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Formation of the system of financial support of higher education institutions in Ukraine

Formación del sistema de apoyo financiero a las instituciones de enseñanza superior en Ucrania

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Abstract

In the conditions of a military challenge, the financial system of Ukraine is under significant pressure, which also affects the supply of universities. The purpose of the article is to analyze the formation of the system of financial support of higher education institutions in Ukraine. System analysis, comparison, modeling became the main methods for writing research. The research used indicators of expenditures of the consolidated budget of Ukraine. In the results, the role of the inflationary challenge in the financial support of higher education institutions of Ukraine was traced, and it was established that in fact the real volumes of budget financing of the industry (at the level of 7% of GDP) were never reached. Ensuring financial diversification is an important aspect for overcoming negative manifestations of lack of funds. The article traces separate methods: the introduction of a targeted tax, independent financial

Resumen

En las condiciones de un desafío militar, el sistema financiero de Ucrania se encuentra bajo una presión significativa, que también afecta a la oferta de las universidades. El propósito del artículo es analizar la formación del sistema de apoyo financiero de las instituciones de educación superior en Ucrania. El análisis del sistema, la comparación, la modelización se convirtieron en los principales métodos para la redacción de la investigación. La investigación utilizó indicadores de gastos del presupuesto consolidado de Ucrania. En los resultados, se rastreó el papel del desafío inflacionario en el apoyo financiero de las instituciones de educación superior de Ucrania, y se estableció que, de hecho, nunca se alcanzaron los volúmenes reales de financiación presupuestaria del sector (al nivel del 7% del PIB). Garantizar la diversificación financiera es un aspecto importante para superar las manifestaciones negativas de la falta de fondos. El artículo traza distintos métodos: la introducción de un impuesto específico, la actividad

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activity and the help of patrons, implementation of joint projects with private structures, receiving international financial assistance. With the help of content analysis, the strengths and weaknesses of all the proposed paths were determined. The conclusions state that in the conditions of martial law, the last two items are the most relevant sources of filling university budgets.

Keywords: higher education, financing, Ukraine, inflation, Russian aggression.

Introduction

The current challenges of a globalized society dictate new ways of solving problems. Financing of the education sector in Ukraine also faces national challenges related to a chronic lack of resources and an imperfect legislative framework, as well as the destruction of infrastructure during the war. Strengthening and developing educational opportunities is a key prerequisite for further social progress in every country and an integral element of achieving social well-being. The validity of this judgment can be seen in the increased attention to the education sector by governments, international institutions, academia, and intellectuals.

Higher education can be perceived as the basis of human capital, helping to acquire the necessary theoretical knowledge, skills, and competencies that create a future specialist and deepen the manifestations of the country's social potential. This makes it possible to effectively use the opportunities for progressive innovative development of society, scientific and technological progress, to achieve increased productivity, and to improve the overall quality of life. At the same time, the gradual progressive development of the university education system is possible only if the sector is properly funded, and a sound, efficient, and effective financial policy aimed at achieving realistic goals is implemented.

The purpose of the article is to analyze the formation of the system of financial support for higher education institutions in Ukraine. This task is realized by revealing several issues related to the formation, status, and prospects for further development of the system of financing university education in Ukraine.

Theoretical Framework or Literature Review

Many modern European, American, and Asian scholars have been interested in the specifics of financing the education sector. In particular,

financiera independiente y la ayuda de mecenas, la realización de proyectos conjuntos con estructuras privadas, la recepción de ayuda financiera internacional. Con ayuda del análisis de contenido, se determinaron los puntos fuertes y débiles de todas las vías propuestas. Las conclusiones afirman que, en las condiciones de la ley marcial, los dos últimos puntos son las fuentes más relevantes para llenar los presupuestos universitarios.

Palabras clave: educación superior, financiación, Ucrania, inflación, agresión rusa.

Rosinger et al., (2022) analyzed key aspects of public funding of higher education during the Covid-19 pandemic. These researchers noted that modern countries provide significant support to the higher education system through the prism of allocations to colleges and universities. However, according to Rosinger et al., (2022), higher education also tends to receive disproportionate cuts during recessions, and it faces potentially unprecedented cuts. Mgaiwa (2018) examined the main sources of funding for public university education. This paper also characterizes key trends in the financing of other expenditures and capital development of public universities. Chakrabarti Gorton & Lovenheim (2020) studied the problem of public investment in higher education and characterized its impact on the long-term financial performance of universities. The main trends and prospects for the financial capital of higher education institutions are characterized in the study by Dowd, Rosinger & Fernandez Castro (2020).

