DOI: 10.55643/fcaptp.3.56.2024.4420

FINANCIAL MANAGEMENT OF ENTREPRENEURIAL UNIVERSITIES IN THE CONDITIONS OF DIGITALIZATION, SMART ECONOMY AND THE DEVELOPMENT OF EDUCATIONAL TOURISM

Oleksandr Galych
PhD in Economics, Professor, Rector, Poltava State Agrarian University, Poltava, Ukraine;
ORCID: 0000-0001-6478-8309

Marta Barna
D.Sc. in Economics, Vice Rector, Professor of the Department of Tourism and Hotel and Restaurant Business, Lviv University of Trade and Economics, Lviv, Ukraine;
ORCID: 0000-0001-5248-9774

Oleg Fedirets
D.Sc. in Economics, Associate Professor of I. Markina Department of Management, Poltava State Agrarian University, Poltava, Ukraine;
ORCID: 0000-0002-9710-4644

Hanna Fedirko
PhD Student, National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, Ukraine;
ORCID: 0000-0002-3691-7748

Taliat Bielialov
D.Sc. in Economics, Professor, Head of the Department of Entrepreneurship and Business, Kyiv National University of Technologies and Design, Kyiv, Ukraine;
ORCID: 0000-0003-4019-755X

Polina Puzyrova
D.Sc. in Economics, Professor, Associate Professor of the Department of Smart Economics, Kyiv National University of Technologies and Design, Kyiv, Ukraine;
e-mail: puzyrova@ukr.net
ORCID: 0000-0003-0839-8730
(Corresponding author)

Received: 23/04/2024
Accepted: 13/06/2024
Published: 30/06/2024

ABSTRACT

The article defines the key aspects of methodical support of financial management of entrepreneurial universities in the conditions of digitalization, smart economy and development of educational tourism. Attention is focused on the fact that at this time Ukraine faced complex phenomena caused by the invasion of the Russian Federation on the territory of our state, which caused powerful changes in all sectors, industries and industries of Ukraine. It was noted that against the background of active digitalization and financial instability, migration shifts and the flow of human resources took place. In this context, there is a need for an active policy of creating and evaluating the effectiveness of the concept of financial management of entrepreneurial universities in the conditions of digitalization, smart economy and the development of educational tourism, taking into account the challenges faced by the modern economy of Ukraine. With the use of methods of production functions, the article proposes an assessment of the financial management of entrepreneurial universities. It was noted a need to increase the financial support of entrepreneurial universities, which is important for improving the quality of education and tax revenues at the regional and state levels. Attention is focused on the phenomenon of increased outflow of students outside of Ukraine with the simultaneous outflow of teaching staff abroad. It was noted that it is the effective financial policy of supporting entrepreneurial universities that can reduce negative phenomena in education.

Keywords: financial management, entrepreneurial universities, education, tourism, gross regional product, smart economy, migration, teaching staff, higher education institutions

JEL Classification: A29, I29, L83

INTRODUCTION

Effective financial management of entrepreneurial universities is extremely necessary and important. A variety of funding sources allows entrepreneurial universities to ensure sustainable development and promote the integration of science and business. Entrepreneurial universities in the conditions of digitization, smart economy and the development of educational tourism are a special type of higher education institution aimed at preparing students for successful entrepreneurial activity in the conditions of the modern world. Such universities provide students with the knowledge and skills necessary to start and successfully run their own business. This may include courses in business management, marketing, finance, strategic planning and entrepreneurial leadership. Entrepreneurial universities foster a culture of innovation by encouraging students to develop innovative ideas and projects that can become the basis for future enterprises. Such universities actively use digital technologies in the educational process, providing access to online courses, open online resources, virtual workshops and other innovative learning methods. Entrepreneurial universities often partner with businesses and entrepreneurial organizations to provide students with hands-on experience, internships and support to bring their ideas to life. The growing interest in educational tourism

DOI: 10.55643/fcaptp.3.56.2024.4420

can be used by entrepreneurial universities to attract students from around the world. This may include student exchange programs, international internships, and other forms of international cooperation. This approach contributes to the preparation of students for effective participation in the modern economy and the development of entrepreneurial activity in various branches of industry. A necessary condition for stimulating the development of effective entrepreneurial universities is the concept of entrepreneurial university management, which is especially important in the context of digitalization, smart economy and the development of educational tourism.

LITERATURE REVIEW

Scientists (Noh and Lim, 2015) propose a methodology for assessing the work of nurses for financial management training, which significantly expands the paradigm of humanitarian education by increasing the financial awareness of junior staff. Scientists (Beverungen et al., 2014) propose methods of accounting for financial resources in universities, including charitable ones.

The scientist (Villegas, 2015) suggests directions for improving the efficiency of financial management in conditions of instability and bifurcation shifts. The study (Başçı and Alkan, 2015) proposed a model of financial support for university studies. Scientists (Caballero et al., 2001) proposed an effective distribution of financial resources in the university system. The article (Jinjoyan, 2022) rightly states that the generation of educational tourism and the development of the higher education sector can have a significant impact on the competitiveness of countries. Higher education is an important factor in a country's competitiveness, and its quality affects the ability to think innovatively and create a smart economy.

Scientists (Ndou et al., 2019) emphasize the need for synergy in considering entrepreneurship, education and tourism. Researchers (Eichelberger et al., 2020) offer an in-depth study of entrepreneurial ecosystems in smart cities and study the specifics of the consequences of the implementation of regional tourism policy. The work (Ovcharenko et al., 2022) identified the need to model complex ecosystems in the context of globalization, while the authors defined a modelling system and logic that can be used to analyze entrepreneurial universities.

The article (Youssef et al., 2021) offers the most optimal ways of developing entrepreneurship in the conditions of active digitalization and a changing external environment. Significant for our scientific article are the studies of the authors (Ndou et al., 2019), who propose directions for studying entrepreneurship in tourism, in this study the authors use the experience of European universities.

The use of self-management in management practice, which determines the activation of entrepreneurial universities, is proposed by scientists (Katernyak et al., 2023). The authors emphasize the need for digitalization and the activation of its integration into culture and tourism (Zhao et al., 2023). They note that it is digitalization in the tourism sector that can economically restore any economy. Scientists (Stryabkova et al., 2021) identify the need for innovative learning in the context of a smart economy and special planning of the service sector, as well as a complete technological interconnection of economic sectors. The scientific work (Turkay et al., 2019) defines modern trends and values that change the logic of managing the tourism sector.

The scientific conclusions (Gryshchenko et al., 2021) deserve special attention. They proposed to create innovative university clusters in conditions of active informatization of education, which will comprehensively stimulate the education market in modern Ukraine. Scientists (Xiang, 2018) noted the need to improve the technologies of the tourism industry in the period of digitization and dissemination of information resources. A group of scientists (Sobchenko, Zhelizniak, 2023; Zhyvko et al., 2022; Ismagilova et al., 2019) focused on stimulating the digital economy, which is necessary for all sectors of the economy and industries.

Scientists (Orji et al., 2022) proposed quite non-standard digital tools for the higher education sector, which were tested at Nigerian universities. Scientists (Vasylchak et al., 2022) proposed a system of human capital formation that should be used in the smart economy. Interesting research during pandemics is shown in the work (Casado-Aranda et al., 2021), where scientists proposed models for the formation of smart cities during periods of instability and external threats.

The researcher (Zhurakovska, 2014) proposed an assessment of educational migration in the context of globalization of economic development. In the work (Klyuchkovska et al., 2017) they showed how it is possible to analyze student migration using the example of Ukrainian higher education institutions. Research (Svityashchuk and Stadny, 2014) identified the features and problems of modern migration in Ukrainian education.

As we can see, in the scientific world there is a very extensive system of studying financial management, academic entrepreneurship and entrepreneurial universities. The problem of financing in the context of digitization and the spread of

information technologies in education and business is analyzed in depth and in detail. Many studies are devoted to the importance of financial management, smart economy and the development of educational tourism. At the same time, the problem of financial management of entrepreneurial universities in the conditions of digitalization, smart economy and the development of educational tourism has not been comprehensively investigated in any scientific source.

AIMS AND OBJECTIVES

The purpose of the article is the logic of the financial management of entrepreneurial universities as a conceptual basis for their development in the conditions of digitalization and the smart economy.

