

CREATIVE ECONOMY DEVELOPMENT: THE CASE OF UKRAINE COMPARED TO EU COUNTRIES

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ABSTRACT

The article researches the modern concept of the creative economy, summarizes different views of scientists regarding the concept of "the creative economy". The general key tendencies of creative economy formation in the EU countries and other most developed world countries are substantiated according to the level of the creative economy. Factors and modern patterns of the country creative economy development at the macro level are determined. The nature of the relationship between the country GDP growth and the creative economy level were studied, thus, giving opportunity to identify two key groups of EU countries in terms of the ratio of these indicators. The causality among the level of economic freedom in the country, the "creativity" of the economy and social progress is substantiated. The leading role of R&D employees as a component of the country creative class for the growth of the creative economy level is determined. The strategic model of the creative economy development in Ukraine under the conditions of transformation and global digitalization is worked out. The model is based on the outcomes of GAP analysis of creative results, key indicators of the creative environment and international indices of Ukraine compared with EU countries and Great Britain.

Keywords: Creative Economy, Global Creativity Index, Creative Industries, Ukraine, Eu Countries

JEL Classification: O10, O19

INTRODUCTION

During the period of transition to post-industrial society the attitude of scientists and practitioners to the creative economy, as well as approaches to its study have been constantly evolving. In particular, the idea of applying the model of innovative and creative development of civilization has been emphasized as an alternative to the paradigm of post-industrialism. Therefore, determining the strategic directions of creative industries growth gains utmost importance for the national economy development.

At present, it is the EU countries which mostly form the rating of the most powerful creative economies in the world. However, the indicators of the creative environment, the structure of the creative class and the obtained creative results vary considerably, causing different dynamics of the creative economy in each country. For Ukraine, as a country with a clearly defined European integration aspiration, the principal task is to develop and implement a national strategy for the development of the creative economy. It requires a clear understanding of the creative economy essence; determination of the main tendencies, regularities and factors of its formation; studying the nature of the relationship between creative results and macro indicators; solving the problem of choosing criteria and metrics to assess the level of "creativity" of the national economy. The aim of this study is to find a solution for effective fixing the problems.

Taking the above-mentioned into considerations, the main purpose of the study is to identify the most significant trends in the formation of the creative economy as well as the main

factors of its development in the EU, which gives opportunity to settle the current strategic directions of creative economy on the example of Ukraine.

LITERATURE REVIEW AND THEORETICAL FOUNDATION

It is worth mentioning that the concept of knowledge progress, which is a source of economic growth, definitely impossible without a creative component, originated in the 70s from the postulate of E. Denison that "the accumulation of knowledge in production leads to increased innovation, because innovation is manifested in ability to generate and transform knowledge into new products, technologies, processes and services. " (Denison, 1962).

Currently, the leading founders of the creative economy theory are J. Hawkins, a member of the UN Creative Economy Advisory Board (Howkins, 2011), R. Florida, economist and sociologist (Florida, 2005), World Bank expert Charles Landry (Landry, 2006), sociologist R. Cushing (Cushing, 2001), and others. The analysis of their scientific works provided us with an opportunity to conclude that defining the concept of creative economy it is expedient to distinguish four main approaches. According to the first one, it is a complex of knowledge-intensive industries engaged in the production and maintenance of information and communication networks. The second approach involves organizational and institutional innovation in various sectors of the economy. The third outlook defines the creative economy as a financial model of management based on the use of innovation to create new products and services. The fourth viewpoint determines the essence of concept of the creative economy as a set of creative industries, whose development depends more on human resources and their potential than on material security.

Despite different interpretations of concept of "the creative economy", scientists agree that creativity is the basis of the creative economy. The dominance of employees' creative skills in various sectors of economy is becoming a determining condition for economic growth (Davymuka, 2017). Moreover, it leads to feedback, when the economic system directly contributes to the creation of innovative scientific development, growth of cognitive and creative abilities (Dosi, 2005). In the theoretical discourse the desire of scientists to distinguish between the concepts of "creativity" and "innovation" is also noticeable. Note that creativity may eventually remain in the form of a plan, and innovation must have a tangible, useful and economical effect (Erdem, 2018). Moreover, it definitely contributes to the emerging economy (Ogbeibu, 2021). Therefore, in our opinion, the concepts of innovation and creativity should be considered together in a continuous causal relationship.

Ch. Landry considers creativity in connection with the development of modern cities, while of great importance are not traditional factors (landscape, natural conditions, infrastructure), but the knowledge and abilities of people, their entrepreneurship and initiative (Landry, 2006). However, creativity is concentrated not only in human beings but also in the urban environment. It implies that the creative economy develops where there is a favorable "creative environment" creating opportunities for creativity and generation of ideas (Grefe, 2016). The so-called creative class is also capable of generating changes, which, according to sociologist Richard Florida, can ensure the prosperity of cities and regions (Florida, 2005).

When assessing the level of the creative economy, it is also necessary to understand the essence of the formation of the creative potential of the state. In this regard, we note a study that argues that in the context of globalization, businesses involved in the creative industries, in fact, find a balance between culture, creativity, on the one hand, and commerce - on the other (Dronyuk, 2019). As a result of such activities there is a formation of creative potential, which brings not only a certain profit, but also creates a quality creative product for society.

Note that the researcher R. Cushing denied the importance of social capital as a primary factor in innovative development and proposed criteria - human and creative capital. He singled out the concept of "creative centers", which are characterized by greater diversity, ingenuity and innovation, which makes them centers of economic growth (Cushing, 2001).

The formation and reproduction of creative capital is subject to such trends as follows

(Bell, 2004). First, there is an increase in the share of employees involved in the creative industries. Secondly, creative potential becomes a leading factor, the so-called "locomotive" of socio-economic and innovative progress of society. After all, the value of "labor" is determined, on the one hand, by the availability of modern knowledge, skills and abilities, and, on the other hand, by intellectual and creative abilities. Thirdly, all manifestations of creativity - technological, cultural and economic ones - are interconnected and indivisible. Fourth, the constant development of intellectual and creative abilities of creative employees is necessary. Continuous improvement of the educational level of the creative class is a prerequisite for the production of new knowledge, innovations and transformations covering all the areas of social development.

