

DEVELOPMENT OF INTEGRATED SMART BUSINESS MODELS FOR ECONOMIC RECOVERY IN UKRAINE AND THE EUROPEAN UNION

Abstract. The article is dedicated to exploring the development of integrated smart business models for economic recovery in Ukraine and the European Union. An integrated approach to creating new business models is analyzed and proposed. Key types of integrated smart business models that can be used to support economic growth and development are identified. The article calls for collaboration and partnership between the business community, government, and academic institutions to successfully implement these integrated smart business models.

In the light of the global economic crisis caused by Russia's invasion of Ukraine, many countries around the world, especially the EU, are facing serious economic challenges. However, along with challenges, this situation also provides an opportunity to review and improve the efficiency of business models. Integrated intelligent business models can be a key tool for restoring economic growth in the EU and Ukraine as they recover from the war. These business models represent an innovative approach that combines many factors, including the use of new technologies, interaction between different sectors of the economy, and cooperation between enterprises and innovative start-ups. Integrated smart business models can be effective tools for promoting economic recovery, as they can increase resource efficiency, reduce costs and accelerate the adoption of new technologies. In this way, they can create new opportunities for business development and increase competitiveness both locally and internationally.

In the European Union, smart specialisation has become part of the «Europe 2020: A Strategy for Smart, Sustainable and Inclusive Growth» [1], which aims to ensure sustainable and knowledge-based growth in the EU regions. The aim of the strategy is to increase the competitiveness of EU regions through investments in research and innovation, as well as to create new jobs and improve the quality of life. In Ukraine, smart specialisation has also begun to play an important role in supporting economic growth and development. The state strategy for regional development «State Strategy for Regional Development for 2021-2027» aims to support regional initiatives and develop the competitiveness of Ukrainian regions [2, p. 6]. The European Union is already taking steps to encourage innovation and the use of new technologies in business. For example, the Horizon 2020 and Horizon Europe programmes fund research and development in various fields, such as artificial intelligence, cybersecurity, environment, and energy [3]. At the same time, Ukraine is also trying to attract investment and develop its national innovation potential. However, more specific measures and initiatives to promote integrated smart business models are still lacking.

Integrated smart business models for economic recovery in the EU and Ukraine is a relatively new field of research. Yonatan Levy and Bernard Quassi wrote a study «Smart Business Models for Recovery: The French Example» [4, p. 684]. They investigated how the integration of new technologies and smart business models can contribute to the economic recovery of France. Roberto Zoboli and Alessandro Palma researched «Integrated Smart Business Models for Economic Recovery: The Role of the State and the Private Sector» [5]. In their work, they examined how government support and investment can help develop smart business models and contribute to Italy's economic recovery. The Research Centre «Smart Business Models and Sustainable Economic Development» in Belgium is also working on this issue [6]. They conduct research and organise seminars and conferences on the development of smart business models and their role in sustainable economic development. The research conducted by Yigitcanlar, Kamruzzaman, Foth,

Sabatini-Marques, da Costa, and Ioppolo aimed to investigate whether cities could become smart without being sustainable by conducting a systematic review of the literature [7]. The authors analyzed various academic papers and identified a lack of consensus on the relationship between smartness and sustainability in cities. Lorenzo Massa and his colleagues from Switzerland conducted a study «Smart Business Models for Economic Recovery: Insights from the Swiss Experience» [8, p. 266]. They studied how smart business models helped Switzerland cope with the effects of the economic crisis and ensure sustainable growth.

Research related to integrated smart business models is in its infancy and there are some knowledge gaps. Some of the gaps include a lack of empirical data, a lack of standards and methodologies for measuring the effectiveness of smart business models, and a lack of a clear understanding of how smart business models can be integrated into existing economic systems and cultures in the region. In addition, the availability and use of technology in the regions can be an obstacle to the development of smart business models and their successful integration into economic systems. To fill these knowledge gaps, more research is needed to better define the potential benefits and limitations of integrating smart business models into the EU and Ukrainian economies.

Integrated intelligent business models are the most effective approach to developing and implementing new business models. These models combine various intelligent technologies, such as artificial intelligence (AI), machine learning (ML), data analytics (DA) and the Internet of Things (IoT), to create innovative and efficient business models. There are a number of benefits to implementing integrated intelligent business models. First, they allow companies to reduce costs and increase profits by optimising business processes and improving resource management. Secondly, they allow companies to quickly adapt to changes in the market environment and respond flexibly to new customer requirements.

For the EU and Ukraine, integrated smart business models can be a key tool for economic recovery after the pandemic. In the EU, integrated smart business models are already widely used in various industries, such as finance, healthcare, manufacturing, and transport. In Ukraine, the implementation of such models is just beginning, but there are already a number of successful examples of such technologies in industries such as IT, finance and logistics.

