takes 48th place. In the first place Qatar and our neighboring countries - Poland and Russia - by 33th and 53th places. [7]

First place in the regions of Ukraine this sub factors rank takes Kyiv (average 34,0% of the best values of the indicators sub factors) - with relatively high levels of productivity and overall productivity

in the service sector, small and medium enterprises, with foreign companies capital; Donetsk region (21,2%) - with high overall productivity including the rate of growth; Dnipropetrovsk region (18,9%) - with a total capacity of labor productivity in industry and agriculture, small and medium enterprises. The lowest value of this indicator sub factors are: Chernivtsi region (10,8%) - with the worst overall performance and productivity in the industry; Khmelnytsky region (11,00%) - with the lowest productivity in the service sector and low levels of productivity in companies with foreign capital; Chernihiv region (11,03%) - with the lowest productivity in companies with foreign capital and low levels of productivity in the service sector and small and medium-sized enterprises (Fig. 1).

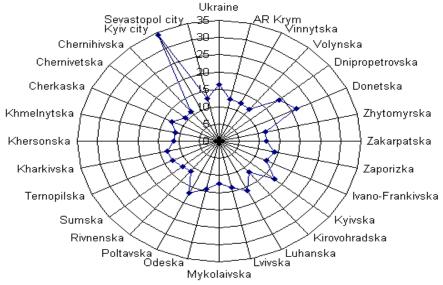


Fig. 1. Competitiveness of Ukraine and its regions by indicators of performance IMD-2012, the average % of the best values of leading indicators

Source: calculated and based on data [2; 7; 9]

Positioning of Ukraine and its regions internationally competitive space in terms of performance indicate that the economic policy of the state is regressive. This course prolongs unattractive investment and innovation inability of Ukraine and, therefore, makes it to the group of "third world". In order to reverse the negative tendencies should increase:

- the general level of performance, that performance in all the segments of the economy;
- productivity in the industry in the context of the paradigm neoindustrial development of the country and its regions, involving structural changes of production orientation, flexible manufacturing systems, production of large-scale high-tech products with high added value, forming vertically and horizontally integrated corporate structures;
- productivity in agriculture by strengthening its material and technical base and human resources, improve concentration and specialization of production (in accordance with EU practice);
- productivity in services based on the growth potential of creative personnel, extensive use of outsourcing and franchising, computers etc.
- productivity in large enterprises (by specialization of production, optimize their organizational structure, reducing the number of administrative staff, etc.):
  - productivity of SMEs should conduct what their technical upgrading and unification in clusters;
- the performance of companies with foreign capital, in particular by creating a favorable business environment, additional investment in innovative production, for example in the production of medicines in Ltd. "Sperco Ukraine" (Vinnitsa).

**Conclusion:** Assessment of international competitiveness of Ukraine and its regions by the sub factors of productivity and efficiency (according to the methodology IMD-Lausanne) has shown that it in general and on most indicators are low and, therefore, needs to be improved. This requires a

number of innovative measures to modernize the economy to improve, eventually living conditions of the people.

Continued research in certain areas will identify trends of development of Ukraine and its regions internationally competitive space by improving overall productivity and efficiency of use of certain inputs.