At the same time, Hnydiuk et al., (2021) conducted an audit of budget programs in the EU countries to identify the features of minimizing possible deviations and characterize the main causes and factors that may affect violations in the use of budget funds. Nelipa et al., (2018) identified the peculiarities of managing higher education institutions in Ukraine against the background of global information challenges. The main challenges of higher education development are analyzed in Sokol & Melko (2022). The situation and key opportunities for educational development in Ukraine are analyzed in the national report by Anishchenko et al., (2021). Oleksienko et al., (2022) characterized the importance of digitalization for the development of the university of the future. At the same time, Londar et al., (2021) in their collective monograph study characterized the problem of improving the financial system of education in Ukraine. Levchenko et al., (2022) studied the peculiarities of organizing the

financial system of enterprises of the future. On the other hand, Lysiak, Petrova & Tsiupiak (2020) described the state and prospects of reforming the financial support of higher education in Ukraine.

Nevertheless, the analysis of problems and prospects for improving the financial support of higher education institutions in Ukraine remains an under-researched issue. Further analysis is also needed to identify the significance of the inflationary challenge, the realities, and opportunities for diversifying the financing of higher education in Ukraine.

Methodology

The study is based on the principles of systematicity, objectivity, and scientificity. The system analysis was used to characterize the peculiarities of the formation of the financial structure of the budgetary support of higher education institutions, in particular, decentralization of funding, implementation of the principles of "funds follow the student," etc. The systemic analysis decomposed the system into separate elements and considered how these parts interact to achieve the overall goal of efficient use of funds to meet the needs of higher education in Ukraine. The study also used the method of comparative analysis, in particular, to demonstrate the indicators of state funding of universities in Ukraine and Central and Eastern Europe. The existing mechanisms for ensuring the financial stability of Ukrainian universities are evaluated from the point of view of the modeling method.

The article is also based on the expenditures of the consolidated budget of Ukraine (Expenditures of the consolidated budget of Ukraine, 2023) and the Inflation Index in Ukraine (Inflation index in Ukraine, 2023).

Results and Discussion

Financing higher education in Ukraine: the inflationary challenge

Due to the reforms of financial decentralization and strengthening of the financial capacity of administrative units, the share of local budgets in financing student education in higher education institutions has increased. This reflects an increase in budget allocations for colleges, technical schools, and vocational schools (Anishchenko et al., 2021; Ovcharova, 2022). Universities, academies, and institutes are

usually funded from the state budget. In the 2019-2020 academic year, the total amount of funding for higher education in Ukraine was 43.2%, which is the same as in the previous academic year. However, this figure is 5% lower than in the 2015-2016 academic year (Lysiak, Petrova & Tsiupiak, 2020). The slow transformation of the mechanism of financial support for higher education, in particular the practice of financing the network of educational institutions, has led to the state restraining the development of higher education institutions, limiting their independence and financial autonomy (Londar et al., 2021). In the structure of sources of funding for education at universities, academies, and institutes, individuals account for a significant share. In the 2010/2011 academic year, this figure reached a maximum of 60.3%, and in 2015/2016 it reached a minimum of 51.0% (Lysiak et al., 2020). This is high compared to Lithuania and Slovakia, where private funding and private investment in higher education accounted for more than half of the total funding.

Financing of higher education and its regulation are components of the overall mechanism of education financing. They include relevant financial relations, sources, forms, methods, instruments, and levers (Cummings et al., 2021). The assessment of government influence and financing of education is usually carried out by determining the total expenditures on education relative to the country's GDP. According to the Law of Ukraine "On Education", the state is obliged to allocate at least 7% of GDP to education, using state, local and other sources of funding (Lysiak et al., 2020). Financing of education from the general budget of Ukraine and its share in relation to GDP show that the normative requirements for financing education, in general, are approaching the maximum amount but have not yet reached it.

Taking into account the absolute figures, it can be concluded that in 2019, education spending in the general budget of Ukraine increased by almost UAH 29 billion (over USD 1 billion) compared to 2018. At the same time, the financial support of higher education is not financially stable and generally shows a downward trend (even taking into account the 2019 figures). It is estimated that in 2019, in percentage terms, financial support increased by 0.05%, but compared to 2015, there is a significant drop in the level of support by 0.27% (See Figure 1).