Against the backdrop of the military conflict, integrated intelligent business models can become one of the tools for economic recovery in Ukraine and the EU. Based on the research conducted, the following types of integrated smart business models can be distinguished: digital state model, innovation cluster, sustainable economy development, SME cluster development, export cluster development, and infrastructure development.

In the light of the military conflict and the general economic crisis in Ukraine, the digital state model can be an effective way to improve the efficiency of public administration and the provision of services to the population. It could include the use of new technologies such as artificial intelligence and blockchain to improve decision-making and increase the transparency of government programmes.

The innovation cluster model could be another integrated smart business model that could be implemented in Ukraine and the EU. A cluster can bring together different sectors of the economy, including the IT industry, manufacturing, transport and logistics, to increase productivity and create new business opportunities. This model can help create new jobs and attract investment to the region.

The sustainable economy model can be applied in Ukraine and the EU through the use of innovative technologies and practices that will help reduce harmful emissions and increase the energy efficiency of production processes. As a result, the environmental pressure on the environment can be reduced and the economy's dependence on energy sources such as oil and gas can be reduced.

The SME cluster development model can bring together enterprises from different sectors of the economy to improve their competitiveness and productivity. In addition, it can facilitate the

exchange of experience and knowledge between enterprises, which can improve the quality of products and services.

The export cluster development model envisages the creation of clusters specialising in the export of goods and services to different countries. This model can help attract foreign investment and create new jobs.

The model of infrastructure development, such as roads, railways and airports, can help improve trade links and the country's investment attractiveness. The development of communication infrastructure and Internet technologies could help to develop the information technology sector and increase its competitiveness. These measures will help Ukraine attract foreign investment and strengthen ties with the European Union.

A comprehensive integrated smart business model that implements the above can be formed to improve Ukraine-EU relations based on the following elements:

1. Digital technologies and the Internet of Things (IoT). Ukraine can use digital technologies and IoT to improve its infrastructure and management of cities, transport, healthcare, and other sectors. This can lead to greater resource efficiency, lower energy costs, and a better quality of life for citizens. In addition, it can create new opportunities for innovative start-ups and small and medium-sized enterprises (SMEs), increasing economic growth.

2. Energy efficiency. This pillar involves the use of energy efficient technologies, such as solar panels, wind turbines, and other renewable energy sources, to reduce dependence on imported oil and gas. This can reduce energy costs and lower emissions, thus reducing the negative impact on the environment.

3. Export development. Ukraine can use export development as a means of strengthening its economic ties with the EU. To do so, it should focus on developing competitive industries, such as IT, agriculture, metal production, and others. This could lead to an increase in foreign exchange earnings, the creation of new jobs, and improved economic ties between Ukraine and the EU.

4. Innovations and start-ups. Ukraine can use the development of innovations and start-ups to create new opportunities for economic growth and integration into the EU. It could also attract new investors and improve the international perception of Ukraine as a country investing in technology.

A comprehensive, integrated smart business model based on the above elements could help Ukraine strengthen its economic ties with the EU and make its economy more resilient and competitive. However, its successful implementation requires the development of specific action plans, the attraction of investors, and political support from the government and the business community. Thus, an integrated smart business model focused on Ukraine's economic recovery and the EU's post-war recovery has a number of advantages over current business models. It allows companies and entrepreneurs to better understand the market and interact with each other, which contributes to the development of more efficient production chains. In addition, thanks to digital technologies, this approach can lead to a reduction in the time required to deliver goods and services, which in turn will increase trade volumes and reduce costs for the participants in the business model. Another benefit of an integrated smart business model is improved information exchange between participants. It facilitates a more transparent and faster exchange of information and reduces risks for participants, who can use this information to make more informed decisions. In addition, participants can collaborate to solve common problems and achieve common goals, which can lead to new business opportunities.

An integrated smart business model will also enable companies to improve their competitiveness and expand their markets by accessing new technologies, information and resources. In addition, through more efficient supply chain management, companies can reduce production costs and improve the quality of their products. Finally, an integrated smart business model can contribute to a more sustainable economy based on more efficient use of resources and economic growth that is not harmful to the environment.

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JEL Classification: D4, F1, M1, O3, Z1

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БІЗНЕС ПЛАНУВАННЯ, МОЖЛИВОСТІ І РИЗИКИ У НАНОТЕХНОЛОГІЧНІЙ ІНДУСТРІЇ

BUSINESS PLANNING, OPPORTUNITIES AND RISKS IN THE NANOTECHNOLOGY INDUSTRY

Анотація. Коротка характеристика основних положень про особливості планування діяльності в індустрії нанотехнологій, можливості і загрози для ведення бізнесу.

Abstract. A brief description of the main provisions on the peculiarities of planning activities in the nanotechnology industry, opportunities and threats for doing business.