

UDC 504.062

¹ R.I. Danabayeva, ² U.K. Shedenov^{1,2} Al-Farabi Kazakh National University, Almaty, Kazakhstan¹ The Santiago de Compostela University, Santiago de Compostela, SpainE-mail: rauan.danabaeva@mail.ru

Sustainable development of innovations in Kazakhstan: on the way to a knowledge-based economy

Kazakhstan's economy has expanded rapidly over the last decade, posting one of the fastest paces of growth in the region. Kazakhstan is becoming a critical part of the emerging "New Silk road" that connects the East with Europe, Turkey and the Middle East. The paper analyses the national innovations systems, the institutional framework of innovation policy and the state of science, technology and innovation (STI) in the Republic of Kazakhstan. As a country with abundant natural resources, Kazakhstan is still facing challenges in transforming into a knowledge-based economy. The strategic course of Kazakhstan for industrial-innovative development provides necessary conditions for elaboration and implementation of new scientific ideas and technologies. The strategy of development of Kazakhstan till 2050 together with such documents as the Strategic Development Plan up to 2020, or the State program of Forced Industrial-Innovative Development of Kazakhstan for 2010-2014 provide regular, necessary conditions that support the development of research, technology and innovation in Kazakhstan. And advantageous geographical position, regional integration initiatives and an improving business climate are three key reasons why Kazakhstan is emerging as an attractive investment destination.

Key words: innovation policy, industrial-innovative development programm, technology, economic growth, national innovation system, sustainable development.

Р.И. Данабаева, У.К. Шеденов

Қазақстандағы инновациялардың тұрақты дамуы: "Білім" экономикасына негізделген жол бағытында

Қазақстан - ауқымды табиғи-ресурстық, интеллектуалды, білім беру және өндірістік әлеуеті бар ел. Бірақ табиғи-ресурстық әлеует өзінен-өзі тұрақты экономикалық өсу мен өмір деңгейінің өсімін қамтамасыз етпейді. Қазіргі кезде территория көлемі де, жер асты байлықтары да, халық саны да нақты экономика өсімінің кепілі бола алмайды. Тек білім, ғылым мен интеллектуалды әлеует ғылыми мүдделердің өндіріспен үйлесімділігі ғана экономиканың тұрақты дамуы мен ел байлығының негізі болады. Дамыған нарықты экономикалы елдер тәжірибесі жаға технологияларды құру мен игеру, бәсекеге қабілетті өнімнің әлемдік нарыққа шығаруы тұрақты ұлттық экономиканың маңызды шарты болып табылатындығын дәлелдейді. Мақалада тұрақты даму концепциясы, инновация ұғымы, инновациялық-тұрақты дамуы қарастырылған және сипаттайтын көрсеткіштері жүйелендірілген. Тұрақты дамуға жету жолындағы Қазақстандық тәжірибе негізінде жаға технологиялар мен инновациялардың пайдалану бойынша осы процесті жылдамдату үшін нұсқаулықтар ұсынылған.

Түйінді сөздер: инновациялық саясат, индустриалды-инновациялық даму бағдарламасы, технология, экономикалық өсім, ұлттық инновациялық жүйе, тұрақты даму.

Р.И. Данабаева, У.К. Шеденов

Устойчивое развитие инноваций в Казахстане: на пути к экономике, основанной на знаниях

В настоящее время практически во всех странах мира существенное внимание уделяется проблеме устойчивого развития, включая его инвестиционное и инновационное обеспечение и создание системы, позволяющей использовать достижения науки и техники на благо ныне живущих и будущих поколений на глобальном, национальном, региональном и местном уровнях. В статье рассмотрены вопросы устойчивого развития инноваций. Сегодняшняя казахстанская экономика представляет собой ярчайшую иллюстрацию традиционной экономической науки непрерывного экономического роста без достаточного использования механизмов равновесного развития. Также в статье рассмотрены рекомендации по организации научных и образовательных центров в лучших исследовательских университетах, способных стимулировать создание новых технологий и инноваций.

Ключевые слова: инновационная политика, индустриальная-инновационная программа развития, технология, экономический рост, национальная инновационная система, устойчивое развитие.

Introduction

Kazakhstan's economy is heavily reliant on the country's natural resources, notably its vast oil and natural gas reserves, the extraction of which accounts for a significant portion, 18,9% of the country's annual GDP. The great wealth and development of the extractive industries has resulted in minimal economic diversification and has created an inflexible labour market.

