

**INCREASINGS ENVIRONMENTAL EFFICIENCY DIRECTIONS IN THE
CONTEXT OF ENSURING ECONOMIC STABILITY UNDER ECONOMIC
GLOBALIZATION CONDITIONAL**

SAMOILYK Iuliia,

Doctor of Economic Science, Professor,
Poltava State Agrarian Academy,
Poltava, Ukraine
e-mail: iuliia.samoilyk@gmail.com

SVYSTUN Lyudmyla,

PhD in Economic Science, Associate Professor,
National University «Yuri Kondratyuk Poltava Polytechnic»,
Poltava, Ukraine
e-mail: svmila308@gmail.com

***Abstract.** The article has been devoted to issues sustainable development. The differences between the Global Sustainable Competitiveness Index (GSCI) and The Global Competitiveness Index (GCI) have been considered in the article. It has been proved that ecology is an important component of sustainable development. Country ratings for both indices were built. There have been significant differences between the leaders in both rankings: the first place in the ranking by GSCI has been occupied by Sweden with a score of 60.6. According to The Global Competitiveness Index (GCI), Singapore ranks first position (84.8), but in the Global Sustainable Competitiveness Index, this country rank 41st.*

In the article, The 2018 Efficiency Index (EPI) has been considered. This index make it possible to assess at the national level how close the countries are to the established goals of environmental policy, as well as the goals of sustainable development in the global environment. It has been detected, that by regions of the world, the highest indicators of the environmental efficiency index are occupied by European countries – the first 17 countries in the ranking with a value of more than 75.9.

It has been justified Key strategies of action on economic entities in order to ensure sustainable economic development.

Key words: environmental efficiency, ensuring economic stability, development, economic globalization, strategy

JEL classification: F 64

UDC: 504:332

1. Introduction

The economic systems development under market conditions significantly depends on the economic stability level, so in recent years, sustainable development is one of the priority strategic objectives. Changes in economic activity, for example, the crisis in the real economy and financial system, have significantly affected the sustainability of economic entities, demonstrated their weaknesses, unpreparedness, extremely low flexibility and adaptability to overcome existing difficulties. In recent years, the practice of enterprises has proved the relevance of ensuring their economic stability.

Environmental efficiency is an important component of the sustainable development of market participants and countries in general. In 1992, the concept of sustainable development was adopted in Rio de Janeiro. This concept provides for harmonious development, which provides a balance between environmental, economic and social components. The need to conduct research on the economic stability formation and the impact of the ecological factor on this indicator is primarily related to the uneven distribution of resources, impact on society, opportunities, expectations and threats to the future. Also, the paradigm of economic stability has been caused by the need for fundamental research on the nature of economic relations in the context of globalization. Such threats are particularly acute for economic resilience in economic crises.

Any economic activity has an active impact on the environment. Similarly, consumption influences the environment state. Thus, the development of mechanisms for balanced development and ensuring economic stability and environmental efficiency is relevant and necessary.

2. The degree of investigation of the problem currently

Problems of combining environmental efficiency and economic sustainability in the context of economic globalization are studied by many scientists, in particular H.Bossel, A.Bockermann, S.O.Funtowicz, B.Meyer, J.H.Spangenberg, J.Malek, L.Melnyk, D.W.Pearce, C.Rammel, Iu. Samoilyk, I.Serageldin [1-3, 7-18]. The Spangenberg's paper derives suggestions for criteria of the sustainability of the economy, and in particular its economic and environmental sustainability [17, 18]. Research and modeling of indicators of sustainable development were also devoted to works of H.Bossel, A.Bockermann, I.Omann, I.Serageldin [1-3, 15]. The article of C.Rammel and J.C.J.M. van den Bergh describe the areas of minimizing the risks of sustainable development [12]. The Malek's study has identified 29 enablers of sustainable manufacturing. Interpretive Structural Modeling has been utilized by Malek to develop a hierarchy structural model which can represent the interrelationships among the enablers of sustainability [7]. The methodology of Priyadarshini and Abhilash incorporates a quantitative assessment of social, ecological and economic indicators of agricultural sustainability in India. An umbrella policy (National Policy on Eco-Agri-Food Systems) has been proposed by authors for sustainable management of the country's entire agricultural value chain. [11]. Svystun L. studies the components of agricultural areas economic stability [13].

Despite the significant number of works on issues of economic stability, this issue does not lose its relevance. In addition, the environmental problems of ensuring the economic systems sustainability remain unresolved. Thus, research in this direction is topical.

3. The purpose of research

The purpose of research is a study of economic systems patterns development, identification and evaluation of key indicators characterized the management systems economic stability, identification of the place of the environmental factor in the system of economic stability indicators; development of recommendations for improving environmental efficiency in the context of ensuring economic sustainability under the economic globalization conditional.

4. Methods and materials applied

For the research, it has been used data by World Economic Forum. The analysis presented in the Global Competitiveness Report 2019 is based on a methodology integrating the latest statistics from international organizations and a survey of executives. The methodology, developed in collaboration with leading experts and practitioners through a three-year consultative process, is designed to support countries to identify relevant policies and practices. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of the World Economic Forum. The Report presents information and data that were compiled and/or collected by the World Economic Forum.

The of The Sustainable Competitiveness Index would have been calculated by data and time series made available by the World Bank Indicator database, various UN agencies (UNDP, UNEP, UNICEF, FAO, WHO, WMO, www.data.un.org), the International Monetary Fund (IMF), and other non-governmental organisations (including Transparency International, Reporters without Borders, The New Economics Foundation, The Institute for Economics and Peace, The Fund For Peace, the Joint Global Change Research Institute).

