

# ENTREPRENEURSHIP EDUCATION: TEACHING AND LEARNING MODERN MECHANISMS OF ENTREPRENEURSHIP DEVELOPMENT BASED ON PUBLIC-PRIVATE PARTNERSHIP

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## ABSTRACT

*The world practice shows that one of the alternative tools to provide the necessary financial base for the creation, modernization, maintenance and operation of facilities, in conditions of limited public resources, is the mechanism of public-private partnership. Before graduation, future entrepreneurs must master modern-day mechanisms of entrepreneurship development. Public-private partnership in Kazakhstan has become a more profitable investment for potential investors. The aspect of socio-economic relations is important for entrepreneurs and this led the authors to choose the topic of the research. The authors of the article reviewed the socio-economic issues of the development of the national economy, the forms, methods and instruments of state regulation, which should be put to a curriculum.*

*The main elements of the digital economy are shown, the effectiveness of introducing digital technologies, which demonstrates the dynamism and systematic nature of the innovative development of entrepreneurial activity in the framework of cooperation between the state and business. The study outlines the core topics to raise in entrepreneurship education and the significance of innovation management are determined, based on which the relevant conclusions are defined.*

**Keywords:** Public-Private Partnership, Business, State Regulation of the Economy, National Digitalization Programs, Innovative Development, Entrepreneurship Education.

## INTRODUCTION

The rapid pace of economic development and changes occurring in the forms of interaction between the government and private entrepreneurship demand future specialists to possess new knowledge in the field of innovation and its application in the business sector.

Today, digitalization is a strategic development priority in many countries. According to the forecasts of the world's leading experts, by 2020 a quarter of the world economy will be

digital. More than 15 countries such as Canada, the USA, Russia, Germany, China and others are implementing national digitalization programs.

The tools of the digital economy allow markets to develop even in the conditions of the economic crisis, as they enable companies to quickly and flexibly respond to changes in market conditions and better satisfy consumer needs.

Modern business programs should follow these trends. Entrepreneurship education stimulates entrepreneurial activity and the quality of education affects the level of economic development of an enterprise. Students should know the entrepreneurial approaches, innovative technologies and mechanisms of public-private partnership, as well as assess the availability of financial and educational capital.

The state purposefully stimulates various forms of PPP in order to accumulate resources in priority areas of development and create conditions for attracting private business to cooperate on the principles of PPP. The intensification of public-private partnership in Kazakhstan is associated with a significant improvement in the legislative and institutional framework over the past seven years, which made it possible to conclude 443 PPP contracts for a total amount of 1.1 trillion tenge. Public-private partnership provides an opportunity to develop private initiative business which will allow to participate in projects traditionally in the field of state responsibility through a long-term partnership with the state. The socio-economic transformations carried out in Kazakhstan over the years of independence have opened up new opportunities for the revitalization of business activities, which should be introduced to entrepreneurship students.

## LITERATURE REVIEW

In the triple helix, universities, industry and the public sector collaborate closely in knowledge creation and transfer to the productive sphere. Entrepreneurial graduates should be more alert to job opportunities, be able to use them more creatively and attain higher productivity than their non-entrepreneurial peers (Guerrero et al., 2016; Kucel et al., 2016). New socioeconomic scenarios, universities play a relevant role in the identification and exploitation of opportunities (Audretsch 2014; Remus & Sebastian, 2015). Therefore, the main challenge of universities is try to become more entrepreneurial in order to compete, and they become more productive and creative. There a only a few studies exploring the impact of university support on the entrepreneurial activity of students with regard to innovation and they show that these measures have a positive effect on the attitude of students to entrepreneurial development in public-private partnerships (Guerrero et al., 2016a; Nabi et al., 2017, Eesley & Miller, 2018).