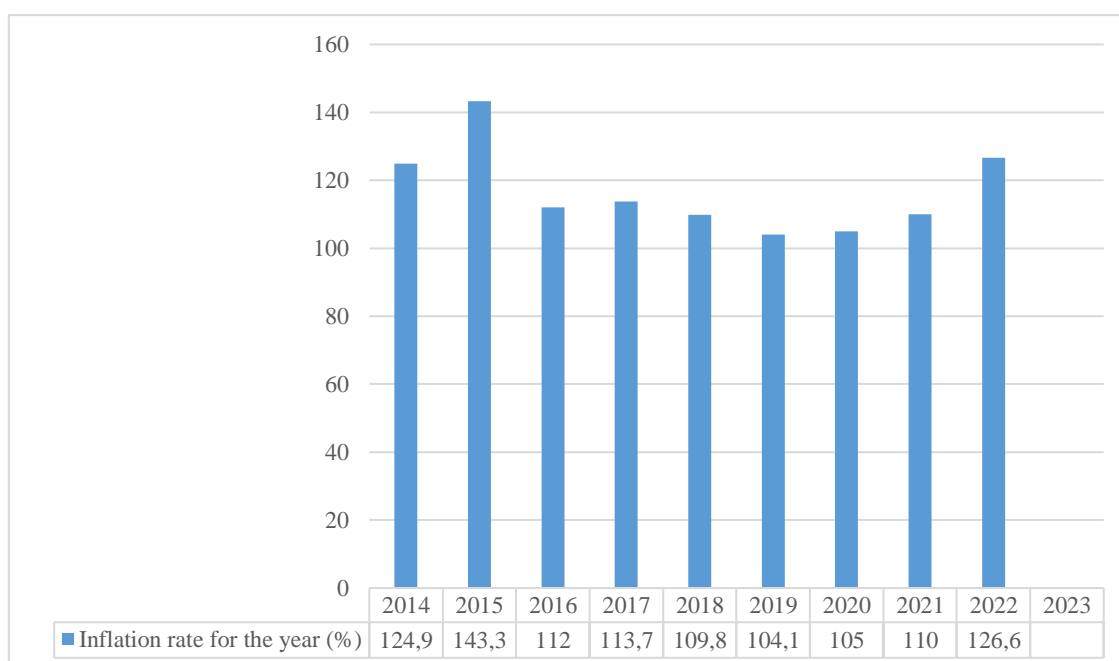


Fig. 1. Summary chart of the inflation index.

Source: Adapted from Inflation index in Ukraine, 2023

Even taking into account the fact that GDP has almost doubled since 2015 (i.e., over the past 8 years), inflation has also been extremely sharp over this period, causing the purchasing power of the Ukrainian hryvnia to decline rapidly. The first stage of the decline occurred in 2014, and the second in 2022. The reason for both was Russian aggression. At the same time, even during periods of temporary stabilization, including 2019, the growth of Ukrainian budget expenditures on higher education was offset by inflation. In fact, given the inflationary processes of depreciation of the national currency, over the past decade, budget expenditures have not been able to meet the needs of higher education institutions for affordable funding.

In 2022 and 2023, the funding situation became more complicated due to the deployment of Russian military aggression and the emphasis on defense spending (See Figure 2).

In particular, the national budget indicators for education in 2023 have undergone some changes.

The draft budget for 2023 proposes to reduce funds under the main budget program for financing the training of personnel by higher education institutions for the Ministry of Education and Science of Ukraine. It is about cutting spending by more than UAH 4 billion (about \$100 million) - from UAH 21 billion to UAH 17 billion, compared to the figures of the previous year, 2022. Similarly, it was said that funding for the Taras Shevchenko National University of Kyiv would be reduced, which would lose more than UAH 400 million (\$10 million), from UAH 1.7 billion to UAH 1.3 billion, according to budget allocations. In addition, the Fund for the Development of Professional Higher Education Institutions will not receive funding for 2023 at all, although in 2022, despite cost savings, more than a quarter of a billion hryvnias were allocated for these expenses under the relevant budget program. On the other hand, it is important to note the increase in funding for certain budget programs related to military training (Oleksiienko et al., 2022).

