

**O. M. BEKETOV NATIONAL UNIVERSITY OF URBAN
ECONOMY IN KHARKIV**

School of Economics and Management

Department of Economics and Marketing

EXPLANATORY NOTE

to the Master's Degree Qualification Thesis

on the topic: **"The Impact of Global Economic Trends on Enterprise
Competitiveness and Development in International Markets"**

Written by: 2nd year student, group M MiEk 2024-2a

Speciality 051 Economics

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The Master's degree qualification thesis has been completed in full accordance with the assigned task and the established requirements.

It is admitted for defense by the examination committee

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**O. M. BEKETOV NATIONAL UNIVERSITY OF URBAN
ECONOMY IN KHARKIV**

Institution School of Economics and Management
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October 6, 2025

TASK

FOR THE MASTER'S DEGREE QUALIFICATION THESIS

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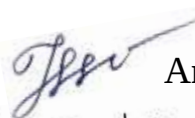
1. Topic of the qualification work	The Impact of Global Economic Trends on Enterprise Competitiveness and Development in International Markets
Academic Supervisor: Anastasiia Moskvina, Candidate of Economic Sciences (PhD), Docent, Associate Professor	
approved by order of the higher education institution dated September 29, 2025, № 871-03	
2. The deadline for the student to apply is December 1, 2025	
The initial data for the study include operational data of companies, including media companies providing educational services; macroeconomic statistical materials; scientific concepts; theoretical and practical contributions of leading scholars in the field of foreign economic activity of enterprises, presented in monographic and periodical scientific literature; reports and expert studies; as well as regulatory and legal acts.	
4. Content and description (list of issues to be developed): Introduction Chapter 1 Theoretical Foundations for Studying Enterprise Competitiveness Under Global Economic Trends Chapter 2 Analysis Of The Competitive Environment For Enterprises Operating In The Edtech Sector Under Globalisation Chapter 3 Directions For Enhancing The International Competitiveness And Development Of Edtech Enterprises Under Global Economic Transformations References Appendices	

5. List of graphic material (with precise indication of mandatory drawings):

1. Title Page.
2. Structural and Logical Diagram of Master's Degree Qualification Thesis.
3. Research Methods;
4. Key Ecosystem Factors for Ensuring the International Competitiveness of EdTech Enterprises;
5. Digitally Deliverable Education Services and EdTech;
6. The Role of EdTech in the Global Economy;
7. EdTech Market Analysis;
8. Structural Asymmetries of Competitive Opportunities;
9. Mechanism Transformation of EdTech Potential into International Competitiveness;
10. Mechanism of EdTech Enterprise Competitiveness Formation;
11. Conclusions and Recommendations.
11. Approbation of the Results of the Master's Degree Qualification Thesis;
12. Conclusion Slide.

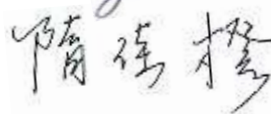
6. Date of issue of the task: October 6, 2025

Academic Supervisor



Anastasiia MOSKVINA

The assignment was accepted by the student

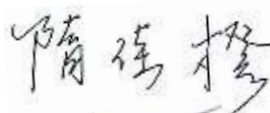


SUI JIACHENG

CALENDAR PLAN

No by/ list	Stage name applicant's qualification (Master's) thesis	Completion date of work stages	Note
1	Development of the plan for the applicant's qualification (Master's) thesis, literature review on the topic	06.10.25 – 12.10.25	Completed
2	Writing the theoretical and methodological sections of the qualification (Master's) thesis	13.10.25 – 02.11.25	Completed
3	Writing the calculation and analytical sections of the qualification (Master's) thesis	03.11.25 – 16.11.25	Completed
4	Writing the recommendation sections of the qualification (Master's) thesis	17.11.25 – 04.08.26	Completed
5	Verification of compliance with academic standards	05.08.25 – 16.08.26	Completed
6	Preparation of an explanatory note and verification of compliance with academic integrity principles	17.08.26 – 23.08.26	Completed
7	Preliminary defense and obtaining a review	24.08.26 – 25.08.26	Completed
8	Defense of the qualification (Master's) thesis	26.08.26	

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Verification of compliance
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Oksana BERVENO

ABSTRACT

The master's degree qualification thesis contains 89 pages, 26 figures, 22 tables, 3 formulas, and 67 sources used.

TOPIC OF THE THESIS: "The Impact of Global Economic Trends on Enterprise Competitiveness and Development in International Markets".

SUBJECT OF THE RESEARCH: The theoretical, methodological, and applied aspects of the transformation of enterprise competitiveness under the influence of megatrends.

OBJECT OF THE RESEARCH: The research is the competitiveness and development of enterprises under the influence of global economic trends.

PURPOSE OF THE THESIS: To determine the dependence of enterprise competitiveness on global economic trends and to substantiate directions for enhancing it in international markets.

TASKS OF THE THESIS: To examine the essence and main characteristics of global economic trends in the contemporary world economy; to analyse theoretical approaches to defining enterprise competitiveness and the factors shaping it in the international environment; to assess the competitive environment and identify the key factors influencing the development and competitiveness of enterprises in the EdTech sector; to assess national development potential and the competitive positions of EdTech ecosystems through comparative analysis of countries; to identify the impact of global economic transformations on the international competitiveness and development of EdTech enterprises; to develop innovation and organisational approaches and mechanisms for enhancing the international competitiveness and international scaling of EdTech enterprises under global economic transformations.

RESEARCH METHODS: general scientific methods – analysis and synthesis, comparison, generalization; special methods – grouping, detailing, and modeling

The results of the qualification (Master's) thesis can be applied in the practical activities of EdTech companies.

YEAR OF COMPLETION 2025

YEAR OF DEFENSE 2026

KEYWORDS: GLOBAL ECONOMIC TRENDS; INTERNATIONAL COMPETITIVENESS; EDTECH; DIGITAL TRANSFORMATION; INNOVATION; INTERNATIONAL MARKETS

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INTRODUCTION

Relevance of the Topic. The current stage of development of the global economy is characterised by the deepening of globalisation processes, digital transformation, and changes in the nature of international competition. While at earlier stages globalisation was largely manifested through the expansion of international trade in goods, capital flows, and the development of transnational production, today the international exchange of services, technologies, knowledge, and digital products is becoming increasingly important. As a result, the operating conditions of enterprises and the mechanisms for developing their competitive advantages are undergoing significant transformation.

The theoretical foundation for the study of international competition, firms' competitive advantages, and their entry into international markets was established by the works of M. Porter, J. Dunning, A. Rugman, and others [36]. At the same time, contemporary transformations of the global economy require further development of these approaches, taking into account digitalization, technological change, the transformation of global value chains, and intensifying competition among firms from different types of economies.

Contemporary research increasingly focuses on moving from a general understanding of competitiveness to its measurement at the firm level. In particular, A. Chikan, E. Czako, B. Kiss-Dobronyi, and D. Losonci proposed the concept of the firm competitiveness index, which considers firm competitiveness as a multidimensional characteristic [34].

An important area of contemporary research concerns the relationship between globalization and firms' competitive behavior in international markets. K. S. Ozkan and co-authors examine the dynamics of international competition and the transformation of competitive advantages in a multipolar global economy, demonstrating that firms from emerging economies can develop specific competitive advantages and strengthen their positions in developed-country markets [5].

Another important research area is the impact of digitalization and technological

change on firm competitiveness. M.-A. Galindo-Martin, M.-S. Castano-Martinez, and M.-T. Mendez-Picazo substantiate the relationship between digitalization, entrepreneurship, and competitiveness based on evidence from European countries [26]. Studies by C. Chen, Y. Zhang, and S. Wang, as well as G. Jing, S. Meng, and M. Yu, confirm the importance of digital transformation for the performance of Chinese firms and for strengthening their positions in global value chains [19].

A substantial body of research addresses the competitiveness of Chinese and Ukrainian enterprises. Y. Zhao emphasizes the role of investment, R&D, human capital, and international trade in shaping competitive advantages [66]. Ukrainian researchers A. Tkachenko, D. Maslov, A. Simakhova, A. Boboshko, Yu. Kotelnikova, and others examine the impact of globalization, innovation, and digitalization on the competitiveness of enterprises [31].

At the same time, a review of contemporary research indicates that the mechanism through which global economic trends affect the competitiveness of enterprises in the educational technology sector has not yet been sufficiently explored. A considerable share of existing studies focuses on the macroeconomic effects of globalization and digitalization, the competitiveness of individual countries or firms, or specific aspects of digital education development. Less attention has been paid to how global changes translate into specific determinants of firm competitiveness and affect firms' opportunities for development and international market expansion.

The comparative dimension of this issue also requires further investigation. In particular, it is important to identify the relationship between national environmental characteristics – such as the level of digitalization, innovation potential, human capital, digital infrastructure, market size, and government policy – and the competitive capabilities of individual enterprises in the educational technology sector across different countries. This approach makes it possible to move beyond a general description of global trends and identify their actual impact on the competitiveness and development of enterprises in international markets.

The object of the research is the competitiveness and development of enterprises under the influence of global economic trends.

The subject of the research is the theoretical, methodological, and applied aspects of the transformation of enterprise competitiveness under the influence of megatrends.

The aim of the research is to determine the dependence of enterprise competitiveness on global economic trends and to substantiate directions for enhancing it in international markets.

To achieve this aim, the following **tasks** are set:

1. To examine the nature and main characteristics of global economic trends in the contemporary world economy;
2. To analyse the theoretical approaches to defining enterprise competitiveness and the factors shaping it in the international environment;
3. To develop a methodology and identify key factors for assessing the competitiveness of enterprises operating in the EdTech sector;
4. To assess the national development potential and competitive positions of EdTech ecosystems through a comparative analysis of China, Ukraine, and selected leading economies;
5. To identify the impact of global economic transformations on the international competitiveness and development of EdTech enterprises and determine the key challenges and opportunities arising from these transformations;
6. To substantiate innovation and organisational approaches and mechanisms for building the international competitiveness and supporting the international development of enterprises in the EdTech sector.

Research methods. The study employs a combination of general scientific (theoretical and logical), specific, and statistical methods. The methods of analysis and synthesis are used to examine the theoretical foundations of global economic trends, enterprise competitiveness, competitive advantages, and the development of the EdTech sector. Induction and deduction are applied to formulate theoretical generalizations and identify the relationships between global trends, national conditions, sectoral development, and enterprise competitiveness. The systems approach is used to examine the EdTech ecosystem as an interconnected system of

global, national, sectoral, and enterprise-level factors. Comparative analysis and the method of cross-country comparison are applied to assess and compare the economic, digital, innovation, and technological environments of the selected countries, as well as the competitive environment and development potential of the EdTech sector. Statistical and quantitative methods are used to analyze the dynamics and scale of international markets and other quantitative characteristics of EdTech development. Structural-factor analysis is applied to systematize the key factors influencing the development and competitiveness of the EdTech sector. International methodological frameworks developed by the WEF, IMD, and GII are used as methodological references for assessing the relevant economic, digital, innovation, and competitiveness dimensions. Based on the systematization of EdTech development factors, an original model for assessing the national EdTech ecosystem is proposed, incorporating five key factors and the concept of the Enablement Threshold. Graphical and tabular methods are used to visualize comparative results, development dynamics, relationships, and analytical findings. Abstract-logical generalization is applied to formulate conclusions and develop recommendations for strengthening the competitiveness and development potential of the EdTech sector.

The information base of the study draws upon academic and analytical sources addressing the impact of global economic trends on enterprise competitiveness and development in international markets. It includes scholarly works by domestic and international researchers in the fields of international economics, global economic processes and enterprise competitiveness, including monographs, academic textbooks and articles published in peer-reviewed journals. The study also incorporates analytical reports by international organisations, macroeconomic and industry-specific statistical data, as well as other relevant analytical materials used to assess global trends, international market conditions and factors influencing enterprise competitiveness and development.

The main results of the study lie in clarifying the theoretical foundations of the impact of global economic trends on enterprise competitiveness and development; improving approaches to assessing enterprise competitiveness in international markets;

identifying key factors shaping enterprise competitiveness under global economic transformations; and developing practical recommendations aimed at strengthening the international competitiveness and sustainable development of enterprises in global markets.

The practical significance of the obtained results lies in the possibility of applying the developed conclusions and recommendations by enterprises to assess the impact of global economic trends on their competitiveness and development, formulate effective strategies, and strengthen their positions in international markets. The results may also be used by public administration bodies to develop policies and measures aimed at supporting enterprise competitiveness, sustainable development, and successful adaptation to changes in the global economic environment.

Approbation of the results of the master's qualification thesis. Selected results and key findings of the Master's qualification thesis were presented and discussed at an international scientific and practical conference.

Demirova S. D., Moskvina A. O., Sui Jiacheng. International Competitiveness of Enterprises in the Context of Global Economic Trends and Structural Imbalances. Світова економіка в умовах глобальної турбулентності: виклики та нові моделі розвитку : матеріали міжнар. наук.-практ. онлайн-конф., Харків, 28 квітня 2026 р. / Харків. нац. ун-т міськ. госп-ва ім. О. М. Бекетова, Груз. міжнар. ун-т (Тбілісі, Грузія), Міжнар. ун-т Карлсхохшуле (Карлсруе, Німеччина) [та ін.] ; редкол.: О. В. Бервено, Ю. В. Федотова, А. О. Москвіна]. – Харків : ХНУМГ ім. О. М. Бекетова, 2026. – С. 13-15. URL: https://ekt.kname.edu.ua/images/Conferences/2026/Zbirnyk_2026.pdf.

Structure and scope of the qualification thesis. The work consists of an introduction, three chapters, conclusions, references, and appendices. The full text of the work is presented on 99 pages of computer text, including: 89 pages of main text, which contains 22 tables, 26 figures, and 3 formulas; a list of references containing 67 items; and 1 appendix.

CHAPTER 1

THEORETICAL FOUNDATIONS FOR STUDYING ENTERPRISE COMPETITIVENESS UNDER GLOBAL ECONOMIC TRENDS

1.1 The Nature and Main Characteristics of Global Economic Trends in the Contemporary World Economy

A significant contribution to the study of contemporary globalisation processes has been made by leading economists around the world. Dani Rodrik examines the tensions between globalisation, national sovereignty and democratic governance, emphasising the need for a balanced model of integration into the global economy. Branko Milanović analyses the impact of globalisation on income distribution and the growth of global inequality. Thomas Piketty studies the problems of capital concentration and socio-economic disparities in the global economy. Meanwhile, Pankaj Ghemawat proposed the concept of “semi-globalisation”, according to which the world economy remains only partially integrated, while national borders and institutions continue to play an important role in its functioning.

Chinese economists have also made a significant contribution to the development of contemporary globalisation research. In particular, Justin Yifu Lin views globalisation as a process of structural transformation of the world economy, in which countries integrate into global production chains in accordance with their comparative advantages. Huang Yiping takes a similar position, emphasising the growing role of the digital economy, international financial flows and technological platforms in the development of contemporary globalisation. Yao Yudong has also made an important contribution to the study of global economic processes, highlighting the need to reform the international financial system as the role of developing countries increases. In addition, Li Daokui views globalisation as a complex, multi-level process involving the formation of a new architecture of global economic governance.

In contemporary academic literature, increasing attention is paid to the fact that the process of globalization is undergoing significant transformations. After the Global

Financial Crisis, the COVID-19 pandemic, and the intensification of geopolitical competition, new trends in the development of the world economy have emerged, altering the nature of globalization processes.

At the end of the twentieth and the beginning of the twenty-first century, globalization was primarily characterized by rapid growth in international trade, investment flows, and financial integration. However, in recent decades, structural changes in the global economy have become increasingly important. These changes are associated with technological innovation, the digitalization of economic activity, and the transformation of global production and value chains.

In particular, the British economist Martin Wolf emphasizes that contemporary globalization is no longer characterized solely by the continuous expansion of international trade and financial flows. Instead, its development is increasingly shaped by technological change, geopolitical factors, and the structural restructuring of the global economy.

In this context, several new concepts have emerged in academic discourse to describe the current stage of global economic development. One of these is “**slowbalization**,” which reflects the slowdown in the pace of global economic integration compared with the period of so-called “**hyperglobalization**” of the 1990s and early 2000s. In contemporary academic literature, the concept of deglobalization is increasingly used to describe processes involving a partial reduction in the intensity of international economic integration. The main drivers of these changes include the global financial crisis, the COVID-19 pandemic, growing geopolitical competition, and the efforts of states to ensure economic and technological security. However, most researchers emphasize that deglobalization does not imply a complete retreat from international economic interaction but rather reflects its transformation (See Table 1.1).

At the same time, researchers emphasize that globalization is not coming to an end but is transforming in response to technological, economic, and geopolitical changes. The main contemporary forms of this transformation include digital globalization, regionalization, and geoeconomics (See Table 1.2 and Figure 1.1).

Table 1.1

Comparison of the characteristics of hyperglobalization and slowbalization in the global economy

Characteristic	Hyperglobalization (1990s–2000s)	Slowbalization (2010s–present)
Trade	Rapid growth of global and international trade	Slower growth of global trade and economic integration
Global value chains	Expansion and deepening of global value chains	Fragmentation and restructuring of global value chains
Financial flows	High capital mobility and active international capital flows	Rising geopolitical and economic risks affecting financial flows
Investment	Significant growth of foreign direct investment (FDI)	Increasing focus on regional investment and supply chains
Market regulation	Liberalization of markets and trade policies	Increasing protectionist tendencies
Economic integration	Deep economic integration at the global level	Growing regionalization of economic relations

Factors of Globalization → Deglobalization / Slowbalization → Transformation of Globalization → Contemporary Forms and Trends

Digital Globalization

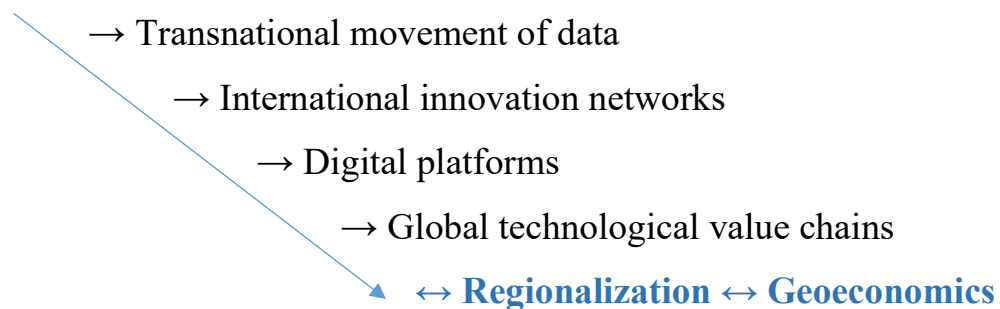


Figure 1.1. Transformation of Global Value Chains and Interconnected Contemporary Forms of Globalization

Table 1.2

Stages of Globalization Development

Period	Key Characteristics	Emerging Trends
20th – early 21st century	Hyperglobalization, growth in trade and investment	International financial and trade flows
2010s	Slowbalization, fragmentation of global value chains	Regionalization, geopolitical risks
Mid-2020s	Digital globalization, geoeconomic competition	Digital platforms, transnational data flows, technological networks

One of the key trends is digital globalization, which is based on the cross-border movement of data, the development of digital platforms, digital trade and international technological networks. As Richard Baldwin notes, the global economy is gradually shifting from the globalization of goods towards the globalization of knowledge, information and technology. Digital globalization creates new opportunities for enterprises to enter international markets and scale digital products, while increasing the importance of technology, data and digital infrastructure.

The processes of regionalization and fragmentation of global value chains are intensifying, driven by growing geopolitical risks, trade conflicts, and the efforts of states to enhance economic and technological security. At the same time, these processes do not imply a retreat from globalization but rather indicate a transformation of the mechanisms of international economic integration.

Regionalization involves the deepening of economic ties among groups of countries and the growing importance of regional markets. It is associated with the development of regional integration agreements, the restructuring of global value chains, and the relocation of production closer to key markets. Therefore, regionalization should not be viewed as the opposite of globalization, but as one of the forms of transformation of global economic integration, in which international interaction increasingly takes place through regional networks.

Regional integration organizations contribute to trade liberalization, the coordination of economic policies, and the formation of common markets for goods, capital and labour. The most influential centres of regional economic integration remain the European Union, the North American and Asia-Pacific regions. As of the mid-2020s, more than 350 regional trade agreements registered with the World Trade Organization are in force worldwide, confirming the significant role of regional integration in the contemporary global economy.