J. Hawkins, identified 15 vectors of the creative industries, which include software production, research and development, as well as creative and related to art industries, including design, media, journalism and others (Howkins, 2011). A key feature of the creative industries is intellectual property (patents, trademarks, copyrights and original developments) being the main capital.

One cannot help noting that today the creative industries show a very high rate of economic growth making up about 7.5-8% per year (Boccella, 2016). The rapid development of the market of creative goods and services is determined by objective preconditions. First and foremost, the material needs of most people began to be met almost fully in a short time. Secondly, information and knowledge became a direct productive force, which led to a significant increase in demand for education and widespread intellectual activity in society. Third, the essence of consumption changed radically. Emphasis in this area started shifting to intangible assets. Creativity has become a higher and more perfect type of activity, which is associated with the inner needs of the individual and the desire for self-realization.

The criterion of "creativity" of the national economy in global space is the Global Creativity Index. The calculation of the index is based on the 3T model, which includes the following estimations (Martin Prosperity Institute, 2017):

- "Talent", using the percentage of the population with a Bachelor's or higher degree to reflect the concentration of human capital in the region. In addition, the relative concentration of the creative class is measured by counting professional categories in the creative industries.
- "Technology", providing for the calculation of sub-indices of "innovation" and "high technology", which are based on such indicators as: patents granted per capita, concentration of technological industries in the region (software, electronics, engineering services), etc.
- "Tolerance", which in turn combines the sub-indices "Gay Index", "Bohemian Index" and "Melting Pot Index". While the Gay Index essentially characterizes social perception, the Bohemian Index reflects the number of artists in the region, the Melting Pot Index is a measure of openness to working immigrants, whose presence can be seen as a new factor in economic growth.

However, when evaluating the proposed T-components there are at least 3 points to discuss.

First, estimating the level of "talent" solely on the basis of the share of the population with higher education is not objective. For example, in Ukraine a high proportion of the population with higher education is due to a merely traditional desire to obtain a degree and, regrettably, does not mean further graduates' working in the field of the acquired profession.

Secondly, there is a tendency to professional migration, when professionals with technical education are engaged in creative activities and generating a creative product, despite having received different specialty of education. At the same time, creative goods production is often just a hobby. Thus, items are sold through foreign marketplaces without accounting, due to which part of the national creative goods production is actually in the shadows.

Third, another substantial difficulty of accounting for the creative results of the country is due to the employment of numerous freelancers. It accounts for the fact that it is burdensome to assess which exactly country owns the creative result –either the country of the employer or the country that nurtured the creative employee.

Taking all the above mentioned into consideration, the determining of the level of the

state creative economy requires an individual approach, analysis of the patterns of formation of the creative economy, as well as identifying the creative results which have already been created and can be achieved in the future. An important methodological issue is the substantiation of indicators which could represent a basis for identifying and studying the creative potential of the economy. It should be pointed out that the essence, features of evaluation of the effectiveness of the creative industries in Ukraine have not been studied thoroughly so far. However, they are becoming more and more relevant and require further study.

METHODOLOGY AND DATA

In order to achieve the research goal, an appropriate study was conducted in 35 countries (EU countries, other countries from the top 10 in the ranking of global creativity and Ukraine).

The world-renowned Global Creativity Index was chosen as the leading criterion for assessing the “creativity” of the national economy. In general, the system of evaluation of the creative economy by the index method is summarized in the following table (Table 1).

Table 1 ASSESSING OF THE CREATIVE ECONOMY LEVEL BY THE INDEX METHOD		
The concept	Index or sub-index (an assessing criterion)	The main indicators for calculation
Creative Economy	Global Creativity Index (GCI)	Score is based on the "3T" model $GCI=f(I_t; I_{tech}; I_{tol})$
“3T” model		
Talent	Global talent sub-index (I_t)	Human capital (adults with higher education)
		Creative class
Technology	Global Technology Sub-Index (I_{tech})	The scope of R&D research
		The amount of innovation
		Employees involved in research
Tolerance	Global Tolerance Sub-Index (I_{tol})	Coefficient of Racial and National Minorities Perception, GayIndex
Source: own formation based on MPI methodology (Martin Prosperity Institute, 2017)		

It should be noted that when calculating the index according to the method of Martin Prosperity Institute, all three components of the 3T model ($I_t; I_{tech}; I_{tol}$) are given the same weights. Thus, the level of technology, talent or tolerance development is considered equally important in assessing the creative economy of any country in the world, which gives opportunity to build an overall rating. As a result, the indicators of the creative economy development in the EU and Ukraine were systematized and studied according to such indicators as: global indices of creativity, competitiveness of the national economy, innovation, economic freedom, social progress, GDP and their growth rates, human capital distribution over creative industries, the volume of creative production of goods and services, their share in exports, the structure of high-tech production, the share of the creative class and others. The period of collecting indicators is from 2018 till 2019.

Statistical methods of correlation-regression and trend analysis were applied to the formed samples, giving opportunity to establish the key patterns of the creative economy formation. The article also presents the results of GAP analysis of indicators shaping the creative economies of Ukraine in comparison with some EU countries. It provided opportunities for forming strategic approaches for the growth of the creative economy in Ukraine.

RESULTS

Trends and Patterns of the Creative Economy Development in the Global Space

Besides uniting investment-attractive creative industries the modern creative economy also acts as a powerful driver of economic and socially responsible business development.

However, the difficulty of quantifying the creative economy of any country is that it has both economic and socio-cultural components which are difficult to be measured in tandem. One of such "measures" is the Global Creativity Index.

The value of the Global Creativity Index is very different for different countries, which indicates a fairly large, and in some places virtually insurmountable gaps in the development of countries around the world in terms of technology and creative potential. Thus, the top three creative economies in the world are formed by Sweden, the United States and Finland with creativity indices of 0.92; 0.90 and 0.89, respectively. The least "creative" countries in Europe are Lithuania, Poland and Ukraine with correspondent indices of 0.48; 0.47 and 0.41. By comparison, Pakistan, Indonesia and Cambodia have the lowest index values in the world (0.05; 0.03 and 0.02, respectively) (UNCAD, 2018).