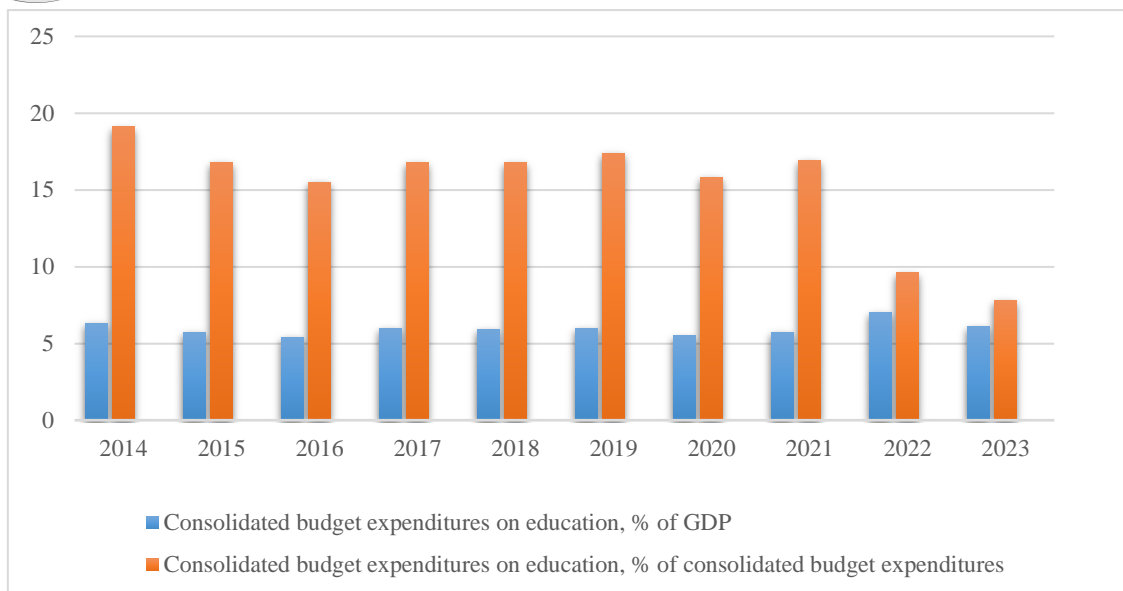


Fig. 2. Dynamics of expenses of the consolidated budget of Ukraine.

Source: Adepted from Expenditures of the consolidated budget of Ukraine (2023)

For example, expenditures on higher education institutions with "specific conditions of education" (under the Ministry of Internal Affairs of Ukraine), on the contrary, increased - both from general and special budget funds (Sokol & Melko, 2022). In particular, in 2023, spending on higher law enforcement education increased by almost UAH 600 million (about \$12.5 million), which can be explained by the need to train additional specialists under martial law. At the same time, it is difficult to determine to what extent this increase in costs (given the inflationary challenge) compensates for the losses from the issue of the Ukrainian hryvnia.

Expenditures on education in Ukraine as a percentage of GDP are significantly higher than the average in some countries of Central and Eastern and Southern Europe (e.g., Austria, Slovenia, Czech Republic, Poland, Hungary, Slovakia, Lithuania, Turkey). However, in the Ukrainian context, the total amount of funding is generally lower, which is explained by the wider diversification of sources of funding for higher education (Nelipa et al., 2018). International experience shows that the diversification of sources of financial support for higher education institutions and diversification of opportunities for its attraction are important elements of the introduction of market mechanisms in the functioning of the education sector in general and higher education in particular (Rosinger et al., 2022; Miningou, 2019).

Some worthwhile decisions in this direction have already been made. Expenditures for the Ministry of Education and Science of Ukraine decreased

in 2023, but funding for higher education will continue at the expense of international funds. In particular, under the budget program No. 2201610, which aims to improve the energy efficiency of higher education institutions, the amount of funding in 2023 will increase by more than UAH 1.8 billion (USD 40 million) - from UAH 650 to almost UAH 2.5 billion. Another important program is the budget program No. 2201680, aimed at improving the conditions for quality assurance and transparency in the Ukrainian higher education system and attracting international assistance (Zhdan et al., 2022). According to the latter, funding will increase by almost UAH 100 million (USD 2.5 million) in 2023.