Alongside regionalization, geoeconomic competition is intensifying. The concept of geoeconomics views economic instruments as means of achieving the geopolitical objectives of states. Such instruments include trade policy, investment restrictions, technological controls, sanctions, and control over strategic resources. The

key centres of economic power remain the United States, the European Union and China, whose competition significantly influences international trade and investment flows, as well as the structure of global value chains.

Thus, digital globalization, regionalization and geoeconomic competition are interconnected processes. Digitalization creates new technological and economic links, regionalization changes their geographical structure, while geoeconomic competition determines new conditions and constraints for international interaction. As a result, contemporary globalization is taking on a dynamic and multidimensional form, combining global integration, digitalization, regionalization and geoeconomic competition.

Therefore, contemporary globalization should not be viewed as a linear process of deepening integration, but as a transformation of the global economic system, within which global and regional processes interact simultaneously and shape a new architecture of international economic relations.

Thus, contemporary globalization is a complex and multidimensional process that combines deepening economic interdependence among countries with profound structural changes in the global economy. Its development is increasingly shaped by technological innovation, digitalization, the transformation of global value chains, and geoeconomic competition among the leading centres of the world economy.

The general characteristics of the globalization process are illustrated in Figure 1.2 [14].

The globalization of the world economy is driven by a complex set of interconnected factors encompassing the economic, political, technological and social dimensions of modern society (See Table 1.3 and Figure 1.3).

First, economic factors. An important driving force of globalization has been the concentration and transnationalization of capital, the development of transnational corporations and global financial markets. Large companies are increasingly operating beyond their national economies, creating global production and innovation networks. The development of global value chains, international trade, and foreign direct investment has significantly increased the economic interdependence of countries.

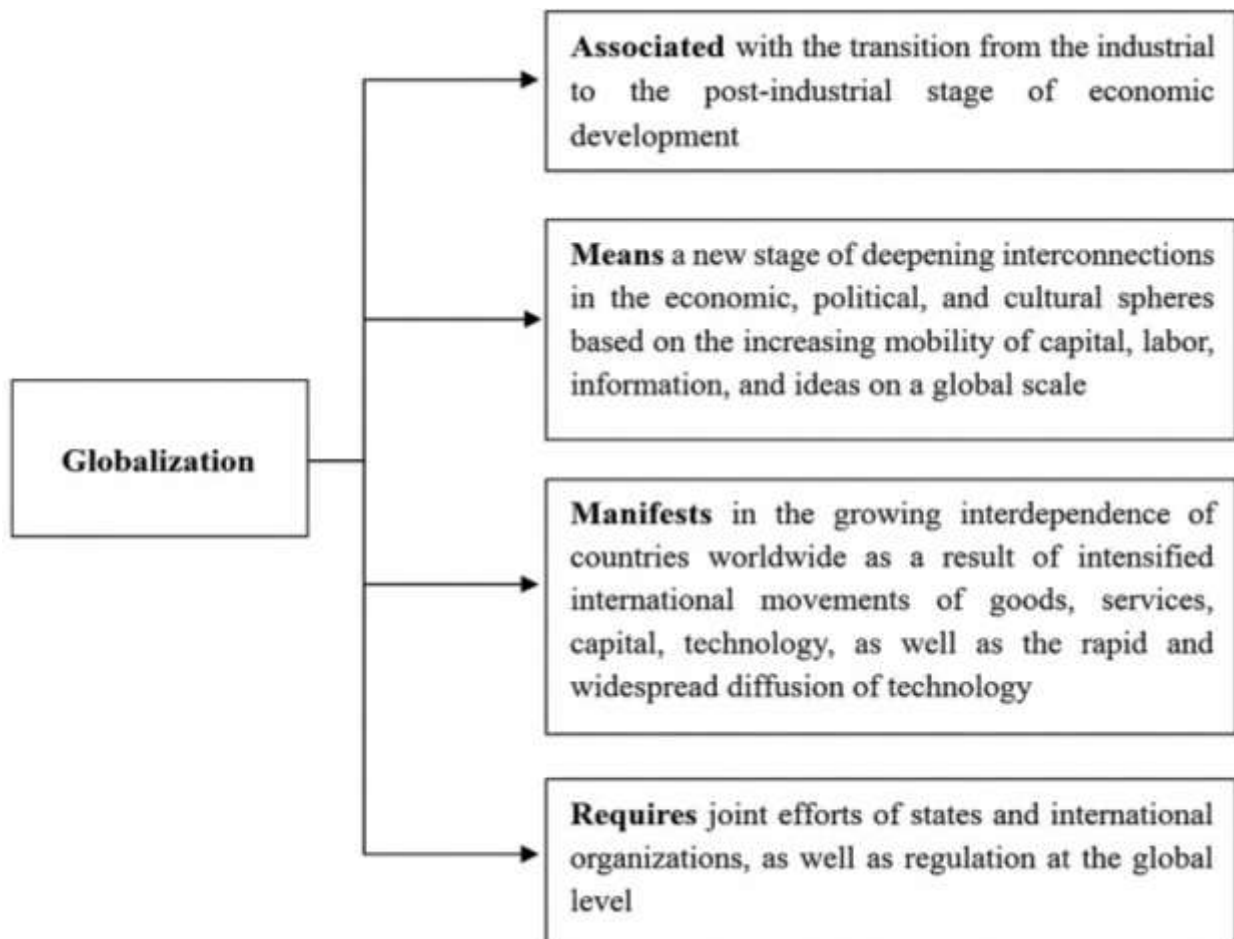


Figure 1.2. General Characteristics of the Globalization Process [18]

Table 1.3

Causes and Driving Forces of Globalization

Category of Factors	Examples	Impact on Globalization
Economic	Transnational corporations, global financial markets, foreign direct investment	Increased economic interdependence
Political	Liberalization, multilateral institutions, WTO, international trade agreements	Formation of an open global economy
Technological	ICT, digital platforms, global value chains	Acceleration of the exchange of goods, services and information
Information	Global information networks, analytical platforms	Strategic resource for management and coordination
Socio-cultural	International mobility, education, tourism, media	Formation of a global cultural and information space

Source: compiled by the author.

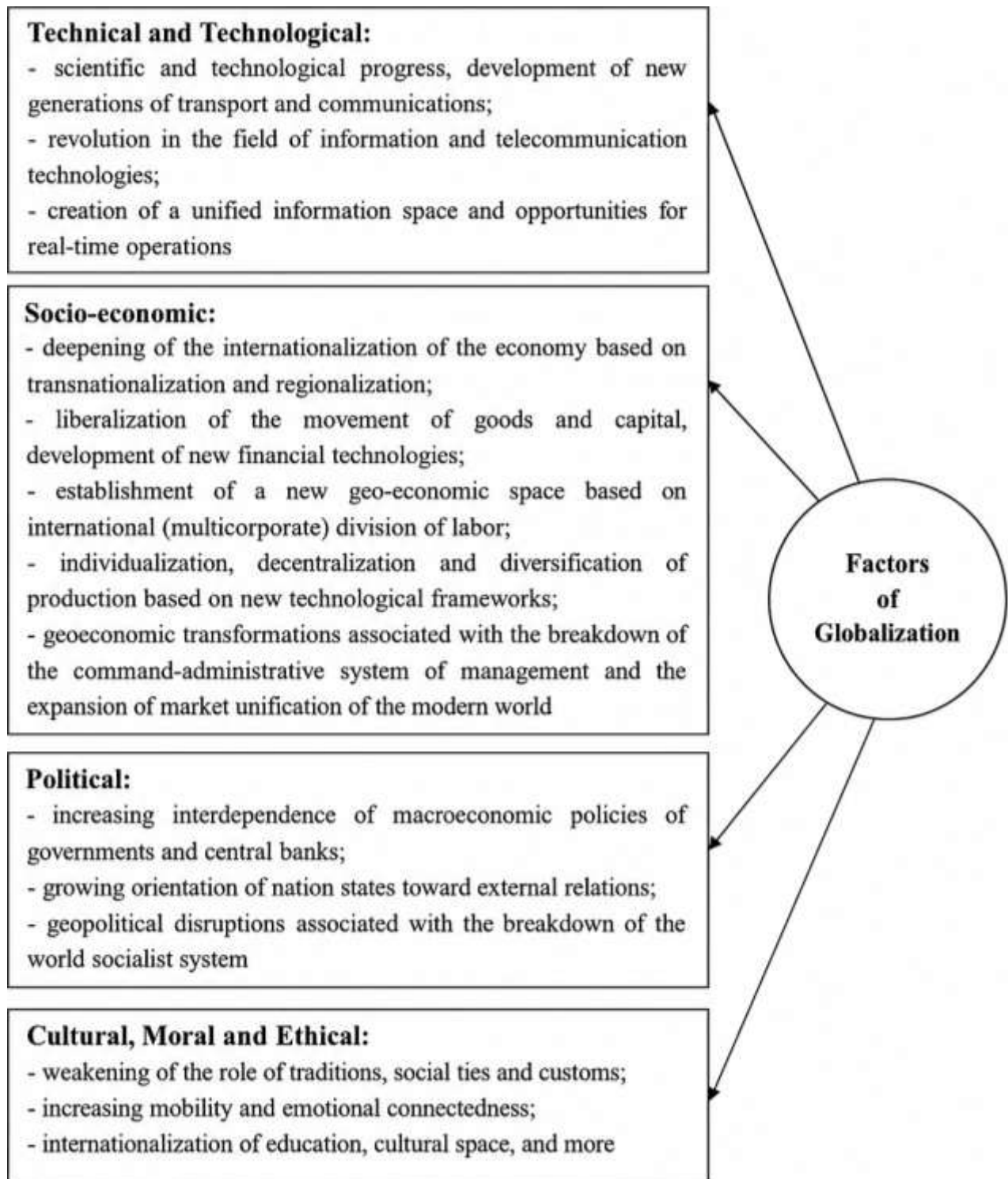


Figure 1.3. Factors of Globalization [28]

Second, political factors. An important role has been played by the liberalization of international economic activity, the reduction of trade barriers, and the development of multilateral institutions of global economic governance. The establishment of the World Trade Organization, the expansion of international trade agreements and regional integration organizations have contributed to the formation of a more open

global economy.

Third, technological factors. The rapid development of information and communication technologies, transport and digital platforms has significantly accelerated the international exchange of goods, capital, services and information. Under contemporary conditions, cross-border data flows, digital trade and global technological networks play a key role, forming a new stage of development known as digital globalization.

Fourth, the information factor. In the global economy, information has become one of the key strategic resources. The development of global information networks, databases, analytical platforms, and digital communication systems has significantly expanded opportunities for coordinating international economic activities and making managerial decisions at the global level.

Fifth, socio-cultural factors. Increased international mobility, the development of international education, tourism, and cultural and academic exchanges contribute to the formation of a global information and cultural space. Global media, digital communications, and social networks significantly influence the dissemination of ideas, values, and consumption patterns across different regions of the world.

Globalization is a complex and contradictory process that has both positive and negative socio-economic consequences. On the one hand, it contributes to the expansion of international trade, the diffusion of innovations, and the increasing economic interdependence of states. On the other hand, globalization processes may deepen economic disparities, intensify competition among countries, and create new challenges for national economies (See Table 1.4 and Figure 1.4).

One of the key problems of contemporary globalization is the uneven distribution of its benefits. Deeper international economic integration contributes to the faster development of countries and economic sectors that possess competitive advantages in global markets. At the same time, industries that are unable to withstand international competition may lose their positions, leading to structural changes in the labour market, declining employment in certain sectors, and the need for workforce retraining.

Another important consequence of globalization is the transformation of the

economic structure. In most developed countries, the share of manufacturing has declined, while the importance of the services sector, financial industries, and digital industries has increased. These processes are driven not only by international competition but also by technological change, production automation, and the development of the digital economy.

A significant challenge is also the growth of socio-economic inequality. In many countries, demand for highly skilled labour is growing faster than demand for low-skilled labour, contributing to an increase in income inequality. At the same time, globalization facilitates the diffusion of knowledge, the development of international education, and the formation of a global labour market for highly qualified specialists.

Another important trend is the international mobility of production and capital. Transnational corporations can relocate production facilities to regions with more favourable business conditions, lower labour costs, or better access to markets. On the one hand, this contributes to attracting investment and developing new economic centres; on the other hand, it may lead to job losses in traditional industrial regions.

An important aspect of contemporary globalization is the growth of international migration and labour mobility. The movement of highly qualified specialists between countries contributes to the diffusion of knowledge and technologies; however, it may also result in the so-called “brain drain” from developing countries.

Significant changes have also occurred in the field of international finance. The globalization of financial markets facilitates the active movement of capital across countries and expands opportunities for attracting investment. At the same time, a high degree of financial integration increases the vulnerability of national economies to global financial crises and fluctuations in international markets.

Under contemporary conditions, the consequences of globalization are increasingly shaped by geoeconomic factors. Intensifying competition among the major centres of economic power, trade conflicts, technological restrictions, and the restructuring of global supply chains are contributing to a new configuration of the global economy.

Table 1.4

The Consequences of Globalization

Category	Positive Consequences	Negative Consequences
Economy	Increased international trade; development of global production networks; higher productivity	Structural imbalances in the economy; uneven redistribution of capital; job losses in less competitive sectors
Technology and Innovation	Diffusion of innovations and technologies; development of the digital economy; access to international platforms	Increased competition; pressure on local technology companies
Social Sphere	International labour mobility; access to education and knowledge; development of the global labour market	Growing income inequality; outflow of highly skilled workers (“brain drain”); challenges of workforce adaptation
Finance and Capital	Easier access to international investment; increased financial integration	Greater vulnerability to global financial crises; risk of volatile capital flows, market fluctuations and capital outflows
Politics and Regulation	Development of international standards; incentives for macro-financial discipline	Growing influence of transnational corporations; weakening of national sovereignty
Global Integration	Development of international cooperation	Deepening interdependence among countries; risk of fragmentation of global value chains; growing geopolitical competition

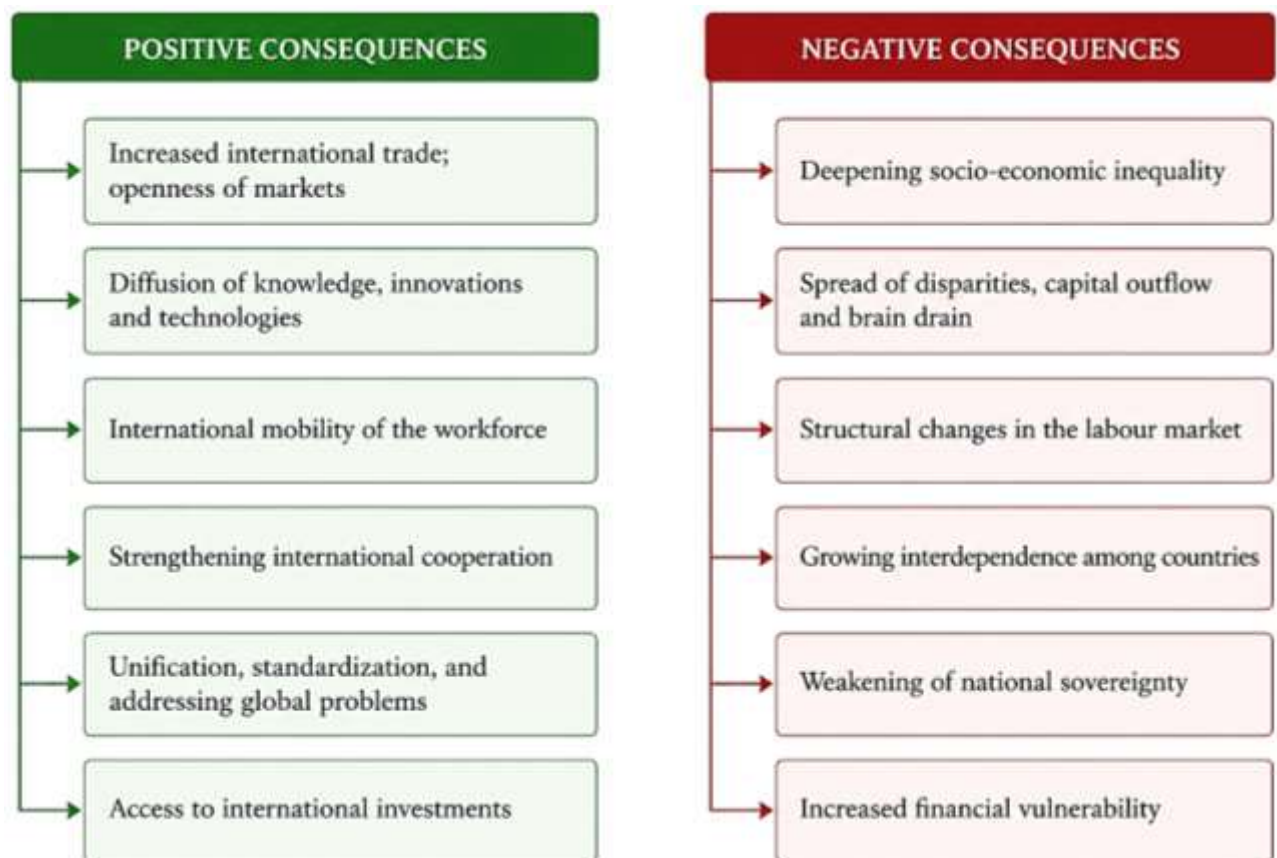


Figure 1.4. The Consequences of Globalization

Thus, globalization creates both new opportunities and significant challenges for countries. The effectiveness of states' participation in the global economy largely depends on their ability to adapt economic policy to changing conditions, foster innovation and human capital development, and strengthen their competitive advantages in the international division of labour.

The contemporary stage of development of the global economy is characterized by accelerating technological change, deepening international economic interdependence, the transformation of global value chains, and intensifying international competition. The adoption of digital technologies, the development of artificial intelligence, the automation of production, the spread of innovative business models, and changes in the structure of international trade significantly affect the operating conditions of both national economies and individual enterprises.

Under these conditions, an innovation-driven development model is becoming increasingly important. A country's ability to create, attract, and effectively utilize new technologies increasingly determines its position in the international division of labor and its level of international competitiveness. At the same time, technological backwardness may limit a country's participation in global production and technological networks, reduce its investment attractiveness, and weaken the competitive position of enterprises in international markets.

Globalization creates both new opportunities and risks for national economies. The main opportunities include expanded access to international markets, capital, technologies, and knowledge; intensified international scientific and technological cooperation; participation in global value chains; and the attraction of foreign investment. At the same time, increasing economic interdependence makes national economies more vulnerable to external crises, fluctuations in international market conditions, changes in trade policy, and global financial and technological trends.

An important characteristic of contemporary globalization is its asymmetric nature. Countries differ in their ability to benefit from international economic integration depending on their level of technological development, quality of institutions, human capital, investment capacity, and enterprise competitiveness.

Therefore, globalization processes do not automatically lead to convergence in levels of development. On the contrary, insufficient adaptability of a national economy may reinforce existing structural imbalances.

In this context, the experience of different countries demonstrates a variety of approaches to adapting to global economic trends. China and Ukraine provide illustrative examples of countries that differ substantially in terms of economic scale, production structure, institutional environment, and degree of integration into the global economy, while facing common challenges related to technological modernization, human capital development, productivity growth, and enterprise competitiveness.

Over the past several decades, China has significantly strengthened its role in the global economy, gradually shifting from a development model based primarily on labor and production advantages toward a more innovation- and technology-oriented model. The development of the digital economy, high-tech industries, research and innovation activities, as well as the active participation of Chinese enterprises in global value chains, have contributed to strengthening the country's position in international markets. At the same time, the Chinese economy faces new challenges related to improving the quality of economic growth, achieving greater technological independence, developing domestic demand, and moving toward higher value-added production.

Ukraine has a different economic structure and institutional environment. For Ukraine, technological modernization, the restoration of production capacity, the development of innovation infrastructure, the attraction of investment, and deeper integration into the European and global economic space are of particular importance. At the same time, Ukrainian enterprises face additional structural and security-related challenges, which increase the importance of adaptability, technological flexibility, and the ability to enter and compete in international markets.

A comparison of China and Ukraine makes it possible to examine how different institutional, resource, and structural conditions affect countries' ability to benefit from globalization. However, the purpose of such a comparison should not be to identify a

universal development model. Rather, the experience of different countries demonstrates the need to adapt economic policy to the specific conditions of each country, its resource potential, economic structure, and position in the international division of labor.