In accordance with the goal, the following tasks were set and solved:

- the method of modelling the financial management of entrepreneurial universities is specified;
- a system of indicators that evaluate the effectiveness of financial management of entrepreneurial universities in the conditions of digitalization and smart economy is defined;
- analyzed the dynamics of educational migration in the conditions of digitalization and military risks;
- a forecast of the level of educational migration is proposed and the threats that will be relevant to the national market of education and financial management are identified.

METHODS

Our concept of financial management of entrepreneurial universities in the context of digitalization, smart economy and the development of educational tourism will be developed using production functions. Production functions are an important tool for understanding the relationship between the factors of external relations and the resulting features of the study. The analysis of production functions allows not only to describe this relationship, but also to identify optimal strategies for using financial resources to achieve maximum productivity and production efficiency in the conditions of the spread of digitalization and the smart economy. This is especially important in the conditions of the modern economy of Ukraine, where financial resources are limited and competition is high. The use of linear and non-linear production functions makes it possible to better understand complex migration processes in education and to find optimal ways to achieve the research goals and promote the efficient distribution of financial resources. The methodology of production functions is important in our analysis because it combines theory with practice and can help enterprises and organizations make better management decisions in the field of financial policy based on objective data and analysis in conditions of increased digitalization, active migration and the spread of the smart economy.

RESULTS

Financial management of entrepreneurial universities is based on a complex process of planning, organization, control and monitoring of the university's financial resources to achieve its strategic goals. Effective financial management of entrepreneurial universities contributes to their sustainability and competitiveness, enabling them to innovate and provide a high level of education and research. Balanced and successful management ensures the stability and reliability of the university's financial condition, which allows maintaining the continuity of the educational process and research activities. It allows you to optimize costs and use available resources in the most efficient way, in particular by reducing excess costs and investments in strategically important projects. Effective financial management of entrepreneurial universities is the foundation of their success and allows them to fulfill their mission of providing quality education and conducting advanced scientific research. We will determine how high-quality the financial management of entrepreneurial universities is in modern Ukraine, and also specify how it is carried out in the conditions of digitalization, smart economy and the development of educational tourism. At the initial stage, we will determine the dynamics of educational tourism. According to the testimony of UN analysts (as defined in the Report "Migration in Ukraine: Figures and Facts"), the migration of Ukrainian students abroad became especially active after the annexation of Crimea and military operations. Analysis of data on the migration of students from Ukraine over the past few years provides an opportunity to better understand the dynamics of this process. From 2016 to 2021, there was some improvement in the outflow of human resources, which led to a decrease in the growth of the number of students studying abroad. According to the information resource of UNESCO (http://data.uis.unesco.org/index.aspx?queryd=3806) for 2019, the number of Ukrainian students who emigrated from Ukraine amounted to 77.6 thousand people. The outflow coefficient, which reflects the percentage of mobile students from the total number of students, in Ukraine was 4.63, which roughly corresponds to similar indicators in some countries of

DOI: 10.55643/fcaptp.3.56.2024.4420

Central Europe. Germany, Poland, Slovakia and the Czech Republic were the most popular countries for Ukrainian students in 2019. During this period, the largest number of Ukrainian students studied in Poland - 26.9 thousand people, 6.3 thousand Ukrainian students studied in Germany, 3.2 thousand in the Czech Republic, and 2.9 thousand in Slovakia. These data indicate certain dynamics in migration educational processes and may be useful for further analysis and development of strategies in the field of educational policy, migration and international cooperation in the context of stimulating the smart economy. Figure 1 shows the number of students who migrated from Ukraine, 2013-2022.

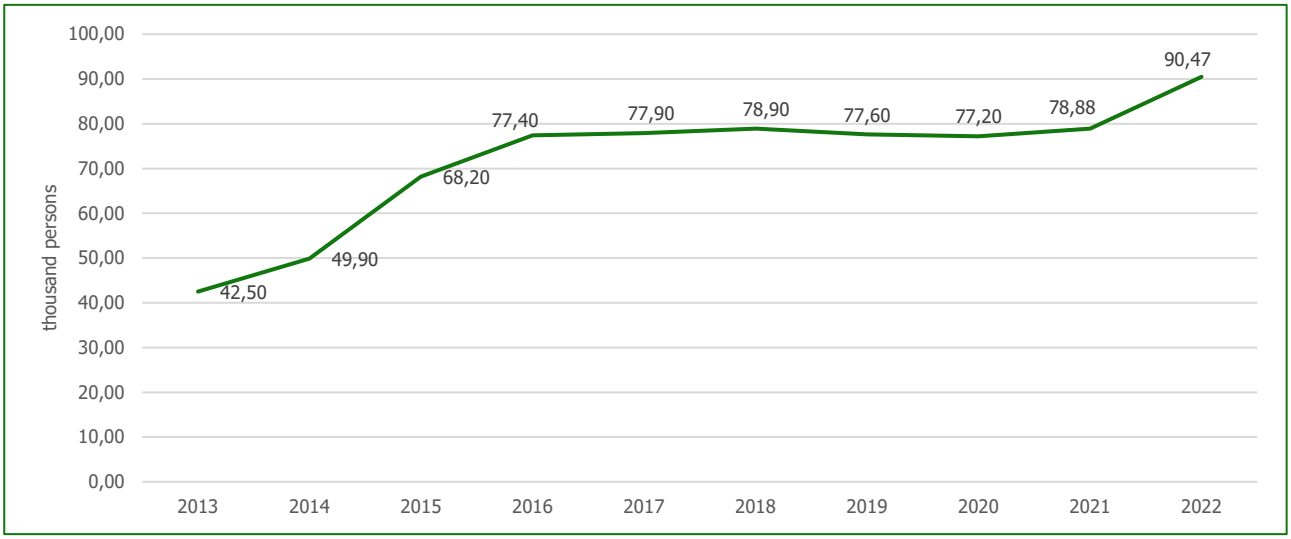

Figure 1. Dynamics of educational tourism of students who migrated from Ukraine, 2013-2022. *(Source: http://data.uis.unesco.org/index.aspx?queryid=3806)*

The spread of COVID-19 has created unprecedented challenges for educational tourism, as well as for international labour mobility in general, which has completely changed the trend of financial management. This requires improvement of the concept of financial management of the specified processes. The pandemic, and then military actions, led to an unprecedented decrease in the number of potential applicants to Ukrainian higher education institutions, who preferred to study in foreign educational institutions. In general, such phenomena were caused by the financial problems of households, which arose as a result of the complex socio-economic development of the country in general, caused by the crisis. It is also worth noting that the formation of entrepreneurial universities abroad is more effective, due to which many Ukrainian students consider studying abroad as an opportunity to get a high-quality education and, in the future, get a job in more prosperous countries that are not involved in military conflicts. These conditions remain important even in the context of a pandemic and military operations, although additional restrictions and difficulties may arise in connection with the changed conditions for crossing borders and carrying out international travel. However, the consequences of such a phenomenon for the development of Ukraine can be catastrophic, as it can lead to the loss of personnel and knowledge that can be useful for Ukraine. According to survey data, only a very small proportion of young people from Ukraine who study in foreign institutions of higher education plan to return home. This may emphasize the need to develop strategies aimed at attracting and retaining talented youth in the country, as well as stimulating their participation in the development of Ukrainian society and economy. In this sense, the concept of financial management of entrepreneurial universities in the context of digitalization, smart economy and the development of educational tourism is important.

In the financial management of entrepreneurial universities, it is important to analyze the dynamics of educational tourism. If we analyze educational tourism, then we should recognize its growth, especially in 2022, in connection with the full-scale invasion of Russia into Ukraine, which caused the outflow of 90,47 thousand people. In the context of the COVID-19 pandemic and the economic difficulties that arose as a result of the crisis, the overall number of students in both internal and external educational programs began to decrease. The ratio between the number of students in Ukrainian educational institutions and Ukrainian students abroad may vary depending on various factors, such as economic conditions, availability of educational programs, and political and socio-cultural factors. To obtain accurate data on the dynamics of the number of students and their ratio in recent years, it is necessary to refer to official sources of statistical information. Using the statistical reporting of the State Statistics Service and educational migration for the last ten years, we will determine the indicators of such migration. A graphical presentation of the ratio of the number of students who migrated from Ukraine to the number of young people in higher education institutions of Ukraine at the beginning of the academic year, 2013-2022 is presented in Figure 2.

