

ABSTRACT

**to the thesis of a graduate student of specialty 6D051000 "State and Local Government" of the Karaganda University of Kazpotrebovuz
Tapenova Gulnur Sagatovna for the degree of
Doctor of Philosophy (PhD)
on the subject: "Public administration of higher education system
in the context of building the knowledge-based economy"**

The relevance of the research topic New model of economy, in which the development of Kazakhstan at a new stage of development of the world has become the main factor of science and innovation, socio-economic growth, is based on the knowledge economy. Modernizing knowledge to achieve economic growth and competitiveness is impossible without an effective mechanism for transforming it into innovative products and services and their distribution. Education has become a fundamental element of human development. Without it, there can be no development in any field of human activity. Thus, the socio-economic trends taking place in the world have changed the life philosophy of humanity and have formed a new view of the role of education as part of the economic system. Over the last three decades, we have witnessed the rapid development and decline of national economies, economic crises, the formation of unified global economic space, an increase in the portion of the sphere of activity, the consequences of the pandemic situation, the development of digital technologies. In an era of rapid information growth, knowledge has become the most important resource of modern organizations and the key to their effective functioning [1].

The state-financed strategic programmes define the importance of the formation of a higher education system adapted to the knowledge-based economy for the development of the country's economy. In the President's Speech to the people of Kazakhstan, the strategy "Kazakhstan-2050", "The new political course of the established state", sets the task of implementing a policy "aimed at the cardinal modernization of all levels of education, from pre-school to higher education".

Another important strategic document in the formation of state policy in the higher education system, one of the main tasks of which in the field of higher and postgraduate education is to "ensure high-quality training of competitive personnel", was the "State Budget of the Republic of Kazakhstan for the period of 2016-2019". In line with this program, a number of target indicators have been introduced to increase the number of universities in the world rankings and the share of commercialized projects in total number of applied research works.

The Head of State Kassym-Jomart Tokayev in his Speech to the people of Kazakhstan held on September 2, 2019 "Constructive public dialogue is the basis of stability and prosperity of Kazakhstan" repeatedly emphasized that "the economy of education, increasing labour productivity, the development of innovations, artificial intelligence have become key factors of global development" [2]. To date, the "Concept of development of education in the Republic of

Kazakhstan for 2022-2026" has been approved, including the expansion of access to higher and postgraduate education, the modernization of the content of higher and postgraduate education, the increase of level of expertise, the improvement of the management system of the higher education institutions and the internationalization of higher and postgraduate education, as well as one of the key concepts "training of highly qualified personnel for the education-based economy".

The national project "Quality Education for All "Bilimdi ult" has replaced the state programs, the main task of which is to increase the competitiveness of Kazakhstan's universities. As part of the project, it is planned to introduce effective indicators for increasing the proportion of universities that run international education programs, academic exchanges with foreign partners, the number of foreign experts involved in teaching and the number of branches of leading foreign universities.

Currently, Kazakhstan is facing the task of full transition to the knowledge-based economy, economic development in new conditions through the implementation of a national strategy based on the combination of education and science and improving its effectiveness. In this context, the role of the state in the scientific and innovative field is increasing and effective policies are becoming more important in order to modernize the higher education system in order to achieve socio-economic and technological growth. In the context of the emergence of the knowledge-based economy, the changes and trends of the last decade require reforming of the higher education system. In particular, when there is an imbalance between the labor market and training programs for specialists with higher education, when there is an increase in competition in the knowledge and technology market, when there is an awareness of the need for modern higher education institutions to focus on the commercialization of the results of scientific and technical activities by releasing competitive products on the market, when there is a development of digital technologies, when there is a conquest of the world market by giant educational platforms, it is necessary to pay special attention to the formation of an effective state policy so that the higher education system meets modern requirements. The main directions of state innovation policy in the system of higher education and science, defined by state legislative initiatives and a set of measures, are the creation of conditions for the development of the innovation potential of higher education institutions, increased investment and state support for innovation activities of higher education institutions, changes in economic conditions, increased independence and transition from strict control to risk management for the effective functioning of higher education institutions.

We know that the growth of the innovation potential of the higher education system is a guarantee of qualitative change in the country's economy, sustainable socio-economic development of the nation, attaining a leading position in the world market and increasing its competitiveness. In this regard, the development of the main provisions of the theoretical approach to the "knowledge-based economy" and effective public management in the formation of the innovation potential of the higher education system are of high relevance in today's economy.