In the pursuit of increasing its investment in the extractive industries, the Kazakhstan government and the private sector have failed, to place adequate importance on environmental sustainability in the country.

Literature review. Theoretical studies highlight studies focusing on international technology collaboration and identify relevant investigations into the challenges R&D organizations encountered. It is essential to unveil concepts specifying measurement tools for a technology collaboration which can be grouped with those that describe the range of factors to be considered [1; 2; 3; 4], the kind of methods to be applied [5; 6; 7], and the character of the approaches to be used by the supplier and adopter [8; 9;]

The importance of technology origin as a part of the relationships between developed countries has been given some attention in the literature on technology partnerships but primarily from the aspects of technology transfers. Ming and Xing (1999) study the theory of product life cycle in developing countries [10]. The product life cycle in developed nations is along the route: research-development-design-production. In developing countries it goes along the route: production-design-development-research. The core essence of the first route is innovation. It needs a large number of highly qualified scientists, engineers and technologists and is sustained by large R&D spending. The second route is a learning and accumulation one, which is based on the transfer, absorption and adaptation of existing knowledge. The author conclude that in developed countries R&D is carried out mainly to facilitate learning and these notions are doomed to obtain technologies through FDI (foreign direct investment) or licensing agreements.

Technology collaboration can provide a number of strategic benefits such as new knowledge, flexibility, leverage, improved quality and focus [11]. The decision to collaborate can be considered truly strategic, if it follows the route of selecting a suit-

able supplier negotiating and drafting the contract; managing the supplier relationship and identifying both the existing and future needs of the organization.

For globalization of R&D, to avoid 'being surprised' when national market and customers reject their products, companies 'must strive to adopt a strategy-creation process' that involves country-specific assessment [12;13].

In recent years, a growing number of economists have come to see that is not so much accumulation of capital but rather innovation that drives countries' long run economic growth [14]. As the OECD notes 'A driving factor for much of the economic growth and rise in living standards in the post-World War II era is the rapid advances in technology and innovation'. Indeed innovation drives economic growth, employment growth, and wage growth by driving the productivity growth that lies at the heart of all it. Moreover, the OECD has shown that technology-using industries have higher-than-average productivity and employment growth than industries that use less technology. Moreover, innovative activity delivers substantial social returns outside of those reaped by innovator. Nordhaus estimates that investors capture just 4 % of the total social gains from their innovations [15].

2. Industrial -Innovation policy of Kazakhstan

Kazakhstan is an upper-middle company, according to the World Bank classification with GDP per capita of around 12.000\$ in 2012. Large and sparsely populated, the country is rich in natural resources, with very significant reserves of oil, gas, minerals. While the development of its natural resources has provided a major impetus to the recent expansion of Kazakhstan's economy, the authorities have stressed the need to develop other sources of growth and improve overall economic competitiveness. In order to support these aims, growing resources are being devoted to the modernization of the economy and the revamping of its infrastructure, seeking to facilitate economic diversification. Kazakhstan set up different institutions and developed many programs aimed at encouraging innovation and modernization. Kazakhstan has put a growing emphasis on the promotion of innovation as a driver of economic development and diversification.

Kazakhstan is becoming a critical part of the emerging "New Silk Road" that connects the East

with Europe, Turkey and the Middle East. And advantageous geographical position, regional integration initiatives and an improving business climate are three key reasons why Kazakhstan is emerging as an attractive investment destination. Kazakhstan has an increasingly business-friendly environment. Kazakhstan has an increasingly business-friendly environment. The World Bank's Doing Business 2013 index ranks it 49th, up from 56th place in 2012. Overall through, Kazakhstan was named as one of the 10 economies improving the most across three or more areas of doing business between 2011 and 2012. And the World Bank has included Kazakhstan in its list of the world's 20 most attractive investment destinations [16]. Kazakhstan in 2012 for the first time reached a historic high in the growth of innovation indicators. Positive trend is due to the successful results of the State program of Forced In-

dustrial-Innovative Development of Kazakhstan for 2010-2014. According to the report "Global Competitiveness Report 2013-2014" of World Economic Forum, Kazakhstan has improved by one position to rank 50th this year out of 144 countries [17]. The country benefits from a flexible and efficient labor market (15th) and a stable economic environment (23rd) at a time when many countries are struggling in these areas. Kazakhstan's main challenges relate to its health care and primary education systems (97th), its lack of business sophistication (94th), and its low innovation (84th).