In the modern scientific literature of foreign authors, great attention is paid to the issues of socio-economic development taking into account national peculiarities, including state regulation of the economy: Dwivedi (2008), Brzozowska et al., (2015) and others. Such Russian scientists as: Klimenko & Minchenko (2016), Yudina (2016), Yudina & Tushkanov (2017), Sarycheva (2017), Babkin & Chistyakova. (2017), Vasilenko (2017), Zaretsky & Ivanova (2018) investigated the formation of a national economy, namely, the development of innovations and innovation activities of enterprises with a focus on state regulation of economic processes occurring in modern society.

The mechanisms of public-private partnership (PPP) are extremely popular because they are based on the idea that competition between public and private enterprises is an effective way to improve the quality of a service or a product (Verger et al., 2016). Many countries, like Britain, America, Spain, and France, use public-private partnerships to eliminate budget deficits,

budgetary pressures, and to bridge the gap between supply and demand (Chowdhury et al., 2011). Thus, recently, countries have developed their own PPP programs both for the provision of public infrastructure facilities and services and for training future entrepreneurs. In Nigeria, for example, the PPP system is not popular and, accordingly, the attention to it in the education program is insignificant. The education program designs take into account the context in which partnerships and obstacles that may arise during the implementation (Babatunde et al., 2015). Therefore, an effective system of entrepreneurship education must include innovations in the field of public-private partnerships and provide knowledge essential to overcome barriers. The primary skills that entrepreneurship students should acquire are:

1. Measuring the potential of public and private partners.
2. Measuring political and administrative readiness to reconcile PPPs.
3. Forecasting and solving probable problems associated with the insufficient socio-economic background, corruption, and the lack of competition (Natia & Al-hassan, 2015).

The development of socio-economic relations of Kazakhstan at the stage of development of a sovereign state can be traced in the publications of Kazakhstani economists, such as: Zhatkanbaev (2014), Shamshieva (2013), Khasenova (2013), Temirbekova (2012), Salimzhanova (2016), Kirdasinova (2017) who investigated the theoretical and methodological, methodological and practical issues of state support for small and medium-sized businesses.

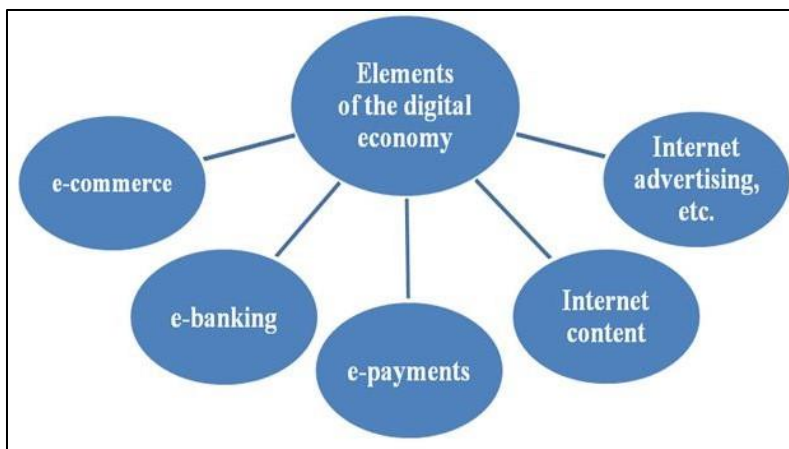
Nevertheless, the analysis of publications shows that innovation-related issues surrounding the entrepreneurship education in the Republic of Kazakhstan are not sufficiently studied, in this regard, the author's study is aimed at further studying the patterns, characteristics and modern trends in the development of innovative entrepreneurship in the framework of PPP, which are illuminated in the entrepreneurship education.

## METHODS

To implement certain forms, various methods and instruments of state regulation are used.

This article analyzes the main methods (direct and indirect) of public-private regulation and the main elements of digital economy, the use of which an entrepreneurship graduate should master within the framework of public-private partnership (Figure 1).