However, the reasons for countries lagging behind in terms of creativity are individual ones to each country and require more detailed assessment when developing national development strategies. For example, despite the high level of technology (9th place in the world), Germany ranks 16th due to relatively lower rates of talent and tolerance (26th and 18th place). A similar situation is typical for Switzerland, Israel and Japan. On the other hand, Canada and Australia are in the top 10 most creative economies in the world due to a high level of tolerance and despite much lower rates of technology development (15th and 17th place in the world rankings).

The researches identified the most significant trends in the formation of the creative economy of the world in relation to key macroeconomic results and development indicators.

Trend 1. The desire for extensive GDP growth does not provide a corresponding growth of the country's creative economy. Moreover, countries with a high level of the creative economy mostly have one of the lowest average annual GDP growth rates (Figure 1).

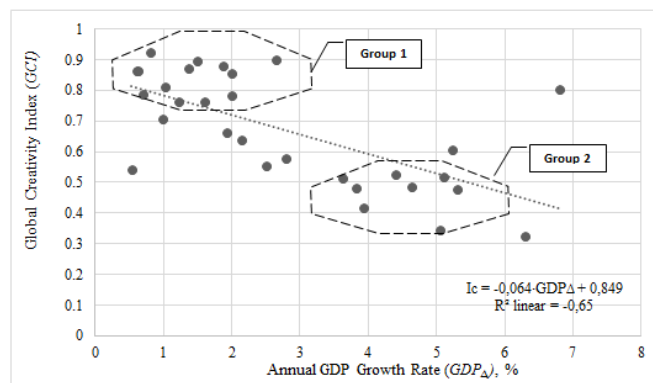


FIGURE 1
INDEX OF CREATIVITY AND GDP OF THE WORLD COUNTRIES

Source: own evaluation

The comparison of countries according to the global index of creativity and the average annual GDP growth allows us to identify 2 groups of countries.

Group 1 (12 countries). The most developed countries in Europe and the world have the highest levels of creative economy ($GCI > 0.85$). At the same time, they are characterized by relatively low average annual GDP growth rates ($GDP\Delta < 2.5\%$). In addition, there is another criterion for uniting them into a single group, which is the highest level of innovation in these economies (Innovation index $I_{\text{inov}} > 55$). It should be emphasized that currently the most innovative states are Switzerland, the Netherlands and Sweden with innovation indices of 0.68; 0.64; 0.63 respectively.

The analysis reveals that in the most developed countries there is a clear shift of emphasis from the quantitative increase of the national product output to ensuring its quality and innovation component.

Group 2 (8 countries). Mostly CIS and Baltic countries, for which the lowest in Europe innovation ($I_{\text{inov}} < 45$) and creativity ($GCI < 0,5$). However, in recent years, these countries have shown the largest average annual GDP growth in Europe ($GDP_{\Delta} > 3,5\%$).

Such dynamics is caused by these countries being targeted at a rapid and massive increase in national product production, without attracting the full potential of the existing creative cluster, innovative technologies, modern R&D research, etc. A striking example of this trend of extensive GDP growth is China, which deserves special attention, as it stands out of 2 groups of countries precisely because of the significant gap in the indicators (the lowest creativity index in the sample 0.32 along with the highest GDP growth rate of 6.3% and below average index of innovative economy - 53.1).

Taking into account the above considerations, GDP growth can not act as a significant indicator of growth in the creative economy of the world. The analysis reveals that the country's GDP growth increases the level of the creative economy only if it is achieved through a number of parameters such as the share of high-tech production increasing, widespread innovation, the number of creative class growing, national research conducting. A vivid example of such a strategy is Ireland, which is one of the 5 most powerful creative economies in the world ($GCI = 0,8$) and shows the highest GDP growth of 6.8%, which is provided by the intensive introduction of high-tech and innovative production ($I_{\text{inov}} = 57,1$).

Trend 2. At present stage of the world development there is a close connection in the system of such global indicators as "economic freedom \rightarrow creative economy \rightarrow social progress". In other words, the development of the creative economy becomes possible under conditions of ensuring a high level of companies economic freedom, which, in its turn, leads to rapid increase in social progress in a society. The obtained graphs illustrate this dependence visually (Figure 2a, 2b).

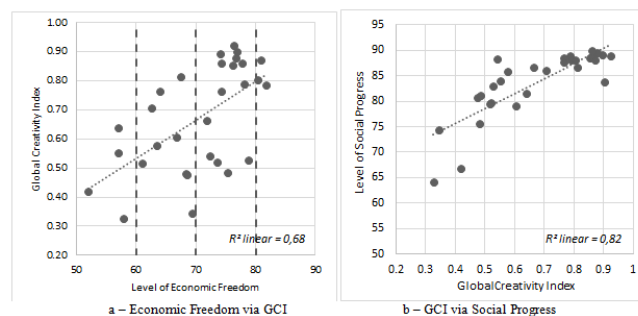


FIGURE 2
DEVELOPMENT MODEL "ECONOMIC FREEDOM \rightarrow CREATIVE ECONOMY \rightarrow SOCIAL PROGRESS"

Source: own evaluation

The Resulting Model Can be Explained by the Following Factors

Economic freedom is defined as the absence of state or any other nomenclature obstacles which provides free production, distribution and consumption of goods and services (Castro, 2020). The following limits of the economic freedom level can be distinguished as follows: completely economically free countries (80-100); mostly free countries (70-79); relatively free (60-69); restricted in economic freedoms (50-59) and despotic ones (0-49) (Heritage Foundation, 2019). These areas are highlighted in the graph (Figure 2a). At the same time, an economically free society provides for the implementation of 10 "freedoms": business, trade, taxes, investment, government influence, money, protection of property rights, freedom of labor relations and freedom from corruption. In fact, these "freedoms" form a healthy and proactive environment in which the 3T model of the creative economy can develop as effectively as possible.

It is worth mentioning, that the vast majority of European countries are aimed at forming a high level of economic freedom in society, which is highlighted by the key pillars of the EU. It creates a favorable basis for the development of the creative economy. In all EU countries with a high level of economic freedom (above 70) there is a high level of the Creative Economy Index ($GCI > 0.65$). The only exceptions were the Baltic countries, where the growth of the creativity index lags slightly behind the level of development of economic freedom of society. However, we can predict that this balance will be achieved over time.