Global trends are particularly important at the enterprise level. Enterprises are directly exposed to changes in international demand, technologies, the competitive environment, and access to resources. In the global economy, enterprise competitiveness is increasingly determined not only by cost levels and product prices. The importance of quality, technological sophistication, innovativeness, reliability, adaptability, and the ability to create high-value-added products is growing.

In this context, innovation is becoming a key driver of enterprise development. However, the existence of research results or new technologies alone does not guarantee competitive advantages. What matters is an enterprise's ability to integrate technological innovations into production and management processes, commercialize research results, develop new products and services, and effectively introduce them into domestic and international markets.

Thus, in the contemporary economy, competitive advantages may be created not only in the country where a particular technology was developed, but also in countries and enterprises capable of using and commercializing that technology most effectively. This increases the importance of international technology transfer, scientific and technological cooperation, and the integration of enterprises into global innovation networks.

At the same time, the innovative development of enterprises largely depends on the national institutional environment. The state creates the conditions for investment and innovation activities, the development of science and education, the protection of intellectual property rights, the attraction of foreign capital, and the functioning of financial markets. Accordingly, effective public policy should not replace market mechanisms but rather create conditions that provide enterprises with incentives and opportunities for long-term technological development.

An important component of such an environment is the financial system, which

ensures the mobilization and redistribution of capital among economic sectors. Bank lending, the stock market, venture financing, foreign direct investment, and other financial instruments create opportunities for financing innovation and investment projects. For enterprises oriented toward international markets, access to financial resources is one of the key factors enabling technological modernization and production expansion.

Foreign direct investment is of particular importance, as it can provide not only an inflow of financial capital but also access to technologies, management practices, international distribution channels, and global production networks. At the same time, the effectiveness of attracting FDI depends on the investment climate, the quality of institutions, the protection of property rights, macroeconomic stability, and the potential of the national economy.

Under contemporary conditions, public innovation policy cannot be limited to direct funding of scientific research. It is necessary to establish a complete innovation cycle, ranging from basic and applied research to technology transfer, product development, commercialization, and entry into international markets. Ensuring effective cooperation among universities, research institutions, enterprises, and public institutions is particularly important.

Thus, the development of countries and enterprises in the contemporary global environment is determined by a set of interconnected factors, including technological change, innovation activity, the quality of human capital, access to financial resources, the institutional environment, and the nature of participation in the international division of labor. At the same time, there is no universal model for adapting to global economic trends.

For China and Ukraine, these processes differ due to differences in their economic scale, structure, institutional environment, and position in the global economy. At the same time, both countries face common challenges related to increasing productivity, developing innovation and human potential, modernizing enterprises technologically, and strengthening their presence in international markets.

Therefore, the analysis of global economic trends and their impact on China,

Ukraine, and enterprises in these countries makes it possible to identify not only the major risks associated with contemporary globalization but also opportunities for developing new competitive advantages. The ability of countries and enterprises to respond promptly to technological, investment, and structural changes, effectively utilize international resources, and adapt innovations to market needs is becoming one of the key determinants of their long-term development and competitiveness in international markets.



Figure 1.5. Globalization Level of Countries According to the KOF Globalisation Index [27]

To assess the level of globalisation across countries, contemporary researchers use various composite indicators. One of the most widely used is the KOF Globalisation Index, which considers the economic, social and political dimensions of countries' integration into the global system. According to the latest data from this index, the highest levels of globalisation are demonstrated by the Netherlands, Switzerland, Belgium, the United Kingdom and Sweden (See Figure 1.5). China is also among the countries with a high level of global economic integration, while Ukraine

occupies a mid-range position in the global ranking, reflecting the gradual deepening of its participation in international economic relations despite challenging geopolitical conditions. At the same time, contemporary research indicates that following the period of rapid globalisation in the 1990s and early 2000s, the pace of economic integration has slowed somewhat, although the overall level of interdependence between the world's economies remains high.

1.2 Theoretical Approaches to Defining Enterprise Competitiveness and the Factors Shaping It in the International Environment

One of the key competitive advantages of enterprises in the context of globalization is technological development and the ability to create and utilize new technologies, knowledge-intensive products, and services. The modern international economy is characterized by a kind of “technology race,” in which countries and enterprises strive to continuously enhance their technological capabilities. At the same time, globalization facilitates the dissemination of advances in science and technology to developing countries; however, leading economies continue to develop new technologies and knowledge-intensive products, protecting them through intellectual property rights, patents, and trademarks.

An important prerequisite for technological development is investment in research and development (R&D). The scale of contemporary technological competition is evidenced by the growth of global R&D expenditure. According to the latest OECD data, global R&D expenditure reached approximately USD 3.8 trillion in 2024. The largest volumes are accounted for by the United States and China, while the business sector remains the main performer of research and development activities in OECD economies.

As a result, the competitive advantages of enterprises are gradually shifting from inexpensive resources and labor toward technologies, innovation, human capital, and the ability to create products and services with high added value. Not only the volume of R&D investment is important, but also the ability of enterprises to create, absorb, and commercialize new knowledge. At the same time, enterprises and countries with limited technological and financial capabilities face difficulties in moving from low-value-added activities to more sophisticated technological and specialized types of activities.

Another important manifestation of globalization is the formation of international production networks and global value chains (GVCs). Within these networks, individual stages of production and service provision are distributed among

different countries. At the same time, R&D, technology development, design, marketing, and strategic management are largely concentrated in the most developed economies, while enterprises in developing countries may initially participate in such chains through the production of components, assembly, or the performance of standardized operations. According to OECD data, in 2024, trade associated with global value chains remained at a high level, accounting for approximately 17% of global GDP [45].

However, participation in GVCs alone does not guarantee an increase in competitiveness. For enterprises in developing countries, it is important to gradually move toward more complex and profitable functions – from simple production and assembly to design, engineering, R&D, digital, and specialized services. Such technological and functional upgrading makes it possible to increase the share of domestic value added, accumulate technological capabilities, and reduce dependence on price competition.

A notable example of such technological upgrading is South Korea. Over an extended period, the country gradually moved from labor-intensive activities toward more complex and knowledge-intensive production. It established competitive positions in steel production, shipbuilding, automotive manufacturing, electronics, and the semiconductor industry. The development of human capital, investment in R&D, and the accumulation of technological capabilities played an important role in this process. According to the World Bank, South Korea's R&D expenditure amounted to approximately 5.1% of GDP in 2024, which is among the highest levels in the world.

Another large-scale example of changing competitive advantages is China. For a long time, the competitiveness of the Chinese economy was largely driven by the scale of production and relatively low labor costs. At the same time, as the economy developed, the structure of China's competitive advantages gradually changed. Today, alongside the scale of production, technological capabilities, innovation, and the development of high-tech industries are becoming increasingly important. China has become one of the world's largest R&D centers and continues to expand its technological potential.

At the same time, the Chinese economy is not homogeneous in terms of technological development. Alongside its strong performance in manufacturing and technologically complex industries, the country continues to develop fundamental technological research, its own global brands, and the production of high-value-added goods. Therefore, the Chinese experience can be considered a process of gradual technological and functional upgrading based on an already established strong industrial and manufacturing base.

For Ukraine, the challenge of increasing the competitiveness of enterprises is of a different nature. According to the OECD, Ukraine's R&D expenditure amounted to approximately 0.3% of GDP in 2022, compared with an average of 2.9% for OECD countries. At the same time, Ukraine has significant human, educational, and scientific potential, which can provide a basis for developing international competitiveness. However, the full-scale war has resulted in the destruction of part of the production and energy infrastructure, labor shortages, reduced investment activity, and high economic uncertainty [60].

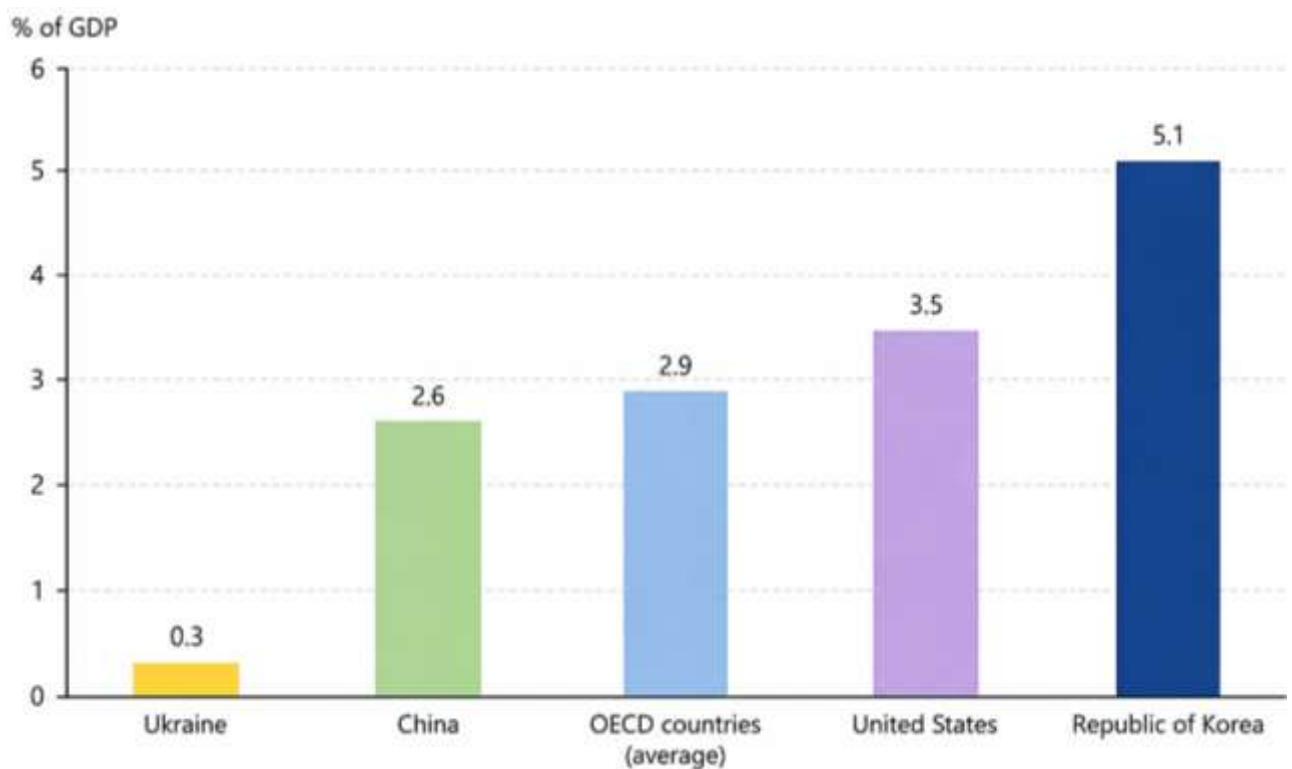


Figure 1.6. Research and development expenditure in selected countries as a percentage of GDP in 2024

Figure 1.6 presents the share of expenditure on research and development in GDP for Ukraine, OECD countries, China, the United States, and South Korea.

At the same time, for Ukraine, opportunities to integrate into European and global production networks remain important. The transition toward products and services with higher added value contributes to increased productivity, export revenues, and the technological potential of enterprises. Under current conditions, particular importance is attached not only to increasing export volumes but also to the development of services exports, engineering, design, R&D, and other activities that enable enterprises to compete in international markets not only on the basis of price but also through technology, quality, innovation, and knowledge.

A comparison of China and Ukraine demonstrates different stages in the development of international competitiveness. Over recent decades, China has significantly strengthened the technological and innovation component of its economy while maintaining a strong industrial base and a significant role in global production networks. Ukraine, despite having substantial human and scientific potential, faces insufficient investment in innovation, losses of production infrastructure, labor shortages, and the consequences of the war. At the same time, both countries are affected by global trends toward a more technology- and knowledge-based model of international competition.

For enterprises in the educational services sector, these global changes are of direct importance. Education is one of the sectors in which human capital, knowledge, and digital technologies are both resources and the foundation of the service itself. The development of online learning, digital platforms, remote consultations, and other technologies enables enterprises to expand beyond local markets and work with clients from different countries. At the same time, the international competitiveness of such enterprises depends on the quality of educational services, the professional competence of staff, digital capabilities, reputation, language and cultural adaptation, as well as the ability to address the needs of international clients.

Thus, contemporary global economic trends are changing the conditions under which enterprises compete in international markets. Technology, innovation, human

capital, digitalization, and the creation of high added value are gradually becoming more important alongside traditional advantages related to resource costs and economies of scale. The experiences of South Korea, China, and Ukraine demonstrate different conditions and trajectories of this development. For enterprises in the educational services sector, these processes are manifested primarily through the growing role of digital technologies, international cooperation, service quality, and human capital, creating a direct link between global economic trends and the competitiveness of the enterprise at which the internship was conducted.

A comparison of selected macroeconomic indicators and the conditions for the formation of international competitiveness in China and Ukraine is presented in Tables 1.5 and 1.6.

Table 1.5

Comparison of Selected Macroeconomic Indicators of China and Ukraine in 2024

Indicator	China	Ukraine
GDP per capita, USD	13.3 thousand	5.4 thousand
GDP growth, %	5.0	2.9

Table 1.6

Comparison of the Conditions for the Formation of International Competitiveness in
China and Ukraine

Characteristic	China	Ukraine
Technological development	High level and continued expansion	Significant potential, but limited resources
Innovation position	Transition towards the development of indigenous technologies	A combination of technology adoption, adaptation and own technological development
R&D	High levels of investment	Low level of funding
Industrial base	Strong	Damaged and transformed as a result of the war
Human capital	Significant	Significant scientific and educational potential
Global value chains (GVCs)	Deep integration	Potential for deeper integration
Main development direction	Technological and functional upgrading	Recovery and transition towards higher value added

Competitiveness is one of the fundamental categories of modern economic science, as it characterises the ability of economic entities to establish and maintain their position under competitive conditions. As international economic interaction deepens, the meaning of this concept has expanded: competitiveness is determined not only by the ability to operate at lower costs, but also by the capacity to create value added, implement innovations, adapt to technological and structural changes, and develop sustainable competitive advantages.

In the broadest sense, competitiveness can be defined as the ability of an economic entity to create and realise advantages that enable it to achieve better results than its competitors under specific market conditions. At the same time, it has a *relative nature* and depends on the specific market, time period, composition of competitors, technological level, and criteria used for comparison.

At the enterprise level, competitiveness reflects its ability to use available resources and capabilities effectively to create products or services that meet consumer requirements and offer advantages over competitors' offerings. Such advantages may include price, quality, technological sophistication, innovation, service quality, brand reputation, digital capabilities, and the ability to adapt to changes in the external environment.

Under conditions of international competition, an enterprise interacts not only with companies from its own country but also with foreign producers and suppliers that may have access to different technologies, financial resources, markets, human capital, and institutional support. Therefore, the international competitiveness of an enterprise can be defined as its ability to create, offer, and deliver goods or services in international markets while maintaining or strengthening its competitive position under continuously changing external conditions.

The competitiveness of an enterprise is shaped by the interaction of *internal and external factors*. Internal factors include financial resources, material and technical infrastructure, technological level, quality of management, staff qualifications, innovation potential, marketing capabilities, brand, product or service quality, and organisational flexibility. External factors include the state of the national and global

economy, the level of competition, government economic policy, the institutional environment, trade regimes, access to international markets, technological change, exchange-rate fluctuations, changes in demand, geopolitical risks, and the transformation of global value chains.

At the same time, the distinction between internal and external factors is not absolute. An enterprise can adapt to external changes by adjusting its strategy, upgrading its technology, diversifying its markets, developing its workforce, or changing its business model. Therefore, an important component of competitiveness is not only the availability of particular resources but also the enterprise's ability to respond effectively to changes in the external environment.

From a systemic perspective, the competitiveness of an enterprise should be considered in relation to the competitiveness of its industry and national economy. An enterprise operates within a specific institutional, macroeconomic, technological, and social environment that creates both opportunities and constraints for its development. The competitiveness of a country reflects the ability of an economy to create conditions for the productive use of resources, economic growth, innovation, and entrepreneurship.

Figure 1.7 illustrates the levels at which international competitiveness is formed.

Thus, the competitiveness of an enterprise, industry, and national economy are interrelated but distinct concepts. A favourable economic and institutional environment creates conditions for enterprise development; however, the ultimate competitive position of a particular enterprise also depends on its own resources, capabilities, managerial decisions, and ability to adapt to changes in the international environment.

Under the WEF approach, competitiveness is defined through the characteristics of an economy that ensure the efficient use of factors of production, while productivity growth is regarded as one of the key drivers of long-term economic development. The GCI 4.0 included 12 main pillars: institutions, infrastructure, ICT adoption, macroeconomic stability, health, skills, product market, labour market, financial system, market size, business dynamism, and innovation capability [1].



Figure 1.7. System for the Formation of an Enterprise's International Competitiveness

Source: developed by the author.

The WEF methodology is important for the theoretical understanding of competitiveness because it demonstrates its multidimensional nature. It links competitiveness not only to production costs or international trade, but also to the institutional environment, human capital, technologies, the financial system, innovation, and business dynamism. At the same time, the latest full Global Competitiveness Report was published in 2019; therefore, the GCI 4.0 should be used as a theoretical and historical basis rather than as a current country ranking [1].

For the contemporary analysis of the competitiveness of national economies, the

IMD World Competitiveness Ranking is appropriate. The IMD methodology assesses competitiveness across four main factors: economic performance, government efficiency, business efficiency, and infrastructure. Each factor comprises five sub-factors, with each sub-factor assigned an equal weight of 5% in the overall result. In 2026, the ranking covers 70 economies.

The IMD assessment combines statistical data with a survey of business executives. In 2026, it used 172 statistical criteria and 92 criteria based on the business survey; statistical data account for two-thirds of the overall result, while business executive assessments account for one-third [56].

The application of the IMD World Competitiveness Ranking in the study of enterprise competitiveness is particularly important for characterising the environment in which enterprises operate. Government efficiency, infrastructure, productivity, financing conditions, the availability of qualified personnel, and the quality of the business environment determine enterprises' opportunities to invest, implement innovations, and compete in international markets [62]. At the same time, an aggregated country ranking cannot serve as a direct indicator of the competitiveness of an individual enterprise, as companies' performance also depends on their industry, business model, technological capabilities, quality of management, and chosen competitive strategy.

A special place in the assessment of contemporary competitiveness is occupied by the Global Innovation Index (GII), as innovation activity is an important source of long-term competitive advantages. The GII assesses the innovation capabilities and outputs of economies across seven pillars, which are grouped into two sub-indices: Innovation Input and Innovation Output. In 2025, the methodology included 78 indicators, of which 63 were quantitative data, 10 were composite indicators, and 5 were indicators derived from surveys [32].

The GII 2025 covers 139 economies. The top ten are Switzerland, Sweden, the United States, the Republic of Korea, Singapore, the United Kingdom, Finland, the Netherlands, Denmark, and China, which entered the top ten for the first time [32].

The use of the GII in this study makes it possible to complement the assessment

of competitiveness with an innovation and technological dimension. This is particularly important for enterprises, as their ability to create, absorb, and commercialise knowledge affects their capacity to develop new products, improve business processes, increase productivity, and enter new international markets [53].

A comparison of international methodologies for assessing competitiveness is presented in Table 1.7.

Table 1.7

Comparison of International Methodologies for Assessing Competitiveness

Methodology	Level of assessment	Main focus	Key components	Relevance to the enterprise
WEF GCI 4.0	National economy	Productivity and competitiveness factors	12 pillars	Theoretical and historical basis
IMD WCR	National economy	Competitive environment	Economic performance, government efficiency, business efficiency, infrastructure	Assessment of the external operating environment
GII	National economy	Innovation potential and outputs	Innovation Input / Innovation Output	Assessment of the innovation and technological environment

Thus, WEF, IMD and GII should be considered complementary instruments. WEF provides a theoretical basis for understanding the factors of productivity and long-term competitiveness; IMD makes it possible to assess the overall competitive environment and the conditions in which the economy operates; GII characterises the innovation and technological potential, which is becoming increasingly important for enterprises' ability to develop and maintain competitive advantages. At the same time, for assessing the competitiveness of individual enterprises, international rankings should be complemented by indicators of the companies' own performance.