The scientific problem of the thesis is the weak implementation of policy in the system of higher education in the context of insufficient implementation of public administration and the formation of the knowledge-based economy at the stage of formation of the knowledge-based economy of the higher education system of the Republic of Kazakhstan.

Extent of scientific study of the problem.

The researches of the representatives of foreign and domestic scientists are devoted to the improvement of the public administration of the higher education system in the conditions of the formation of the knowledge-based economy. These representatives are R. Akoff and Ansoff, O.S. Vihansky, D. Gordon, P. Drucker, V.P. Kolesov, V.L.Makarov, I.V. Makarova, B.Z. Milner. A great contribution to the study of the development of the theory and methodology of management of the higher education system was made by such foreign scientists as A. Smith, J.B. Backhouse, G. Becker, E. Valen, K.E. Wake, G. Winston, K.I. Volpin, D. Garvin, A. Diamond, H.G. Johnson, P. DiMaggio and et al.

The system of education as a social institution and as an object of public administration has been studied in the works of I. I. Katanaev, B. Malinovsky, Ch.Friedman and B.A. Lundval, G.E. Zborovsky, J. S. Mill, E.Giddens, L.A.Mikeshin, F.E.Sheregi, R.Boudon, P.Bourdieu, J. Coleman, K.Jenks, S.Bowles, G.Gintes and domestic scientists A.B.Aitbembetova, J.K.Dyusebaeva, M. Tulegenova, Z. Valikhanov. The knowledge-based economy, as a new stage in the development of knowledge and innovation, which has become the main source of economic growth, is studied in depth in the works of foreign authors such as D. Bell, J. Gelbraith, P. Drucker, I. Masud, F. Makhloop, T, Sakaya, K.Smith, Ch. Takeuchi, E. Toffler, F. Hayek et al.

Various problems of management of higher educational institutions were considered in the studies of such scientists from near abroad as P.S. Avetisyan, B.V. Agranovich, A.N. Asaul, R.A. Badamshin, V.I. Bidenko, E.S. Biryukov, E. Vodichev, L.L. Voroshilova, G.E. Galikyan, V.S. Galstyan, T.I. Gustomyasov and others.

In addition, the study of the public administration of the higher education system has been devoted to the works of a number of domestic scholars, such studies are considered in the works of the following academic economists:

S.M. Omirbayev, Sh.T. Shayakhmetova, Zh.E. A.B. Aitbembetova, J.K. Dyusebaeva, M. Tulegenova, Z. Valikhanov A.I. Monobaeva, K.A. Zhakenova, B. T. Zhumagulov, J.A. Kulekeev, A.A. Kaigorodtsev, Yu.V. A.E. Mambetkaziev, A.B. Aitbembeova, E.K. Sagadiev, A.K.Kusainov, S. Zimanov, Sh.A. Yesimova, B.K., J. Adilov, A.B. Aitbembetova, K.K. Berdimuratova and others.

Despite a large number of works by domestic and foreign scientists devoted to the study of various aspects of public administration of the higher education system, the development and public administration of the higher education system in the context of the formation of the knowledge economy still needs to be studied. The selection of the thesis topic and the definition of its purpose and objectives were based on this fact.

The purpose and objectives of the study. The aim of this thesis research is to develop proposals for improving the public administration of the higher education system under conditions of the formation of the knowledge-based economy in the Republic of Kazakhstan.

The following **scientific problems** need to be solved to achieve this purpose:

- To study the educational system as a social institution and the object of public administration;
- To identify the main areas of specificity of the public administration of the higher education system in the context of the emerging knowledge-based economy and the criteria and indicators for the management of the education system;
- To study the experience of the public administration of the higher education system in the countries of the near and far abroad;
- To analyze the status and speed of development of higher education in the context of building the knowledge-based economy;
- To analyze the performance of public administration instruments in higher education;
- To perform social diagnosis of the public administration of higher education;
- To define organisational mechanisms aimed at improving the public administration of higher education system;
- To perform analysis of regulatory and legal support for public administration of higher education system;
- Research of digitalization of the higher education system.

The research object is the public governance of the higher education system of the Republic of Kazakhstan in the conditions of the formation of the knowledge economy.

The subject matter of the study is a set of methodological tools for the public administration of the higher education system in the context of the emergence of the knowledge-based economy.