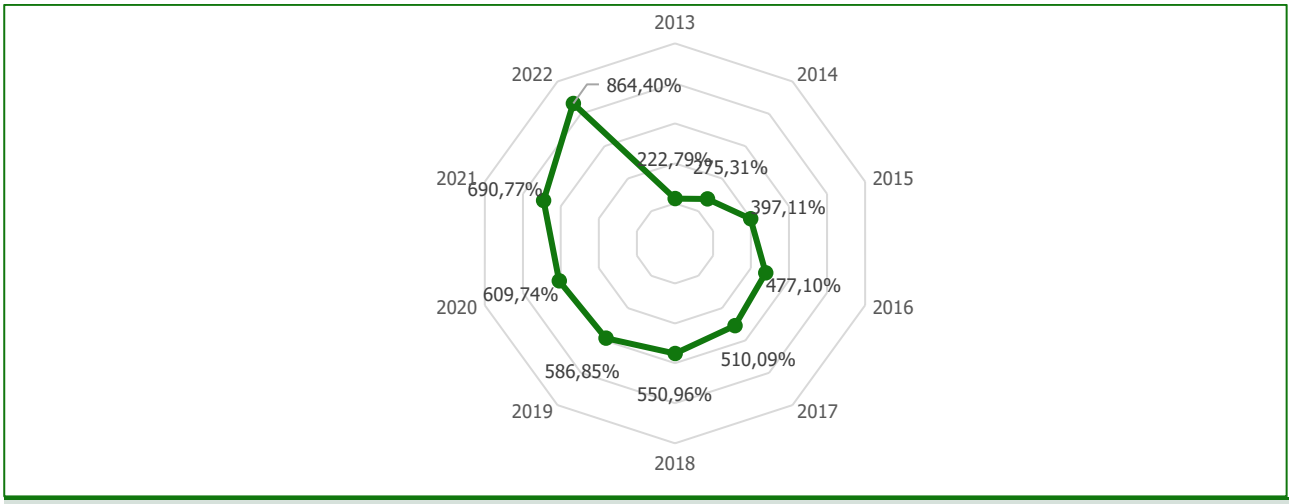

Figure 2. The ratio of the number of students who migrated from Ukraine to the number of young people in higher education institutions of Ukraine at the beginning of the academic year, 2013-2022. *(Source: compiled by the authors taking into account information sources http://data.uis.unesco.org/ and https://www.ukrstat.gov.ua/)*

Also, based on the information of these state structures, the dynamics of the volume of teaching staff who migrated abroad, as well as the dynamics of the teaching staff who remained to perform educational functions in domestic higher education institutions and their ratio, 2013-2022, were formed (Figure 3, Table 1).

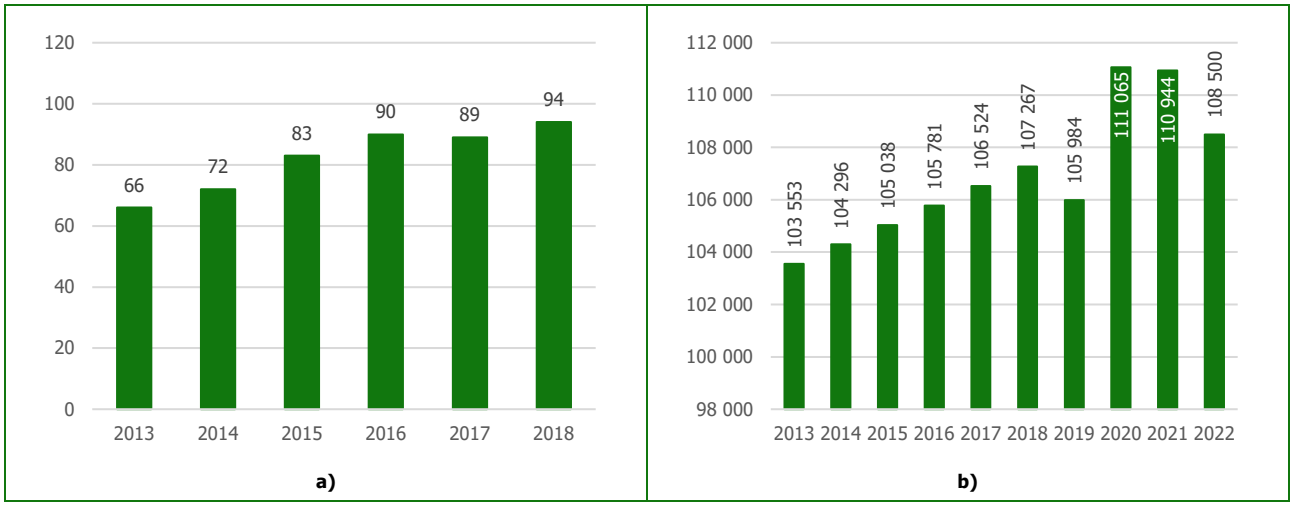

Figure 3. Dynamics of the volume of teaching staff who migrated abroad (a), dynamics of teaching staff who remained to perform educational functions in domestic higher education institutions (b), 2013-2022. *(Source: compiled by the authors taking into account information sources http://data.uis.unesco.org/ and https://www.ukrstat.gov.ua/)*

Table 1. The coefficient of the ratio of the volume of teaching staff who migrated abroad and teaching staff who remained to perform educational functions in domestic higher education institutions, 2013-2022. *(Source: compiled by the authors taking into account information sources http://data.uis.unesco.org/ and https://www.ukrstat.gov.ua/)*

Year	The coefficient of the ratio of the volume of teaching staff who migrated abroad and teaching staff who remained to perform educational functions in domestic higher education institutions, %
2013	0.064
2014	0.069
2015	0.079
2016	0.085
2017	0.084
2018	0.087
2019	0.087
2020	0.086
2021	0.088
2022	0.094

DOI: 10.55643/fcaptp.3.56.2024.4420

To study, research, model and forecast the concept of managing entrepreneurial universities in the conditions of digitization, smart economy and the development of educational tourism, we use the previously calculated coefficient of dependence of the ratio of the number of students who migrated from Ukraine to the number of students who have migrated from Ukraine to the number of students since the beginning of the academic year and the dynamics of functioning educational institutions. institutions over the past ten years. To calculate and process data on the dependence of functioning educational institutions on the ratio of the number of students who migrated from Ukraine to the number of students from the beginning of the academic year, 2013-2022, using non-linear functions, we use the software resource "StatSoft" and built-in statistical functions for modelling complex economic systems So, we calculated the influence of the studied phenomenon on the final one using the tool of non-linear functions for the last ten years. In the course of mathematical calculations, modelling and static calculations, nonlinear production regressions of functioning educational institutions were obtained, which are presented in Table 2.

Table 2. Results of data processing to determine the production function of functioning educational institutions of Ukraine, 2013-2022.

Impact factor: the ratio of the number of students who migrated from Ukraine to the availability of students since the beginning of the academic year, %							
The production function to be modelled	**Regression input**		**Dependence of variable variation on independent indicators**	**Coefficient Pearson**	**Connection type**	**Reliability coefficient**	**Characteristics of the model**
	a1	**a0**					
$Y = a_1/X + a_0$	8.92	436.27	0.65	0.81	Dense clear	15.00	Adequate quality
$Y = a_1 \ln X + a_0$	-247.90	-114.47	0.79	-0.89	Dense inversion	29.84	
$Y = a_1 e^X + a_0$	2478.56	1467.73	0.87	0.93	Dense clear	53.79	
$Y = a_1/\ln X + a_0$	-5457.92	6385.83	0.91	-0.95	Dense inversion	76.41	
$Y = a_1\sqrt{X} + a_0$	-2446.31	1184.34	0.85	-0.92	Dense inversion	45.77	
$Y = a_1/\sqrt{X} + a_0$	95.93	191.45	0.72	0.85	Dense clear	20.57	
$Y = a_1X^2 + a_0$	-54642.95	801.25	0.95	-0.97	Dense inversion	141.03	
$Y = a_1/X^2 + a_0$	0.14	551.84	0.54	0.73	Dense clear	9.24	
$Y = a_1X^3 + a_0$	-592668.34	749.54	0.93	-0.96	Dense inversion	105.67	
$Y = a_1/X^3 + a_0$	0.00	584.61	0.45	0.67	Average obvious	6.60	
$Y = \frac{1}{a_1X + a_0}$	8.92	436.27	0.65	0.81	Dense clear	15.00	
$Y = a_1\sqrt[3]{X} + a_0$	-17221.16	934.15	0.90	-0.95	Dense inversion	72.68	
$Y = a_1/\sqrt[3]{X} + a_0$	26.75	436.27	0.65	0.81	Dense clear	15.00	
$Y = a_1^X a_0$	-2025454.48	819.61	0.97	-0.98	Dense inversion	222.54	
$Y = X^{a_1} a_0$	0.01	481.45	0.70	0.84	Dense clear	18.58	

Therefore, the regression models of the number of functioning educational institutions over the last ten years obtained by the production function modelling tools can be compared according to the dependence of the variable variation on independent indicators, coefficients of determination, correlation significance, determine the mathematical and statistical quality, density, general characteristics and adequacy of the production functional model, which in the subsequent period, it will allow modelling and forecasting of the concept of management of entrepreneurial universities in the conditions of digitalization, smart economy and development of educational tourism.