At the same time, enterprise competitiveness is determined not only by the external environment but also by its ability to develop and implement competitive advantages. Under current conditions, such advantages are increasingly based on knowledge, technologies, innovation, human capital, and organisational capabilities. Therefore, innovation activity is one of the central mechanisms for enhancing

international competitiveness.

With regard to innovation development, a country can occupy three main positions: first, create new knowledge and conduct R&D; second, adapt and improve scientific and technological results obtained in other countries; and third, adopt technological advances through their dissemination and diffusion. Accordingly, three main innovation development strategies can be distinguished: the transfer strategy, the borrowing strategy, and the capability-building strategy.

The transfer strategy involves using foreign scientific and technological potential and transferring its achievements to the national economy. This approach makes it possible to reduce the time and financial costs associated with developing indigenous technologies; however, it may create dependence on external sources of technologies and capabilities.

The borrowing strategy involves adopting high-technology products and production technologies that have already been developed and are used in other countries, while drawing on domestic production capacity, labour resources, and scientific and technological potential. Its key feature is not simply copying technologies but adapting and improving them while gradually building up domestic technological capabilities.

The capability-building strategy is based on using domestic scientific and technological potential, developing R&D, attracting foreign scientists and engineers, and integrating basic and applied research. The implementation of this strategy creates conditions for developing indigenous technological capabilities, producing high-value-added goods, and moving from the adaptation of existing technologies towards the development of proprietary technological solutions.

The three technological development strategies that converge towards a common outcome – international competitiveness – are presented in Figure 1.8.

These strategies should not be regarded as completely mutually exclusive. In the course of economic and technological development, a country or enterprise may combine them sequentially depending on the level of accumulated capabilities, access to financial resources, the state of its scientific base, and the nature of international

competition. Of particular importance is the gradual transition from the passive adoption of technologies to their adaptation, improvement, and the development of indigenous innovations.



Figure 1.8. Innovation Development Strategies and the Formation of Technological Capabilities

China's experience is illustrative in this context, as its economic development has been accompanied by a gradual strengthening of its technological and innovation capabilities. China's current position in the GII, including its entry into the world's top ten innovative economies in 2025, indicates a significant strengthening of the innovation component of competitiveness [3]. However, in the context of the theoretical discussion, this fact is important not as an object of detailed analysis of China, but as an example of the possibility of moving from predominantly using external technological resources towards developing an indigenous innovation base.

For enterprises operating in international markets, the choice and combination of innovation strategies has a direct impact on the nature of their competitive advantages. The use of external technologies can facilitate the rapid exploitation of

new market opportunities, while the development of in-house R&D enables enterprises to create unique technological capabilities and reduce dependence on external sources of knowledge. Therefore, an enterprise's long-term competitiveness depends on its ability not only to adapt existing technologies but also gradually to develop its own innovative solutions.

In addition to innovation, important factors of enterprise competitiveness include human capital, financial resources, management quality, marketing capabilities, digital infrastructure, organisational flexibility, and the ability to engage in international cooperation. Under current conditions, the ability of an enterprise to respond rapidly to changes in demand, technologies, and the competitive environment is becoming particularly important. Thus, dynamic capabilities are becoming an important source of competitive advantage alongside traditional resources.

Ukraine and China demonstrate different conditions for the formation of enterprise competitiveness. According to the GII 2025, China ranked 10th, while Ukraine ranked 66th among 139 economies [3]. At the same time, Ukraine retains certain strengths within its innovation system that can be used to develop new competitive advantages, particularly in human capital, knowledge, technology and digital capabilities [32].

An additional constraint for Ukraine is the impact of the full-scale war. The war has resulted in substantial losses of physical and human capital, disruption of production and logistics links, labour shortages, and significant infrastructure damage. According to the World Bank, as of the end of 2025, Ukraine's reconstruction and recovery needs were estimated at almost USD 588 billion over the following decade, nearly three times the country's nominal GDP in 2025 [44]. At the same time, Ukraine's private sector is expected to play a key role in economic recovery, job creation, and productivity growth.

Macroeconomic indicators also demonstrate a substantial difference between Ukraine and China. According to the World Bank, in 2024 GDP per capita was approximately USD 13.3 thousand in China and USD 5.4 thousand in Ukraine, while GDP growth rates were 5.0% and 2.9%, respectively [35; 46]. These indicators cannot

be used as a standalone measure of competitiveness; however, they characterise the different scale of the resource and investment opportunities within which enterprises in the two countries operate (See Tables 1.5 and 1.6).

At the same time, a direct comparison of China and Ukraine based solely on aggregate macroeconomic indicators does not fully explain differences in enterprise competitiveness. It is also necessary to consider the quality of institutions, innovation potential, human capital, technological capabilities, infrastructure, and the integration of enterprises into international markets. Therefore, combining the IMD World Competitiveness Ranking and the Global Innovation Index is appropriate for the purposes of this study: the former makes it possible to assess the general conditions in which the economy and businesses operate, while the latter characterises the innovation and technological basis for the formation of competitive advantages [44; 63].

In this context, it is important to distinguish between a country's ability to create innovations and its ability to absorb, adapt and commercialise technological advances. Three levels of an economy's innovation position can be identified: the creation of new knowledge and the conduct of R&D; the adaptation and improvement of technologies developed in other countries; and the adoption and dissemination of technologies through mechanisms of diffusion. However, in the modern economy, these levels should not be regarded as mutually exclusive. Even technological leaders simultaneously draw on external knowledge, while catching-up countries may move from adaptation to the creation of indigenous technologies in areas where specialised competitive advantages are emerging.

For enterprises, the combination of internal technological capabilities with access to international knowledge, capital, markets and partnership networks is particularly important. Therefore, global value chains can serve not only as channels for selling products but also as mechanisms for technological learning, raising quality standards, adopting new management practices and developing innovation capabilities. For Ukraine, the integration of enterprises into such chains is one possible avenue for enhancing international competitiveness, while for China, the transition from performing individual production functions towards greater control over the

technological, innovation and branding components of value creation is becoming increasingly important.

Thus, enterprise competitiveness is a comprehensive and dynamic characteristic shaped by the interaction of an enterprise's internal resources and capabilities and the external conditions in which it operates. At the macro level, the competitive environment is determined by the state of the national economy, institutions, infrastructure, human capital, and the innovation system; at the micro level, it is determined by an enterprise's ability to use these conditions effectively to develop its own competitive advantages.

Within this study, the international competitiveness of an enterprise is considered as the result of the interaction between its internal capabilities and the external global economic environment. This approach makes it possible to link the theoretical analysis of competitiveness with an examination of the impact of global economic trends on enterprise development. Changes in the technological environment, digitalisation, the transformation of global value chains, changes in international competition, and other global processes are reshaping the conditions under which enterprises develop their competitive advantages.

Therefore, the theoretical study of competitiveness provides a basis for the subsequent comparative analysis of enterprises in China and Ukraine. In the next section, these theoretical principles can be applied to specific enterprises, primarily Huaxia Qihan (Beijing) Education Technology Co., Ltd. as the main case study object, comparing it with Ukrainian enterprises operating in the same field and leading international companies. This approach will make it possible to move from an analysis of general competitiveness conditions to identifying specific mechanisms through which enterprises develop and implement competitive advantages in international markets.

In the first chapter, the theoretical foundations for studying enterprise competitiveness under conditions of global economic change were examined. The main trends of contemporary globalisation were analysed, including digitalisation, regionalisation, the transformation of global value chains, and the intensification of

geoeconomic competition, as well as their impact on enterprise activities. The essence of the international competitiveness of an enterprise was defined, its internal and external factors were considered, and the role of innovation, technologies, human capital, and global value chains in ensuring competitiveness was examined. The WEF, IMD, and GII methodologies were also analysed, and the innovation strategies of transfer, borrowing, and capability-building were considered. The examples of China and Ukraine demonstrate different conditions for the formation of competitiveness and show that contemporary competitive advantages of enterprises increasingly depend on technologies, innovation, digitalisation, and the ability to adapt to global changes.

CHAPTER 2

ANALYSIS OF THE COMPETITIVE ENVIRONMENT FOR ENTERPRISES OPERATING IN THE EDTECH SECTOR UNDER GLOBALISATION

2.1 Methodology and Factors for Assessing the Competitiveness of Enterprises in the EdTech Sector

The modern development of education is taking place amid profound digital transformation, which is changing not only the ways in which the educational process is organized but also the economic model of the education sector. The spread of high-speed Internet, mobile devices, cloud technologies, artificial intelligence, big data, adaptive learning systems, and digital platforms is creating the conditions for a transition from the traditional education model to a more flexible system of digital and blended learning. As a result, education is increasingly acquiring the characteristics of a global digital service that can be delivered regardless of the geographical location of the provider and the consumer.

In this context, the EdTech (Education Technology) sector is emerging and developing rapidly. It can be understood as a combination of technologies, digital products, platforms, services, and business models used to deliver, organize, manage, and improve the educational process. It includes learning management systems (LMS), online courses and educational platforms, digital textbooks, assessment systems, adaptive and personalized learning, mobile educational applications, virtual laboratories, Learning Analytics systems, corporate training, and, in recent years, solutions based on generative artificial intelligence and AI tutors.

At the same time, the concept of EdTech is broader than distance learning. While distance education primarily characterizes the way in which the educational process is organized, EdTech encompasses the technological and entrepreneurial ecosystem that enables the creation, distribution, monetization, and scaling of digital educational products. Therefore, for the purposes of this study, particular importance should be attached not only to the level of digitalization of education but also to the economic,

innovative, technological, and institutional capacity of a country to develop EdTech enterprises.

The global transformation of education is also creating new opportunities for international trade in services. The World Trade Organization (WTO) recognizes four modes of supplying services internationally. In the education sector, distance learning represents Mode 1 (cross-border supply), in which an educational service is supplied from the territory of one country to a consumer in another country without the physical movement of the provider. Other modes include Mode 2 (consumption abroad), when students travel to another country to obtain educational services; Mode 3 (commercial presence), which may involve the establishment of foreign-owned educational institutions or branch campuses; and Mode 4 (presence of natural persons), involving the temporary movement of individuals to supply educational services (See Table 2.1) [61].

Table 2.1

Main Modes of International Supply of Educational Services According to the WTO
Classification

Mode	Mode of international supply	Characteristics	Example in Education / EdTech
Mode 1	Cross-border supply	The service is supplied from the territory of one country to a consumer in another country without the physical movement of either the provider or the consumer.	Online courses, distance learning, digital educational platforms, AI tutors
Mode 2	Consumption abroad	The consumer travels to another country where the educational service is provided.	International students studying at universities abroad
Mode 3	Commercial presence	The educational service provider establishes a physical presence in another country.	A university branch campus, international educational center, or foreign-owned education company
Mode 4	Presence of natural persons	An employee or specialist temporarily moves to another country to provide the service.	A lecturer, trainer, or educational consultant temporarily working abroad

Source: compiled by the author based on WTO data.

Thus, the digitalization of education is most directly associated with Mode 1, as it enables the cross-border supply of educational services without the physical

movement of either the provider or the consumer.

The development of international trade in digitally deliverable services is particularly important for the EdTech sector. The OECD defines digitally deliverable services as services that can be delivered through information and communication technology (ICT) networks and explicitly includes education and training services in this category. At the same time, the OECD emphasizes the distinction between services that are digitally delivered and those that are digitally deliverable: education services may be provided digitally, but they can also continue to be delivered through physical interaction [31].

This means that digital education can be considered not only as a component of education policy but also as part of international digital trade in services. The ability to provide educational services remotely reduces the importance of geographical distance and creates opportunities for educational enterprises to reach international markets without establishing a physical presence in every target country.

The scale of this transformation is reflected in the growth of international trade in digitally deliverable services. According to UN Trade and Development (UNCTAD), digitally deliverable services accounted for 56% of global services exports in 2024, demonstrating their growing importance in international services trade. UNCTAD also reports that the value of global exports of digitally deliverable services reached approximately USD 4.5 trillion in 2023, while the share of such services in global services exports continued to increase over the following period (See Table 2.2) [58].

The above data are important for the study of EdTech, as digital educational services have a fundamentally different scaling model compared with traditional education. While traditional learning largely depends on the physical presence of teachers, classrooms, and the geographical location of an educational institution, a digital platform can serve consumers in different countries simultaneously. Accordingly, the marginal cost of serving an additional user of a digital product may be significantly lower than in the traditional model of educational service provision.

Table 2.2

Dynamics and Key Indicators of International Trade in Digital Services

Indicator	Value
Global exports of digitally deliverable services, 2025	approximately USD 5.4 trillion
Share of digitally deliverable services in global services exports, 2023	approximately 55%
Share of digitally deliverable services in global services exports, 2024 & 2025	approximately 56%
Exports of digitally deliverable services by developing economies, 2023	more than USD 1.3 trillion
Global exports of ICT services, 2024	approximately USD 1.2 trillion

Source: compiled by the author based on data from UNCTAD, OECD, and WTO.

This characteristic should be taken into account when assessing the international competitiveness of EdTech enterprises. For such enterprises, the potential market is not limited to the domestic market of the country of origin but extends to a global audience. At the same time, this model creates new requirements regarding content quality, localization, language adaptation, digital infrastructure, data protection, compliance with educational standards, and the ability to operate across different regulatory environments.

For the quantitative assessment of the export orientation of the national EdTech ecosystem, several indicators can be used.

To assess the potential for international expansion of an EdTech enterprise, the Digital Export Specialization Coefficient can be used:

$$KDE = \frac{DE}{SE} \times 100\% , \quad (2.1)$$

where:

DE – exports of digital services of the country;

SE – total exports of commercial services.

The indicator measures the share of digital services in the country's total exports of commercial services and can be used to compare the digital export orientation of different countries.

For the educational segment specifically, an analogous indicator can be used if the enterprise or statistical source provides data on the volume of international digital educational services:

$$KEdTech = \frac{EX_{DigitalEdTech}}{EX_{Digital}} \times 100\% , \quad (2.2)$$

where:

$EX_{DigitalEdTech}$ – exports of digital educational services;

$EX_{Digital}$ – exports of digital services.

This indicator characterizes the share of digital educational services in the country's total digital exports and can be used to assess the relative export orientation of the national EdTech sector.

To determine whether a country has an international specialisation in the export of educational services, the *Revealed Comparative Advantage (RCA) index* can be used:

$$RCA_{edu} = \frac{X_{edu}^c / X_{services}^c}{X_{edu}^w / X_{services}^w} , \quad (2.3)$$

where:

X_{edu}^c – exports of educational services of the country;

$X_{services}^c$ – total exports of services of the country;

X_{edu}^w – global exports of educational services;

$X_{services}^w$ – global exports of services.

An $RCA > 1$ indicates that the country has a relative specialisation in the export of the respective group of services.

At the same time, when applying this indicator to EdTech, an important statistical limitation should be taken into account: international statistical systems do not always identify EdTech as a separate category. Therefore, direct measurement of EdTech exports requires combining data on educational services, digitally deliverable

services, ICT services, and the activities of relevant enterprises. For this reason, in this study, indicators of international trade in educational and digitally deliverable services are used as characteristics of the potential of the business environment.

The development of EdTech does not automatically imply an improvement in the quality of education. UNESCO notes that the evidence base concerning the effectiveness of many educational technologies remains insufficient, while technological products evolve faster than a sufficient body of independent assessments of their impact can be developed. Therefore, the competitiveness of EdTech enterprises should be assessed not only in terms of the technological novelty of their products but also in terms of their educational effectiveness, scalability, safety, accessibility, and alignment with users' needs [66].

In this regard, for the subsequent comparative analysis, it is appropriate to use a system of factors characterising a *country's readiness for EdTech development* (See Table 2.3).

Table 2.3

Main Factors Shaping National EdTech Development Potential

Factor group	Main indicators
Economic	GDP, GDP per capita, income levels, public expenditure on education
Educational	Educational attainment, number of students, development of lifelong learning
Digital	Internet access, network speed, smartphone penetration, digital skills
Technological	ICT infrastructure, cloud technologies, AI, big data
Innovation	R&D expenditure, patent activity, GII, innovation clusters
Entrepreneurial	Number of EdTech companies and start-ups, investment, venture capital
Institutional	Government policy on digital education, standards, data protection
International	Exports of educational services, digitally deliverable services, international partnerships
Human capital	Qualifications of teachers and IT specialists, digital competences of the population
AI-related	Use of AI in education, personalisation, AI tutors, learning analytics

Source: compiled by the author.

This approach makes it possible to move from a general comparison of the level of digitalisation towards an assessment of a *country's potential as an environment for the development of competitive EdTech enterprises*.

The proposed framework identifies five key factors of the national EdTech ecosystem that create favorable conditions for the development and competitiveness of EdTech enterprises (See Figure 2.1). The logic of the model can be presented as follows: 5 country-level factors → Enablement Threshold → favorable EdTech ecosystem → enhanced competitiveness of EdTech enterprises.

Unlike models focused on assessing the internal resources and characteristics of an individual enterprise, the proposed model focuses on the external environment formed at the national level. It demonstrates how the quality of national ecosystem conditions creates the prerequisites for the development, scaling, and strengthening of the competitive positions of enterprises in the educational technology sector.

The model includes five interrelated factors:

Policy Alignment – the alignment of government policy in education, digitalization, and technological development with the needs of the EdTech sector, as well as the favorability of the regulatory environment for enterprise operations and development.

Market Access – the ability of enterprises to access educational institutions, corporate clients, and other target customers, as well as to enter new markets, including international markets.

Capital Connectivity – access to investment and financial resources, grant programs, venture capital, and strategic partnerships required for innovation development, product development, and business scaling.

Ecosystem Coordination – the level of interaction among EdTech enterprises, universities, educational institutions, technology companies, investors, government organizations, and other ecosystem participants.

Research & Credibility – the availability of research and expertise, evidence of the effectiveness of educational and technological solutions, as well as the level of trust and reputation required to attract users, clients, and partners.

These factors are interconnected and complement one another. For example, access to capital alone does not guarantee successful enterprise development if market opportunities or an appropriate regulatory environment are lacking. Similarly, the availability of a research base and technological competencies has limited impact in the absence of mechanisms for commercialization, partnership development, and market access [18].

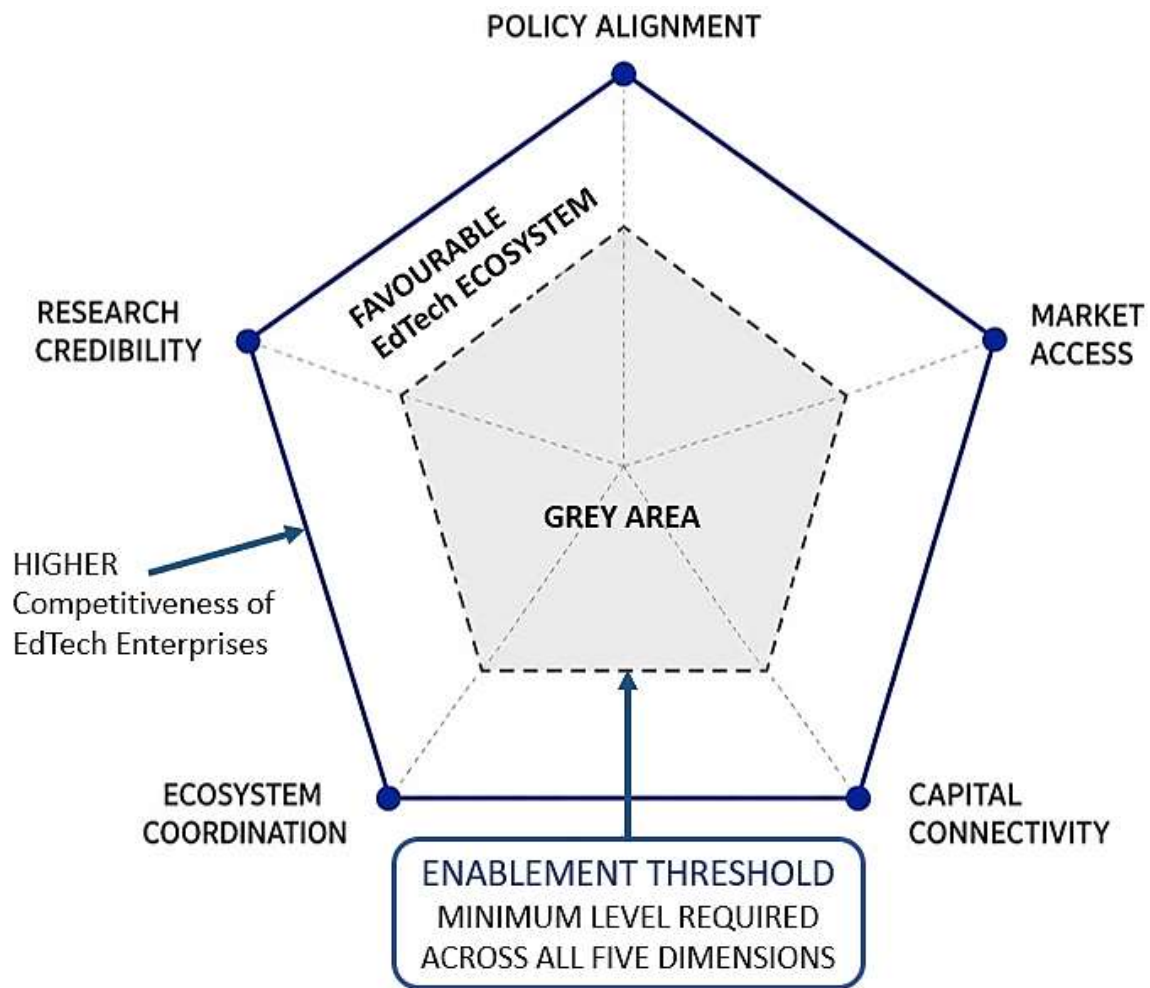


Figure 2.1. Key Ecosystem Factors for Ensuring the Competitiveness of EdTech Enterprises

The gray zone in the diagram represents the Enablement Threshold – the minimum threshold of ecosystem development. It indicates the level at which the combination of ecosystem factors creates the basic conditions necessary for the effective functioning and development of EdTech enterprises. The Enablement Threshold is not a measure of the competitiveness of an individual enterprise and is not

intended for its direct ranking. Rather, it is used to assess the extent to which the national environment is capable of supporting the development of competitive EdTech enterprises.