It has been used global metrics for the environment by Yale Center for Environmental Law & Policy, Yale University Center for International Earth Science Information Network, Columbia University in collaboration with the World Economic Forum with support from The McCall MacBain Foundation and Mark T. DeAngelis.

4. Results obtained and discussions

The economic stability is a combination of the different elements (financial, production, personnel, marketing, investment, and management), relationships to ensure the stable economic system operation, rapid response to external and internal threats, maintaining the economic system

state within acceptable limits deviations from the plan and strategy. Economic stability ensures the most efficient operation of all economic system elements.

On a world level, the Global Sustainable Competitiveness Index (GSCI) has been developed. This index allows assessing the achieved economic stability level of countries in the world through the prism of their competitiveness.

The Global Sustainable Competitiveness Index (GSCI) has been developed by SolAbility on a global level for all countries of the world.

SolAbility is an independent sustainability think-tank and advisory, with presence in Korea and Switzerland. SolAbility is the maker of 3 DJSI Super-Sector Leaders. We have designed and implemented the sustainable management for GS Engineering & Construction (DJSI Global Industry leader 2012), Korea Telecom (DJSI Global Industry Leader 2011-2013, 2015), and Lotte Shopping (DJSI Global Industry Leader 2011-2015) [22]. The Global Sustainable Competitiveness Index (GSCI) measures the total competitiveness – now, and the potential into the future – of nation-economies. Sustainable competitiveness is the ability to generate and sustain inclusive wealth without diminishing the future capability of sustaining or increasing current wealth levels. The GSCI is the most comprehensive measurement of the competitiveness of nation-states – both as-is, and with respective to future potential [22] (Table. 1).

Table 1. Structure of The Global Sustainable Competitiveness Index (GSCI)

Category	Indicators	Numbers of Indicators
Natural Capital Indicators	Fossil energy prevalence (% of total); Food Production Index; Renewable freshwater availability/capita; Endangered species; Electricity from hydropower (%); Energy self-sufficiency; Forest area (% of total); Land area below 5 m (% of total); Arable land (ha/capita); Population living below 5m (% of total); Potential arable land (ha/capita); Average rainfall (mm); Land degradation (% of total); Biodiversity Benefit Index (GEF); Land at risk of desertification; Fertilizer consumption/ha; Extreme weather incidents; Tourist attractiveness; Mineral reserves (per GNI and capita); Ocean Health Index; Population density; Natural resource depletion (as percentage of GNI)	22
Resource Intensity Indicators	Transmission losses; Freshwater withdrawal rate; Ecological consumption footprint; Water productivity; NOx emissions per GDP; Steel usage efficiency per capita (T/CAPITA); NOx emissions per capita; Air pollution – mean particule concentration; Energy per GDP; Air pollution exposure – population; Energy per capita; Hazardous waste per GDP; CO2 emissions / GDP; Electricity consumption / GDP; CO2 emissions /capita; Water usage per capita; Electricity consumption per capita; Waste per capita; Electricity from coal (%); Waste per GDP; Electricity from oil (%); SO2 emission per GNI; Renewable electricity excluding hydro (%); SO2 emissions per capita	24
Social Capital Indicators	Doctors per 1000 people; Overweight; Hospital bed availability; Teen moms; Nurses per 1000 people; Life expectancy; Child mortality (below age 5, death per 1000); Obesity rate; Public health spending (% of total health spending); Income quintile ratio; Suicide rate; GINI coefficient (income distribution inequality); Prison population rate (per 100000 people); Human rights index; Homicide rate (per 100000 people); Women in parliament (% of MPs); Peace Index; Birth per woman; Press Freedom Index; Aging society; Public health expenditure of total expenditure	22
Intellectual Capital Indicators	Primary education completion; Spending per student (% of per capita GDP); Primary student repetitions; Patent applications per 1 million people; Secondary education enrolment; Patent applications (per GDP); Tertiary education enrolment; New business registrations per 1 million people; Spending on education (% of state expenditure); Trademark applications; Pupil-teacher ratio; R&D FTEs per million people; Pupil gender ratio; R&D spending; School dropouts secondary; High tech exports; Education spending (% of GDP)	17
Governance Efficiency Indicators	Internet availability; GNI per capita; TI CPI Index; Non-renewable resource income dependency; Bribery payments – % of businesses; Bank capital-asset ratio; Employment in the service sector; Market fluctuation exposure: stock trading volume (% of GDP); Employment in the manufacturing sector; Market fluctuation exposure: company value (% of GDP); Manufacturing value added; Imports (% of GDP); Unemployment; Population (total); Investments; Market fluctuation exposure: stock trading volume (% of GDP); Austerity Index; Market fluctuation exposure: company value (% of GDP); Quality of public services; Imports (% of GDP); Poverty development; Population (total); Military spending (% of total government spending); GNI (total); Rail network per area & population; Ease of doing business; Government debt; Access to electricity	27
Total		111

Source: summarized by authors by [19, 22]

The Global Sustainable Competitiveness Index (GSCI) includes five groups of indicators: Natural Capital Indicators, Resource Intensity Indicators, Social Capital Indicators, Intellectual Capital Indicators, Governance Efficiency Indicators.