Correlation, determination and Fisher's indicator indicate the quality of production functions in regression models. Since, in the analyzed functional regression models, Froz.>Ftab. (Ftab.= 5.32), then with a reliability of P= 0.95 the calculated function of the dependence of the final dynamic indicator of functioning educational institutions of Ukraine on the coefficient of the ratio of the number of students who migrated from Ukraine to the presence of students since the beginning of the academic year can be considered as adequate initial data. We will use the regression models obtained by the tools for modelling production functions for economic analysis, modelling and forecasting in the subsequent post-war period. Next, we analyze the correlation coefficients of the selected production models of the number of functioning educational institutions in Ukraine. Therefore, when studying production models, it is important to analyze not only the values of the regression coefficients but also the coefficients of determination in order to understand how accurately the models reflect the variation of the result and the quality of their forecasting (Table 4). Next, we determine the best production regression of the number of functioning educational institutions - the nonlinear function Y=2478.56/lnX+1467.73. Using the dynamic

series of the coefficient of the ratio of the number of students who migrated from Ukraine to the number of students since the beginning of the academic year and the effective indicator and significant coefficients of the nonlinear function Y=2478.56/lnX+1467.73 for analytical characteristics and comparison, we determine the theoretical level of functioning educational institutions (Table 3).

Table 3. Theoretical values of the number of functioning educational institutions of Ukraine, 2013-2022.

Calculation of theoretical values of functioning educational institutions, 2013-2022. Using the non-linear function Y=2478.56/lnX+1467.73	
Year	**Theoretical values of the number of institutions - total, units, Y**
2013	816
2014	778
2015	699
2016	653
2017	635
2018	613
2019	594
2020	582
2021	540
2022	455

Next, we forecast both the investigated factor and the performance indicator of functioning educational institutions in Ukraine, we assume that with a decrease in the ratio of the number of students who migrated from Ukraine to the number of students from the beginning of the academic year from 8.28% to 8.11% in the period of 2025 - in 2027, the number of functioning educational institutions of Ukraine will increase from 393 to 401 units, but it should be emphasized once again that this forecasting was carried out using economic-mathematical methods and models, built-in statistical functions and is based exclusively on them (Table 4).

Table 4. Calculation of forecast values of the factor and performance indicator, 2025-2027.

Year	**Predicted values of the ratio of the number of students who migrated from Ukraine to the number of students since the beginning of the academic year, %, X**	**Predictive values of functioning educational institutions - total, units, Y**
2025	8.28	393
2026	8.16	399
2027	8.11	401

Graphically, the actual, theoretical and forecast values of the factor and performance indicator for the last and next period of the study are presented in Figure 4 and Figure 5.

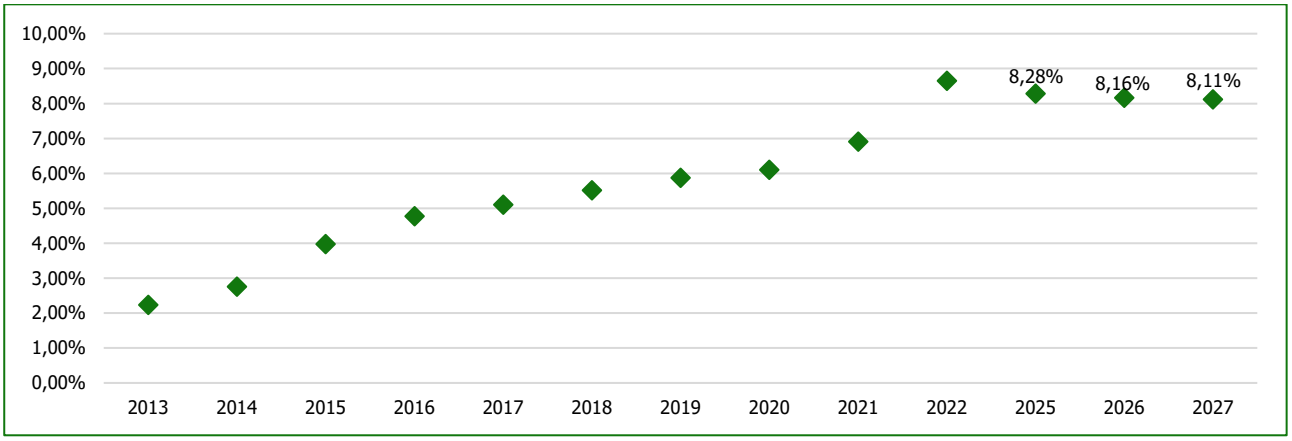

Figure 4. Dynamics of the actual and forecast values of the ratio of the number of students who migrated from Ukraine to the number of students since the beginning of the academic year, 2013-2022, 2025-2027.

DOI: 10.55643/fcaptp.3.56.2024.4420

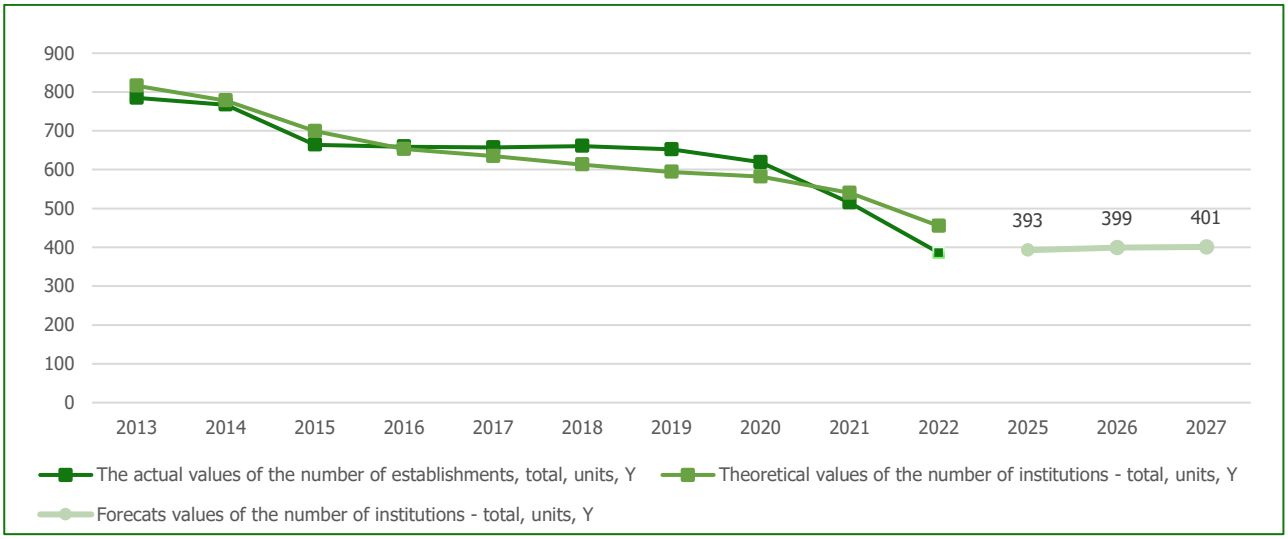

Figure 5. Actual, theoretical and forecast values of functioning educational institutions of Ukraine, 2013-2022, 2025-2027 using the nonlinear function Y=2478.56/lnX+1467.73. *(Source: calculated by the authors)*

We will conduct research, analysis and modelling of the financial aspect of the functioning of entrepreneurial universities, the effectiveness of their activities and the impact on the economy and on saving budget funds using production functions, Pearson's linear correlation coefficient and Spearman and Kendall's rank correlation coefficients over the past fourteen years. The data specified in Table 5 served as the source for the analysis.