In addition, strengthening the country's creative economy contributes directly to sustainable social progress (Figure 2). At present, the level of social progress is a qualitative result and criterion of social welfare and living standards of the population, because it reflects, on the one hand, access to basic needs (education, health services, environmental safety), and on the other - providing opportunities for personal development of citizens and freedom of decision-making (Porter, 2019). Thus, this indicator is a measure of socially conscious management, which is based upon the creative economy. It is the creative economy that provides society with innovative products created on the basis of social responsibility, environmental awareness and optimal use of resources.

Trend 3. The driver of the creative economy acceleration is to expand the share of the creative class in the country by increasing human resources, involved in knowledge-intensive industries, research and development.

As you know, the first of the three components of the 3T model of creativity is the technology, which is given the same weight as talent and tolerance, which equalizes the importance of these components. However, the analysis points up that at the current stage of global development it is the level of manufacturability and innovation that plays a leading role in shaping the creative economy. Such a "creative" innovative product is a consequence of the productive activities of the creative class of society, which sets the pace of a country progressive development.

Although the creative class of a country encompasses various professions including scientists, researchers, artists, journalists, designers, architects, etc., the most important driver of the creative economy at present stage is R&D staff. R&D employees include specialist, engaged in the creation of new knowledge, products, processes, methods and systems, as well as the management of relevant projects, scientists, researchers and graduates (O'Connor J., 2020). These specialists are directly involved in the creation of innovative solutions, high-tech models, the latest products and cutting-edge patents, which are an important component of creating global creative product.

This opinion is confirmed by our research results.

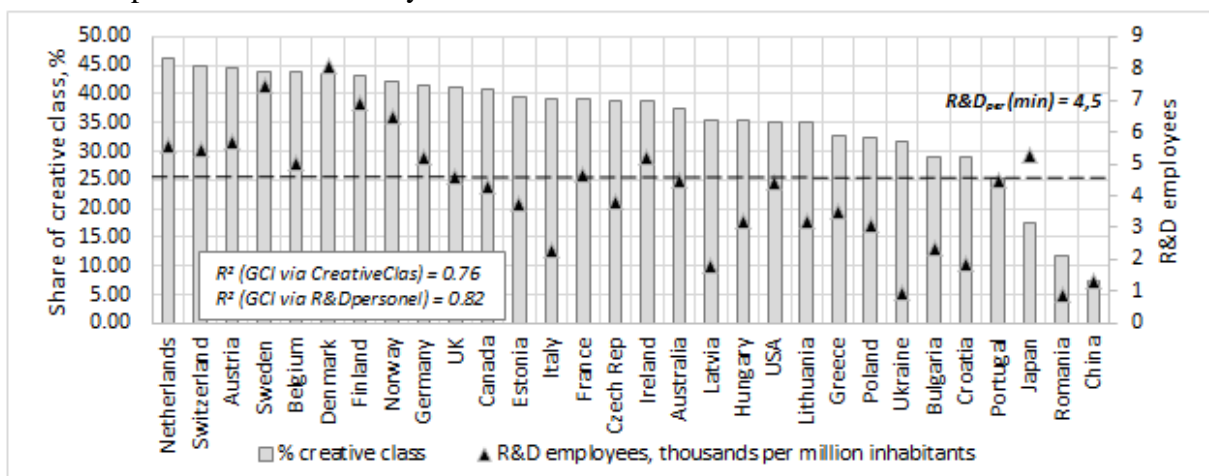


FIGURE 3
COUNTRIES RANKING ACCORDING TO THE SHARE OF CREATIVE CLASS AND R&D EMPLOYEES

Source: own evaluation

The highest values of the creativity index are observed in those countries where the share of the creative class and the volume of R&D professionals are the highest ones. There is a clear relationship between these indicators, even when choosing a linear trend, which allowed to build the following models:

- 1) The value of the Global Creativity Index of the country (*GCI*) depends on the share of the creative class in the country (C_{clas}): $GCI(C_{clas}) = 0,014 \cdot C_{clas} + 0,16$. The $R^2 = 0,76$, the error is 11.9%. Fisher's and Student's criteria meet regulatory limits.
- 2) The value of the Global Creativity Index (*GCI*) depends on the number of professionals involved in the R&D research sector ($R\&D_{per}$): $GCI(R\&D_{per}) = 0,08 \cdot R\&D_{per} + 0,34$. The $R^2 = 0,82$, the error is 10.7%. Fisher's and Student's criteria meet regulatory limits.

Analysis of the obtained functional dependences gave us opportunity to conclude that to ensure as high level of the creative economy, as in the top 10 countries in the world with ranking of creativity ($GCI > 0,7$), the share of creative class in the country should be at least 38.5%, with the number of professionals, involved in R&D research at least 4.5 thousand people per 1 million of population. The diagram (Figure 3) shows that currently, achieving this level of scientific potential is an urgent task for a third of European countries, including the Baltic States, Poland, Romania, Bulgaria and Ukraine. Government support for the development of science and, thus, extend the creative cluster is to help increase the level of development of the creative economy in these countries.

Problems of the Creative Economy Developing in Ukraine

Taking into consideration Ukraine's long-standing aspirations for European integration, building a creative economy is a strategically important task, as the vast majority of EU countries not only have a high index of creative economy, but also form the top 10 most creative economies in the world. On the other hand, the development of creative industries is to give the state opportunity to solve a number of related and no less urgent problems, namely: development of nation human potential, increasing innovation of domestic production, strengthening corporate social responsibility, creating environment for creative cluster growth and manufacturing of modern high-tech and creative products. It should be also pointed out that the creative economy development is to strengthen the country's position on the world stage, especially in terms of exports of creative goods, services, applying unique technologies.

At present, Ukraine's position in world rankings is far from being a strong one. According to the level of the global creativity index, Ukraine ranks 45th out of 139 countries with a score of 0.53. The components of the 3T model in Ukraine are as follows: technology (34th place); talent (27th place); tolerance (77th place) (UNCAD, 2018). Thus, Ukraine is one of the last in the ranking of creativity among European countries, along with Romania, Lithuania and Bulgaria.