Globalization and the Fourth Industrial Revolution have created new opportunities but also disruption and polarization within and between economies and societies. In this context, the World Economic Forum introduced last year the new Global Competitiveness Index 4.0, a much-needed new economic compass, building on 40 years of experience of benchmarking the drivers of long-term competitiveness. The index is an annual yardstick for policy-makers to look beyond short-term and reactionary measures and to instead assess their progress against the full set of factors that determine productivity. These are organized into 12 pillars: Institutions; Infrastructure; ICT adoption; Macroeconomic stability; Health; Skills; Product market; Labour market; Financial system; Market size; Business dynamism; and Innovation capability [21] (Tabl. 2).

Table 2. Structure of The Global Competitiveness

Pillar	Category	Indicators	Numbers of Indicators
Institutions	Public	Property rights	2
		Ethics and corruption	3
		Undue influence	2
		Government efficiency	6
		Security	4
	Private	Corporate ethics	1
		Accountability	4
Infrastructure	Transport infrastructure	Roads, ports, railways, air	5
	Electricity and telephony infrastructure	Electricity supply, mobile/fixed line availability	3
Macroeconomic environment		Budget balance, savings, inflation, debt, credit rating	5
Health and primary education	Health	Malaria, tuberculosis, HIV, life expectancy, child mortality rate	8
	Primary education	Quality and enrolment	2
Higher education and training	Quantity of education	Secondary and tertiary enrolment	2
	Quality of education	Quality of schools and teaching, internet access in schools	4
	On-the-job training	Training and availability of training	2
Goods market efficiency	Competition	Domestic competition (competition, taxation, business barriers)	8
		Foreign competition (trade tariffs, custom proceedings, FDI, imports)	6
	Quality of demand conditions	Customer orientation, buyer sophistication	2
Labour market efficiency	Flexibility	Management-labour relations, hiring/firing freedom, redundancy cost, taxation	5
	Efficient use of talent	Pay & productivity, brain drain, female participation	4
Financial market development	Efficiency	Availability and affordability of capital and venture capital	5
	Trustworthiness and confidence	Soundness of banking systems, security market regulation	3
Technological readiness	Technological adoption	Technology availability, technology transfers	3
	ICT use	Availability and speed of communication infrastructure	6
Market size	Domestic market size	Domestic market size index	1
	Foreign market size	Foreign market size index	1
Business sophistication	Supply, production, value chain utilisation, marketing	Supplier quantity and quality, production sophistication, value chain depth, marketing capabilities	10
R&D Innovation	Research availability and spending	Researcher availability & quality, research institutions and capabilities, R&D expenditure, government procurement, patent applications	8
Total			115

Source: summarized by authors by [19, 21]

Probably the most famous “competitiveness” index is the “Global Competitiveness Report”, annually published by and at the World Economic Forum (WEF).

There are many different “indexes”, published by different organisations, ranking nations against each other in all possible (and, sometimes, impossible) different criteria. Amongst them are several indexes that in some way or another refer to “competitiveness” is in other words, indexes that rank countries according to their ability to create wealth, and the outlook for sustaining or increasing current wealth. However, the definition of competitiveness in a conventional approach tends to focus on economic and financial aspects of any given economy, and is based on momentary pictures in time. This approach has two main limitations: the focus on economic and financial performance aspects assumes that an economy works within an air-tight space independent of its physical environment (i.e. independent of the actual land it is built on); does not take into account the ramifications of current economic activities on the future economic development and wealth creation capabilities [19].

Through the inclusion of the so-called “non-financial” characteristics of national economies (the land that an economy is built upon, resource efficiency, and the way societies ensure equal opportunities, and distribute wealth and services amongst its citizens), the Sustainable Competitiveness Index aims at developing a broader picture of competitiveness that incorporates the normally omitted factors, which are essential pillars of an economy that is not built on borrowed time but is able to sustain growth and wealth into the future. Different interpretations of different data sets or surveys analysed and put into indexes or rankings can open interesting new perspectives, regardless of the accuracy and real-life relevance of the index. However, real-life relevance and correlations to actual success factors depend on a) the source and reliability of the raw data, and b) the definition of “competitiveness” that underlies a specific index. The definition or understanding of the term “competitiveness” guides the selection of competitiveness indicators and their analysis, i.e. the aspects of an economy that define the competitiveness of a nation according the point of view of the publishing organisation or the individuals behind the index. It is therefore not really surprising that different “competitiveness” rankings come up with very different results [19].

The countries ranking according to the Global Sustainable Competitiveness Index (GSCI) have been formed. The first place in the ranking in 2019 has been occupied by Sweden with a score of 60.6, Finland (59.5), and Iceland (57.3) have been occupied the second and third positions respectively. It should be noted that the leading positions in this ranking have been occupied by European countries (Fig. 1).