According to this report Kazakhstan approached the group of countries driven by innovation. Priority is given to innovative policies to encourage and promote business innovation, as well as the implementation of the technology transfer (see the Table 1).

Table 1 – Countries/economies at stage development [17]

Stage 1 Factor-driven (38 economies)	Transition from stage 1 to stage 2 (20 economies)	Stage 2 Efficiency -driven (31 economies)	Transition from stage 2 to stage 3 (22 economies)	Stage 3 Innovation-driven (37 economies)
Kyrgyz Republic India Ghana Bangladesh Yemen Mali and etc.	Algeria Armenia Azerbaijan Bolivia Kuwait Moldova Saudi Arabia Philippines and etc.	China Egypt Romania Thailand Tunisia Ukraine And etc.	Argentina Brazil Hungary Kazakhstan Latvia Malaysia Russian Federation Turkey	Australia Austria Germany Japan Korea, Rep. USA Norway and etc.

In the World Economic Forum GCI (Global Index of Competitiveness of the World Economic Forum), Kazakhstan joined the group of countries inspired by 'management efficiency' and 'innovations' along with such countries as Brazil, Malaysia, Turkey, Russia and others.

By 2016, GDP per capita in Kazakhstan is expected to reach US\$15000, compared with the current level of over US\$12000- and the country will be classified by the World Bank as "high income company". All in all, these are significant achievements for a country that only became independent over 20 years ago.

Innovation policy in Kazakhstan plays a great role in Kazakhstan's economic strategy. There is a clearly stated policy objective to move from a

resource-based to a knowledge-based economy, using earnings from the oil, gas, and mineral sector to facilitate diversification and modernization [18]. A major challenge for innovation policies in Kazakhstan is the weak domestic demand for innovation, which reflects the structural characteristics of the economy and the dominance of extractive industries.

3. National innovation system

Innovations are one of the key factors, influencing the development and the progress of any society. Innovation capabilities of companies depend on a variety factors, such as R&D expenditure, knowledge management processes, culture, organization structure, management systems etc [19].

In search of new, innovative ideas and solutions to undertakings tend to cooperate more and more often also colleges, universities and other public research is actually one of their missions. Concept of the National System (NIS), proposed by Freedman is widely used [20]. Freedman definition of an NIS is ‘the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies’. The central actors in the NIS system are business enterprises, which require internal R&D capacities to innovate successfully. The concept of the NIS remains the basis for innovation policy in many countries. Governments have an important role in

fostering innovation. Innovation, like all economic activity, is contingent on a number of conditions that interact with the different elements of NIS. In particular these framework conditions define a suitable business environment that facilitates entrepreneurship and innovation.

The Programme for Innovative Development and Support for Technological Modernization of Kazakhstan for 2010-2014 recognized the need to develop the NIS on the basis of integrated and inter-related and systematic actions that address the different factors influencing the generation, dissemination and commercialization of knowledge (see the Table 2).

Table 2 – Development of national innovation system [20]

1 stage	2 stage	3 stage
2010-2014	2014-2020	2018-2025
Creation of the competitive industrial and technological base	Development of the innovation market	Increase of the innovation economy
Challenges of innovations		
1. Technology modernization	2. Creation of the economy bases for the future	3. Creation of the favorable innovative environment
To raise the technology level of the operating enterprises will promote the ability to accept innovations, and then not only to become consumers, but to become a generators of innovative technologies.	a) To identify high-tech industries that will become a base for technological competitiveness of the economy of Kazakhstan in a long-time period; b) to develop own scientific competencies of the economy of Kazakhstan in a long-time period.	Increase of the NIS elements coordination, analytical support to the innovative processes, science and innovation propaganda, legislative base improvement.

The key to a successful National Innovation System rests on the creation of synergies between the various Sector and Regional Innovation Systems. As modern science is a multidisciplinary activity, knowledge-generation institutions have a major role to play in creating such synergies, as they facilitate exchanges between scientists and engineers of different disciplines.