Theoretical and methodological basis of the **study** are the works, theoretical and methodological developments and relevant publications of domestic and foreign scientists on the public administration of the higher education system at the stage of formation of the knowledge-based economy.

Research methods: the specific nature of the chosen topic determined the use of the principles of description, institutional analysis, systems analysis, economic analysis based on statistical data, comparative and dynamic analysis, integral analysis, social diagnosis.

The empirical basis of the study was the results of official statistical data from the National Statistical Office of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, materials published on the official websites of the Ministry of Education and Science of the Republic of Kazakhstan, the Ministry of Science and Higher Education of the Republic of Kazakhstan, the Ministry of National Economy of the Republic of Kazakhstan, the Institute of Legislation and Legal Information of the Ministry of Justice of the Republic of Kazakhstan. This thesis presents the results of a two-stage sociological survey of

leading specialists, university teaching staff in Karaganda and students of postgraduate education programs.

Scientific novelty of the thesis. The following findings of scientific novelty are the main conclusions of this research:

- The author's comment on the concept of "knowledge-based economy" in the conceptual and categorical development of the knowledge economy in the public administration of the higher education system and the structural and logical scheme of the development of higher education in the conditions of the formation of the knowledge-based economy;

- Integral analysis of the effectiveness of public administration instruments of the higher education system;

- Improvement of organizational mechanisms of public administration of higher education system;

- Proposals for the improvement of the legal and regulatory framework for the public administration of the higher education system have been drawn up;

- Proposals have been developed as part of the improvement of the digitization of higher education.

Main conclusions put forward for the defence:

- 1) On the basis of scientific approaches to the study and critical analysis of the concept of "knowledge-based economy", the author completes and clarifies this concept and proposes a structural and logical scheme of the relationship between the development of higher education and the formation of the knowledge-based economy;

- 2) The performance of state management instruments for the higher education system was assessed using the integral method based on the "State Budget of the Republic of Kazakhstan for 2016-2019" and the transformation of state programs into national projects was tested and demonstrated;

- 3) An empirical analysis based on a social diagnosis of higher education has been carried out and a number of proposals for improving the organisational mechanisms of the public administration of the higher education system have been developed;

- 4) Proposals for the improvement of the legal and regulatory framework for the public administration of the higher education system have been drawn up;

- 5) A conceptual framework for the "digital university" has been developed as part of the drive to improve the digitisation of higher education.

The practical significance of the study lies in the fact that the results obtained in the analysis, evaluation and research of the public administration of the higher education system in the conditions of becoming a knowledge-based economy are used in the development of strategic policy documents by the Ministry of Science and Higher Education of the Republic of Kazakhstan, in connection with an independent evaluation of the processes taking place in the research process.

The Ministry of Science and Higher Education of the Republic of Kazakhstan uses the integral assessment method, adapted from the analysis of the performance

of the public administration of the higher education system, to assess the current and final results of the programme documents.

In addition, the optimisation of the public administration of the higher education system in the emerging knowledge-based economy lies in the development of public strategic programs in the implementation of public administration policies for the higher education system, the assessment and processing of their performance and the improvement of the development and evaluation of strategic plans of public institutions and state-funded programs.

The results of the thesis research can be used in the development of educational programs and lectures at universities in the disciplines: "Public Administration of Education", "Psychology and Management in Education" and "Social State", etc.

Approbation and implementation of the results of thesis. The main results of thesis research have been published in 13 scientific papers, including 3 articles in scientific journals included in the Scopus database, 3 articles in journals recommended by the Committee for Control of Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan, 6 articles in the materials of international scientific and practical conferences, 1 article in the materials of the International Forum. The articles were published jointly with scientific consultants.

The results of thesis research were tested in the Department of Higher and Postgraduate Education of the Ministry of Education and Science of the Republic of Kazakhstan (Appendix A).

The structure of thesis. The research work consists of an introduction of 161 pages, three chapters with nine sections, a conclusion, a list of references 210, normative references, symbols and abbreviations, 43 figures, 9 tables and 10 appendices.