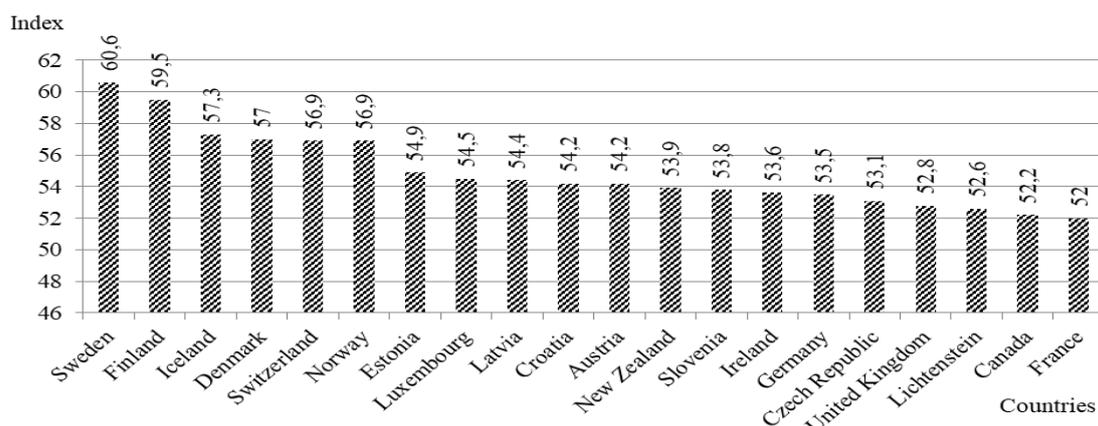


Figure. 1. The TOP-20 countries of the world by The Global Sustainable Competitiveness Index (GSCI) Rankings 2019

Source: created by authors by [22]

In this rankings, the lowest positions have been occupied by Iraq (25,2), Singapore (24,9), Israel (24,9), Jordan (23,9), Lebanon (20,5). It is worth noting that Singapore has been occupied in 2019 the first position by the ranking of The Global Competitiveness with score 84,8. It has been on 1.3 more compared with last year.

According to The Global Competitiveness Index, Singapore ranks first position (84.8), followed by the United States and Hong Kong, respectively. Countries such as the Netherlands, Switzerland, Japan, Germany, Sweden, and the United Kingdom also have high rates (Figure 2).

The success of nations currently is mostly expressed in their economic output – GDP, and GDP per capita, GDP growth. The GDP or GNI, however, are limited to the current economic output, and do not evaluate underlying structures. The best-known competitiveness ranking is the WEF's Competitiveness Index. However, the WEF index is flawed, both methodically and in terms of indicators considered. The US is a big economy, but the 2nd most competitive economy. The US has MS, Google and precision military hardware; people don't buy American cars because they are not competitive [21].

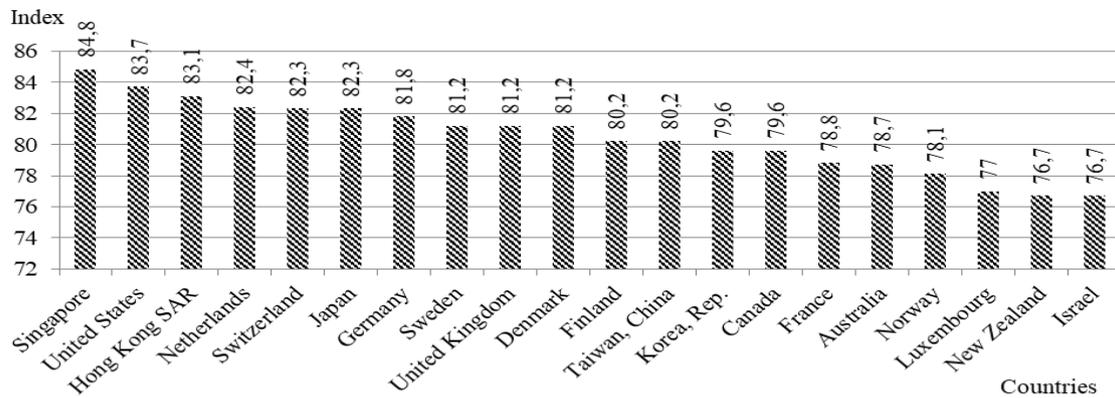


Figure 2. The TOP-20 countries of the world by The Global Competitiveness Index (GCI) Rankings 2019

Source: created by authors by [21]

Next Figure 3 shows some of the most striking differences between the WEF-Index and the Global Sustainable Competitiveness Index.

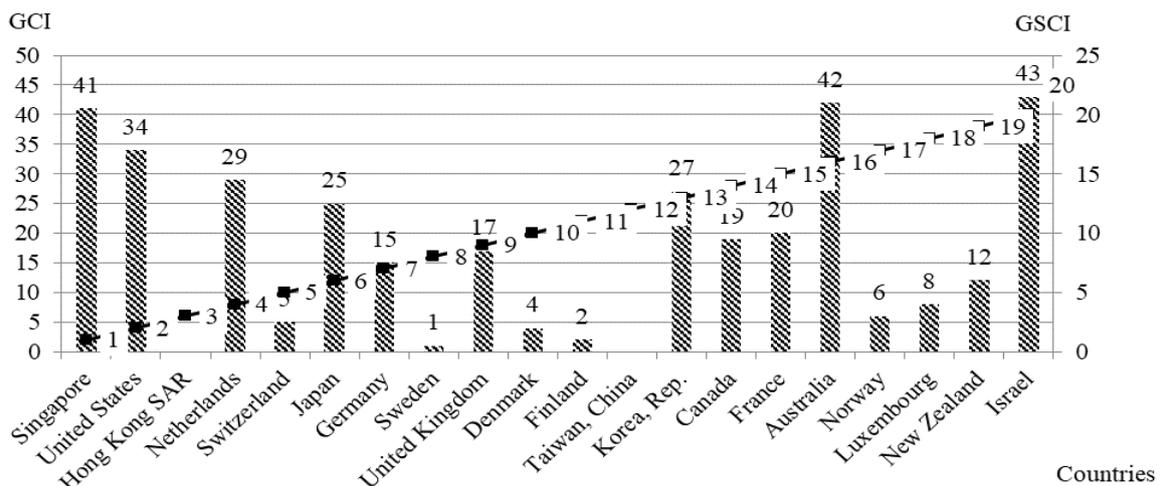


Figure 3. Comparison of rankings by The Global Competitiveness and The Global Sustainable Competitiveness Indexes 2019

Source: created by authors by [21]

A comparison of the both rankings leaders shows that Singapore ranks first position in the Global Competitiveness Index, but in the Global Sustainable Competitiveness Index, this country rank 41st. Similarly, the United States ranks 2 and 34 in both rankings respectively. The positions of the Netherlands are 4 and 29 positions.