#### References

- 1. Porter, M. (2005). Konkurentsiia [Competition]. Moscow: Vylyams [in Ukrainian].
- 2. Boiko, T., Honcharenko, I., Dmytriuk, N. etc. (2012). Zvit pro konkurentospromozhnist rehioniv Ukrainy 2012: Nazustrich ekonomichnomu zrostannyu ta protsvitanniu [Report on Competitiveness of Regions of Ukraine 2012: Towards Sustained Growth and Prosperity]. Kyiv: Kopirait. Retrieved from http://www.feg.org.ua/docs/FEG\_report\_2012\_body\_ua\_20 .11.2012.pdf [in Ukrainian].
- 3. Brykova, I. V. (2007). Determinanty mizhnarodnoii konkurentospromozhnosti natsionalnyh rehioniv v globalnomu ekonomichnomu prostori [The determinants of international competitiveness of national regions in the global economic space]. Mizhnarodna ekonomichna polityka International economic policy, 7, 5–27 [in Ukrainian].
- 4. Butko, M. P. (2016). Arhitektonika konkurentospromozhnosti regioniv Ukrainy v konteksti yevrointehratsii [Architectonics of regional competitiveness Ukraine in the context of European integration]. Kyiv: AMU [in Ukrainian].
- 5. Danylovych-Kropyvnyczka, M. L (2010). Pidvyshchennia konkurentospromozhnosti ekonomiky Ukrainy v paradygmi produktyvnosti [Improving the competitiveness of Ukraine's economy paradigm performance]. Visnyk Nacionalnogo universitetu «Lvivska politehnika» Bulletin of National University «Lviv Polytechnic», 690, 580–586 [in Ukrainian].
- 6. Matveieva, O. (2014). Derzhavno-upravlinskyj aspekt analizu pokaznykiv produktyvnosti praci yak faktoru pidvyshhennia konkurentospromozhnosti rehioniv Ukrainy [Public administrative aspect analysis of labor productivity as a factor in increasing the competitiveness of the regions of Ukraine]. Derzhavne upravlinnia ta mistseve samovriaduvannia Public administration and local government, 2, 135–146 [in Ukrainian].
- 7. World Competitiveness Yearbook 2012. (n.d.). www.imd.org. Retrieved from http://www.imd.org/research/publications/wcy/index.cfm. [in English].
- 8. Zaxarchenko, S. V. (2016). Konkurentospromozhnist Ukrainy ta yii rehioniv: mizhnarodnyy vymir [The competitiveness of Ukraine and its regions: the international dimension]. Vinnytsia: Konsol [in Ukrainian].
- 9. Ofitsfinyi sait Derzhavnoyi sluzhby statystyky Ukrainy [Official site of State Statistics Service of Ukraine]. www.ukrstat.gov.ua. Retrieved from http://www.ukrstat.gov.ua/ [in Ukrainian].

#### Література

- 1. Портер, М. Конкуренция / Майкл Э. Портер ; [пер. с англ. О. Л. Пелявского и др. ; под ред. Я. В. Заблоцкого и др.]. М. : Вильямс, 2005. 608 с.
- 2. Звіт про конкурентоспроможність регіонів України 2012 : Назустріч економічному зростанню та процвітанню [Електронний ресурс] / [Т. Бойко, І. Гончаренко, Н. Дмитрюк та ін.] ; Фонд «Ефективне управління». К. : Копірайт, 2012. 208 с. Режим доступу : http://www.feg.org.ua/docs/FEG\_report\_2012\_body\_ua\_20.11
- .2012.pdf.
  3. Брикова, І. В. Детермінанти міжнародної конкурентоспроможності національних регіонів в глобальному економічному просторі / І. В. Брикова // Міжнародна економічна політика. 2007. № 7. С. 5—
- 27.
  4. Бутко, М. П. Архітектоніка конкурентоспроможності регіонів України в контексті євроінтеграції : монографія / М. П. Бутко. К. : АМУ, 2016.
- 452 с.
   Данилович-Кропивницька, М. Л. Підвищення конкурентоспроможності економіки України в парадигмі продуктивності / М. Л. Данилович-Кропивницька // Вісник Національного університету «Львівська політехніка». 2010. № 690. С. 580–586.
- 6. Матвеєва, О. Державно-управлінський аспект аналізу показників продуктивності праці як фактору підвищення конкурентоспроможності регіонів України / О. Матвеєва // Державне управління та місцеве самоврядування. 2014. Вип. 2. С. 135—146.
- 7. World Competitiveness Yearbook 2012. IMD // http://www.imd.org/research/publications/wcy/index.cfm
- 8. Захарченко, С. В. Конкурентоспроможність України та її регіонів : міжнародний вимір : монографія / С. В. Захарченко. Вінниця : Консоль, 2016. 413 с.
- 9. Державна служба статистики України [Електронний ресурс] : офіц. сайт. Режим доступу : http://www.ukrstat.gov.ua/.

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