Data processing is conducted using the existing indexes (World Digital Competitiveness Index, ICT Development Index) and a “*Digital Kazakhstan*” program.

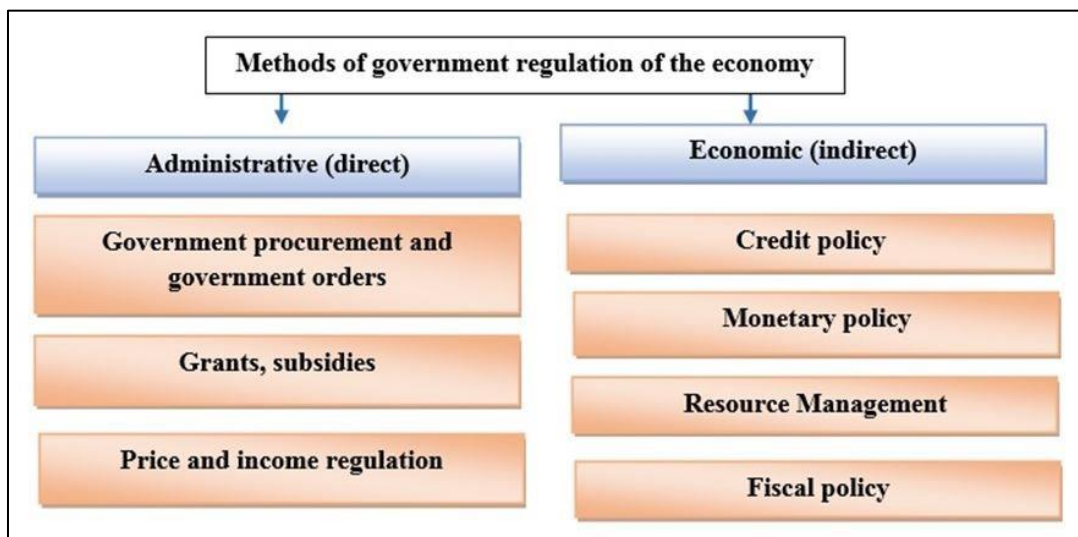


Note: Compiled by the author on the basis of source (2017).

**FIGURE 1  
ELEMENTS OF THE DIGITAL ECONOMY**

**RESULTS**

The study found the core methods of government regulation to include in the entrepreneurship curriculum (Figure 2).



Note: Compiled by the author on the basis of source (2013).

**FIGURE 2  
METHODS OF STATE REGULATION OF THE ECONOMY**

Depending on the economic role, government appropriations may be in the form of:

1. Subventions: funds allocated from the state budget to local budgets.
2. Subsidies: financial assistance that is provided to the population or self-supporting enterprises and organizations.

3. Government subsidies: funds aimed at compensating for price differences caused by the state policy of price regulation.
4. Licensing and quoting of foreign economic activity provides for the issuance by the state through authorized bodies of permits for foreign economic activity on certain goods listed in the export and import licensing list.
5. Direct government spending.
6. The establishment of fixed prices and tariffs; The establishment of state standards and regulations (economic, social, food, environmental, sanitary, pharmaceutical, veterinary, etc.).

No	Instruments	Description
1.	Fiscal policy	Stimulation of business activity, impact on unemployment and inflation due to manipulation of expenses and taxes. Unreasonable use of the destabilization of the economy.
2.	Monetary policy	The impact of the state on money circulation and the amount of money. The state through the central (national) bank is able to regulate the issue and the total money supply, set limits for bank interest rates, etc. Thus, to provide soft loans, issue bonds and other securities.
3.	The policy of regulating income	A tool to combat inflation. The policy of freezing prices and wages is used.
4.	Social policy	Ensuring social justice, supporting socially unprotected or poorly protected segments of the population, creating social guarantees, maintaining a decent standard of living conditions.
5.	State regulation of pricing	State measures to regulate prices are of three types: legislative, administrative and judicial. Laws adopted by Parliament create the legal basis for relations between economic entities, as well as between them and the state in the field of pricing.
6.	Foreign economic regulation	The set of methods used by the state to influence economic relations between countries in accordance with state and national interests, goals and objectives