Diversification of higher education financing in Ukraine: realities and opportunities

In order to ensure appropriate conditions for the development of the national system of higher education in Ukraine and to implement the constitutional rights of Ukrainian citizens to receive free higher education in state or communal institutions of higher education since 2015 there is a system of targeted distribution of applicants. This allowed an orderly disposition of the possibilities of the state order for the provision of educational services to entrants to educational training programs for bachelors (as well as masters of medical, pharmaceutical, and veterinary training areas) on the basis of a complete general secondary education (Järvis et al., 2021). The receipt of high scores as a result of high school education and successful completion of an external independent

assessment (from 2022, a nationwide multidisciplinary test) has shaped the relevant recommendations for enrollment in higher education institutions with state or regional budgets (Report on the review of state budget expenditures, 2021). Also, since 2016 a funding model has been proposed, according to which funds for training future specialists are distributed unevenly among universities - the best high school graduates have an advantage (Anishchenko et al., 2021). The introduction of the principle "budgetary places go to the best applicants" and the implementation of formulaic calculations in the order at public expense allowed the MES of Ukraine to allocate the most popular universities and, accordingly, to finance them in a more targeted way (Report on the review of state budget expenditures, 2021).

The implementation by the Ministry of Education and Science of Ukraine of the principle of "broad competition" and targeted allocation of state-funded places, even under current martial law conditions, can be considered significant and progressive innovations in the financing of higher education institutions. On the one hand, the use of a broad competition is currently the only mechanism to guarantee transparent and fair conditions for admission to higher education institutions, which helps to realize the constitutional rights of applicants to

receive free higher education (based on competitive assessments) (Lysiak et al., 2020).

The model of targeted use of funds for capacity building under the budget order made it possible to use the possibilities of the principle of "funding follows the applicants", i.e. the local budget does not finance the state order for universities as a whole, but allocates funds for the training of applicants who have demonstrated the best results in the external independent evaluation (or national multi-subject test) (Londar et al., 2021). The introduction of this mechanism has finally eliminated the possibility of using corruption schemes, when funding was provided to universities "close to the authorities" by distributing resources in a "manual mode" (Report on the review of state budget expenditures, 2021). Targeted placement of the state order has significantly increased the opportunities for creating a competitive environment among Ukrainian higher education institutions.

In general, the updated practice of funding allocation has led to the selection of the best universities, whose funding, at the same time, provides additional opportunities for the development of financial support for higher education institutions in Ukraine. Conditionally, the analyzed methods can be depicted in the form of a special figure (See Figure 3).

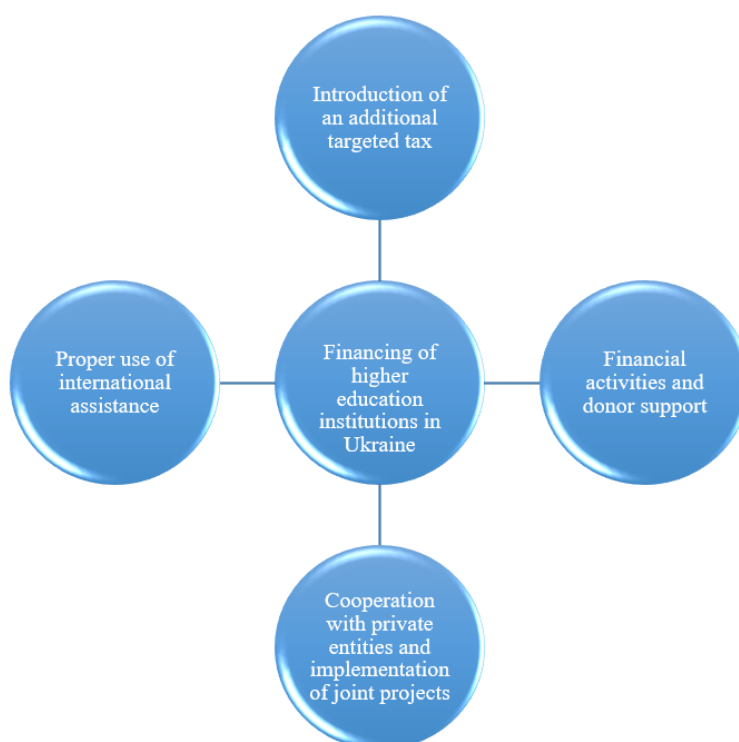


Fig. 3. Opportunities for the development of financial support for Ukrainian universities.