By regions of the world, 60 % of the leading positions by The Global Competitiveness is the countries of North America and Europe, 30 % is countries of Souse Asia, 10 % is countries of Midle East.

90 % of the leading positions by The Global Sustainable Competitiveness Index is the countries of North America and Europe (Figure 4).

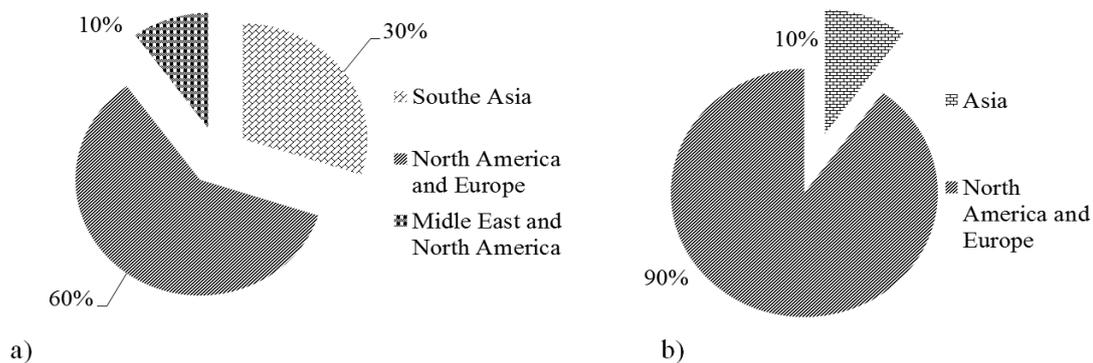


Figure 4. Distribution of countries – leaders (TOP-20) in the rankings by region of the world

a) The Global Competitiveness Index Rankings;

b) by the Global Sustainable Competitiveness Index (GSCI) Rankings)

Source: created by authors by [21, 22]

Most countries around the world are concerned about the deterioration of the environment. To assess environmental trends, each country uses both general and specific indicators. For a global comparison, the most comprehensive is the methodology developed by Yale University in the United States [20], which provides for the calculation of an integrated indicator – the Environmental Performance Index (EPI). The 2018 Efficiency Index (EPI) was calculated for 180 countries on 24 performance indicators in ten categories covering environmental health and ecosystem viability. These indicators make it possible to assess at the national level how close the countries are to the established goals of environmental policy, as well as the goals of sustainable development in the global environment (Fig. 5).

By regions of the world, the highest indicators of the environmental efficiency index are occupied by European countries – the first 17 countries in the ranking with a value of more than 75.9.

These values emphasize the sustainable relationship between the level of economic and environmental development. The higher the level of economic activity and quality of life in the country, the more attention is paid to environmental policy. European environmental protection is one of the strictest among the regions of the world. European countries are constantly paying attention to the goals of sustainable development in shaping their strategy. Also, the leading countries have a significant natural and climatic potential, which with proper economical use can ensure sustainable development of countries in its classical interpretation. In the region of Tropical Africa, the leading position is occupied by the Seychelles with an environmental performance index of 66.02, in the overall ranking is 39 positions. The countries of this region are mostly in the last positions of this rating.

The environmental efficiency index does not primarily characterize the state of the environment, but the activity and effectiveness of environmental policy and the country's proximity to sustainable development goals. African countries ecological state can be described as average, while active measures to achieve sustainable development goals in the region are not carried out. A negative

phenomenon for the ecology of developing countries is the placement of waste from developed countries on their territory. Among the Caribbean countries, Trinidad and Tobago leads with an index of 67.36, among Latin American countries – Costa Rica (67.85). These regions are relatively environmentally friendly with significant natural potential, and the government puts environmental issues at a high position along with strategically important issues. In Asian continent, the leader in the environmental efficiency index is Japan – 74.69. It should be noted that this indicator has been calculated without taking into account radiation pollution. Japan, as a leader in the economy, input a lot of attention and investment in environmental innovations. Israel, a leader in Central Asia and North Africa by the Environmental Performance Index, makes a major contribution to solving environmental problems. In the region of Eastern Europe and Eurasia (which also includes Ukraine), Slovakia leads in the Environmental Efficiency Index with an index of 70.6. The leaders of the region also include Lithuania, Bulgaria, the Czech Republic, and Slovenia, with an environmental efficiency index of more than 67. In total, 29 countries in the region have been selected to evaluate this indicator. In last place has been occupied by Bosnia and Herzegovina (41.84) and Uzbekistan (45.88). Ukraine ranks 25th in the region and 109th in the world with a value of 52.87.