The main strength of Kazakhstan is the support for Science, technology and Innovation at senior levels in the government. The Government of the Republic of Kazakhstan has adopted a wide range of policies and made substantial investments in support of innovation. For instance, plans for increased spending on innovation by large state companies may

provide new impetus, including the decision to allocate 10% of the net profit of Samryk-Kazyna, National Welfare Fund, on innovation-related projects. The need to increase domestic demand for innovation, to diversify the concentration of economic activity, to structure a comprehensive strategy for Human Capital Development, and to establish and strengthen a tradition of commercializing research are among the key areas that need to be given special attention. A major challenge for innovation policies in Kazakhstan is the weak domestic demand for innovation. In this context, one way of overcoming this obstacle is to enter foreign markets with a high demand profile for innovative products and diversify and reach new target markets other than Russia and China.

4. Investment climate

The 2010-2014 state program on accelerated industrial and innovative development was established to promote stable and well-balanced economic growth. The program targets diversification of the economy and improved competitiveness by developing priority sectors and supporting industrial development.

And industrialization map is the key mechanism used to implement the program. The Government and the business community work together to identify specific projects that meet the program's requirements and plot them on the industrialization map. Currently the industrialization map includes 779 projects, which have a combined value of KT 11.2t (US\$74.7b). These projects will create approximately 220,000 jobs during their construction period and around 181,000 jobs when they are put into operation. Contribution of these projects to GDP in 2012 is 1.3% [9].

Results for the first three years (2010 to 2012) of the program:

- Number of projects put into operation: 537
- Total investment: KZT 2.1t (US\$ 14b)
- Jobs created: 57,000.

The main programmatic document is the State Programm for Accelerated Industrial Innovative Development (SPAIID) 2010-2014, part of the Development Strategy 2020 that was approved in 2010 and covers 2010-2020. In addition to the SPAIID, the Development Strategy 2020 includes a Health Programme, Education Programme, Language Programme and others (see the Table 3). SPAIID has 13 sectoral programmes and ten func-

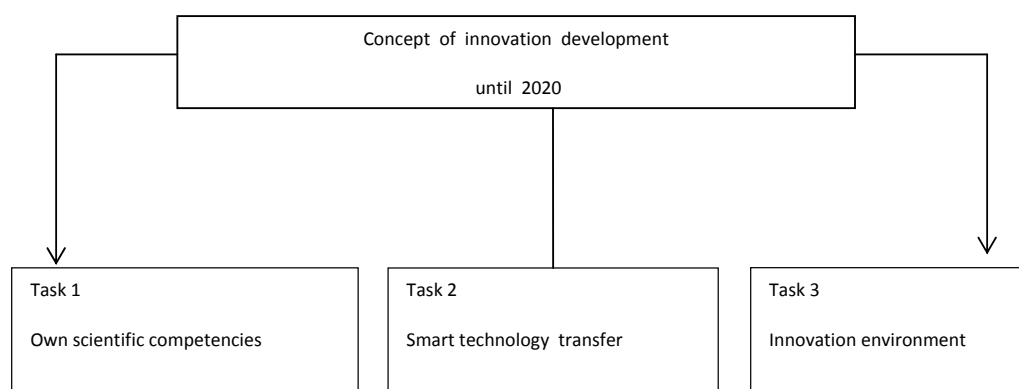
tional programmes. It builds on earlier measures and includes regional development plans and sector plans.

In accordance with the provisions of the SPAIID, the Ministry of Industry and New Technologies is in charge of elaborating the intersectoral plan for scientific-technological development until 2020. The priorities identified in this plan are reflected in the criteria used for access to different mechanisms of support (grants, consulting services, business incubation). Innovation grants in Kazakhstan are:

1. Grant for industrial research;
 2. Grant for supporting of high-tech goods production at the initial stage of development;
 3. Grant for patenting abroad or in regional patent organizations;
 4. Grant for technology transfer;
 5. Grant for technology commercialization;
- In the frame of state program 'Performance 2020'
6. Grant for training of technical staff abroad;
 7. Grant for attraction of highly qualified foreign professionals;
 8. Grant for attraction of consulting, design and engineering organizations;
 9. Grant for implementation of management and production technologies.

Kazakhstan's vast natural resource base is its key asset, according to investors. The country ranks 12th in the world in terms of oil reserves and 19th for natural gas reserves, making it one of the world's top 15 oil-producing countries. At present, Kazakhstan is a leading global producer of coal, copper, zinc, bauxite, uranium and chrome ore.

Table 3 – Innovation development tasks until 2020 [21].