Note: Compiled by the author on the basis of source (2007)

Indirect methods are implemented through various measures, economic policy and its priorities. These include monetary-credit and budget - tax policy of the state. These methods include:

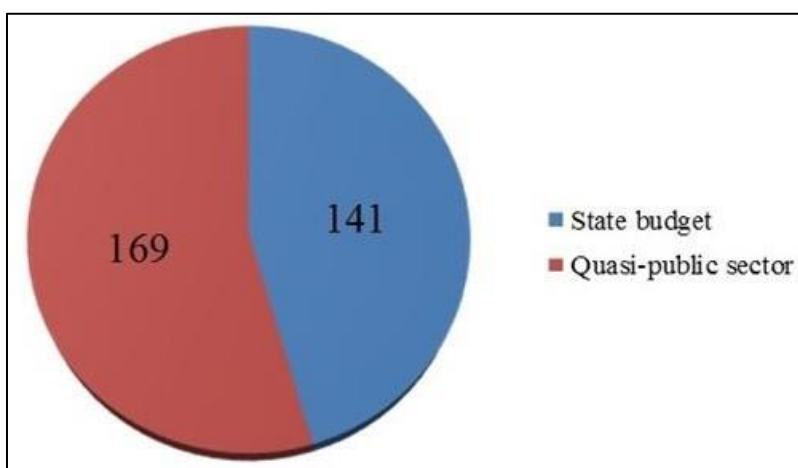
1. Taxation, the level of taxation, the system of tax incentives.
2. Price regulation.
3. Payment for resources, interest for a loan and credit facilities.
4. Customs regulation of exports and imports, the exchange rate and the conditions of functioning of the exchange rate.

Direct and indirect methods of state management of the economy and, accordingly, the administrative and economic means of state regulation of the economy have common goals and objectives and always take the appropriate legal form.

There is a wide range of tools for solving the tasks in the field of economics facing the state (Table 1).

All government regulatory tools are interrelated. When making decisions in one area, their influence on other areas should also be taken into account. Because none of the instruments of state regulation acts in isolation from the others.

Currently, the “*Digital Kazakhstan*” program has been developed in the Republic of Kazakhstan; the program implementation dates have been defined from 2017 to 2022. The program consists of 5 main areas, 17 initiatives, within which 120 events are implemented. 310 billion tenge is provided for the execution of this state program. The project implementation is scheduled not only at the expense of budget funds, but also at the expense of attracting investments and loans from international financial organizations and development institutions. Examples of such partners are the World Bank, as well as domestic producers participating on the basis of a public-private partnership (Figure 3).



Note: Compiled by the author on the basis of source (2017)

**FIGURE 3**  
**SOURCES OF FINANCING**

It is planned to allocate funds in the amount of 141 billion tenge from the republican budget in accordance with Table 2.

<b>Year</b>	<b>Amount of funding, tenge</b>
2018	21 544 099 000
2019	33 153 045 000
2020	59 865 614 000
2021	26 485 629 000

Note: Compiled by the author on the basis of source (2017)

As a result of the program, civil society and business have the opportunity to improve the quality of life. Obtaining public services in a short time and remotely, access to education and health care, training and employment of specialists clearly have a positive effect on the living standards of the population. Therefore, the improvement of macroeconomic indicators, the development of digital technologies and competitiveness of the country as a whole will follow.

Achieving long-term goals will ensure a successful transition to a digital economy.

An important direction in creating an innovative economic system is to attract a venture capital fund. Start-up projects do not always have sufficient financial resources for the implementation of the project, and public investments are issued on a returnable basis. For proper support of start-up projects, it is important to develop a legislative framework in the field of venture investments, including individual investors.