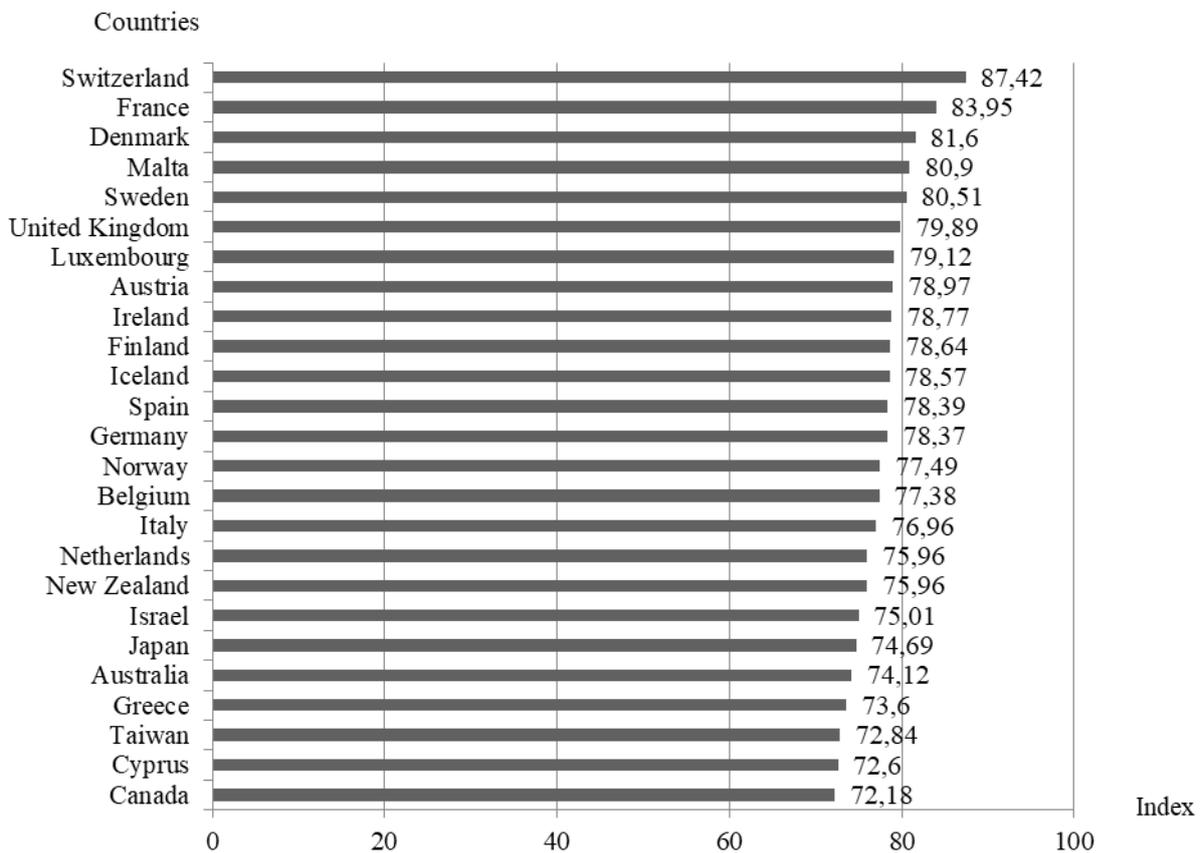


Figure 5. The TOP-25 countries of the world by The Environmental Performance Index (EPI) 2018
Source: created by authors by [20]

A number of striking conclusions emerge from the EPI rankings and indicators. First, good policy results are associated with wealth (GDP per capita), meaning that economic prosperity makes it possible for nations to invest in policies and programs that lead to desirable outcomes. This trend is especially true for issue categories under the umbrella of environmental health, as building the necessary infrastructure to provide clean drinking water and sanitation, reduce ambient air pollution, control hazardous waste, and respond to public health crises yields large returns for human well-being. Second, the pursuit of economic prosperity – manifested in industrialization and urbanization – often means more pollution and other strains on ecosystem vitality, especially in the developing world,

where air and water emissions remain significant. But at the same time, the data suggest countries need not sacrifice sustainability for economic security or vice versa. In every issue category, we find countries that rise above their economic peers. Policymakers and other stakeholders in these leading countries demonstrate that focused attention can mobilize communities to protect natural resources and human well-being despite the strains associated with economic growth. In this regard, indicators of good governance – including commitment to the rule of law, a vibrant press, and even-handed enforcement of regulations – have strong relationships with top-tier EPI scores. Third, while top EPI performers pay attention to all areas of sustainability, their lagging peers tend to have uneven performance. Denmark, which ranks number 1, has strong results across most issues and with leading-edge commitments and outcomes with regard to climate change mitigation. In general, high scorers exhibit long-standing policies and programs to protect public health, preserve natural resources, and decrease greenhouse gas emissions. The data further suggest that countries making concerted efforts to decarbonize their electricity sectors have made the greatest gains in combating climate change, with associated benefits for ecosystems and human health. We note, however, that every country – including those at the top of the EPI rankings – still has issues to improve upon. No country can claim to be on a fully sustainable trajectory. Fourth, laggards must redouble national sustainability efforts along all fronts. A number of important countries in the Global South, including India and Nigeria, come out near the bottom of the rankings. Their low EPI scores indicate the need for greater attention to the spectrum of sustainability requirements, with a high-priority focus on critical issues such as air and water quality, biodiversity, and climate change. Some of the other laggards, including Nepal and Afghanistan, face broader challenges such as civil unrest, and their low scores can almost all be attributed to weak governance [20].