Table 5. Input data for modelling the financial aspect of the functioning of entrepreneurial universities, 2010-2023. *(Source: compiled by the authors taking into account information sources http://data.uis.unesco.org/ and https://www.ukrstat.gov.ua/)*

Year	Growth rates of entrepreneurial universities of Ukraine, %	Growth rates of financial investments in education, %	Growth rate of gross regional product (in actual prices), %	Entrepreneurial universities to the total number of higher education institutions, %
2010	99.10	113.25	99.02	21.79%
2011	98.88	114.97	98.88	21.65%
2012	97.73	70.00	97.73	21.37%
2013	96.51	70.41	96.51	21.15%
2014	95.18	79.66	95.18	20.60%
2015	91.14	187.61	91.14	21.69%
2016	93.06	146.57	93.06	20.33%
2017	97.01	154.72	97.01	19.79%
2018	98.46	127.70	98.46	19.36%
2019	96.09	107.37	96.09	18.87%
2020	93.50	78.10	93.50	18.58%
2021	104.35	103.38	104.35	23.30%
2022	85.83	100.68	85.83	26.68%
2023	98.06	95.54	98.06	29.11%

As factor X, we defined the number of entrepreneurial universities, the amount of financial investments in education and the share of entrepreneurial universities in the total number of higher education institutions. The gross regional product (in actual prices) and the amount of financial investments in education over the last period are taken as effective indicators of the activity of the educational sector. Modelling of the Pearson coefficient and indicators of the production model showed

that the production linear model of the influence of the number of entrepreneurial universities on financial investments in education Yr=8362.46-40.09X, the correlation coefficient 0.63 is a straight-average value characterizing the dependence between the factor and the indicator, Fisher's F test of 20.85 is significant at 0.004, so the model is adequate and of high quality. The production linear model of the influence of the number of financial investments in education on the gross regional product (in actual prices) Yr=35204.61+943.12X, correlation coefficient 0.83 – a direct and close relationship between the factor and the indicator, Fisher's F test 59.94 significant at (0.004), which indicates the adequacy of the model and its quality. Production linear model of the influence of the share of the number of entrepreneurial universities to the total number of higher education institutions on the gross regional product (in actual prices) Yr=-267411.27+13475722.88X, correlation coefficient 0.78 – a direct and close relationship between the factor and the indicator, Fisher's F test 1.77 significant 0.004, the model is adequate and qualitative. As we can see, the proposed dependencies and their statistical parameters and coefficients of the main factors and indicators of the educational sector are high, significant and qualitative, which can be analyzed, modelled and forecasted in the future. The next stage is based on the analysis of factors to model the ratio of Spearman and Kendall for the last fourteen years (Table 6).

Table 6. Ranking of factors and indicators of modelling the financial aspect of the functioning of entrepreneurial universities for the calculation of Spearman and Kendall rank correlation coefficients, 2010-2023.

Year	Rank of entrepreneurial universities, X factor	Rank of financial investments in education, factor Y	Rank of gross regional product, factor Y	Rank of financial investments in education, factor X	Rank of gross regional product, factor Y	Rank of entrepreneurial universities to the total number of higher education institutions, %, factor X
2010	1	10	14	10	14	4
2011	2	9	13	9	13	6
2012	3	12	12	12	12	7
2013	4	13	11	13	11	8
2014	5	14	10	14	10	9
2015	6	11	9	11	9	5
2016	7	8	8	8	8	10
2017	8	7	7	7	7	11
2018	9	2	6	2	6	12
2019	10	1	5	1	5	13
2020	12	5	4	5	4	14
2021	11	4	3	4	3	3
2022	13	3	2	3	2	2
2023	14	6	1	6	1	1

We carry out additional calculations and finally determine the Spearman rank correlation coefficient of the main factors and indicators of the activity of the educational sector over the past fourteen years (Table 7).

DOI: 10.55643/fcaptp.3.56.2024.4420

Table 7. The results of data processing of the main factors and indicators of the modelling of the financial aspect of the functioning of entrepreneurial universities and the determination of the Spearman rank correlation coefficient, 2010-2023.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Number of entrepreneurial universities, unit, factor X	1	2	3	4	5	6	7	8	9	10	12	11	13	14
Financial investments in education, unit, factor Y	10	9	12	13	14	11	8	7	2	1	5	4	3	6
d=X-Y	-9,00	-7,00	-9,00	-9,00	-9,00	-5,00	-1,00	1,00	7,00	9,00	7,00	7,00	10,00	8,00
n=14														
d2=792,00														
R=	0,74	The obtained value of Spearman's rank correlation coefficient indicates the presence of a relationship between the factor and the indicator. At the same time, there is an inverse dependence and a close connection: with the growth of entrepreneurial universities, financial investments in education decrease												
Years	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Financial investments in education, unit, factor X	10	9	12	13	14	11	8	7	2	1	5	4	3	6
Gross regional product, unit, factor Y	14	13	12	11	10	9	8	7	6	5	4	3	2	1
d=X-Y	-4,00	-4,00	0,00	2,00	4,00	2,00	0,00	0,00	-4,00	-4,00	1,00	1,00	1,00	5,00
n=14														
d2=116,00														
R=	0,75	The obtained value of Spearman's rank correlation coefficient indicates the presence of a relationship between the factor and the indicator. At the same time, there is a direct dependence and a close connection: with the growth of financial investments in education, the value of the gross regional product increases												
Years	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Entrepreneurial universities to the total number of higher education institutions, %, factor X	4	6	7	8	9	5	10	11	12	13	14	3	2	1
Gross regional product, unit, factor Y	14	14	14	14	14	14	14	14	14	14	14	14	14	14
d=X-Y	-10,00	-8,00	-7,00	-6,00	-5,00	-9,00	-4,00	-3,00	-2,00	-1,00	0,00	-11,00	-12,00	-13,00
n=14														
d2= 819,00														
R=	-0,80	The obtained value of Spearman's rank correlation coefficient indicates the presence of a relationship between the factor and the indicator. At the same time, there is an inverse dependence and a close connection: with a change in the share of entrepreneurial universities in the total number of higher education institutions, the value of the gross regional product can also change.												

Next, we determine the dependence of the main factors and indicators of the educational sector over the past fourteen years using the Kendall rank correlation coefficient (Table 8).

Table 8. The results of data processing of the main factors and indicators of the modelling of the financial aspect of the functioning of entrepreneurial universities and the determination of the Kendall coefficient, 2010-2023.

Year	Growth rates of entrepreneurial universities of Ukraine, factor X	Growth rates of financial investments in education, factor U	Ranks		Calculation of points	
			Nx	Ny	"+"	"-"
2010	99.10	113.25	1	10	13	3
2011	98.88	114.97	2	9	5	3
2012	97.73	70.00	3	12	2	0
2013	96.51	70.41	4	13	1	0
2014	95.18	79.66	5	14	0	0
2015	91.14	187.61	6	11	3	0
2016	93.06	146.57	7	8	6	0
2017	97.01	154.72	8	7	7	0
2018	98.46	127.70	9	2	12	3
2019	96.09	107.37	10	1	13	3
2020	93.50	78.10	12	5	9	0
2021	104.35	103.38	11	4	10	0
2022	85.83	100.68	13	3	11	0
2023	98.06	95.54	14	6	-	-
	n=	14			P =92	Q=-12
Then S= P+Q =92-12= 80						
S=	80	r=0,88. The obtained value of Kendall's rank correlation coefficient indicates a sufficiently high (higher than average, since |r| >0.5) density of connection between factors X and Y.				

Year	Growth rates of financial investments in education, factor X	Growth rate of the gross regional product, factor Y	Ranks		Calculation of points	
			Nx	Ny	"+"	"-"
2010	113.25	99.02	10	14	0	0
2011	114.97	98.88	9	13	1	0
2012	70.00	97.73	12	12	2	0
2013	70.41	96.51	13	11	1	2
2014	79.66	95.18	14	10	0	4
2015	187.61	91.14	11	9	3	0
2016	146.57	93.06	8	8	6	0
2017	154.72	97.01	7	7	7	0
2018	127.70	98.46	2	6	8	0
2019	107.37	96.09	1	5	9	0
2020	78.10	93.50	5	4	10	0
2021	103.38	104.35	4	3	10	1
2022	100.68	85.83	3	2	11	1
2023	95.54	98.06	6	1	-	-
	n=	14			P =68	Q=-8
Then S= P+Q =68 - 8= 60						
S=	60	r=0,66 The obtained value of Kendall's rank correlation coefficient indicates a high (higher than average, since |r| >0.5) density of the connection between factors X and Y.				