For the development of electronic commerce, the amendments were made to the Tax Code, stimulating the development and increase in the number of subjects of electronic commerce. They have already taken advantage of 331 new e-commerce entity. As part of the development of electronic commerce, it is planned to take measures to protect the rights of consumers, to introduce a single registry to increase the confidence of the population and participants, and also stimulate the transition of business to online trading. E-commerce entrepreneurs will have tax breaks that will increase their competitiveness.

In the cities of Nur-Sultan and Almaty, Kazpost JSC opened specialized centers of «Fulfillment» and electronic commerce. This had a positive impact on the development of e-commerce by reducing the delivery time and improving the process of sending goods. They have processed over 1 million orders. The measures taken allowed to reduce the delivery time of parcels in Kazakhstan from 3 to 1 day, and international parcels from 25 to 15 days.

In 2018, 21 events were completed. The main of them can be noted:

1. Creation of legal conditions for the development of the industrial Internet of things.
2. Improving e-commerce legislation.
3. Establishment of an industrial automation and digitalization institute based on the existing infrastructure.
4. Creation of an international technopark of IT start-ups (Astana Hub);
5. Formation of the national register of trusted software and electronic products of the Republic of Kazakhstan.
6. Development and adoption of a roadmap for the development of the IT industry.

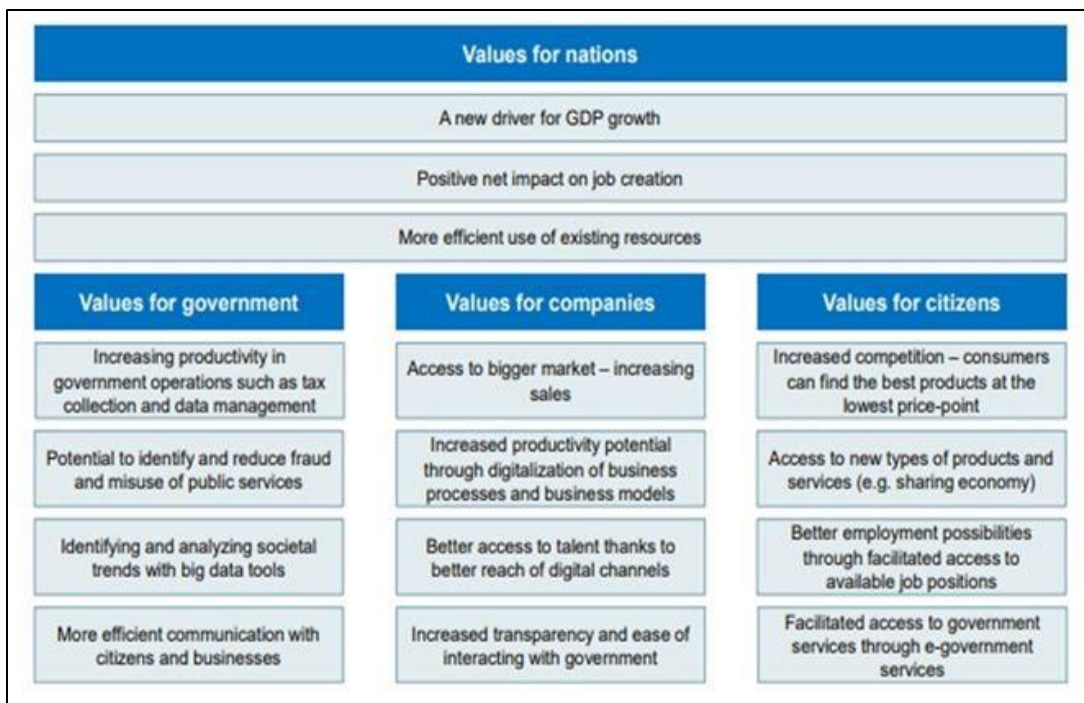
To implement this program, graduates should know the current trends in innovation around the world and of Kazakhstan.