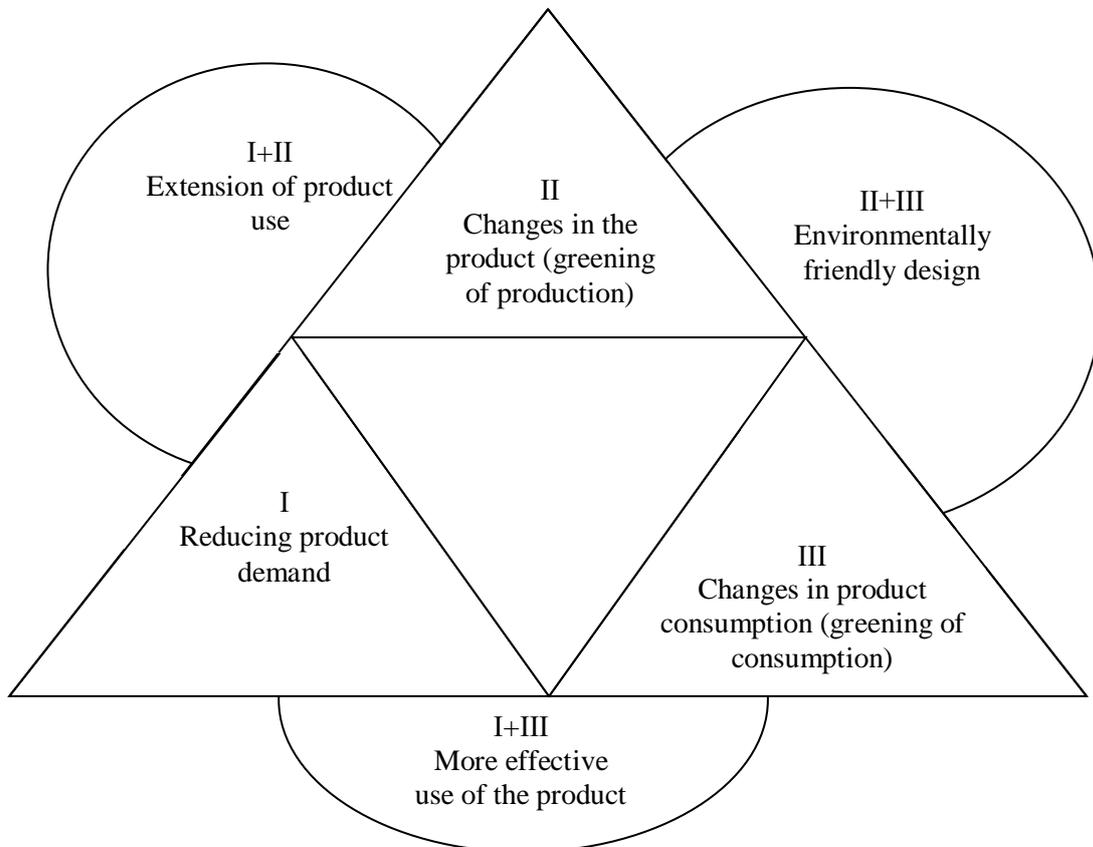


Figure. 6. The scheme of strategy implementation of the influence on the subjects in order to ensure environmentally sustainable economic development

Source: created by authors

The development of an environmentally efficient production system is directly related to the development of environmental demand. The ecological production transformation includes four stages of ecological demand formation, which include:

- 1) development of ecological equipment;
- 2) environmentally improvement of technologies;
- 3) increase the products and services life cycle components efficiency;
- 4) production of goods that serve a fundamentally new (environmentally friendly) lifestyle.

Under market conditions, the mechanisms of economic relations regulation between economic entities are implemented through the interaction of supply and demand. Action on these two market components and the area that connects them is the initial prerequisite for the formation of key strategic schemes for the management of ecology processes. Key strategies of action on economic entities in order to ensure sustainable economic development is next: action on supply (production); effect on demand (consumption); impact on the interface environment, ie the relationship between producers and consumers (Figure 6).

The essence of the first strategy is the stability of economic units that connect specific producers and consumers. The essence of the second strategy is to form a system of motivational influence, which would push producers to switch to "green" products. The essence of the third strategy is to economically force or psychologically persuade the consumer to switch to more environmentally friendly products.

The correct target orientation is an extremely important condition for achieving sustainable development on a global scale. The implementation of the sustainable environmental development strategy should be based on a number of principles (Table 3).

Table 3. Principles of economic and environmental goals unity

The name of the principle	Content of the principles
Economization of environmental factors	Indicators that characterize the impact of the economy on the environment should have, in addition to natural, also cost estimates.
Greening of economic factors	The main economic indicators and assessments of the economic results of society activities should be supplemented by assessments of the environmental consequences.
Economic responsibility for environmental effects	The economic costs caused by the negative impact on the environment must be compensated by those economic entities (state, enterprise, consumer) that are responsible for the environmental consequences.
Environmental improvement	Reproductive processes in the economy should be built so that with each reproductive cycle less environmentally friendly and efficient economic factors are replaced by more perfect and efficient.
A combination of goals and means	Environmental interests should be laid down in the development goals formation, and economic in the selection of means to achieve them.

Source: created by authors

Consequently, environmental protection is an important component of the economic systems sustainable development strategy. Due to the high level of economic activity, the anthropogenic load on the environment is increasing. Under such conditions, a comprehensive approach to solving environmental problems is needed.

5. Conclusions

An economic activity influences on the environment. The development of mechanisms for balanced development and ensuring economic stability and environmental efficiency is relevant and necessary. The economic stability is a combination of the different elements, relationships to ensure the stable economic system operation, rapid response to external and internal threats, maintaining the economic system state within acceptable limits deviations from the plan and strategy.