When the development of the five factors remains below the established threshold, the ecosystem has a limited capacity to support innovation, attract investment, scale enterprises, and facilitate their entry into new markets. When the factors reach or exceed the Enablement Threshold, more favorable conditions for the functioning of the EdTech ecosystem are created. The more balanced the development of all five dimensions, the greater the opportunities for enterprises to develop and implement innovations, attract financing, establish partnerships, access domestic and international markets, and strengthen trust in their products.

Thus, the model demonstrates that the competitiveness of an EdTech enterprise depends not only on its internal resources, technological competencies, and business model, but also on the quality of the external ecosystem in which it operates. A favorable national environment does not automatically create competitiveness; rather, it provides the necessary conditions and expands enterprises' opportunities to realize their competitive potential.

Accordingly, the quality of the national EdTech ecosystem can be considered an important external factor of enterprise competitiveness and the potential for international development of EdTech enterprises. A high and balanced level of the five factors enhances enterprises' ability to transform national ecosystem advantages into concrete business outcomes, scale their products, and strengthen their competitive positions in international markets.

The proposed model has a universal character and can be applied to the analysis of EdTech enterprises of different sizes, business models, and geographical scope, as it focuses not on the specific characteristics of an individual company but on the conditions of the national environment in which its competitive potential is formed and realized.

Digitally deliverable education services are used in this study as a broader indicator of the international digitalisation and export potential of education, while

EdTech refers specifically to technology-enabled products, platforms, and services designed to deliver, manage, personalise, or improve educational processes.

Table 2.4

Classification of Digitally Deliverable Education Services and EdTech

Concept	Meaning	Examples
Digital education	A form/system of organising education through the use of digital technologies	Online learning, blended learning, digital textbooks, online assessment, virtual classrooms
Digitally deliverable education services	Educational services that can be supplied through digital networks (ICT networks)	University online courses, distance learning, online tutoring, virtual teacher consultations
EdTech services	Educational or technology-enabled services provided using EdTech technologies and digital educational products	LMS-based services, AI tutoring, adaptive learning, learning analytics
EdTech	A broader technological and entrepreneurial ecosystem comprising products, platforms, technologies, services, companies and business models that create solutions for education	LMS, AI solutions, educational platforms, assessment systems, digital textbooks, educational applications

Source: compiled by the author.

Digitally deliverable education services are educational services that can be supplied through ICT networks, regardless of whether the underlying educational activity is based on an EdTech business model. EdTech services represent a narrower category associated with technology-enabled educational products, platforms, and solutions designed to deliver, manage, personalise, or improve education.

2.2 Assessment of National Development Potential and Competitive Positions of EdTech Ecosystems: A Comparative Analysis of Countries

According to HolonIQ, the global education market was estimated to reach approximately USD 7.3 trillion in 2025, while the share of education expenditure allocated directly to technology remained relatively small, accounting for less than 4% of total education expenditure. At the same time, HolonIQ estimated global spending on the digital component of education at approximately USD 404 billion in 2025. This indicates substantial potential for further digitalisation of the sector: even a relatively small increase in the share of technology expenditure within total education spending could create a very large potential market for EdTech companies.

At the same time, the development of EdTech should not be equated solely with the production of educational software. The sector encompasses a much broader range of products and services, including Learning Management Systems (LMS), online courses, video-based learning platforms, digital textbooks, educational marketplaces, assessment systems, personalised learning technologies, AI tutors, tools for educators, corporate learning, professional reskilling, and digital solutions for the management of educational institutions.

The integration of artificial intelligence (AI) is becoming particularly important. Unlike the first stage of education digitalisation, when the primary objective was to transfer traditional educational materials into a digital environment, the current stage involves the personalisation of learning, automated generation of learning tasks, adaptation of content difficulty to learners' levels, automated assessment, and the use of large volumes of educational data.

According to HolonIQ, global venture investment in EdTech amounted to approximately USD 1.8 billion in 2024, significantly below the peak levels recorded during the pandemic period. At the same time, investment activity has increasingly concentrated on AI-based solutions, professional learning, skills development, and scalable digital platforms. In 2026, HolonIQ reported approximately USD 1 billion in EdTech venture funding during the first half of the year alone, with investment

increasingly directed towards AI-enabled platforms and workforce learning (See Figure 2.2) [25].

This wording is suitable for an academic thesis and keeps the terminology consistent with the rest of your EdTech section.

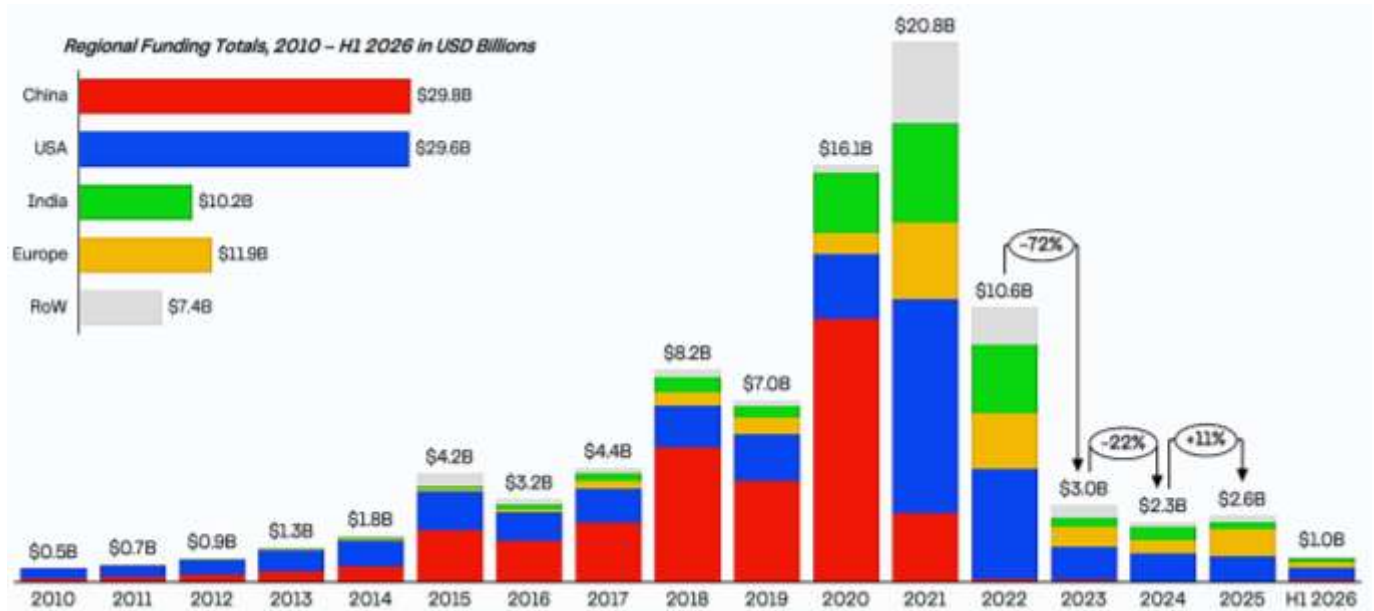


Figure 2.2. Global Education Venture Capital Funding, 2010–1H 2026

Source: HolonIQ (QS)

Analysis of the structure of the global services market indicates a shift in the world economy towards digitalisation. According to joint OECD and WTO data, in 2023, digitally deliverable services accounted for 55% of total global trade in services. This trend became particularly significant following the 2020 crisis: while traditional sectors such as tourism, transport and construction experienced a severe recession, digital trade demonstrated a high degree of adaptability and resilience to external shocks.

The development of this macroeconomic trend has a direct impact on the meso- and microeconomic levels of high-technology industries, particularly the educational technology (EdTech) sector. Although the global EdTech sector experienced a substantial decline in speculative venture capital investment during 2022–2026, commonly referred to as the “venture winter”, actual market demand and cross-border consumption of digital educational services have continued to demonstrate stable

organic growth.

Under these macroeconomic conditions, the assessment and realisation of the export potential of EdTech enterprises are shifting from a model of aggressive investment-driven growth towards greater operational efficiency and strategic resilience. To identify the specific ways in which businesses are adapting to these changes, it is therefore necessary to conduct a microeconomic analysis and comparative assessment of the competitiveness of leading EdTech companies in the region, such as Preply, EdEra, and others, which have successfully exported their digital products to international markets.

In 2024, digitally deliverable services accounted for more than 60% of services exports in developed economies, approximately 44% in developing economies, and only around 15% in least developed countries.

In the first half of 2026, the European market amounted to USD 1.0 billion, representing a 25.7% decline compared with the same period a year earlier, as the rate of decline in value outpaced the decline in volume. Asia and the Middle East and North Africa (MENA) region, however, have shown greater resilience to this trend [27].

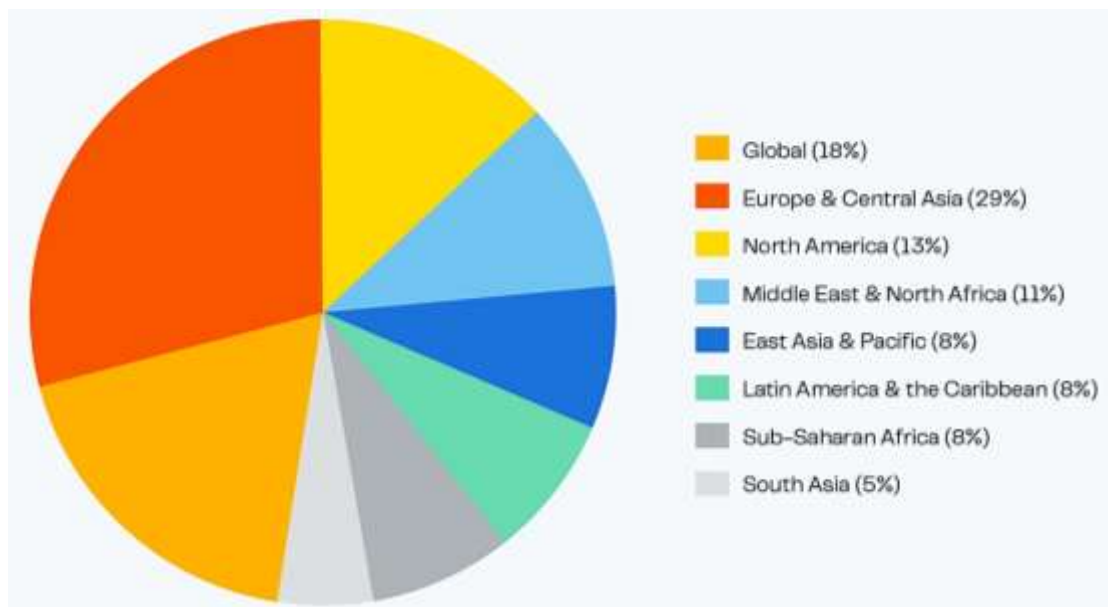


Figure 2.3. Regional Distribution of EdTech Ecosystem Hubs

Source: HolonIQ (QS)

EdTech ecosystem hubs are distributed across seven different regions, with Europe and Central Asia accounting for nearly one-third of the total (See Figure 2.3).

To assess the international potential of EdTech, it is important to consider not only the size of the domestic market but also the capacity to export digital services.

The World Trade Organization (WTO) uses the category of digitally delivered services, referring to services supplied through computer networks, including the Internet, applications, email, video communication and digital platforms.

EdTech does not have a separate international statistical category within the WTO. Therefore, for the purposes of EdTech research, indicators of digital trade in services should be used as a measure of the potential external environment, complemented by industry-specific EdTech data.

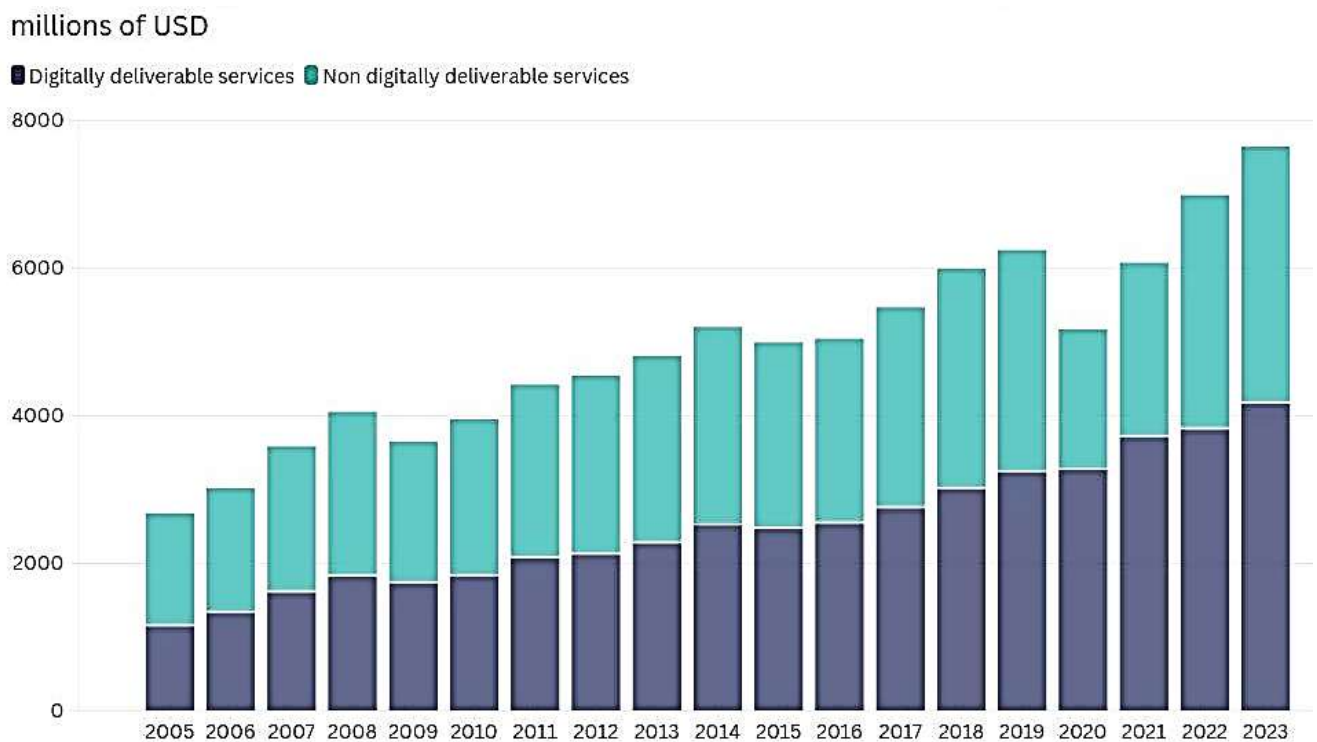


Figure 2.4. Dynamics of the Share of Digitally Deliverable Services in Global Services Exports

Source: OECD–WTO Balanced Trade in Services (BaTIS)

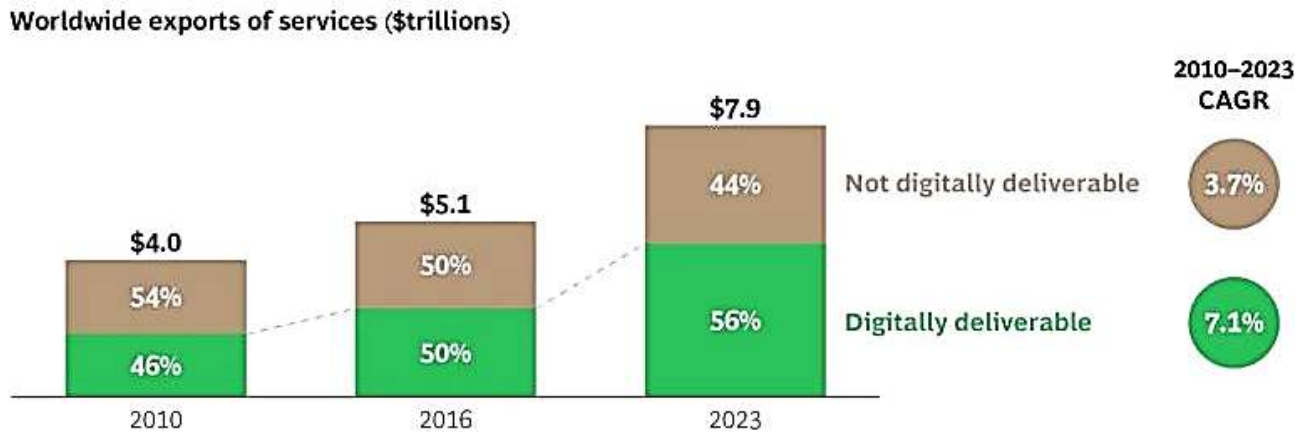


Figure 2.5. Dynamics of the Share of Digitally Deliverable Services in Global Services Exports, %

Source: UN Trade and Development (UNCTAD)

The dynamics of international trade in digital services indicate a structural transformation of the global services market towards the increasing importance of remotely delivered digital formats. According to UNCTAD data, the share of digitally deliverable services in global services exports increased from 48% in 2012 to 52% in 2019, reaching 63% in 2021 during the COVID-19 pandemic. In 2024, global exports of digitally deliverable services reached approximately USD 5 trillion, accounting for 56% of global services exports, which remained substantially above the pre-pandemic level (See Figures 2.4, 2.5 and Table 2.5). At the same time, developed economies accounted for approximately USD 3.8 trillion, while developing economies accounted for around USD 1.2 trillion [55].

Table 2.5

Share of Digitally Deliverable Services in Global Services Exports

Year	Share
2012	48%
2019	52%
2021	63%
2024	56%

Source: UNCTAD

UNCTAD reports that international trade in ICT services – comprising telecommunications, computer and information services – reached USD 1.2 trillion in 2024. Europe accounted for 57% of these exports, followed by Asia and Oceania with 33%, and North America with 8%.

In 2024, global exports of digitally deliverable services amounted to approximately USD 4.8 trillion. The largest exporters were the United States, with approximately USD 741 billion, followed by the United Kingdom (USD 488 billion), Ireland (USD 425 billion), Germany (USD 280 billion), India (USD 276 billion), China (USD 221 billion), and Singapore (USD 220 billion) (See Table 2.6).

Table 2.6

Leading Exporters of Digitally Deliverable Services, 2024

Country	Exports of digitally deliverable services, USD billion	Share of global exports, %
United States	741	15.5
United Kingdom	488	10.2
Ireland	425	8.9
Germany	280	5.9
India	276	5.8
China	221	4.6
Singapore	220	4.6
Netherlands	205	4.3
Republic of Korea	68	1.4
Poland	54	1.1
Ukraine	10	0.2

Source: WTO estimates; Global Trade Outlook and Statistics, 2025; WTO Global Services Trade Data Hub

The data presented characterise the scale and maturity of the digital economy in which EdTech companies operate. The larger the volume of digitally deliverable services exports, the more developed the infrastructure for international remote delivery of digital products, payment systems, digital competencies, and international business networks tends to be.