It should be noted that pursuant to the Global Innovation Index 2019, Ukraine is included in the top 50 of 123 countries (Dutta, 2019). At the same time, in the sub-indices of this rating such as Knowledge & Technology Outputs and Human Capital & Research, our country occupies the 32nd and 41st places, respectively. Nevertheless, the figures are as low as the 101st and the 90th in the Institutions and Infrastructure subindexes. As for the Global Talent Index, Ukraine ranks 43rd out of 60 countries, but according to the sub-index of the quality of university education, it is in the TOP-10 of the same ranking. In the Global Talent Competitiveness Index 2019 Ukraine ranks 69th out of 118, and in the Global Knowledge Skills sub-index - 53rd place, while in terms of the environment for talent - only 103rd. In terms of competitiveness of talents, Ukraine ranks 66th position in the world out of 109 (INSEAD, 2016).

Summarising the results on all above-mentioned indicators still gives us to say that Ukraine has prospects for growth of creative potential, but it is underestimated in the global market. Creative business brings profits to the most systematic and respected international players in the world market, who use the passivity of domestic markets of less developed

countries, including Ukraine, and as a result, lack of conditions for self-realization leads to the outflow of creative and resourceful people abroad.

Nowadays developed world countries actively stimulate the development of creative spheres of activity. In particular, the UK aims to create 1 million creative jobs by 2030 (Eurostat, 2016). According to the research from 2018, out of 16.9 million of economically active population in Ukraine only about 500,000 people, making up 3% of employees, are involved in the creative industries and generate about 5% of the country's GDP, while 40% of those employed in industry work in low-tech production (Zhmerenetsky, 2017).

Ukraine is a participant in international trade of creative goods. UNCTAD research for the analyzed ten year period provides data on the increase in exports of creative industries goods in Ukraine from \$ 238.7 million to \$ 768.3 million (UNCTAD, 2018). According to the UNCTAD classification, creative goods from the categories of "design", "publishing", "applied art" were the ones, most exported from Ukraine. The main markets for creative goods in Ukraine are Europe (78%) and Asia (22%).

The prime area of the creative economy today is the IT industry, which is mainly export-oriented and works on outsourcing technology, fulfilling orders from large foreign companies. Exports amounts to about \$ 3.2 billion (Bebik, 2017). Technological and product startups have a strong potential in the IT market, which is evidenced by large contracts with powerful multinational corporations. The dynamic nature of development indicates that the IT industry in Ukraine can become one of the leading export-oriented sectors of the economy, generating a high-margin product and providing a strong competitive position in the world market. Another market of the creative economy in Ukraine having great potential is the media market, including television, online media production, advertising, PR, radio, cinema, print media, which is focused on the domestic consumer. The volume of this market is now about 15 billion UAH (Farinha, 2017).

The creative economy sector in Ukraine can become a platform on which small and medium-sized businesses develop vigorously. In this context, it is necessary to pay attention to the main problem faced by this business, namely, the sources of funding and investment. In addition to direct support through concessional government loans, it is necessary, in our opinion, to implement a systematic policy of infrastructure formation, project support, and creation of public creative spaces such as hubs, hackspaces, coworkings, anticafes and others. In the regional aspect, it is essential to develop cultural institutions, innovation and production workshops, educational organisations, information technology, which accelerate the involvement of the creative class in business.

Ultimately, Ukraine is characterized by specific prerequisites, including the following: concentration of capital in industrial and socially developed regions with better prospects for attracting investment and opportunities for sales of creative products and services in these regions; availability of a developed educational institutions network, attracting students from other regions of the country and, as a result, creating saturation of young qualified professionals; diversity and dynamism of the urban environment and relatively high quality of infrastructure and institutional security.

Strategic Model of the Ukraine Creative Economy Development

Based on the above issues of the creative economy formation, the authors of the article propose to discuss a strategic model for the development of the creative economy in Ukraine.

The elements and principles of GAP analysis were used to build the model, which provided a strategy based on the elimination of "gaps and lags" between the actual indicators (selected criteria) and the desired ones.

In our opinion, when determining the key "gaps" in the level of development of the creative economy, it is appropriate to consider all indicators in 3 following dimensions: international metrics; creative environment and the creative results obtained. In this view, the indicators were selected and grouped as follows (Figure 4).

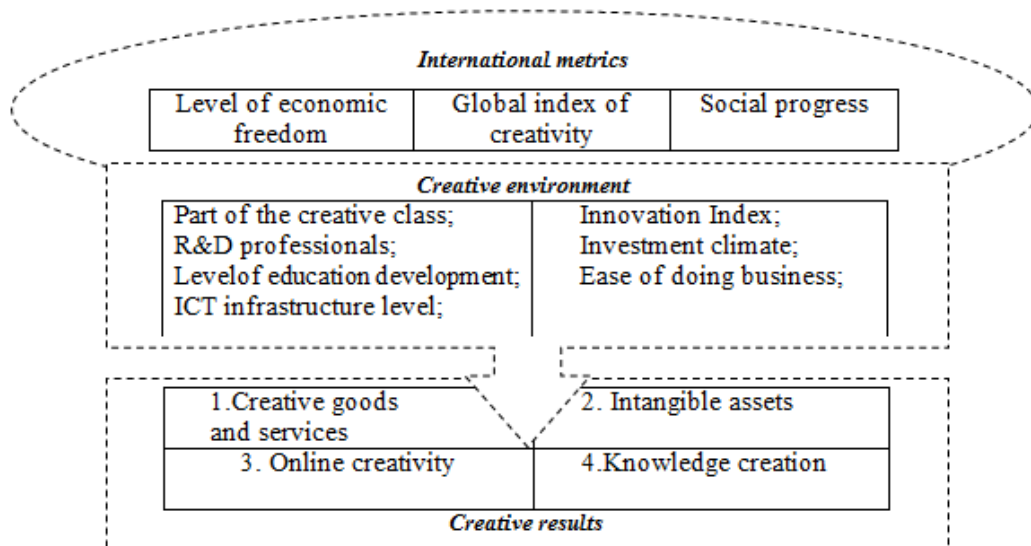


FIGURE 4

PERFORMANCE MEASURES FOR THE CREATIVE ECONOMY ASSESSMENT

Source: own evaluation

Thus, there is possibility to determine the main lags in the position of the country in the world by level of the creative economy. Creative results, in their turn, are grouped in the following areas:

- 1) Creative goods and services as a result of the country creative industries activities, such as the size of the media market, publishing, cinema, the share of creative goods and services exports, etc.
- 2) Intangible assets including the number and estimated value of trademarks created by country residents; volume of creative industrial design, creation of ICT business models.
- 3) Online creativity, which is proposed by Michael Porter as the main result of the creative economy in the context of assessing the country innovation (Porter, 2019). It is proposed to include the volume of top-level domains generated in the country, as well as the content created by national authors at leading Internet resources, mobile applications etc..
- 4) Knowledge generation, meaning the scope and estimated value of patents, know-how, models, scientific articles and research, etc., created by residents.

All these indicators (Figure 4) were used in GAP analysis. At the same time, Ukraine indicators are taken as the initial actual parameters. In order to identify key gaps, to assess, and, ultimately, to select their desired values, similar indicators from other EU countries were chosen.

Countries for GAP analysis were selected from the ranking of global creativity, based on the following considerations:

- 1) Poland is the closest country to Ukraine in terms of the level of creative economy, but it is ahead of Ukraine in the ranking. GCI of Poland is 0.48 while in Ukraine it makes up 0.42. Both countries belong to the same group (group 2, Figure 1).
- 2) Latvia is the leading country in group 2 (Figure 1) with the highest value of the creative economy index.
- 3) Great Britain is the country with the world largest rate of the creative economy development and the largest investment in creative industries, which actively implements strategies for development of the creative economy at the government level.
- 4) Sweden is ranked as a leading country among the world's top creative economies.

All the indicators for GAP analysis were formed into appropriate samples and normalized for correct comparison with each other and "gaps" identification.

Analyzing the model "Economic Freedom - Creative Economy - Social Progress", an obviously positive trend to strengthen the creative economy in Ukraine should be emphasized, despite significant gaps concerning economic freedom of economic entities (Figure 5).

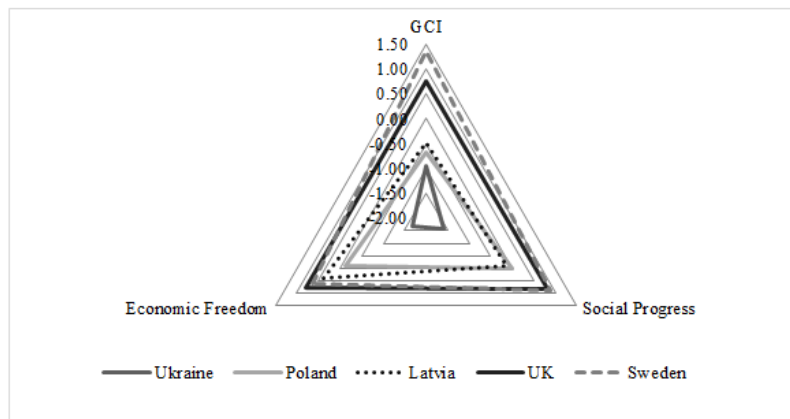


FIGURE 5
POSITION OF UKRAINE IN THE MODEL "ECONOMIC FREEDOM - CREATIVE ECONOMY - SOCIAL PROGRESS" (NORMALIZED INDICATORS)

Source: own evaluation

The chart shows that Ukraine is approaching Poland and Latvia according to the index of global creativity, with which it forms a single group in terms of innovation, creativity and GDP growth (shown above, Figure 1). However, the gap between them and EU countries with a high level of creative economy remains a significant one (Figure 5). For example, the gap between the creative economy of Ukraine and the United Kingdom is 46%.

One of the reasons for this gap is low level of economic freedom in Ukrainian society compared to EU countries. While EU countries aim to ensure a high single level of economic freedom, the gap between Ukraine and the UK is 33%, though it makes up only 12% between Poland and the UK. Under great restrictions on economic freedoms, it is very difficult to implement the latest business projects, especially in innovative creative industries.

In order to deepen the analysis of the most essential reasons for the the creative economy lagging in Ukraine, the indicators in the areas of "creative environment" and "creative results" were also analyzed (Figure 6).

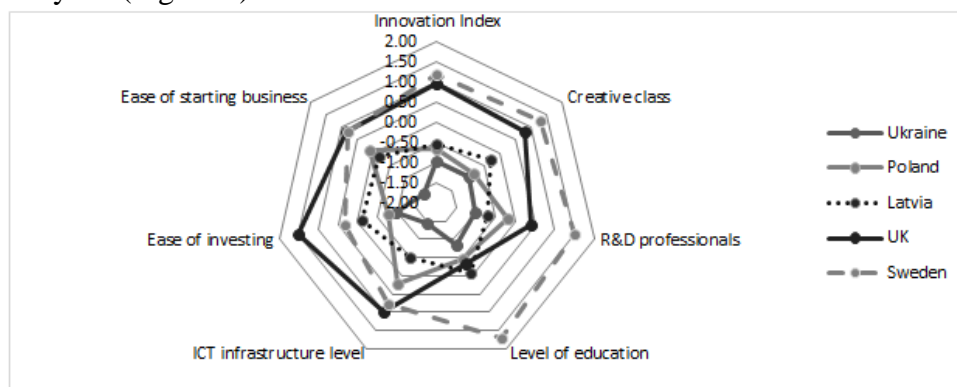


FIGURE 6
CREATIVE ENVIRONMENT (NORMALIZED INDICATORS)

Source: own evaluation

It should be pointed out that position of Ukraine is strong enough in terms of innovation index, share of creative class and level of education. According to these indicators the gap between Ukraine, Poland and the leader of the group - Latvia is minimal and does not exceed 8%.

Therefore, Ukraine can rely on its strengths in building a strategic model for the development of the creative economy in the medium term. However, in the long term, we

should focus on the world leaders in the creative economy, which are characterized by a much larger share of the creative class (at least 40%, while it is only 31% in Ukraine) and economic innovation (above 60%, in Ukraine it is only 38.5%).