The first chapter of the dissertation. It is obvious that in recent years, Kazakhstan's economy cannot rely on the latest achievements. To date, it is impossible to ensure full-fledged socio-economic development while maintaining dependence on raw materials. It is high time to understand that one of the ways out of this situation is to modernize the economy through the development of education and science. In this regard, the state has proposed a number of new promising modernization schemes based on innovation in all spheres of life. Today in the Kazakhstani scientific community there is an active discussion about the quality of innovation, its directions, forms and methods of implementation and effectiveness of innovation potential. Such innovative potential will not only make it possible to modernize the economy, politics, and the sociocultural sphere, but also to form a new economy based on knowledge.

The education system as a social institution and object of state administration has been deeply studied through research as a social institution and object of state administration of the education system, which is the main component of human capital. Among many scholars there is a concept that investment in human capital should be a priority in every society as a means of determining the economic potential of the country's economy and the economic outcome of knowledge aimed

at generating income in the future. It is noted that the development of human capital must be combined with the socio-economic situation in the country, and must be regulated by law. Thus, the distinction between the different aspects of the concepts attributed to the concept of "education" has been investigated from the different approaches and the systemic approach to it. Summarizing the definitions and concepts given during the study by scientists to the concept of education, we conclude that education is a social institution that carries out the process of obtaining knowledge, the organic unity of upbringing, personal development and transfer of material and spiritual culture from generation to generation. The social institution of education, first, stabilizes capacity through the impact on other social institutions, matches the actions of members of the social group with the model of the social role, forms a community of education system, is formed from the learner, the teaching staff, second, forming activities towards the formation of socio-professional composition of the potential, economic, third, changing and modernizing the composition of the potential, fourth, social, stimulating the social mobility of its members and forming personal potential, consisting in creating educational level, the dissemination of cultural values, development of material and non-material culture among different groups of potential and cultural services that form the personal "core" of society.

At the time of the formation of the economy of knowledge, public administration of the system of higher education is currently one of the pressing problems. The transformation of science directly into a productive force, i.e., the transition to a knowledge-based economy, knowledge becomes an important productive resource of modern society, which is a source of economic growth and increased productivity of the entire national economy. In a knowledge-based economy, due to the changing role of education in society and its form and content, there is a need to define it as an economic category and trace the development of form and content. In this regard, the idea of promoting "knowledge economy" around the world is gaining momentum in today's society, having become a global agenda for international partnership. In this process, we see that the global partnership must have a correspondence of categories and concepts of national terminology and commentary apparatus in connection with the formation and mastery of one general professional language. The knowledge economy is the main stimulus for the development of codified knowledge and information technology, which are becoming capital in modern society. Based on the results of the study, the author's additions and clarifications are given: to the concept of "knowledge economy" follows that "*knowledge economy* is an economy in which with the growth of the activity level of innovation manifests the development of the human factor, the nature of individual production, consumption and quality of labor, which is formed as a result of lifelong learning, i.e. knowledge economy is not only the development of education and science, but also the development of human capital in general a complex structure that substantiates development, and it is the innovative potential of the state, which grows through the transfer of knowledge from generation to generation and the exchange of knowledge."

The structural and logical scheme of the connection between the development of higher education and the formation of the knowledge economy is proposed. According to this scheme, the modernization of higher education in the context of the formation of the knowledge economy, the massification of higher education through the scaling of higher education and increasing the number of students, lifelong learning, the combined levels of coverage of different levels of education led to an increase in the education of the workforce, which led to the development of a commercial form of academic partnerships and distance higher education. In addition, due to the globalization of the knowledge economy, the diversification of education and the internalization of higher education have led to an increased demand for skilled labor, a breakthrough in the formation of the world labor market and the growth of the index of higher education. No doubt, these consequences have led to the reform of the system of higher education to improve public administration.

The analysis of foreign experience shows that in Western countries there is a decentralization of state management of the system of higher education, which manifests itself in the transformation of the role of the state, the transfer of management functions to local authorities, non-governmental (commercial) and community organizations. This approach is based on the network interaction of market actors, including state and local government, higher education institutions, public organizations and other institutions of civil society. At the same time, it plays a coordinating role in the network structure of state regulation and its functions are based on the development of a general educational strategy and the provision of legal conditions for the interaction of the subjects of partnership relations.