This trend is directly relevant to enterprises operating in the education

technology sector, as digital technologies eliminate a significant proportion of the geographical constraints associated with the traditional provision of educational services. An educational product in digital form can be developed in one country, technologically supported from another, and delivered to consumers simultaneously across multiple international markets. Thus, the digitalisation of education creates the conditions for a transition from a predominantly national model of educational service provision towards a global model of production and consumption.

At the same time, these indicators do not directly measure the global EdTech market. Rather, they represent the broader segment of digitally deliverable services, which includes, among other sectors, education-related services (See Figure 2.6). Therefore, in this study, they are used as a macroeconomic indicator of global digital transformation that shapes the external environment in which education technology enterprises operate.

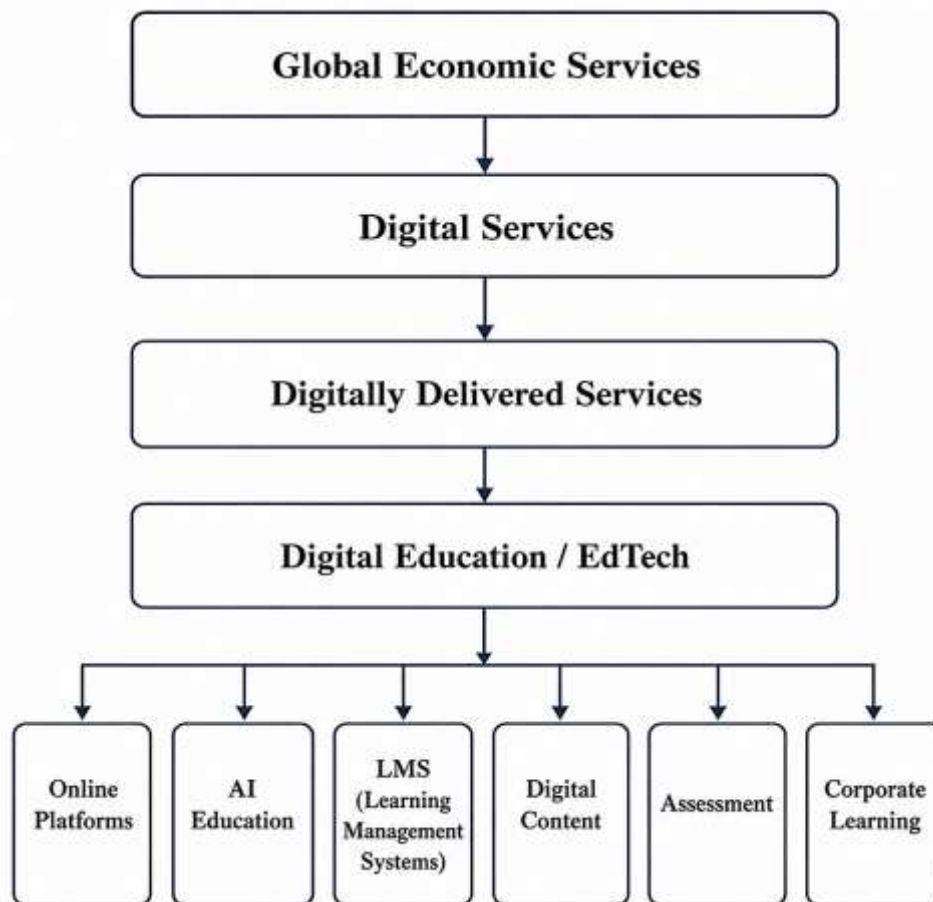


Figure 2.6. The Position of EdTech within the Global Digital Economy
(developed by the author)

An important factor in the development of EdTech is the innovation potential of a country. An EdTech platform is a technology-based product; therefore, its international competitiveness depends substantially on the availability of IT specialists, research infrastructure, venture capital, AI capabilities, and cooperation between universities and businesses.

The Global Innovation Index (GII) 2025 can serve as an additional benchmark for assessing the innovation potential of countries. It does not directly measure the EdTech sector but provides an assessment of the broader innovation environment in which technology-based companies are developed (See Table 2.7).

Table 2.7

Comparative Innovation and Technological Potential for EdTech (Positions of Selected Economies in the Global Innovation Index 2025)

Economy	GII 2025 Rank	Regional / Innovation Profile
Switzerland	1	Global innovation leader
Sweden	2	Global innovation leader
United States	3	Global technological leader
Republic of Korea	4	Leading Asian innovation economy
Singapore	5	Leading digital and innovation hub in Asia
United Kingdom	6	Leading European innovation economy
Finland	7	Leading European innovation economy
China	10	Leading Asian innovation economy
Germany	11	Leading European technological economy
Japan	12	Leading Asian technological economy
India	38	Leading innovation economy in Central and Southern Asia
Ukraine	66	Economy with selected strong innovation capabilities

Source: WIPO, Global Innovation Index 2025

The selected countries therefore differ considerably in terms of their innovation environment. The United States, the United Kingdom, Singapore, and the Republic of Korea are particularly relevant benchmarks for the analysis of EdTech. China ranks 10th, confirming its strong innovation potential and technological capabilities. Ukraine

ranks 66th; however, this does not imply an absence of potential for the development of digital education. The Ukrainian economy retains specific strengths in digital services and knowledge creation, although its overall innovation environment is considerably more constrained.

China is one of the most prominent examples of large-scale state-led and technology-driven transformation of education. Unlike models in which the digitalisation of education is driven primarily by the private sector, China treats it as an integral part of the national strategy for the development of education and the digital economy.

A key element of this policy is the Smart Education of China Platform, a national digital education platform whose development encompasses digital educational resources, personalised learning, digital education management and the integration of artificial intelligence (AI). In 2025, the Ministry of Education of the PRC identified further digitalisation of education, the development of a national education service system and lifelong learning among its priority areas. Particular emphasis was placed on AI integration, the intelligent transformation of educational processes, internationalisation and international cooperation [46].

In 2026, this policy was further continued, with the integration of AI into teaching, learning and education management identified as a key direction of the next stage of digital transformation. At the same time, attention has been given to personalised learning, lifelong learning, stronger links between education and industry, and cooperation between universities and businesses to commercialise research outcomes.

The competitive advantage of the Chinese EdTech environment lies in the combination of great domestic demand, developed digital infrastructure, government support, technological capabilities, and a large user base for digital educational products. The size of the domestic market provides favourable conditions for testing and improving digital solutions, accumulating user data and subsequently scaling successful products internationally.

An important feature of the Chinese model is the integration of educational

digitalisation into the broader digital transformation of the economy. UNESCO IITE notes that China regards the digitalisation of education as one of the mechanisms for developing a learning society, which requires interaction among the government, educational institutions and the private sector. This ecosystem-based model creates favourable conditions for EdTech companies to develop technologies and scale their solutions.

At the same time, the significant role of the state also creates certain constraints. The activities of private EdTech companies are strongly influenced by the regulatory environment. Consequently, their international competitiveness depends not only on technological capabilities but also on their ability to adapt products to the legal, educational, and cultural characteristics of foreign markets.

Thus, China represents one of the most promising environments for EdTech development among the countries examined. Its competitive advantage is determined not only by the scale of its domestic education market but also by the combination of human and technological capabilities, digital infrastructure, R&D resources, government support, and scaling opportunities. Therefore, the competitiveness of Huaxia Qihan (Beijing) Education Technology Co., Ltd. should be assessed not in isolation, but in the context of the digital ecosystem and institutional environment in which the enterprise operates.

Ukraine has a significantly smaller domestic market in terms of scale, but it possesses a number of important prerequisites for the development of digital education, including substantial human capital, a developed IT sector, widespread Internet access, experience in distance learning, and an established culture of using digital services.

According to the 2025 digital skills survey, almost 97% of Ukraine's population has access to the Internet, 57.5% possess at least basic digital skills, while 42% of adults already use artificial intelligence. At the same time, 56% of Ukrainians consider the development of digital skills to be relevant. This indicates a relatively high level of digital adaptability and creates favourable conditions for the development of digital educational products.

An important element of Ukraine's national digital education ecosystem is the

government platform Diia.Education, which focuses not only on digital literacy but also on a broader range of modern competencies and professional skills. Another important component is the Mriia digital education ecosystem, which connects students, parents, teachers and school administrators within a single digital environment. As of autumn 2025, more than 2,600 schools were using the platform. Its functionality includes digital school records, learning planning, assessment and the gradual introduction of AI-based solutions. Thus, the government is establishing digital infrastructure that can create additional opportunities for the development of the private EdTech sector.

Another competitive advantage of Ukraine is its developed IT sector and the ability of Ukrainian specialists to operate in international markets. For EdTech companies, this creates opportunities to develop products aimed directly at international users. Unlike countries with large domestic markets, the relatively limited domestic demand encourages Ukrainian digital companies to enter foreign markets at an earlier stage and adopt an export-oriented development model.

At the same time, Ukraine's innovation potential remains uneven. According to the Global Innovation Index 2025, Ukraine ranked 66th among 139 economies; it ranked 80th in innovation inputs and 54th in innovation outputs. This indicates an ability to generate innovation outcomes despite a relatively constrained resource base. The key challenge is therefore not only the creation of innovations but also their financing, scaling and commercialisation.

The war is an additional factor constraining the development of the domestic EdTech market. Population decline, damage to infrastructure, budgetary constraints and increased investment risks limit the prospects for long-term growth based solely on domestic demand. Consequently, an export-oriented model is particularly important for Ukrainian EdTech companies, whereby products are developed in Ukraine but scaled across international markets.

Thus, the Ukrainian EdTech model differs substantially from the Chinese one. China can use the scale of its domestic market as a basis for testing and scaling technologies, whereas Ukraine has stronger incentives to pursue international scaling

from an earlier stage. The key condition for the competitiveness of Ukrainian EdTech companies is therefore the transformation of existing human and technological capabilities into scalable digital products with international market value.

The comparison between China and Ukraine should be complemented by leading countries that shape current technological and organisational standards in digital education. The analysis therefore considers the United States, the United Kingdom, Singapore and the Republic of Korea, as they represent different models of EdTech development.

The United States has one of the world's most developed EdTech ecosystems. Its competitive advantages are based on the combination of strong venture capital, technology companies, leading universities, research centres and a large purchasing-power market. According to Grand View Research, the US education technology market generated approximately USD 47.7 billion in 2024, with a projected compound annual growth rate of 11.1% for 2025–2030. This figure should be regarded as a market estimate rather than official government statistics. The United States also ranks 3rd in the GII 2025, with particularly strong positions in late-stage venture capital, corporate R&D, and software [13].

Following the pandemic peak, global EdTech investment activity declined substantially. According to Crunchbase, EdTech start-ups raised approximately USD 2.8 billion in global seed-to-growth funding in 2025. Despite the overall decline in investment volumes, capital has increasingly concentrated on AI tutors, personalised learning, skills development, and solutions at the intersection of education and workforce training. This indicates a shift from growth-driven expansion towards investment in technologically and commercially viable solutions.

The United Kingdom is an important European EdTech hub, combining strong innovation capabilities, a developed services sector and a significant international education sector. It ranks 6th in the GII 2025. In 2026, the Department for Education conducted a comprehensive assessment of the EdTech market in England, covering market size and structure, development trends, technology adoption by schools, and the safe implementation of digital solutions. This demonstrates the growing recognition

of EdTech as an important component of the modern education and digital economy [59].

Singapore and the Republic of Korea are particularly relevant for comparison because they demonstrate how competitive digital education systems can be developed even in relatively small domestic markets.

Singapore follows a model of state-led digital coordination, in which the government develops core technological infrastructure while the private sector can build innovative solutions around it. A key instrument is Student Learning Space (SLS), developed by the Ministry of Education in collaboration with GovTech. The platform is available to students and educators across the national education system and provides access to curriculum-aligned digital resources. Its further development is supported by the EdTech Masterplan 2030, which includes the use of AI to personalise learning and support teachers. Singapore therefore represents a model based on government coordination, technological integration and international scalability.

The Republic of Korea represents a more technology- and R&D-oriented model. The country ranks 4th in the GII 2025 and is characterised by high R&D intensity. An important direction of educational digital transformation is the introduction of AI digital textbooks. From 2025, such textbooks began to be introduced for selected subjects, including mathematics, English and informatics; 76 textbooks were approved for the first stage of implementation. EdTech development is also supported by advanced digital infrastructure, widespread smartphone use and the growing application of AI.

Overall, the countries considered represent different EdTech development models. The United States relies on venture capital, private technology companies and a strong innovation ecosystem; the United Kingdom combines innovation, international education and a developed services sector; Singapore emphasises government-led digital coordination and international orientation; while the Republic of Korea focuses on technological development and high R&D intensity. In this context, China is distinguished by the scale of its domestic market and an ecosystem-based approach, whereas Ukraine relies primarily on human capital, IT capabilities,

and an orientation towards international scaling.

Based on the above indicators, a generalised assessment of the EdTech development environment can be formulated (See Table 2.8).

Table 2.8

Comparative Assessment of EdTech Development Potential

Criterion	USA	United Kingdom	Singapore	Republic of Korea	China	India	Ukraine
Domestic market size	Very high	High	Low	High	Very high	Very high	Medium / limited
Innovation potential	Very high	Very high	Very high	Very high	Very high	High	Medium
GII 2025 rank	3	6	5	4	10	38	66
R&D, % of GDP*	3.45	2.68	1.81	4.94	2.58	0,84	0,3
Digital infrastructure	Very high	Very high	Very high	Very high	High	High	High
EdTech government support	High	High	Very high	Very high	Very high	High	High
AI in education	Very high	High	Very high	Very high	Very high	High / developing	Developing
Venture ecosystem	Very high	High	High	High	High	High	Limited
R&D potential	Very high (strong AI and technological base)	Very high (strong university–business sector)	High – concentration of technological and digital capabilities	Very high technological potential	Very high (large scale public and corporate R&D base)	High	Medium
International scalability	Very high	Very high	Very high	High	Very high	Very high	High
Main competitive advantage	Technology + capital	Global education ecosystem	Government digital infrastructure	ICT + education	Scale + technology + government support	Large talent pool + digital scale	IT + human capital
Main limitation	High competition	Regulatory requirements	Small domestic market	Strong government role	Regulatory environment	Infrastructure and institutional constraints	Financial and warrelated constraints

Source: compiled by the author based on data from international organisations and national authorities, including WIPO, the World Bank, UNESCO, OECD, WTO, and national education authorities.

In the second chapter, the competitive environment of the EdTech sector was assessed, the key factors influencing its development were identified, and a comparative analysis of the national EdTech ecosystems of China, Ukraine, and leading economies was conducted in terms of their innovation, digital, and international potential.

CHAPTER 3

DIRECTIONS FOR ENHANCING THE INTERNATIONAL COMPETITIVENESS AND DEVELOPMENT OF EDTECH ENTERPRISES UNDER GLOBAL ECONOMIC TRANSFORMATIONS

3. The Impact of Global Economic Transformations on the International Competitiveness and Development of EdTech Enterprises

Globalisation and digitalisation are gradually transforming the way the education sector operates, strengthening its integration into international trade in services. The development of international economic relations contributes to the expansion of cross-border trade in services, while digital technologies create opportunities for their remote provision without the need for the physical movement of either the provider or the consumer.

The digitalisation of trade, the widespread use of high-speed Internet, digital platforms, cloud technologies, and artificial intelligence facilitate the growth of remotely delivered services. In the education sector, this contributes to the expansion of cross-border provision of educational services, particularly through online courses, digital educational platforms, distance learning systems, and other digital formats.

As a result, a new environment is emerging for the development of enterprises in the education technology sector (EdTech), whose activities combine educational services, digital technologies, and innovative business models. The ability to scale digital products beyond national markets intensifies international competition among EdTech enterprises and increases the importance of their technological, innovative, and organisational capabilities.

Thus, globalisation and digitalisation create the conditions for a transition from a predominantly national model of educational service provision towards a model in which a proportion of educational services can be delivered cross-border through digital networks, creating new opportunities and competitive challenges for EdTech enterprises.

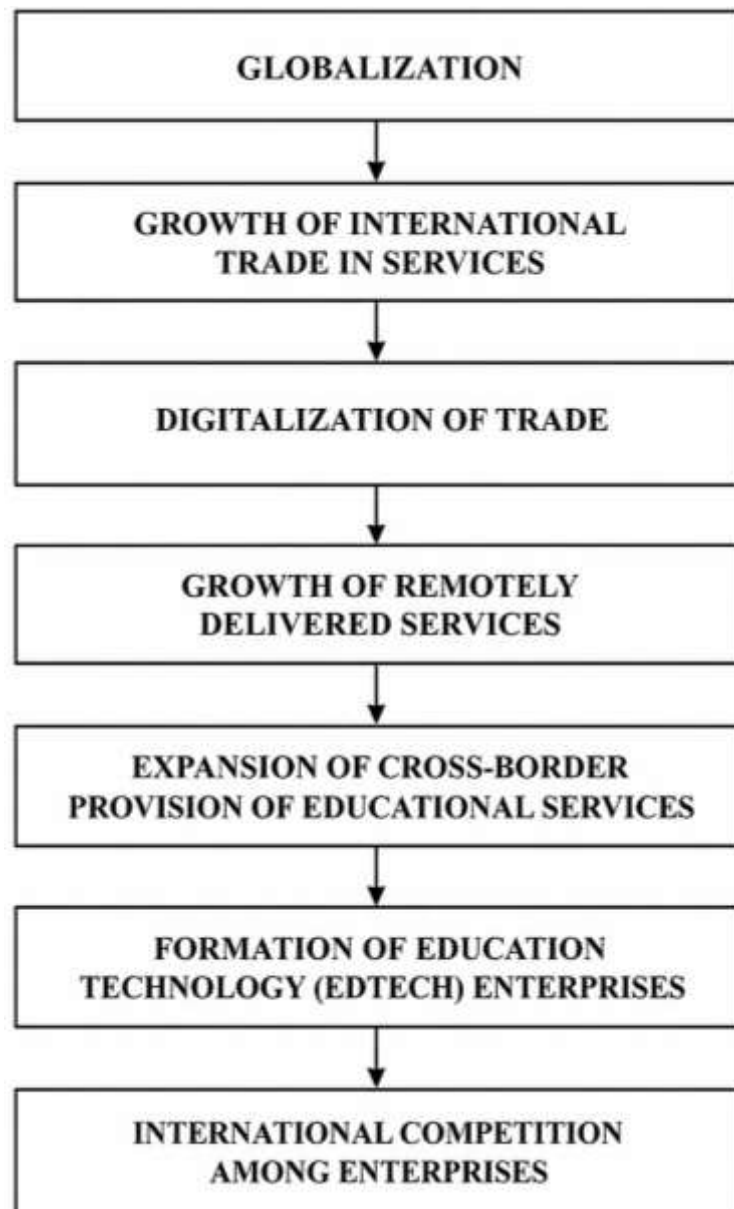


Figure 3.1. The Impact of Globalisation and Digitalisation on the Internationalisation of Educational Services and the Development of EdTech Enterprises

Source: developed by the author.

Figure 3.1 illustrates the sequential transition from globalisation to international competition among edtech enterprises.

For an EdTech enterprise, global trends manifest differently than they do in industrial enterprises (See Table 3.1).

Modern EdTech is characterised by a certain contradiction: on the one hand, overall investment in the sector has declined following the pandemic-driven boom, while on the other hand, the technological complexity of products and their scaling potential are increasing. This means that the international competitiveness of an

EdTech enterprise is becoming less dependent solely on the number of users or the volume of educational content and increasingly depends on its technological base, data quality, AI capabilities, personalisation capacity, platform scalability, and ability to operate in international markets.

Table 3.1

Specific Manifestations of Global Trends in Industrial and EdTech Enterprises

Global Trend	For an Industrial Enterprise	For an Educational Enterprise
Digitalisation	Automation	Online education, EdTech
Globalisation	Product exports	International students and clients
Growing Role of Knowledge	R&D	Teaching quality and educational technologies
Human Capital	Engineers	Teachers, consultants, managers
International Competition	Price + technology	Quality + reputation + service
Global Value Chains (GVCs)	Component manufacturing	International educational partnerships
Cultural Adaptation	Product adaptation	Linguistic and cultural adaptation of education

Source: compiled by the author.