Unfortunately, significant "gaps" are observed in Ukraine concerning such important indicators as the number of R&D professionals (68% lag behind Poland, 79% behind the UK); the level of ICT infrastructure (29% gap between Poland, 38% between the UK), as well as regarding to ease of doing business indicator (gaps 22% and 29%, respectively) and transparency of investment (10% and 58%, respectively). Such a significant lagging behind in the level of investment is a negative consequence of ineffective policy of domestic and foreign investors protection in Ukraine, low market capitalization rate amounting to 22% of GDP and unfavorable investment climate in general.

It is noteworthy that significant gap in the number of R&D professionals certainly indicates negative trends in the development of the creative economy, because, as research illustrated, it is a scientific component of human potential which is a driver of creative industries in the country.

Therefore, the current position of Ukraine in terms of creative environment determines the gaps in creative results as well (Figure 7).

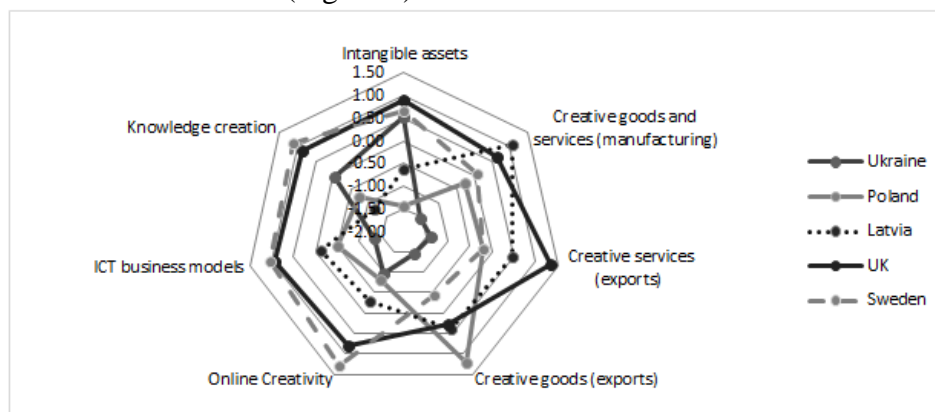


FIGURE 7
CREATIVE RESULTS (NORMALIZED INDICATORS)

Source: own evaluation

Despite the obtained map of creative results being quite disproportionate, it, however, gives us opportunity to identify general trends and the most significant "gaps". The diagram illustrates clearly the orientation of Sweden, as a world leader in the creative economy, towards creative results in the areas of intangible assets, knowledge creation, implementation of ICT models and online creativity; Great Britain is similarly focused on achievement of all creative results; as well as Poland and Latvia are focused strategically on the production and export of creative goods, despite lagging behind the leaders in other creative results.

Ukraine lags behind the most European countries in terms of achieving the such creative results as follows.

Firstly, the production of creative goods and services in Ukraine is 67% less than in Poland and on average 80% less than the volume of creative products in Latvia, Great Britain and Sweden, which certainly indicates the initial stage of creative industries development and extremely low level of creative production. Such a large gap is characteristic for the exporst of creative goods and services abroad.

Secondly, the next big "gap" is in the sphere of knowledge creation (amounts to 35-75% in comparison with other countries under consideration). It is reflected in the low rates of Ukraine regarding the generation of new technologies, patents, certificates, publication of articles with a low level of citation. For comparison, the average H-index in Ukraine is 15, while it equals 35 in Poland, 59 in Sweden and 100 in Great Britain. However, in Ukraine it is not a consequence of low quality research, but mostly due to low level of their promotion and lack of access to global intellectual property banks.

Thirdly, there are slightly smaller, but no less important, "gaps" in online creativity, which are especially significant in the age of the Internet of Things, Industry 4.0, and total informatization. Ukraine lags behind Poland in terms of creative development online by 22% and behind the UK by 74%. It is reflected by the significant lag of Ukraine in various promotions of its own domains, domestic online resources and content creation in the global network. Despite such "lags", Ukraine has an advantage - it is one of the leaders in creating mobile applications, which is also one of the online creativity indicators.

Hence, it should be noted that all the resulting "gaps" are debatable, because today most of Ukraine intellectual resource work in the field of freelance for foreign employers and, in fact, generates a creative product, which is then "counted" in other countries.

The analysis provides opportunity for applying the worked out strategic directions to improve the creative economy of Ukraine, which should be the basis for designing a national model of creative development.

Direction 1. Comprehensive improvement of business environment transparency and investment climate in Ukraine, thus ensuring wider economic freedoms for business entities. To grow the creative economy at least to the level of an average European countries (Poland, Latvia), Ukraine has to improve the indicators of ease of doing business, investment attractiveness, tax policy and political stability by at least 20%.

Direction 2. Increasing the share of the creative class. In the future, the share of the creative class should increase from the actual 31.7 to 40% (the optimal level of developed EU countries in terms of the creative economy performance). It is important that such growth occurs mainly due to the increase of the scientific component of human potential, *i.e.*, human resources involved in the R&D sector. The number of such professionals should be increased at least three times (Poland, Latvia serve the samples), and in the long-term future UK, Sweden are targeted which demands as much as 5 times increase. To implement this direction the following measures should be taken:

- Attracting promising staff to the scientific field of activity, in particular, the direction of STEM;
- Development of scientific communities in all the regions of Ukraine to eliminate territorial disparities in the location and funding of scientific institutions;
- Raising the production technology intensity by encouraging cooperation between business and research institutions;
- Increasing scientific activity transparency and integrity, development of intellectual property, in particular, in the direction of scientific results publication.

Direction 3. Improving the state of information and communication infrastructure in Ukraine by at least 30% in terms of indicators with the largest "gaps" compared to highly creative EU countries, namely: the level of access to ICT for the general public, ease of ICT use by different age groups, increasing the number and ease of public online services, involving the population in E-services. For example, in Ukraine the efficiency index of public online services is 56, while in Sweden it amounts to 94.4 and in Great Britain makes up 97.9.