In the **second chapter** the state management of higher education system of the Republic of Kazakhstan in the conditions of formation of knowledge economy reflects a large-scale breakthrough in the modern state and pace of development of state management of higher education system in the Republic of Kazakhstan. I.e. a set of new education system, educational programs and standards, a network of organizations and educational bodies, as well as a set of principles governing the functioning of the system, aimed at the formation of a knowledge economy, is formed. In any state, the system of higher education is determined by the socio-economic, political structure, cultural, historical and national characteristics of the country. The requirements of society to higher education are reflected in the system of principles of state educational policy. In recent years, during the formation of the knowledge economy in Kazakhstan, the state has taken such steps as the modernization of the legal framework, the development of programs of higher education and innovation development, the creation of research institutes and technology parks, providing universities with academic freedom, the creation of research universities. At the stage of formation of the knowledge economy the tools of state management of the system of higher education were reforms in the education system in the direction of a new concept of management in the way of effective management.

The analysis of the effectiveness of tools of state management of the system of higher education in the formation of the knowledge economy, that is, as a result of the integral analysis of the "state program of development of education and science of the Republic of Kazakhstan for 2016 - 2019". We have analyzed trends in higher education and science through integral analysis, which fully characterizes the effectiveness of this program. From the position of higher education management the 4th strategic direction higher and postgraduate education and the 5th strategic direction the degree of achievement of the declared results of the direction of science - the compliance of the program with the benefits of socio-economic development, the degree of compliance of the actual and planned use of resources and the integral assessment based on the information obtained in the two previous stages were conducted. Additionally, a comparative analysis of state programs for the development of education and science with the currently implemented national project "educated nation" was conducted. This analysis revealed a number of differences between this project and the state program. I.e., if the state program covers all political, legislative and social aspects in the education system, the direction of the national project is narrow. In other words, it is aimed at solving specific problems in the education system. It should be noted that the national project is closely related to the state program in its main parameters and the most important tasks and activities of the program are included in the national project. This situation is similar to replacing only the names and ranks of these documents

During the social diagnostics the factors restraining the development of state management of the system of higher education in the conditions of the formation of the knowledge economy were revealed. The social diagnostics focused on the effectiveness of state management reforms in the higher education system, the effectiveness of state management of the higher education system in the country, and the results of the survey related to the academic independence of the university. Thus, the level of academic independence of the university is a multiple of the system of state administration, the quality of higher education.

In the **third chapter** improvement of state management of higher education system of the Republic of Kazakhstan in the conditions of formation of knowledge economy of state management of mature higher education system and development of new and modern approaches to improve the quality of higher education institutions in the conditions of knowledge economy taking into account the improvement of management process of higher education system is a priority task of the state. Thus, social diagnostics, the study of a number of mechanisms of state management of higher education institution of the Republic of Kazakhstan on independence served as the basis for the presentation of the model scheme of the flexible system of state management of higher education. This scheme will now further expand the autonomy of universities in state control of optimized risks and launch incentive mechanisms

Within the framework of improvement of normative-legal provision of state management of higher education system the reform of higher education system in the conditions of knowledge economy formation at the state level the dynamics of

making additions and changes in the Law of the Republic of Kazakhstan "On Education" is sufficiently studied. In accordance with the results of the study it was proposed to make changes and additions to the Law of the Republic of Kazakhstan "On Education", i.e. to make changes and additions on accreditation of educational organizations in order to expand and clarify the independence of universities. The proposed changes and additions to the current legislation will make a great contribution to the activation of mechanisms to stimulate universities with a flexible system of state management of higher education.

The possibility of developing the higher education system in the context of digital reality and digitalization of the educational process becomes the horizon of the new growth of digitalization of higher education. We made proposals for the digitalization of Kazakhstan's system of higher education through the development of a conceptual project of a digital university and on the basis of a study of the world's giant educational platforms. According to this concept, four main aspects will be created: the formation of an innovation ecosystem, digitalization of educational programs, the transition to digital infrastructure, human capital development and monitoring of university business processes by three modules, the implementation of the Paper-free principle, the full implementation of mobile infrastructure of the university and a single window system. Full implementation of this concept will allow to fully realize the mission, strategy, budget and responsibility of the university within the criterion of risk assessment of organizations of higher and postgraduate education. Thus, we know that the automation of the university system not only solves the problems that face the system of higher education today, but also guarantees the integration of the university in the information database of the Ministry of Education and Science of the Republic of Kazakhstan.

The results of the analysis prove the importance of the need for orientation of the state management of an effective system of higher education in accordance with global trends in the emergence of a knowledge economy. In this regard, within the framework of this scientific work, systematic approaches to improving public administration of the system of higher education in the conditions of becoming a knowledge economy have been developed.