Year	Entrepreneurial universities to the total number of higher education institutions, %, factor X	Growth rate of gross regional product, factor Y	Ranks		Calculation of points	
			Nx	Ny	"+"	"-"
2010	21,79	99.02	4	14	0	0
2011	21,65	98.88	6	13	1	0
2012	21,37	97.73	7	12	2	0
2013	21,15	96.51	8	11	3	0
2014	20,60	95.18	9	10	4	0
2015	21,69	91.14	5	9	5	0
2016	20,33	93.06	10	8	4	0
2017	19,79	97.01	11	7	3	0
2018	19,36	98.46	12	6	2	0
2019	18,87	96.09	13	5	1	0
2020	18,58	93.50	14	4	0	0
2021	23,30	104.35	3	3	11	0
2022	26,68	85.83	2	2	12	0
2023	29,11	98.06	1	1	-	-
	n=	14			P =48	Q=0
Then S= P+Q =48 - 0= 48						
S=	48	r=0,83. The obtained value of Kendall's rank correlation coefficient indicates a sufficiently high (higher than average, since |r| >0.5) density of connection between factors X and Y.				

DOI: 10.55643/fcaptp.3.56.2024.4420

The calculation of the Pearson linear correlation coefficient and the Spearman and Kendall rank correlation coefficients of the financial activity of the educational sector over the past fourteen years allows us to compare them and choose the best coefficient for further research, modelling and forecasting of these factors and indicators (Table 9).

Table 9. Comparison of Pearson's linear correlation coefficient and Spearman's and Kendall's rank correlation coefficients of modelling the financial aspect of functioning, 2010-2023.

Production regression models	Pearson Coefficient	Spearman Coefficient	Kendall Coefficient
A production linear model of the influence of the number of entrepreneurial universities of Ukraine on financial investments in education Yr=8362,46-40,09X	r=0,63	r=-0,74	r==0,88 The best result
A production linear model of the influence of the amount of financial investments in education on the gross regional product (in actual prices) Yr=35204,61+943,12X	r=0,83 The best result	r=0,75	r=0,66
A production linear model of the influence of the share of the number of entrepreneurial universities in the total number of higher education institutions on the gross regional product (in actual prices) Yr=-267411,27+13475722,88X	r=0,78	r=-0,80	r=0,83 The best result

For visual comparison, the authors proposed to graphically present the obtained correlation coefficients: Pearson's linear correlation coefficient and Spearman's and Kendall's rank correlation coefficients of the activity of the educational sector over the last period (Figure 6-8).

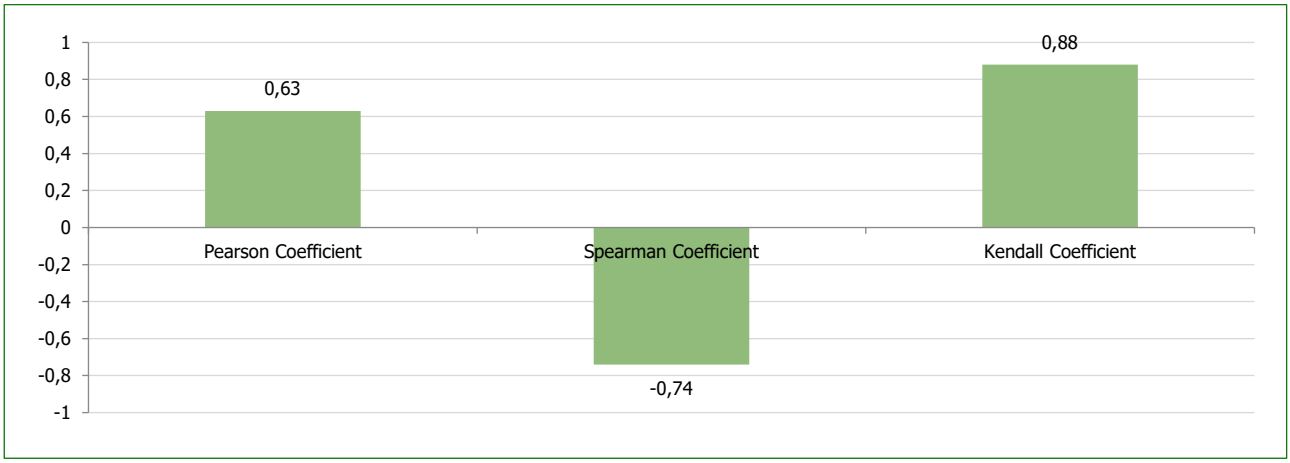

Figure 6. Production linear model of the influence of the number of entrepreneurial universities on financial investments in education Yr=8362.46-40.09X and correlation coefficients.

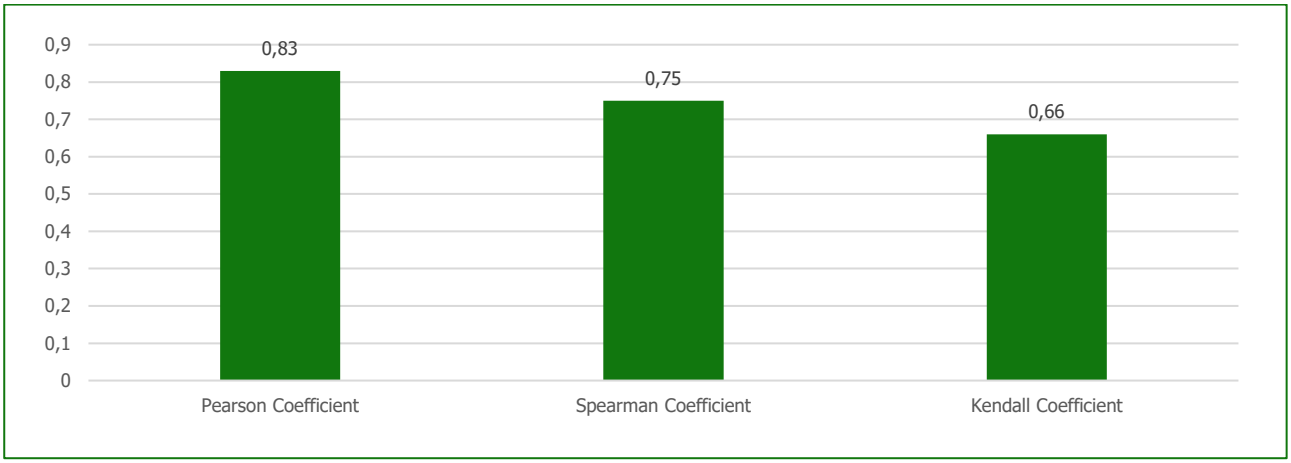

Figure 7. The production linear model of the influence of the amount of financial investments in education on the gross regional product (in actual prices) Yr=35204.61+943.12X and correlation coefficients. *(Source: calculated by the authors)*

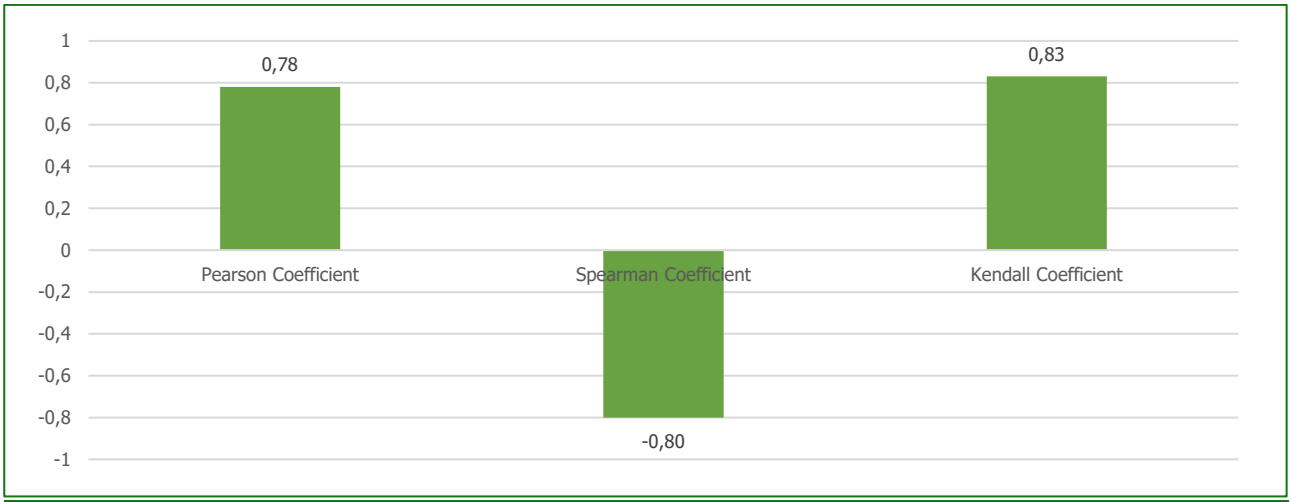

Figure 8. Production linear model of the influence of the share of the number of privately owned higher education institutions to the total number of higher education institutions on the gross regional product (in actual prices) Yr=-267411.27+13475722.88X and correlation coefficients.