Figure 4 shows the core digitalization values at all levels, which knowledge is necessary for the public-private partnership to function.

The Swiss Business School IMD introduced the World Digital Competitiveness Index in 2018. This world ranking covers 63 countries (Figure 5).

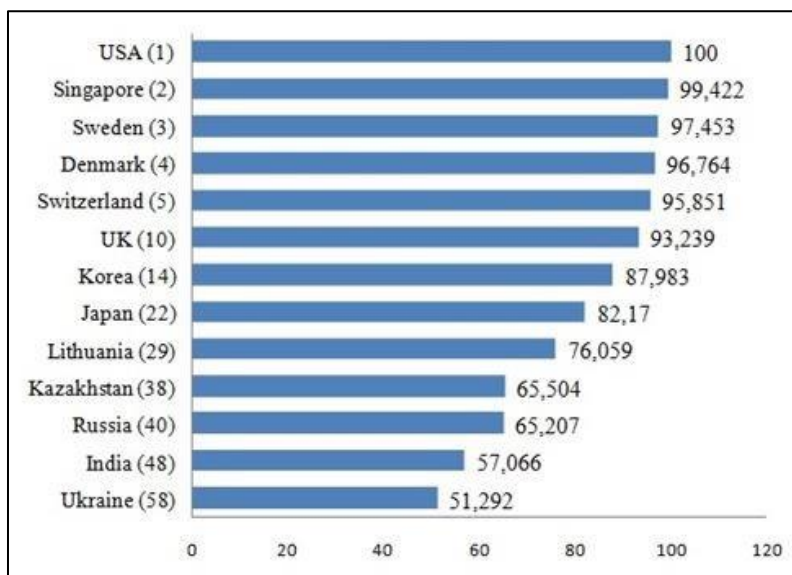
According to this study, Kazakhstan ranks 38<sup>th</sup> among 63 countries in terms of digitalization. Another reputable expert in the digital economy is AAH. From 2008 to 2015, AAH assessed the level of development of the digital economy in 85 countries of the world using the Digitalization Index or E-Intensity Index.

The development of the ICT industry is a key component of the digitalization of all sectors of the economy. The main direction of development of the ICT industry is the support of domestic small and medium enterprises in the field of ICT. To achieve this, the efforts of the state will be aimed at creating a favorable ecosystem of entrepreneurship in this industry (Figure 6).



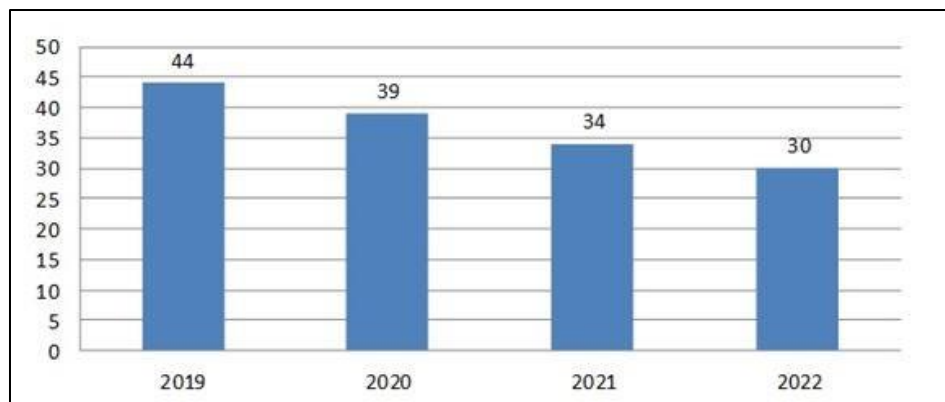
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**FIGURE 4**  
**DIGITALIZATION VALUES AT ALL LEVELS**