Source: Article authors' development

A fairly simple way to help universities is used in France, where there is a separate law on the payment of a fixed tax by private employers to higher education and retraining funds. Stakeholders have the opportunity to activate the option to pay this tax to specific educational institutions that have trained specialists of the appropriate level (Levchenko et al., 2022). However, this method is also difficult to use, as firms can pay these funds themselves for specialized training of their employees, refusing to pay to higher education institutions (Mgaiwa, 2018).

The next source of additional financial resources for higher education is the implementation of contracts for training and information services of universities for private business or the public sector. This path is important in circumstances where business interests do not dominate pedagogical ones, and the work of higher education institutions is not limited to the implementation of commissioned projects. An independent offshoot of this area is research commissioned by companies (Rosinger et al., 2022). The creation of "science parks" and clusters makes it possible to attract additional resources both from customers and from the sale of joint products. The way of obtaining funds from copyrights, real estate, sales of territory or buildings, securities transactions, or other use in financial activities is relevant in the US financial services market. Probably, donations from philanthropists, primarily well-known graduates of higher education institutions, have also become popular in the United States.

To develop this area in the Ukrainian context, legislative changes to the laws on charitable activities and the formation of a positive perception of philanthropy in society are important. Another source is the use of international assistance provided by developed countries. Unfortunately, in the realities of wartime, this is the only way to fill the budget of higher education in Ukraine. However, it can play an important role in the future - the use of European experience in reforming higher education and the implementation of joint projects will further identify competitive higher education institutions and provide them with financial support.

The implementation of any scenario, however, requires a transformation of the structure of higher education institutions. Real diversification of funding sources will require managerial decisions, the use of managerial experience, and marketing techniques. In the

Ukrainian reality, only a few universities are ready to implement such practices.

Conclusions

Ensuring the financial stability of higher education institutions is an important element of Ukraine's reconstruction after the end of hostilities. The preservation of the country's potential development directly depends on the state of university education, so finding solutions in times of crisis is a very urgent problem that needs to be understood. The considered inflationary challenges demonstrate the lack of financial resources for the full functioning of the sector, as the fall of the real exchange rate of the Ukrainian hryvnia against the background of almost unchanged costs (per GDP) leads to a certain stagnation. The military challenge (Russia's armed aggression against Ukraine) actualizes the increase in defense spending, which takes into account expenditures only for military and law enforcement higher education, while civilian universities receive a reduction in financial support. The considered methods of diversifying financial support can be conditionally divided into: the possibility of introducing a targeted tax, intensifying independent financial activities and assistance from patrons, implementing joint projects with private entities (or public sectors of the economy), and receiving international financial assistance. In the context of martial law, the last two points are the most relevant sources of filling university budgets. At the same time, the mechanisms (including legislative ones) for implementing such methods have not been fully developed.

Bibliographic references

- Anishchenko, O. V., Bazeliuk, N. V., Bekh, I. D., Berezivska, L. D., Boiko, A. E., Bykov, V. Y., Chepelieva, N. V., Chunikhina, S. L., Dotsenko, P. P., Dovbyshchenko, V. I., Drach, I. I., Dzhurylo, A. P., Halchenko, M. S., Havrysh, N. V., Hordiienko, V. P., Hudym, I. M., Ivanova, S. M., Kalashnikova, S. A., Kalinina, L. M., ... & Zhyliaiev, I. B. (2021). National report on the state and prospects of education development in Ukraine. Konvi print. <https://doi.org/10.37472/naes-2021-en>
- Chakrabarti, R., Gorton, N., & Lovenheim, M. (2020). State investment in higher education: Effects on human capital formation, student debt, and long-term financial outcomes of