Therefore, it is possible to conclude about the expediency of using the proposed economic and mathematical methods and models for the purpose of evaluating the financial management of entrepreneurial universities. At the same time, there is a need to determine the contingent of higher education institutions, without which effective financial management is impossible.

In the context of the smart economy and digitalization, educational migration and financial policy take on new dimensions and can reflect modern trends in the world of education and technology. Such modelling of the assessment of the financial aspect of management of entrepreneurial universities, indicators of interdependence of functioning educational institutions and the ratio of the number of students who migrated from Ukraine to the number of students since the beginning of the academic year using economic and mathematical methods and models allows to form and correctly choose the concept of financial management of entrepreneurial universities in the conditions of digitization, smart economy and development of educational tourism.

DISCUSSION

Scientists (Noh and Lim, 2015) proposed a methodology for evaluating the work of nurses in the context of financial management, but educational processes and migration in the sectors of the economy were not investigated. Scientists (Beverungen et al., 2014) have not paid enough attention to the financial resources of entrepreneurial universities in the context of the crisis in which Ukraine is now. The scientist (Villegas, 2015) proposed effective directions for improving the efficiency of financial management, but they are already outdated and do not meet modern requirements.

Scientists (Eichelberger et al., 2020) demonstrate the concept of an entrepreneurial ecosystem in smart cities, but the authors do not take into account digitization and the spread of information technologies, which definitely affect public life. Scientists (Gryshchenko et al., 2021) really identified the latest methods of forming a competitive cluster in university education, the value of such research is beyond doubt. However, scientists did not pay attention to the features of the smart economy, which requires taking into account information technologies and the active development of human capital. Innovative findings (Xiang, 2018) undoubtedly have value precisely in the smart economy, at the same time, they are almost impossible to adapt to the conditions of educational and university institutions. The weak positions of the author regarding the support of digitalization in the conditions of a rapidly changing external environment, which is especially evident under modern conditions in almost all economies of the world.

Similar problems can be noted in the authors' articles (Sobchenko, Zhelizniak, 2023; Zhyvko et al., 2022), which, among the above, also weakly took into account the specifics of the development of the smart economy and the need to adapt business entities to informatization in all sectors. Studies (Casado-Aranda et al., 2021) are interesting. However, the authors take the era of the pandemic, to which business and educational institutions have already almost completely adapted. At the same time, tourism in the modern digitalized society has completely changed the trend of its development. Therefore, the conclusions of the authors can be considered outdated and do not take into account the real picture of the development of modern tourism. All the scientific articles analyzed by us do not take into account the synergistic complex

DOI: 10.55643/fcaptp.3.56.2024.4420

of the concept of the formation of entrepreneurial universities in the conditions of digitalization, smart economy and the development of educational tourism. Therefore, it is our scientific research that has the greatest value and practical significance for the development of the system of the national economy based on smart values.

CONCLUSIONS

Funding of entrepreneurial universities is an important aspect of the development of the innovative economy and the support of scientific research. Entrepreneurial universities play a key role in the modern educational environment and economy. Entrepreneurial universities foster the entrepreneurial spirit among students, sparking their entrepreneurial skills and inspiration. They create conditions for the development of new ideas, technologies and business projects. These universities promote the development of innovative ideas and technologies that can be of great importance for economic development. They contribute to the commercialization of research developments and the creation of new enterprises. Entrepreneurial universities support students and graduates in creating and developing their own startups and small businesses. This may include financial support, counselling, access to a network of contacts and other resources. For the concept of financial management of entrepreneurial universities, it is important to take into account the dynamics of tourist migration and the number of functioning educational institutions. It is important to conduct research on migration trends of educators in a timely manner in order to find out the needs and interests of the target audience in the labour market. This will make it possible to determine the financial policy and specify which types of educational programs and services can be most attractive to potential students.

Based on the data calculated by us about financial management, migration in education and the development of higher education institutions, it is possible to develop innovative programs and services aimed at training business leaders, supporting startups, and new business ideas. There is a need for uninterrupted monitoring of the dynamics of financial management, educational migration and development of higher education institutions in order to update the development strategies of entrepreneurial universities and adapt them to changes in the market.

ADDITIONAL INFORMATION

AUTHOR CONTRIBUTIONS

Conceptualization: *Oleksandr Galych, Marta Barna, Oleg Fedirets, Hanna Fedirko, Taliat Bielialov, Polina Puzyrova*
Data curation: *Oleksandr Galych, Hanna Fedirko, Taliat Bielialov*
Formal Analysis: *Marta Barna, Hanna Fedirko, Taliat Bielialov*
Methodology: *Oleg Fedirets, Hanna Fedirko, Taliat Bielialov, Polina Puzyrova*
Software: *Oleksandr Galych, Oleg Fedirets, Taliat Bielialov*
Resources: *Oleksandr Galych, Oleg Fedirets, Taliat Bielialov, Polina Puzyrova*
Supervision: *Oleksandr Galych, Marta Barna*
Validation: *Oleksandr Galych, Marta Barna, Oleg Fedirets, Hanna Fedirko, Taliat Bielialov, Polina Puzyrova*
Investigation: *Oleksandr Galych, Marta Barna, Oleg Fedirets, Hanna Fedirko, Taliat Bielialov, Polina Puzyrova*
Visualization: *Marta Barna, Oleg Fedirets, Hanna Fedirko, Polina Puzyrova*
Project administration: *Oleksandr Galych, Polina Puzyrova*
Funding acquisition: *Oleksandr Galych, Marta Barna, Oleg Fedirets, Hanna Fedirko, Taliat Bielialov, Polina Puzyrova*
Writing – review & editing: *Marta Barna, Oleg Fedirets, Hanna Fedirko, Taliat Bielialov, Polina Puzyrova*
Writing – original draft: *Oleksandr Galych, Marta Barna, Oleg Fedirets, Hanna Fedirko, Polina Puzyrova*

FUNDING

The Authors received no funding for this research.

CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

REFERENCES

1. Noh, W., & Lim, J. Y. (2015). Nurses' educational needs assessment for financial management education using the nominal group technique. *Asian Nursing Research, 9*(2), 152-157. https://doi.org/10.1016/j.anr.2015.04.004
2. Beverungen, A., Hoedemaekers, C., & Veldman, J. (2014). Charity and finance in the university. *Critical Perspectives on Accounting*, *25*(1), 58-66. https://doi.org/10.1016/j.cpa.2012.10.005
3. Villegas, B. S. (2015). Factors influencing administrators' empowerment and financial management effectiveness. *Procedia-Social and Behavioral Sciences*, *176*, 466-475. https://doi.org/10.1016/j.sbspro.2015.01.498
4. Başçı, E. S., & Alkan, R. M. (2015). Entrepreneurship education at universities: suggestion for a model using financial support. *Procedia-Social and Behavioral Sciences*, *195*, 856-861. https://doi.org/10.1016/j.sbspro.2015.06.364
5. Caballero, R., Galache, T., Gómez, T., Molina, J., & Torrico, A. (2001). Efficient assignment of financial resources within a university system. Study of the University of Malaga. *European Journal of Operational Research*, *133*(2), 298-309. https://doi.org/10.1016/S0377-2217(00)00299-X
6. Jinjoyan, V. V. (2022). The impact of educational tourism on the level of the global competitiveness index.*Investments: practice and experience*, *5-6*(2022), 12-16. https://doi.org/10.32702/2306-6814.2022.5-6.12
7. Ndou, V., Mele, G., & Del Vecchio, P. (2019). Entrepreneurship education in tourism: An investigation among European Universities. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *25*, 100175. https://doi.org/10.1016/j.jhlste.2018.10.003
8. Eichelberger, S., Peters, M., Pikkemaat, B., & Chan, C. S. (2020). Entrepreneurial ecosystems in smart cities for tourism development: From stakeholder perceptions to regional tourism policy implications. *Journal of Hospitality and Tourism Management*, *45*, 319-329. https://doi.org/10.1016/j.jhtm.2020.06.011
9. Ovcharenko, I., Khodakivska, O., Sukhomlyn, L., Shevchenko, O., Lemeshenko, I., Martynov, A., Zos-Kior, M., Hnatenko, I., Michkivskyy, S., & Bilyavska, L. (2022). Spatial organization management: Modeling the functioning of ecoclusters in the context of globalization. *Journal of Hygienic Engineering and Design*, *40,* 351-356. https://keypublishing.org/jhed/wp-content/uploads/2022/11/32.-Full-paper-Ievgen-Ovcharenko.pdf
10. Youssef, A. B., Boubaker, S., Dedaj, B., & Carabregu-Vokshi, M. (2021). Digitalization of the economy and entrepreneurship intention. *Technological Forecasting and Social Change*, *164*, 120043. https://doi.org/10.1016/j.techfore.2020.120043
11. Ndou, V., Mele, G., & Del Vecchio, P. (2019). Entrepreneurship education in tourism: An investigation among European Universities. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *25*, 100175. https://doi.org/10.1016/j.jhlste.2018.10.003
12. Katernyak, I., Loboda, V., Strotskyy, R., & Mamatova T. (2023). Virtual community of practice for local development: diverse context and partnership for elearning in project management. *Socio-Economic Relations in the Digital Society, 4*(50), 172-183. https://doi.org/10.55643/ser.4.50.2023.544
13. Zhao, X., Xie, C., Huang, L., Wang, Y., & Han, T. (2023). How digitalization promotes the sustainable integration of culture and tourism for economic recovery. *Economic Analysis and Policy*, *77*, 988-1000. https://doi.org/10.1016/j.eap.2023.01.005
14. Stryabkova, E. A., Vladyka, M. V., Lyshchikova, J. V., Rzayev, A. Y., & Kochergin, M. A. (2021). Smart specialization as a comprehensive territorial and sectoral approach to determining regional development priorities. *Journal of Environmental Management & Tourism*, *12*(5), 1353-1370. https://doi.org/10.14505//jemt.12.5(53).20
15. Turkay, B., Dıncer, F. I., & Dincer, M. Z. (2019). An evaluation of new values in economy and their impacts on future transformation in tourism. *Procedia Computer Science*, *158*, 1095-1102. https://doi.org/10.1016/j.procs.2019.09.151
16. Gryshchenko, I., Ganushchak–Efimenko, L., Shcherbak, V., Nifatova, O., Zos-Kior, M., Hnatenko, I., Martynova, L., & Martynov, A. (2021). Making use of competitive advantages of a university education innovation cluster in the educational services market. European *Journal of Sustainable Development, 10*(2), 336. https://ecsdev.org/ojs/index.php/ejsd/article/view/1230
17. Xiang, Z. (2018). From digitization to the age of acceleration: On information technology and tourism. *Tourism management perspectives*, *25*, 147-150. https://doi.org/10.1016/j.tmp.2017.11.023
18. Sobchenko, T., & Zhelizniak, O. (2023). Practical use of digital services in the educational process of higher pedagogical education institutions as a pedagogical problem. *Socio-Economic Relations in the Digital Society, 3*(49), 63-75. https://doi.org/10.55643/ser.3.49.2023.501
19. Zhyvko, Z., Nikolashyn, A., Semenets, I., Karpenko, Y., Zos-Kior, M., Hnatenko, I., Klymenchukova, N., & Krakhmalova, N. (2022). Secure aspects of digitalization in management accounting and finances of the subject of the national economy in the context of globalization. *Journal of Hygienic Engineering and Design*, *39*, 259-269. https://keypublishing.org/jhed/wp-content/uploads/2022/09/25.-JHED-Volume-39-Full-paper-Zinaida-Zhyvko.pdf
20. Ismagilova, E., Hughes, L., Dwivedi, Y. K., & Raman, K. R. (2019). Smart cities: Advances in research - An information systems perspective. *International journal of information management*, *47*, 88-100. https://doi.org/10.1016/j.ijinfomgt.2019.01.004

DOI: 10.55643/fcaptp.3.56.2024.4420

21. Orji, I. J., Ojadi, F., & Okwara, U. K. (2022). Assessing the pre-conditions for the pedagogical use of digital tools in the Nigerian higher education sector. *The International Journal of Management Education*, *20*(2), 100626. https://doi.org/10.1016/j.ijme.2022.100626

22. Vasylchak, S., Petrynyak, U., Loiak, L., Zagnybida, R., Khomiv, O., & Hnatenko, I. (2022). State regulation of employment in the labor market of territorial communities in the conditions of innovative development of entrepreneurship: Aspects of management. *Journal of Hygienic Engineering & Design*, *40*, 304-311. https://keypublishing.org/jhed/jhed-volumes/jhed-volume-40-fpp-27-svitlana-vasylchak-uliana-petrynyak-liliia-loiak-raisa-zagnybida-olena-khomiv-iryna-hnatenko-2022-state-regulation-of-employment-in-the-labor-market-of-territori/

23. Casado-Aranda, L. A., Sánchez-Fernández, J., & Bastidas-Manzano, A. B. (2021). Tourism research after the COVID-19 outbreak: Insights for more sustainable, local and smart cities. *Sustainable Cities and Society*, *73*, 103126. https://doi.org/10.1016/j.scs.2021.103126

24. Zhurakovska, L. A. (2014). Trends in educational migration in the context of globalization of economic development. *Demography and Social Economy*, *1*, 234-242. https://dse.org.ua/arhcive/21/20.pdf

25. Klyuchkovska, I., Pyatkovska, O., Marusyk, Yu., & Hoysan V. (2017). *Migratory attitudes of students in conditions of visa liberalization (Survey of students of NU "LP" and NTUU "KPI")*. Lviv: Mizhnarodnyi Instytut Osvity, Kultury ta Zviazkiv z Diasporoiu nu «Lvivska Politekhnika». https://miok.lviv.ua/wp-content/uploads/2017/11/ОСТАТОЧНИЙ-ЗВІТ.pdf

26. Svityashchuk, I., & Stadny, E. (2014). *Academic migration. Center for the study of society*. Tsentr doslidzhennia suspilstva. https://cedos.org.ua/system/attachments/files/000/000/050/original/AcademicMigration_CSR.pdf?1404815631

27. Analytical report. Migration in Ukraine: figures and facts (2021). International Organization for Migration, United Nations Migration Agency https://ukraine.iom.int/sites/g/files/tmzbdl1861/files/documents/migration_in_ukraine_facts_and_figures_2021-ukr_web.pdf

Галич О., Барна М., Федірець О., Федірко Г., Бєлялов Т., Пузирьова П.

ФІНАНСОВЕ УПРАВЛІННЯ ПІДПРИЄМНИЦЬКИМИ УНІВЕРСИТЕТАМИ В УМОВАХ ДИДЖИТАЛІЗАЦІЇ, СМАРТЕКОНОМІКИ ТА РОЗВИТКУ ОСВІТНЬОГО ТУРИЗМУ

У статті визначено ключові аспекти методичного забезпечення фінансового управління підприємницькими університетами в умовах диджиталізації, смартекономіки та розвитку освітнього туризму. Акцентовано увагу на тому, що на сьогодні Україна зіштовхнулася зі складними явищами, викликаними вторгненням рф на територію нашої держави, що спричинило потужні масштабні зміни в усіх секторах, галузях і виробництвах країни. Зауважено, що на тлі активної диджиталізації та фінансової нестабільності відбулися міграційні зрушення й перетікання людських ресурсів. У такому контексті існує необхідність активної політики створення й оцінювання дієвості концепції фінансового управління підприємницькими університетами в умовах диджиталізації, смартекономіки та розвитку освітнього туризму з урахуванням викликів, із якими зіштовхнулася сучасна економіка України. З використанням методів виробничих функцій у статті запропоновано оцінювання фінансового управління підприємницькими університетами. Зауважено на необхідності збільшення фінансового забезпечення підприємницьких університетів, що є важливим для підвищення якості освіти й податкових надходжень на регіональному та державному рівнях. Акцентовано увагу на явищі одночасного підвищення відтікання студентів і викладацького складу за межі України. Відзначено, що саме ефективна фінансова політика підтримки підприємницьких університетів здатна мінімізувати негативні явища в освіті.

Ключові слова: фінансове управління, підприємницькі університети, валовий регіональний продукт, освіта, туризм, смартекономіка, міграція, викладацький склад, заклади вищої освіти

JEL Класифікація: A29, I29, L83