Table 3.2

Key Technological Areas of Global EdTech Development and Their Competitive Significance

Direction	Main Technologies	Competitive Significance
Online Education	LMS, MOOCs, video learning	Scaling of educational services
Digital Content	E-books, multimedia, interactive content	Reduction in the marginal costs of distribution
AI in Education	AI tutors, generative AI, adaptive learning	Personalisation of learning
Learning Analytics	Big Data, learning analytics	Individualisation of learning pathways
Digital Assessment	Online testing, automated assessment	Automation of assessment
Corporate EdTech	Upskilling, reskilling, L&D platforms	Increased productivity of human capital
Educational Management	SIS, ERP, school management systems	Digitalisation of education management
AR/VR & Immersive Learning	VR, AR, simulation	New models of practical learning

Source: compiled by the author based on contemporary trends in the digital transformation of education.

Table 3.2 shows that the development of the global EdTech sector is focused on the digitalisation of educational services, the personalisation of learning, the automation of assessment, and the use of AI and data analytics. At the same time, these technological areas generate specific competitive advantages for enterprises, including scalability, cost reduction, improved quality, and the individualisation of educational services.

Thus, the impact of global economic trends is reflected in the fact that technological capability is becoming one of the key determinants of the international competitiveness of EdTech enterprises.

Figure 3.2 presents the conceptual model of global economic trends and structural asymmetries of competitive opportunities.

The presented conceptual framework shows a sequential relationship between global economic trends, structural imbalances, and the international competitiveness of enterprises. The model reflects not only the direct impact of global processes but also the mechanisms through which they influence the competitive opportunities of enterprises [11].

At the first level, the main global economic trends shaping the contemporary international economic environment are presented. These include digitalization of the economy, the development of global value chains, geoeconomic fragmentation, and the ESG and sustainability agenda. Digitalization promotes the spread of digital platforms, data, and knowledge, reduces certain barriers to entering international markets, but may also increase the concentration of market power. Global value chains provide enterprises with access to international markets and resources and can increase productivity, while simultaneously increasing dependence on external shocks. Geoeconomic fragmentation is reflected in regionalization, trade restrictions and geopolitical risks, leading to the restructuring of international supply chains. ESG and sustainability, in turn, increase the importance of environmental and social responsibility, access to green financing, and corporate reputation.

The second level reflects the concentration of resources and market power. Global trends create unequal conditions for different market participants. Large

transnational corporations concentrate a significant share of sales, profits, and capital, control key technologies, data, and digital platforms, and possess greater bargaining power. At the same time, high market concentration limits competition and the entry of new participants. Small and medium-sized enterprises face lower productivity and more limited access to finance, innovation, and international markets.

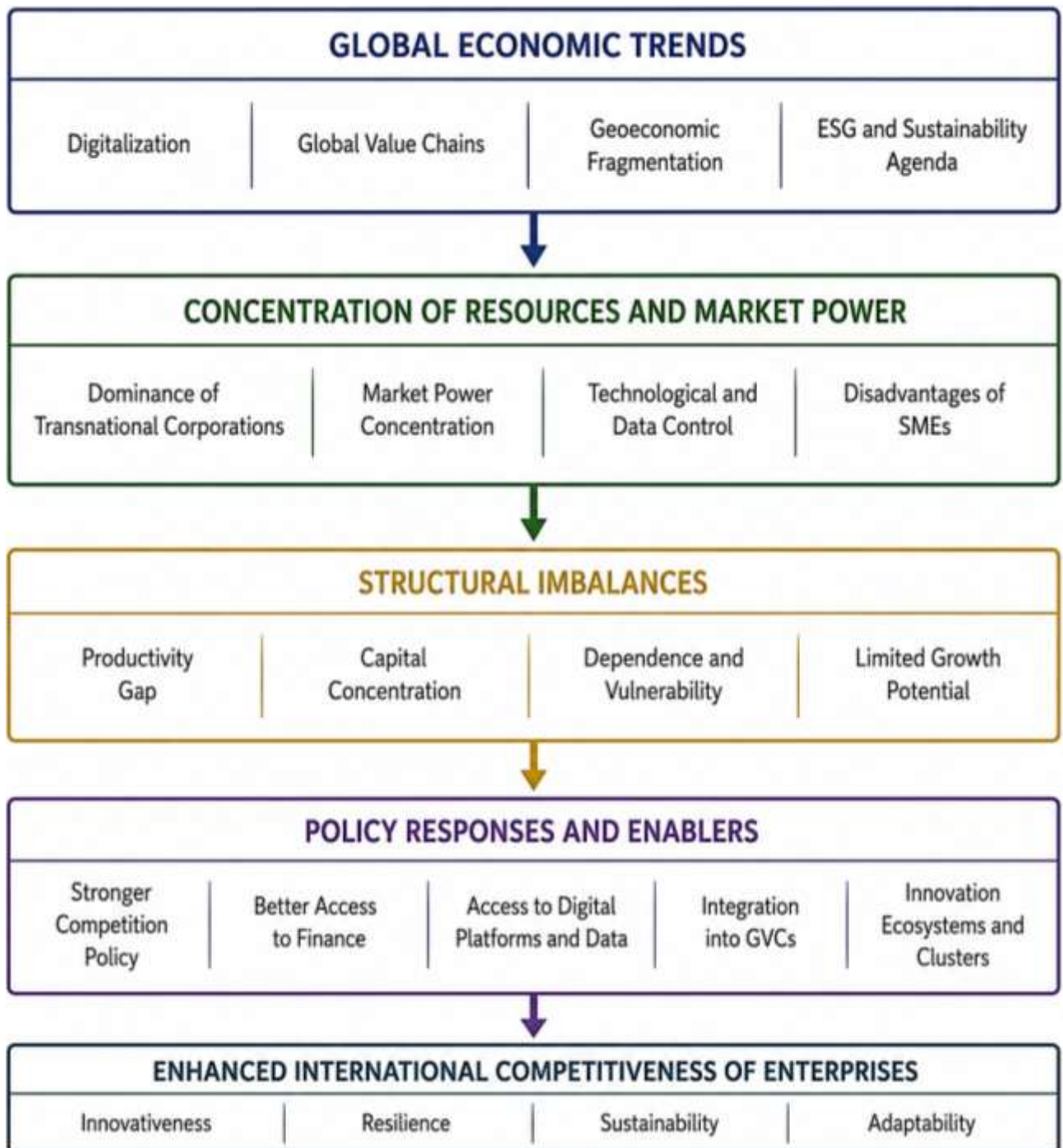


Figure 3.2. Conceptual Model: Global Economic Trends and Structural Asymmetries of Competitive Opportunities (developed by the author)

As a result, a structural asymmetry of competitive opportunities emerges. It is manifested primarily in the productivity gap between large enterprises and SMEs, capital concentration, dependence and vulnerability to external shocks, as well as limited potential for growth and international scaling. Thus, the same global economic trends may affect enterprises differently depending on their size, resources, technological level, and market position.

The next block presents policy and institutional mechanisms for reducing these imbalances. The main measures include stronger competition policy, improved access for SMEs to finance, digital platforms and data, integration into global value chains, as well as the development of innovation ecosystems and clusters. These instruments help create more balanced conditions for enterprises to participate in international competition.

The final outcome is enhanced international competitiveness of enterprises, which involves taking global economic trends into account, overcoming structural asymmetries in the global economy, and developing four key characteristics: innovativeness, resilience to external shocks, sustainability, and adaptability.

3.2 Innovation and Organisational Approaches and Mechanisms for Building the International Competitiveness of Enterprises in the EdTech Sector under Global Economic Transformations

The competitiveness of a digital education enterprise depends on the extent to which it can leverage the advantages of the national innovation *ecosystem*, including access to IT specialists, research centres, venture capital, digital infrastructure, large datasets, and partnerships with educational institutions.

Learner-centered needs determine the purpose of digital transformation; AI and data-driven technologies provide the mechanisms for personalized and adaptive learning; and their integration with digital infrastructure, human engagement, and adaptive pedagogy forms a holistic Digital Learning Ecosystem (See Figures 3.3, 3.4 and 3.5).

The three figures are interconnected and consistently reveal the logic of digital transformation in education – from the needs of an individual learner to the formation of a holistic digital learning ecosystem.

At the first stage, the learner and their individual needs are placed at the center of the educational process (Figure 3.3). Digital transformation should begin not with the introduction of a specific technology, but with the identification of educational goals, learner needs, and the conditions under which learning takes place. It is precisely the learner-centered approach that determines the direction of further use of digital technologies.

The next link is data and artificial intelligence, which enable learning personalization (Figure 3.4). Digital educational platforms, learning management systems, assessment tools, and other sources generate data on learners' activities and performance. The collection, integration, processing, and analysis of these data enable AI to support personalized learning pathways, adaptive testing, content recommendations, and progress monitoring. Thus, AI is not an end in itself of digitalization, but rather a tool for transforming educational data into personalized learning solutions [8].

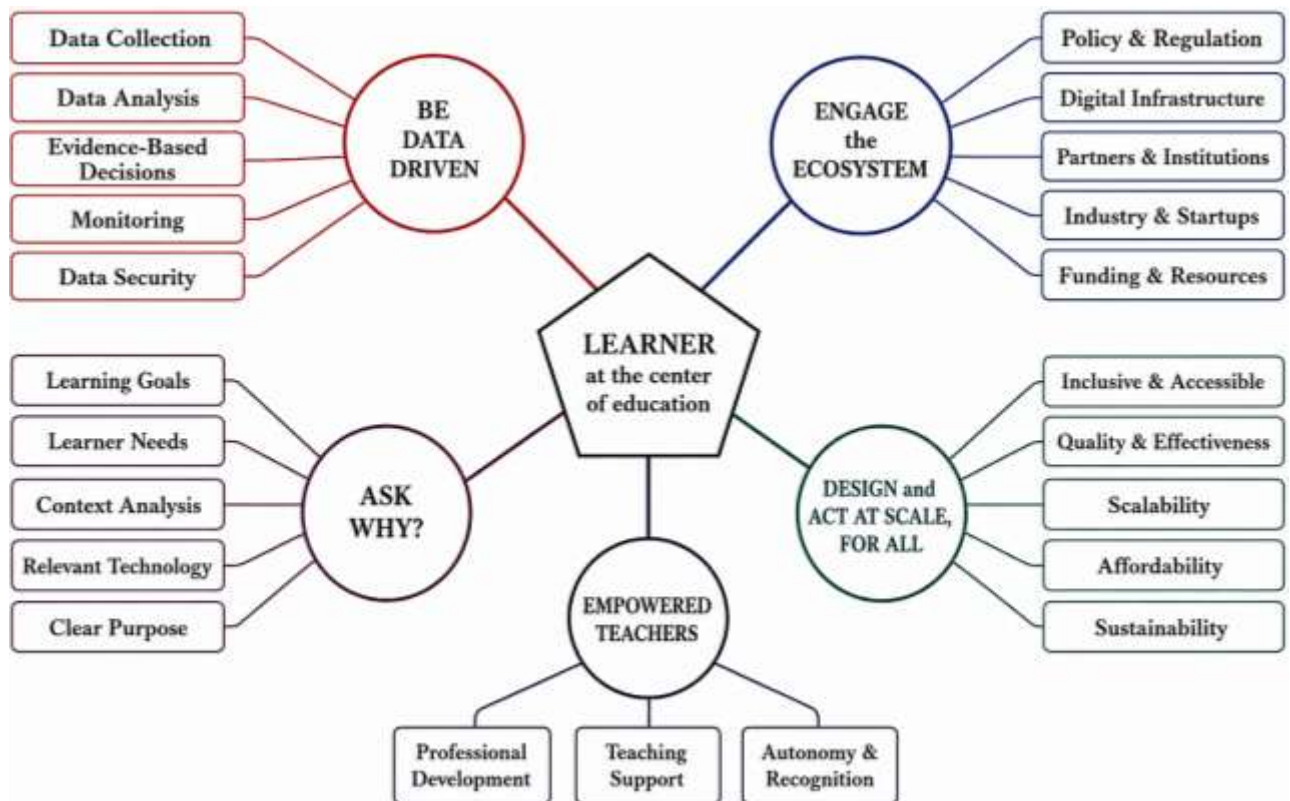


Figure 3.3. Innovation Development Strategies and the Formation of Technological Capabilities

Source: developed by the author.

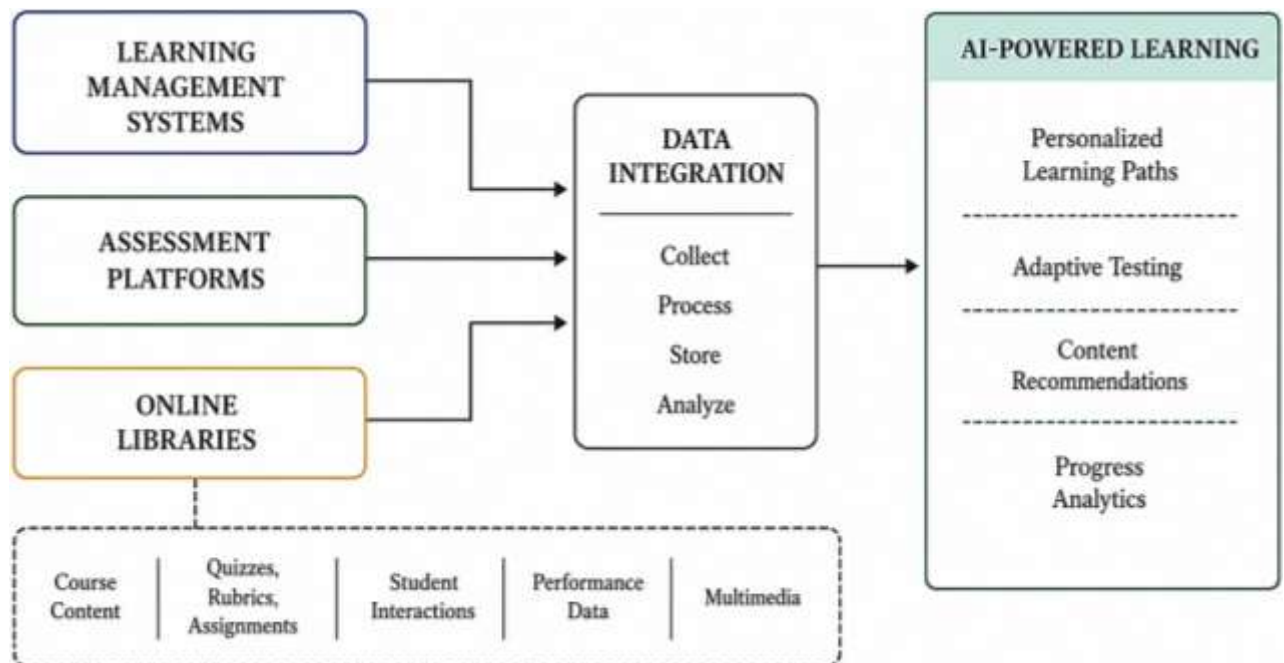


Figure 3.4. Mechanism of Data-Driven Personalized Learning

Source: developed by the author.

The logical completion of this sequence is the Digital Learning Ecosystem (Figure 3.5), in which technologies, data, artificial intelligence, pedagogical processes, teachers, and learners function as interconnected elements of a unified system. Its effectiveness is determined not by an individual digital tool, but by the coordinated interaction of Digital Infrastructure, AI Personalization, Human Engagement, and Adaptive Pedagogy.

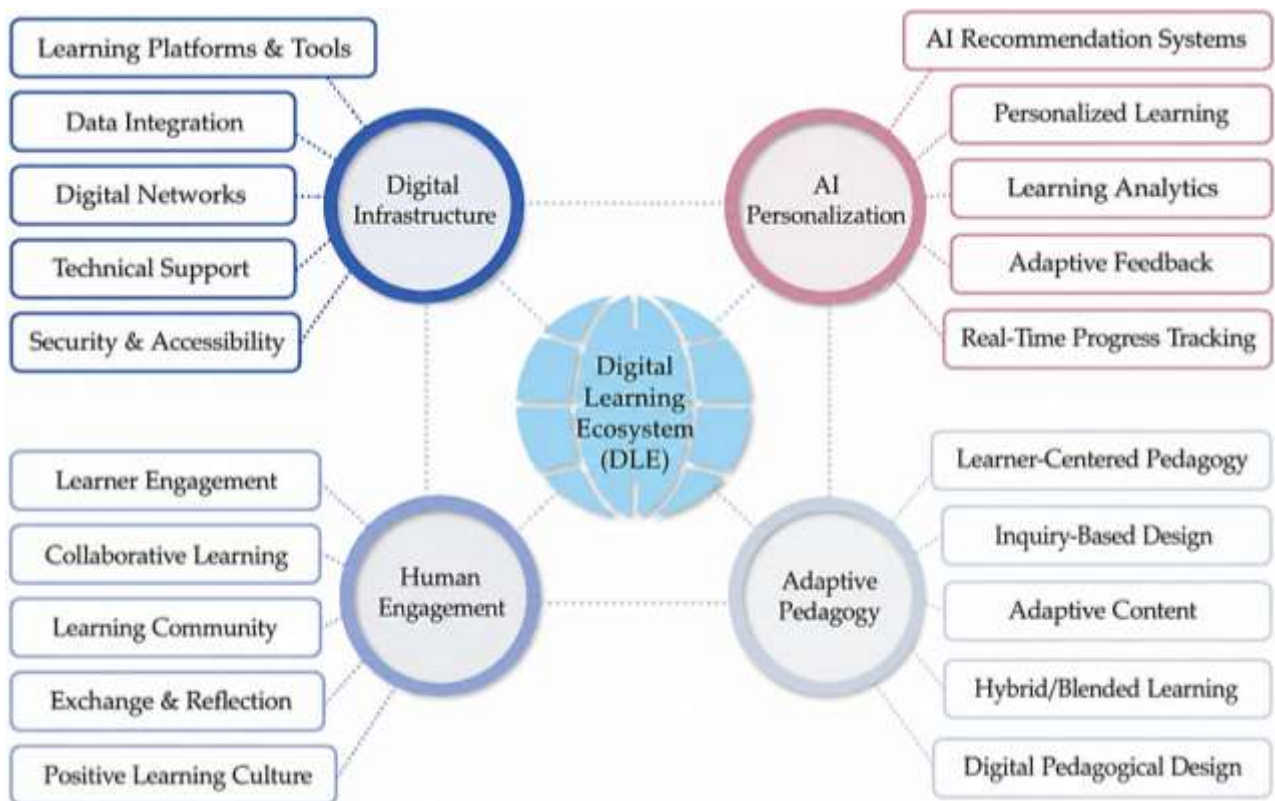


Figure 3.5. Structural Components of the Digital Learning Ecosystem

Source: developed by the author.

Thus, the three figures enable a transition from viewing digital learning as a set of individual EdTech tools to understanding it as a holistic digital learning ecosystem. The central connecting element in this transition is data-driven personalization, through which digital infrastructure enables data collection, while data integration and analytics transform these data into educational insights. AI then uses these insights to personalize and adapt learning, while the pedagogical and human components ensure the effective application of the resulting solutions.

In general, the relationship between the approaches presented in the three figures

can be expressed through the following logical sequence: Learner → Data → AI-enabled Personalization → Human-Centered Adaptive Learning → Digital Learning Ecosystem.

Therefore, the digital transformation of education does not occur simply through the introduction of LMSs, AI, or digital platforms, but through the integration of infrastructure, data, artificial intelligence, pedagogy, teachers, and learners into a unified ecosystem oriented toward individual educational needs and capable of ensuring adaptive, scalable, and effective learning.

At the same time, the sequence Learner → AI → Ecosystem reflects three interconnected levels: Learner represents the individual learner and their needs; AI represents the technological mechanism of personalization; and Ecosystem represents the holistic system that integrates technological, human, and pedagogical components.

A generalization of the mechanisms underlying the formation of EdTech potential can be presented as a sequence: national education policy → digital infrastructure → human and technological capital → innovation ecosystem → EdTech enterprises → digital educational products → international scaling → international competitiveness (see Figure 3.6).