Direction 4. Comprehensive support of producers in creative industries, aimed at increasing the volume of domestic creative product. Production of creative goods and services in Ukraine (media market, publishing, design, ICT development) should eventually grow by 60% (EU average), which is to increase exports of creative products, being currently one of the smallest in the world. It should be emphasized that this level is possible only under condition of implementing direction 2. On average, EU countries export three times more creative services than Ukraine, and 20 times more creative goods. Taking into account the fact that the world market for creative products remains unsaturated, Ukraine has prospects for increasing production in this area. The following requirements should be met to implement the direction:

- Development of "creative entrepreneurship";
- Attracting foreign experience in creating and implementing new business models in scientific and cultural institutions, which traditionally do not operate according to business philosophy;

- Support for domestic brands;
- Development of programs to attract project funding in the creative industries;
- Creating a national system of creative hubs.

It should be borne in mind that all these areas can be implemented, and quantitative indicators achieved only provided a dialogue is established between the creative class, business and government.

CONCLUSION

The study gives us opportunity to draw the following main conclusions.

1. The creative economy embodies the desire of the world leading countries for innovative and creative development aimed at achieving human life high quality indicators. In the long run, the development of creative industries, especially knowledge-intensive ones, will allow the country to strengthen its competitive position in the world market by promoting creative products and, at the same time, owning unique innovative technologies and models.
2. The growth of the country GDP is not a leading indicator of the growth of the country creative economy. Most highly developed countries of the EU and the world have shifted the emphasis from the quantitative extension of the national product to ensuring its quality and innovation component. The analysis shows that the growth of the country GDP increases the level of the creative economy only if this growth is provided by a number of parameters, such as increasing the share of high-tech production, widespread innovation, development of the region creative cluster, conducting national research.
3. The development of the creative economy becomes possible under the conditions of ensuring a high level of economic freedom for economic entities, which in its turn leads to a rapid increase of social progress in society. The close connection was traced in the model "economic freedom → creative economy → social progress".
4. A powerful factor in the development of the creative economy is to extend the share of the creative class by increasing the number of specialists involved in knowledge-intensive industries, research and development. To ensure a high level of creative economy (GCI > 0.7), the share of creative class in the country should be at least 38.5%, while the number of professionals involved in R&D research should be at least 4.5 thousand people per 1 million of country population.
5. Creative activity in Ukraine is in the forming phase. GAP analysis provided identifying significant "gaps" in the level of Ukraine creative economy development compared to EU countries in 3 dimensions, such as international metrics; creative environment and the creative results obtained. The largest "lags" (more than 50% compared to the leaders of the EU creative economies) were identified in the following areas: the level of economic freedom; number of professionals in the R&D sector; level of ICT development; volume of production and exports of creative goods and services; online creativity (except for the development of mobile applications). "Gaps" in investment transparency and ease of doing business amount to the level of 20-50%. Ukraine has shown relatively strong positions with minimal lag in terms of mobile applications development, education and the intangible assets creation.

REFERENCES

- Bell, D. (2004). *The coming of post-industrial society. A venture of social forecasting*. Moscow: Academia.
- Boccella, N., & Salerno, I. (2016). Creative economy, cultural industries and local development. *Procedia. Social and Behavioral Sciences*, 223, 291-296.
- Castro, V., & Martins, R. (2020). Government ideology and economic freedom. *Journal of Comparative Economics*, 1, 59-67. doi: <https://doi.org/10.1016/j.jce.2020.07.007>.
- Cushing, R. (2001). *Creative capital, diversity and urban growth*. Texas: Austin.
- Denison, E. (1962). *The sources of economic growth in the united states and the alternatives before us*. New York: Committee for Economic Development.
- Dosi, G. (2005). Statistical regularities in the evolution of industries: A guide through some evidence and challenges for the theory. *LEM working paper series*, 17, 1-34.
- Dronyuk, I., Moiseienko, I., & Greguš, J. (2019). Analysis of creative industries activities in european union countries. *Procedia. Computer Science*, 160, 479-484.
- Dutta, S., & Lanvin, B. (2019). *Global innovation Index*. Cornell: SC Johnson College of Business.
- Davymuka, S., & Fedulova, L.I. (2017). *Creative sector of economy: Experience and directions of development: monograph*. DU" Instytut rehional'nykh doslidzhen' imeni MI Dolishn'oho NAN Ukraïny".
- Erdem, U. (2018). Local creative culture and corporate innovation. *Journal of Business Research*, 91, 60-70.
- EUROSTAT. (2018). Around 8.4 million people employed in culture in the EU.

- Farinha, C. (2017). *Developing cultural and creative industries in Ukraine*.
- Florida, R. (2005). *Creative class: people who change the future*. Moscow: Classica XXI Publishing House.
- Grefe, X. (2016). From culture to creativity and the creative economy: A new agenda for cultural economics. *City, Culture and Society*, 7(2), 71-74.
- Heritage Foundation (2019). *Index of Economic Freedom report*.
- Howkins, J. (2011). *The creative economy. How people make money from ideas*. Moscow: Classica XXI Publishing House.
- INSEAD. (2016). *The global talent competitiveness index 2015-2016*. Fontainebleau: The Business School.
- Landry, C. (2006). *The Creative City*. Moscow: Classics-XXI.
- Martin Prosperity Institute. (2017). *Creativity and Prosperity: The Global Creativity Index*.
- N-iX. (2017). *All you need to know about Ukrainian it outsourcing. 2017 outlook*.
- O'Connor, J., Gu, X., & Lim, M. (2020). Creative cities, creative classes and the global modern. *City, Culture and Society*, 10-34.
- Ogbeibu, S., Senadjki, A., Emelifeonwu, J., Gaskin, J., & Pereira, V. (2021). Augmenting environmental sustainability through the exchange of green creative ideas—evidence from an emerging economy. *Sustainable Production and Consumption*, 26, 275-287.
- Porter, M. (2019). *Social progress index. Executive Summary*.
- UNCAD. (2018). *Creative economy outlook. Country Profiles*. United Nations.
- Zhmerenetsky, O. (2017). *The dilemma of Ukrainian talents: how to sell your brains the most expensive without leaving the country?*