- students. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.3710347>
- Cummings, K., Laderman, S., Lee, J., Tandberg, D., & Weeden, D. (2021). Investigating the impact of state higher education appropriations and financial aid. SHEECO. Retrieved from <https://acortar.link/3QC4d6>
- Dowd, A. C., Rosinger, K. O., & Fernandez Castro, M. (2020). Trends and perspectives on finance equity and the promise of community colleges. In *Higher education: Handbook of theory and research* (p. 1–72). Springer International Publishing. https://doi.org/10.1007/978-3-030-11743-6_7-1
- Hnydiuk, I., Datsenko, G., Krupelnytska, I., Kudyrko, O., & Prutska, O. (2021). Audit of budget programs in European Union Countries. *Universal Journal of Accounting and Finance* 9(4), 841–851.
- Järvis, M., Tambovceva, T., & Virovere, A. (2021). Scientific innovations and advanced technologies in higher education. *Futurity Education*, 1(1), 13–22. <https://doi.org/10.57125/FED.2022.10.11.2>
- Levchenko, Y., Tszizhma, Y., Slobodian, N., & Nehoda, O. (2022). Organization and planning of the enterprises of the future: legal status. *Futurity Economics & Law*, 2(4), 22–29. <https://doi.org/10.57125/FEL.2022.12.25.03>
- Londar, S., Tereshchenko, H., Anisimova, O., Londar, L., Hapon, V., Chymbai, L., Barabash, O., Sharaievska, M., Sofiienko, A., Chytaieva, K., Zatonatska, T., & Bakhrushyn, V. (2021). Improving the financing of the education system of Ukraine as a prerequisite for successful reform. Kyiv: State Scientific Institution “Institute of Educational Analytics” (SSI “IEA”). <https://iea.gov.ua/wp-content/uploads/2022/05/finansuvannya-osviti-2021.pdf> (in Ukrainian)
- Lysiak, L., Petrova, Y., & Tsiupiak, P. (2020). Financial provision of higher education in Ukraine: status and improvement directions. *Efficient economy*, 12. <https://doi.org/10.32702/2307-2105-2020.12.15> (in Ukrainian)
- Mgaiwa, S. J. (2018). The paradox of financing public higher education in Tanzania and the fate of quality education: The experience of selected universities. *SAGE Open*, 8(2), 215824401877172. <https://doi.org/10.1177/2158244018771729>
- Miningou, E. W. (2019). Quality education and the efficiency of public expenditure: A cross-country comparative analysis. Washington, DC.: World Bank. <https://doi.org/10.1596/1813-9450-9077>
- Ministry of Education and Science of Ukraine (2021). Report on the review of state budget expenditures. [File PDF]. Retrieved from <https://acortar.link/X3fdkz> (in Ukrainian)
- Ministry of Finance and Media (2023). Expenditures of the consolidated budget of Ukraine. Retrieved from <https://index.minfin.com.ua/ua/finance/budget/cons/expense/2023/> (in Ukrainian)
- Ministry of Finance and Media (2023). Inflation index in Ukraine. Retrieved from <https://index.minfin.com.ua/ua/economy/index/inflation/> (in Ukrainian)
- Nelipa, D., Batrymenko, O., Rudenko, S., & Liashenko, I. (2018). Higher education management in Ukraine: Will generation change help us transform it faster? *Scientific Bulletin of National Hirnichoho University*, 3, 167–175. <https://doi.org/10.29202/nvngu/2018-3/19>
- Oleksienko, A., Kotendzhy, L., Kyryllova, Y., Kaminsky, V., & Viesova, O. (2022). An analysis of the digital university phenomenon: dilemmas, new opportunities. *Futurity Education*, 2(4), 18–25. <https://doi.org/10.57125/FED.2022.25.12.02>
- Ovcharova, S. (2022). On the relationship between digitalization and the national smart economy model to achieve strategies of innovative progress. *Futurity Economics&Law*, 2(3), 28–38. <https://doi.org/10.57125/FEL.2022.09.25.04>
- Rosinger, K., Kelchen, R., Baker, D. J., Ortagus, J., & Lingo, M. D. (2022). State higher education funding during COVID-19: Lessons from prior recessions and implications for equity. *AERA Open*, 8, 233285842210912. <https://doi.org/10.1177/23328584221091277>
- Sokol, T., & Melko, L. (2022). Current challenges of higher education in Ukraine. *Pedagogy and Education Management Review*, 1, 49–53. <https://doi.org/10.36690/2733-2039-2022-5-49>
- Zhdan, V. M., Holovanova, I. A., Khorosh, M. V., Bielikova, I. V., & Lyakhova, N. A. (2022). Analysis of the legislative activity of the ministry of health of Ukraine in the conditions of the russian-ukrainian war in 2022. *Medical News*, 75(6), 1425–1433. <https://doi.org/10.36740/wlek202206101>