**FIGURE 5**  
**WORLD DIGITAL COMPETITIVENESS INDEX**



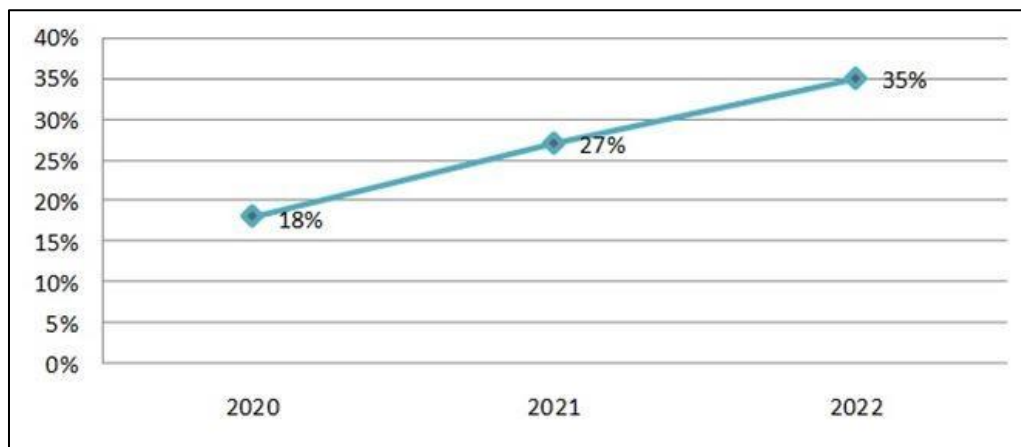


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**FIGURE 6**  
**ICT DEVELOPMENT INDEX**

From the world digital competitiveness and ICT development data, it is clear that to increase digital competitiveness Kazakhstan has to modernize entrepreneurship education with innovations. Students should be informed about the current trends, such as the non-cash payments.

Figure 7 shows the dynamics of non-cash payments.



Note: Compiled by the author on the basis of source (2017).

**FIGURE 7**  
**EXPECTED GROWTH OF NON-CASH PAYMENTS**

The main development opportunities for traditional industries based on the introduction of digital technologies are shown in Figure 8.

The digitization of branches of the economy is expressed in the modernization of production, production and supply of goods and services. The organization of production through the integration of digital technologies with physical objects and processes increases efficiency and competitiveness, as well as in the global market. As a result of the implementation, the growth of domestic exports to foreign markets will be ensured.

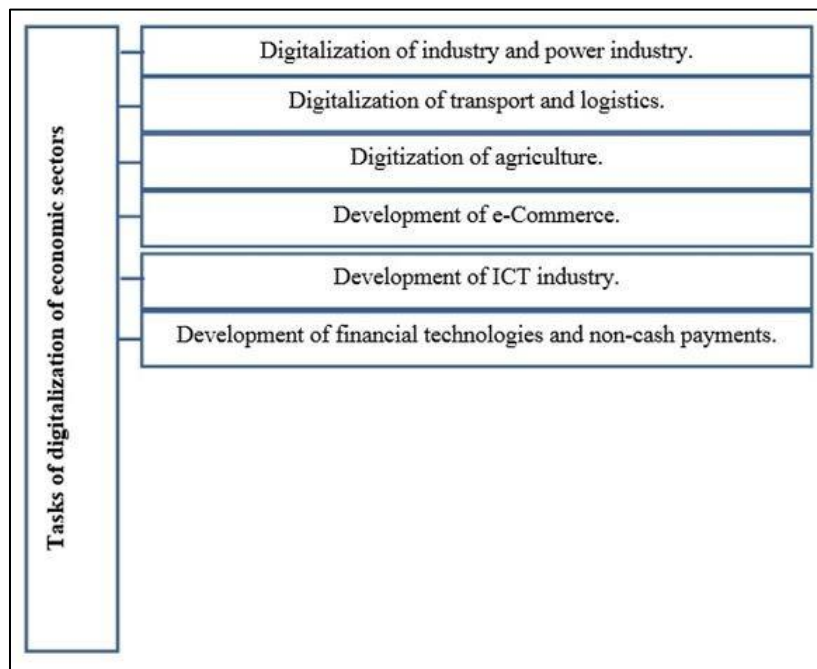
To modernize the economy, the program proposes the implementation of comprehensive measures. They in turn will help entry into 30 developed countries by 2050.