The existence of such interrelationships explains why the same technological product may have different development opportunities depending on its country of origin. For example, an enterprise operating in China has access to a large domestic market, extensive digital infrastructure, government-supported educational platforms, and a powerful technological ecosystem. A Ukrainian enterprise has a smaller domestic market but can compensate for this limitation through a strong international orientation, the use of IT competencies, and the development of products initially designed for cross-border digital delivery.

It is also important to consider that digital trade reduces the importance of geographical proximity between producers and consumers. This is particularly relevant for EdTech, as a digital educational product can be distributed through a single platform across several national markets simultaneously.

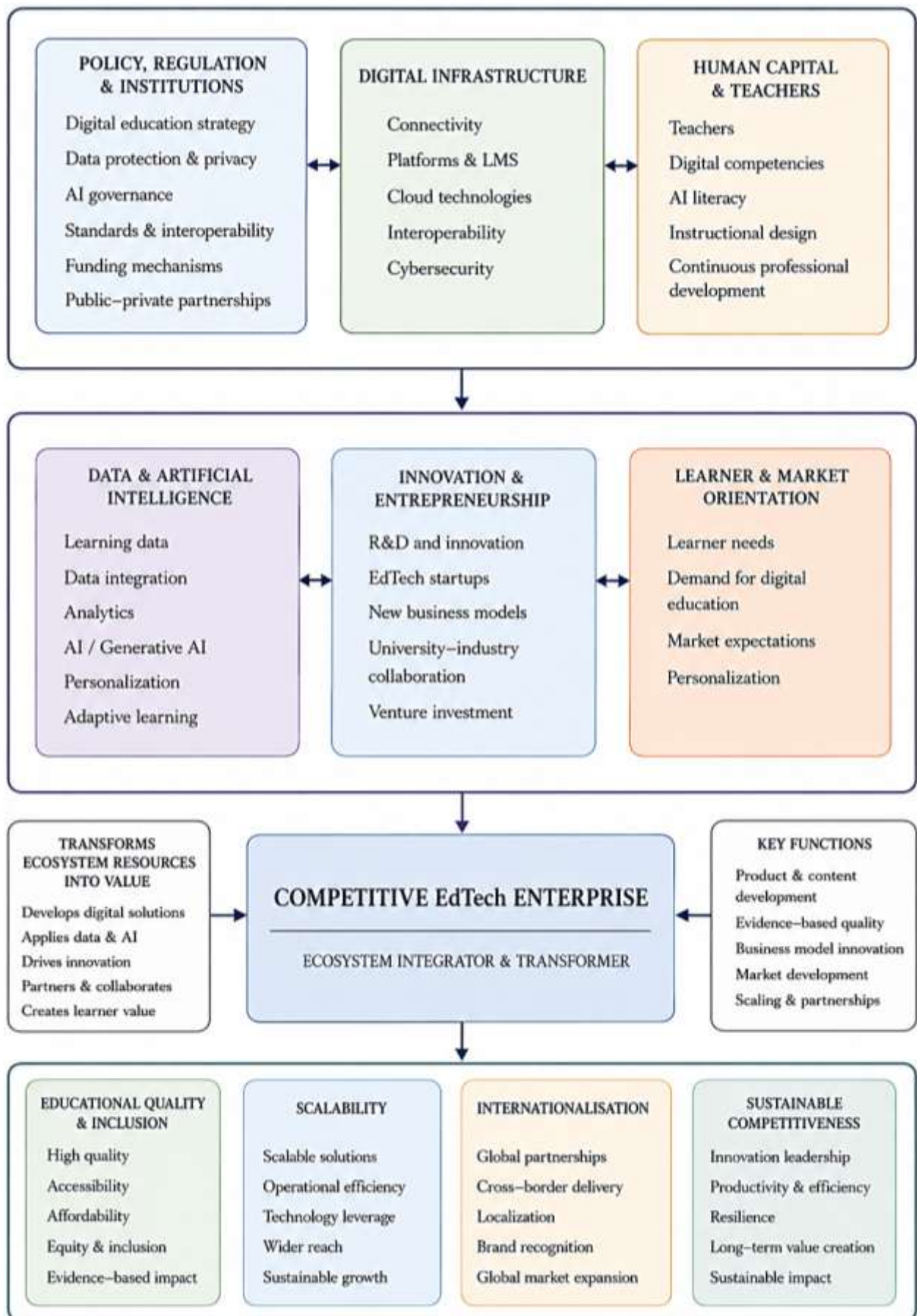


Figure 3.6. Mechanism of EdTech Potential Formation and Its Transformation into International Competitiveness (developed by the author)

At the same time, the international scaling of EdTech companies depends not only on technology. Key barriers include language and cultural adaptation, differences in educational curricula, personal data requirements, cybersecurity, AI regulation, intellectual property protection, and restrictions on digital trade. The OECD emphasizes that regulatory barriers to digital services can increase costs for international suppliers and limit companies' ability to benefit from digital trade.

For Ukraine, this means that a high share of the population with Internet access and significant IT potential create only potential, rather than automatic, international competitiveness for the EdTech sector. To realize this potential, technological competencies must be combined with international scaling business models, access to financing, international partnerships, and the ability to adapt educational products to different markets.

For China, the situation is different: a large domestic market and extensive government-supported digital infrastructure create substantial potential for product testing and scaling. At the same time, entering developed-country markets requires Chinese companies to overcome barriers related to international regulatory compatibility, localization, and trust in digital platforms.

Thus, the key and universal competitive advantage for educational companies across different countries is the ability to transform the advantages of the national environment into concrete business performance outcomes.

Table 3.3 demonstrates that the international competitiveness of EdTech enterprises is determined by a combination of technological, innovation, economic, market, educational, institutional, marketing, infrastructure, and organisational factors. These factors are closely interrelated: technological and innovation capabilities determine the scalability and differentiation of digital products, while product quality, international adaptability, and marketing capabilities influence their acceptance in foreign markets. At the same time, economic, infrastructure, institutional, and organisational conditions determine the enterprise's ability to enter and operate effectively across different national markets.

Table 3.3

Factors of International Competitiveness of EdTech Enterprises

Factor group	Main factors	Impact on international competitiveness
Technological	Level of digital technologies, AI, cloud solutions, platform scalability, cybersecurity	Determine the quality, speed and scalability of the digital product
Innovation	Product novelty, personalised learning, AI tutors, adaptive systems, Learning Analytics	Enable product differentiation from competitors
Economic	Costs, pricing, investment, financial sustainability, marginal costs	Determine price competitiveness and opportunities for international scaling
Market	EdTech demand, market size, competition, consumer behaviour	Determine the attractiveness of entering specific international markets
Educational product quality	Content quality, learning outcomes, teacher qualifications, certification	Build user trust and enterprise reputation
International adaptability	Localisation, language adaptation, cultural adaptation, compliance with local educational standards	Enable adaptation of the product to the needs of different countries
Infrastructure	Availability of high-speed Internet, digital infrastructure, cloud services	Determine the technical feasibility of using the product in different markets
Institutional and legal	Education regulation, personal data protection, copyright, accreditation, tax requirements	May either facilitate or constrain entry into international markets
Marketing	Brand, digital marketing, reputation, distribution channels, partnerships	Determine the ability to attract and retain international users
Organisational	Management flexibility, human capital, international experience, partnership networks	Ensure effective enterprise operations across different markets

Source: compiled by the author.

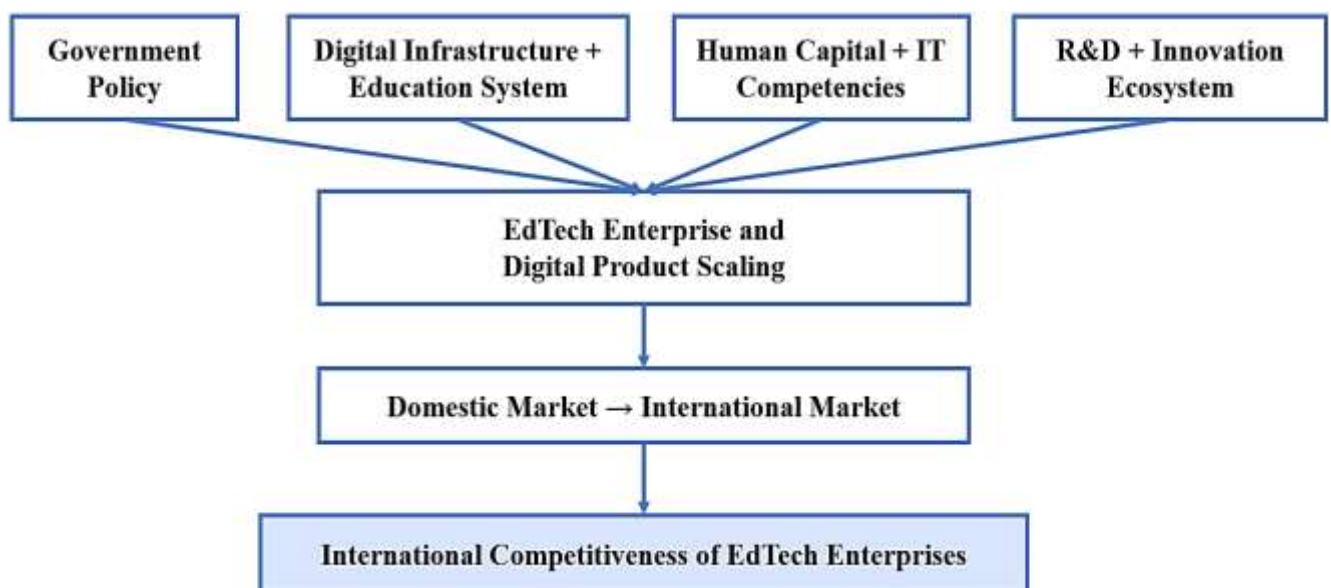


Figure 3.7. Mechanism for the Formation of EdTech Enterprise Competitiveness

Source: developed by the author

Thus, the international competitiveness of an EdTech enterprise should be viewed as a multidimensional capability that combines technological excellence, educational value, economic efficiency, international adaptability, and organisational capacity. The stronger and more balanced these factors are, the greater the enterprise's ability to scale digital educational products, respond to changing international market conditions, and establish sustainable competitive positions in global markets.

Figure 3.7 demonstrates the mechanism for the formation of EdTech enterprise competitiveness, in which external conditions of the national environment are transformed into prerequisites for enterprise development, digital product scaling, and entry into international markets. At the first stage, the formation of competitive potential is influenced by four key groups of factors: government policy; digital infrastructure and the education system; human capital and IT competencies; and R&D and the innovation ecosystem.

The combined influence of these factors creates conditions for the development of an EdTech enterprise and the scaling of its digital product. The scalability of the digital product, in turn, enables the transition from the domestic to the international market, expanding the potential customer base and opportunities for international expansion.

Thus, the final outcome of the mechanism is the formation of the international competitiveness of the EdTech enterprise. The model demonstrates that competitiveness is not formed solely at the enterprise level but results from the interaction between national institutional, digital, human-capital, and innovation-related prerequisites and the enterprise's internal ability to develop, scale, and commercialise digital educational products.

In the third chapter, the impact of global economic transformations on the competitiveness of EdTech enterprises was identified, the key factors shaping their competitiveness were systematised, and approaches and mechanisms for the international scaling of digital educational products were developed.

CONCLUSIONS

The study has provided a comprehensive examination of the impact of global economic trends on the competitiveness and development of EdTech enterprises in international markets. The research demonstrates that contemporary globalisation is undergoing significant transformation under the influence of digitalisation, technological change, regionalisation, geopolitical competition, and the restructuring of global value chains. These processes are fundamentally changing the conditions under which enterprises in the EdTech sector develop and compete internationally.

In the first chapter, the theoretical foundations for studying enterprise competitiveness under conditions of global economic change were examined. The main trends of contemporary globalisation were analysed, including digitalisation, regionalisation, the transformation of global value chains, and the intensification of geoeconomic competition, as well as their impact on the conditions of enterprise development. The essence of international enterprise competitiveness was defined, and its internal and external determinants were considered. Particular attention was paid to the role of innovation, technologies, human capital, digitalisation, and global value chains in the formation of competitive advantages. The WEF, IMD, and GII methodologies for assessing competitiveness and innovation potential were also examined. In addition, the innovation development strategies of transfer, borrowing, and capability-building were considered. The comparison of China and Ukraine demonstrated differences in the conditions for the formation of competitiveness and confirmed that contemporary competitive advantages increasingly depend on technological capabilities, innovation, digitalisation, human capital, and the ability to adapt to global economic changes.

In the second chapter, the competitive environment of the EdTech sector was assessed, the key factors influencing its development were identified, and a comparative analysis of the national EdTech ecosystems of China, Ukraine, the United States, the United Kingdom, Singapore, the Republic of Korea, and India was conducted. The analysis focused on the innovation, digital, institutional, human-

capital, and international dimensions of these ecosystems. It demonstrated that countries have different configurations of competitive conditions in the EdTech sector. The United States and the United Kingdom are characterised by developed innovation ecosystems, strong private-sector participation, and significant potential for international scaling. Singapore and the Republic of Korea demonstrate a high level of state-supported digital transformation and systematic integration of technologies into education. China combines a large domestic market, strong digital infrastructure, substantial R&D resources, state-supported digitalisation, and rapidly developing AI capabilities. Ukraine has significant human capital, IT competencies, digital infrastructure, and experience in online education, but its EdTech ecosystem operates under considerably greater financial, institutional, and security constraints.

The analysis of the EdTech sector confirms that digital technologies are transforming education into an increasingly internationally tradable service. Digital platforms, online courses, mobile applications, cloud technologies, AI-based educational solutions, adaptive learning systems, and Learning Analytics reduce the importance of geographical distance between providers and consumers. As a result, EdTech enterprises can increasingly develop products and services for international markets without establishing a physical presence in each target country.

The analysis also demonstrates that the international competitiveness of EdTech enterprises is formed at the intersection of four major dimensions: educational, digital, innovation, and entrepreneurial capabilities. Educational quality determines the value of the service; digital capabilities provide scalability and accessibility; innovation capabilities support differentiation and technological development; and entrepreneurial capabilities determine the ability to identify market opportunities, commercialise solutions, establish partnerships, and operate effectively in international markets.

The comparative assessment further shows that the availability of technologies alone does not guarantee international competitiveness. The ability to integrate education, technology, artificial intelligence, data analytics, cloud computing, cybersecurity, and software development into scalable and commercially viable products is becoming increasingly important. In this context, countries with stronger

innovation and R&D ecosystems have greater opportunities to develop not only digital educational content but also sophisticated technological platforms and AI-enabled educational solutions.

China demonstrates particularly strong potential in this area due to the combination of technological capabilities, a large domestic market, digital infrastructure, R&D resources, and state-supported digital transformation. Its entry into the top ten of the Global Innovation Index 2025 reflects the growing importance of innovation and technological capabilities in the country's economic development. At the same time, the analysis indicates that China's future international EdTech competitiveness depends not only on technological scale but also on the international adaptation of educational products, the development of cross-border partnerships, and the ability to respond to the specific needs of foreign markets.

Ukraine has a different configuration of competitive conditions. Despite lower levels of innovation inputs and significant financial and institutional constraints, the country possesses important competitive prerequisites, particularly in human capital, IT competencies, digital skills, and experience with online education. The development of national digital educational platforms demonstrates that digital transformation has moved beyond individual electronic services towards the formation of a broader digital educational ecosystem. For Ukrainian EdTech enterprises, however, the ability to transform these advantages into scalable commercial products and internationally oriented services remains particularly important.

In the third chapter, the impact of global economic transformations on the competitiveness of EdTech enterprises was identified, the key factors shaping their competitiveness were systematised, and approaches and mechanisms for the international scaling of digital educational products were developed. The analysis established that the competitiveness of EdTech enterprises is influenced by a combination of technological, innovation, market, institutional, human-capital, financial, and internationalisation factors. Among these, digitalisation, AI adoption, product quality, innovation capacity, human capital, international adaptation, cybersecurity, and the ability to scale digital products are becoming increasingly

significant.

The findings indicate that the international scaling of EdTech products requires more than simply transferring an existing educational product to another country. Effective internationalisation requires linguistic and cultural adaptation, localisation of educational content, consideration of regulatory requirements, development of international partnerships, appropriate digital infrastructure, cybersecurity, and the establishment of effective channels for reaching international customers.

For enterprises in the EdTech and educational services sector, several priority directions for strengthening international competitiveness have therefore been identified.

First, digitalisation of services should be continued through the expansion of online and hybrid learning formats, digital platforms, AI-based solutions, and other technologies that enable international delivery of educational services.

Second, enterprises should focus on quality improvement and service differentiation, developing products that address the specific needs of particular customer groups rather than competing primarily through lower prices.

Third, human capital development should remain a strategic priority. The professional, digital, technological, and language competencies of employees are essential for maintaining service quality and interacting effectively with international customers.

Fourth, enterprises should strengthen international adaptation and localisation, taking into account the linguistic, cultural, educational, and regulatory characteristics of target markets.

Fifth, the development of international partnerships with universities, educational organisations, technology companies, and other institutions can facilitate access to new markets, knowledge, technologies, and customer groups.

Sixth, enterprises should increase the value added of educational services by moving from standard educational provision towards integrated digital products that may combine education, consulting support, language preparation, academic guidance, assessment, analytics, and other complementary services.

Seventh, for Chinese EdTech enterprises, a particularly important strategic direction is to combine the strengths of the Chinese ecosystem — technological capabilities, digital infrastructure, AI development, R&D capacity, and scalability — with greater international adaptation, international partnerships, localisation, and customer-oriented product development.

The research therefore confirms that globalisation and digitalisation are transforming education into an increasingly international and digitally deliverable economic activity. This transformation creates new opportunities for EdTech enterprises to overcome geographical limitations and enter international markets. At the same time, it increases competitive requirements because enterprises must simultaneously satisfy educational, technological, commercial, and international market requirements.

The scientific novelty of the obtained results lies in the further development of theoretical and methodological approaches to studying the impact of global economic trends on the competitiveness and development of EdTech enterprises in international markets. In particular, the theoretical understanding of the relationship between global economic transformations and the competitiveness of EdTech enterprises has been refined; key global factors affecting the development and international activities of enterprises in the sector have been systematised; the relationship between global trends, the competitive environment, and the strategic behaviour of EdTech enterprises has been further developed; and the relationship between national EdTech ecosystem conditions and the international competitiveness of enterprises has been theoretically substantiated.

The practical significance of the research lies in the possibility of applying the obtained results and recommendations by EdTech enterprises when developing international strategies, scaling digital educational products, selecting target markets, adapting products to foreign customers, and establishing international partnerships. The findings may also be useful for managers of EdTech enterprises, public authorities developing policies to support the digital economy and innovative entrepreneurship, participants in national EdTech ecosystems, and higher education institutions in

teaching subjects related to international economics, international business, the digital economy, and enterprise competitiveness.

Overall, the study demonstrates that the international competitiveness of EdTech enterprises is increasingly determined by the interaction of educational quality, digital and technological capabilities, innovation capacity, human capital, institutional conditions, and the ability to adapt and scale products in international markets. The competitive advantage of an EdTech enterprise therefore depends not only on the technologies it possesses but also on its ability to transform knowledge and technology into high-value, scalable, adaptable, and internationally relevant digital educational products.

The results of the study confirm that there is no universal model of EdTech competitiveness. Different countries develop different combinations of institutional, technological, financial, educational, and human-capital advantages. Consequently, the successful international development of EdTech enterprises requires the adaptation of global technologies and business models to the specific conditions of target markets while maintaining sufficient technological scalability and product quality.

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APPENDICES

Approbation of the Results of the Master's Degree Qualification Thesis



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**WORLD ECONOMY AMID GLOBAL
TURBULENCE: CHALLENGES AND NEW
DEVELOPMENT MODELS**

PROCEEDINGS OF THE
INTERNATIONAL SCIENTIFIC AND PRACTICAL
ONLINE CONFERENCE

**INTERNATIONAL COMPETITIVENESS OF ENTERPRISES IN THE
CONTEXT OF GLOBAL ECONOMIC TRENDS AND STRUCTURAL
IMBALANCES**

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Global economic trends of recent decades have shaped a new paradigm of
international enterprise competitiveness, in which not only cost factors and access to
resources are decisive, but also the ability to innovate, undergo digital transformation,
and adapt to a dynamic environment. Studies conducted by international
organizations indicate that integration into global value chains provides enterprises
with higher productivity and access to new markets, while simultaneously increasing
their dependence on external shocks [2; 6].