The oil and gas sector has been the cornerstone of Kazakhstan's growth, with its share of the country's GDP growing steadily from 3.7% in 1997 to 14.7% in 2006, and up to 25,8% in 2011. Oil production stood at 79,2 million tons in 2011. The development of new oil fields and an increase in production capacity will enable it to produce 130 million tons of oil by 2020. Such progress would position Kazakhstan among the world's top five oil-producing nations. The country's natural gas production stood at 40 billion cubic meters in 2012, an increase of 2% from 2011. It aims to increase production to 110 billion cubic meters by 2030.

Similarly, the mining and metals industry plays an important role in Kazakhstan's economic growth, accounting for approximately 27% of Kazakhstan's GDP. The country has 30% of the world's reserves of chrome ores, 25% of manganese ores and 10% of iron ores. It is the 3rd-largest producer of titanium in the world, 7th in zinc production and 13th among global iron ore producers. With only 10%-15% of Kazakhstan's explored reserves currently in operation, its metals and mining industry has huge potential for further growth. In 2010, the Government included the mining sector in the state program on accelerated industrial and innovative development. Manufacturing activity in Kazakhstan is concentrated on oil and gas, chemicals, metals, equipment and tools, and construction material. Recently, there has been a shift in this trend. Competitive labour costs and improving business environment, along with a rising domestic market, have encouraged a number of global companies to set up manufacturing projects in the automotive, chemicals, pharmaceuticals, and defense and steel sectors.

Investors continue to perceive Kazakhstan as a treasure trove of natural resources, while they also value some knowledge-based, high-value add sectors that hold considerable promise. The Kazakhstan Government remains committed to reducing the country's dependence on extractive industries and

developing a more balanced, knowledge-driven and investor-friendly economy. It continues to improve the competitiveness and productivity of priority sectors, such as agriculture and agro-processing; construction and construction materials; oil refining and support services; metallurgy; chemicals and pharmaceuticals; transportation; automotive; telecommunication; biotechnology; and alternative energy.

The country's competitive geographical location at the junction of Asia, Europe and the Middle East enables access to the rapidly growing markets of Russia, India and China, creating unique opportunities for investors and local companies.

During the period from 1993 to December 30, 2010 in Kazakhstan's economy attracted 126.6 billion U.S. dollars of foreign direct investment. According to statistics of the National Bank of Kazakhstan, the structure of involvement of investors in the economy of Kazakhstan for the period is as follows: Netherlands -27.1 billion dollars (21.8 % of total investments), the U.S. - 20, 3 billion dollars (16.1 %) , United Kingdom - \$ 10.4 billion (8.2%) , France – 7,4 billion (5.9%) , Virgin Islands - \$ 6.7 billion (5.3%) , Italy - 5300000000 U.S. (4.2%), China - \$ 5 billion (4%). In addition, large enough countries investing in the economy of Kazakhstan are Russia (3.7%), Canada (3.6%), Switzerland (3.3%) and South Korea (3.1%). Shares of other countries are not significant and are not more than 3%. Total number of countries that have invested in the economy of Kazakhstan exceeds the list in more than 116 countries.

In the context of the current global conditions, Kazakhstan's stable macroeconomic, political and social environment, coupled with its rapid growth comparative safety and good returns on investment. According to the World Economic Forum's Global Competitiveness Report 2012-2013 ranks Kazakhstan's macroeconomic stability 16th out of 144 economies (see the Table 4).

Table 4 – Kazakhstan's rating on macroeconomic environment [17]

Macroeconomic environment	Kazakhstan's rating	Score
2012-13	16	6.1
2011-12	18	5.9
2010-11	26	5.3
2009-10	59	4.7

Source: The Global Competitiveness Report 2012-2013, WEF.

To unlock its growth potential, Kazakhstan must do more to make international investors aware of its strengths. To bring about sustainable and balanced growth, it is critical for the Government of Kazakhstan to reduce its reliance on the oils and gas sector.

Kazakhstan has made considerable progress towards the establishment of a market economy and the provision of an attractive climate for foreign investment. During the decade, Kazakhstan has ranked among the countries attracting the most investment per capita globally. Macroeconomic stability and growth potential contribute to investors' confidence. Despite the global financial crisis resulting in a noticeable slowdown, the Kazakh economy bounced back relatively quickly, growing by 7.5% in 2011. In 2008-2009, during a severe economic crisis, Kazakhstan still managed to attract 39,3 billion \$ in foreign direct investment. As of June 2012, foreign investors had invested a total of 150 billion dollars in Kazakhstan, primarily in the oil and gas sector.