This study analyzes digitalization tasks of economic sectors that cover various areas, which contribute to the integrated development of national economy and which should be brought into a focus in entrepreneurship education (Figure 9).



Note: Compiled by the author on the basis of source (2018).

**FIGURE 8**  
**KEY OPPORTUNITIES OF THE DIGITAL ECONOMY**



Note: Compiled by the author on the basis of source (2017).

**FIGURE 9**  
**TASKS OF DIGITALIZATION OF ECONOMIC SECTORS**

## DISCUSSION

At present, it is impossible to consider socio-economic issues in isolation from government issues, since this is an integral link in the development of the national economy; therefore government regulation of economic processes is important and indisputable in entrepreneurship education.

University is a resource to create a regime of knowledge-based economic and social development in economic and academic systems at different stages of development. A variety of interpretations and changes of academic entrepreneurship programs are expected (Etzkowitz, 2017, Al-Awbathani et al., 2019).

The Republic of Kazakhstan lacks the effective education programs, which embrace the mechanisms of public-private partnership. This is a significant gap under modern conditions. Therefore, exploring the features of PPP's functioning and creating relevant programs is crucial for modern entrepreneurship education. When it comes to the implementation of PPPs for infrastructure development and thus, for the production of entrepreneurs, the UK is considered the most successful country (Lim et al., 2011). Hence, it is recommended to study the experience of Great Britain and other leaders in this field to highlight the most effective teaching methods and strategies.

Among them, e-learning. The criteria of e-learning cannot be separated from the instructional development that is commonly used, so that this will be the cause of students having a positive attitude. The e-learning course is very important for new academician and education practitioner who learn in Higher Education (HE) (Setiyatna et al., 2019).

Apparently, it is precisely this understanding of the place and role of the state in the economic life of the nation that made the well-known economist L. Malkern say that for any leading country there can be nothing worse than wrongly defining the role of the state in the economy (2007). Therefore, it is necessary to form high skills among entrepreneurship students that would allow them to assess a real economic situation and improve it.

To implement the goals of economic policy, a certain number of instruments are needed.

In the theory of economic policy, a prominent place is occupied by the Dutch economist, the first Nobel Prize winner from economy, J. Tinbergen. It was he who proposed the quantitative relationship between the goals of economic policy and the tools for their implementation, which was called the inequality of J. Tinbergen:

$$X \geq U \quad \dots\dots\dots(1)$$

Where,

X: The number of instruments of economic policy.

Y: The number of goals of economic policy.

Which shows that the number of goals should never exceed the stock of tools available to the state (2008).

This inequality is used in practice in the process of forecasting the conditions of a country's economic development, as one of the mathematical and functional limitations in the system of macroeconomic models.

## CONCLUSION

Today, Kazakhstan is facing a lot of challenges. Global ICT development trends directly affect all spheres and sectors of the country's life. This study offers and justifies the core areas to include in the entrepreneurship education programs, indicates the forms of public-private partnership that are worth considering. Based on data from the analysis of the Digital Kazakhstan program, the ICT Development and World Digital Competitiveness rankings, the study outlines the main directions for teaching and learning digital economy. The main digitization tasks of economic sectors are developed and they cover various areas that entrepreneurship graduates should address. In addition, the study indicates the core digitalization values at all levels, which students study to be able to ensure the optimal functioning of public-private partnerships. Here, one may find the key opportunities of the digital economy that should be included in the entrepreneurship curriculum.

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