On a world level, the Global Sustainable Competitiveness Index has been developed. This Index (GSCI) includes five groups of indicators: Natural Capital Indicators, Resource Intensity

Indicators, Social Capital Indicators, Intellectual Capital Indicators, Governance Efficiency Indicators. The first place in the ranking by GSCI has been occupied by Sweden with a score of 60.6. According to The Global Competitiveness Index (GCI), Singapore ranks first position (84.8) A comparison of the both rankings leaders shows that Singapore ranks first position in the Global Competitiveness Index, but in the Global Sustainable Competitiveness Index, this country rank 41st. Similarly, the United States ranks 2 and 34 in both rankings respectively.

The modern world is characterized by increasing anthropogenic pressure due to increased economic activity of the world's leading countries. Under such conditions, the ecological component of economic activity deserves priority attention. Interregional and global comparisons show that the countries of Western Europe make the greatest contribution to improving the environment. According to the environmental efficiency index, Ukraine ranks 25th among 29 countries in the region of East Asia and Eurasia and 109th in the world. This position emphasizes the need to improve Ukraine's environmental policy.

Key strategies of action on economic entities in order to ensure sustainable economic development is next: action on supply (production); effect on demand (consumption); impact on the interface environment, ie the relationship between producers and consumers.

REFERENCES:

1. Bossel, H. (1999) Indicators for Sustainable Development: Theory, Method, Applications, IISD International Institute for Sustainable Development, Winnipeg, Canada.
2. Bossel, H. (2000) Policy assessment and simulation of actor orientation for sustainable development, *Ecological Economics*, Vol. 35, No. 3, pp.337–355.
3. Bockermann, A., Meyer, B., Omann, I., Spangenberg, J.H. (2005) Modelling sustainability. Comparing an econometric (PANTA RHEI) and a systems dynamics model (SuE), *Journal of Policy Modelling*, Vol. 27, pp.189–210.
4. Eurostat. Database. URL : <https://ec.europa.eu/eurostat/data/database>
5. Funtowicz, S.O. and Ravetz, J.R. (1994) The worth of a songbird: ecological economics as a post-normal science, *Ecological Economics*, Vol. 10, pp.197–207.
6. ICSU International Council for Science, (Ed.) (2002) Science and Technology for Sustainable Development, Science for Sustainable Development, ICSU, Paris.
7. Malek J., Desai Tushar N. (2019). Interpretive structural modelling based analysis of sustainable manufacturing enablers. *Journal of Cleaner Production*. Vol. 238, 20 November. <https://doi.org/10.1016/j.jclepro.2019.117996>
8. Melnyk L. (2006). Fundamentals of sustainable development. Sumy: University book. 366.
9. Mokeev V.V., Bunova E.V., Perevedentceva A.V. (2015). Analysing the Economic Stability of an Enterprise with the Help of Eigenstate Method. *Procedia Engineering*. Vol. 129. Pp. 681-689. <https://doi.org/10.1016/j.proeng.2015.12.091>
10. Pearce, D.W., Barbier, E. and Markandya, A. (1990) Sustainable Development, Earthscan, London.
11. Priyadarshini P., Abhilash P. Ch. (2020). Policy recommendations for enabling transition towards sustainable agriculture in India. *Land Use Policy*. Vol. 96. <https://doi.org/10.1016/j.landusepol.2020.104718>
12. Rammel, C. and van den Bergh, J.C.J.M. (2003) Evolutionary policies for sustainable development: adaptive flexibility and risk minimising, *Ecological Economics*, Vol. 47, No. 2, pp.121–133.
13. Savitska S., Zaika S., Svystun L., Koval L., Haibura Y. (2020). [Investment providing sustainable development of rural areas in Ukraine](https://doi.org/10.14807/ijmp.v11i8.1218). *Independent Journal of Management & Production*. Vol 11, No 8. Pp. 571-586. DOI: [dx.doi.org/10.14807/ijmp.v11i8.1218](https://doi.org/10.14807/ijmp.v11i8.1218)
14. Samoylik Iu.V., Vernigora M.V. (2020) Global preconditions for the introduction of ecological innovations in the process of organic food chains formation. Black Sea Economic Studies. 2020. Issue 51. pp. 63-68.

15. Serageldin, I. (Ed.) (1997) Expanding the Measure of Wealth, Indicators of Environmentally Sustainable Development, The World Bank, Washington DC.
16. SolAbility Sustainable Intelligence. The global sustainable competitiveness index 2019. 8th edition. Zurich, Seoul.
17. Spangenberg, J.H. (2005). Economic sustainability of the economy: concepts and indicators. *International Journal of Sustainable Development*. Vol. 8, Nos. 1/2. 47-64. DOI: 10.1504/IJSD.2005.007374
18. Spangenberg, J.H., Omann, I. and Hinterberger, F. (2002) Sustainable growth criteria. Minimum benchmarks and scenarios for employment and the environment, *Ecological Economics*, Vol. 42, No. 3, pp.429-443.
19. Sustainable competitiveness vs Davos man competitiveness. 2013. 16 p.
20. The Environmental performance index 2018. URL: <https://epi.envirocenter.yale.edu>
21. The Global Competitiveness Report (2019) by World Economic Forum Geneva. 666 p.
22. The Sustainable Competitiveness Report 2019. URL: <http://solability.com/the-global-sustainable-competitiveness-index/the-index>

Received: 18.05.2020

Reviewed: 09.06.2020

Accepted to publishing: 26.06.2020