Conclusion

For Kazakhstan it is essential not only to focus on industrial innovation, but also to complement them with suitable innovative business models (i.e., a combination of technological innovation and business innovation). Current investors are much more aware of the country's environment and are willing to explore further possibilities in the market. Conversely, Kazakhstan needs to change the widely held perceptions of potential new investors. Most seem not to have Kazakhstan on their investment radar or remain unaware of the country's attractive features, locations and sectors that present opportunities for growth. To overcome this motivation, it is essential that the Kazakhstan Government intensi-

fies its efforts to communicate the country's potential to the rest of the world. The future attractiveness of Kazakhstan remains central to the Government's efforts to diversify its economy, reduce regional disparity, and improve the innovation and entrepreneurial climate. Even in a challenging global environment, the message can get through that Kazakhstan is building a solid framework for moving up the value chain and is developing a welcoming business culture that is conducive to innovation and growth. Kazakhstan's government acknowledges the need to diversify its economy, and is promoting initiatives and policies to improve knowledge-based industries so that they become more competitive.

Kazakhstan has the opportunity and potential to improve its capacity to innovate, and join the world leaders in innovation. Towards achieving this, Kazakhstan should ensure the effectiveness and coherence of all the constituent elements of the National Innovation system. Ensuring the market economy with a dynamic innovation capacity requires not only sound government policies and tools, but also private sector initiatives. Being a young market economy, Kazakhstan has strong potential, and should give special attention to effective partnership between public and private sector for generating an environment conducive to a functional knowledge-based economy. In order to move up the value chain and ease dependence on natural resources, Kazakhstan should develop and enhance the competitiveness of its knowledge-based and non-extractive sectors. With input from the corporate sector, the Government should better define and identify clusters that are competitive. It can work with private sector players and strategic foreign partners that have the requisite knowledge-intensive technology and know-how.

References

1. Robertson, T., Gatignon, H., (1998) 'Technology development mode: a transaction cost conceptualization', *Strategic Management Journal*, 19: 515-531.
2. Gunasekaran, A. (1998) 'An analysis and experience on the management of international and joint R&D projects', *Management Decision*, 66 (10): 669-678.
3. Lin, C., Tan, B., Chang, S. (2002) 'The critical factors for technology absorptive capacity', *Industrial Management*, 102 (6): 300-308.
4. Sexton, M., Barrett, P. (2004) 'The role of technology transfer in innovation within small construction firms', *Engineering Construction and Architectural Management*, 11 (5): 342-348.
5. McGrath, R., Nerker, A. (2004) 'Real options reasoning and a new look at the R&D, investment strategies of pharmaceutical firms', *Strategic Management journal*, 25: 1-21.
6. Chiesa, V., Gilardani, E., Manzini, R. (2005) 'The valuation of technology in buy-cooperation-sell decisions', *European journal of Innovation Management*, 8 (2): 157-181.

7. Langley, D., Pols, N., Ortt, J. (2005) 'Adoption of behavior: predicting success for major innovations', *European journal of Innovation Management*, 8 (1): 56-78.
8. Czuchry, A., Yasin M. (1999) 'The three 'Is'' of effective marketing of technical innovation: a framework for implementation', *Marketing Intelligence*, 17 (5):240-247.
9. Caputo, A., Cucchiella, F., Fracacchi, L., Pelagagge P., Scacchia, F. (2002) 'A methodological framework for innovation transfer to SMEs', *Industrial Management*, 102 (5): 271-283.
10. Ming, W., Xing, Z. (1994) 'A new strategy of technology transfer to China', *International journal of operations & production Management*, 19 (5/6):527-532.
11. Piachaud, B. (2005) 'Outsourcing technology', *Research Technology Management*, 48 (3):40-47.
12. Mellahi, K., Frynas, J., Finlay, P. (2005) *Global strategic management*. Oxford University Press.
13. Inkpen, A., Ramaswamy, K. (2006) 'Global strategy. Creating and sustaining advantage across borders'. UK: Oxford University Press.
14. Helpman, E. (2004) 'The Mystery of economic growth'. Cambridge: Belknap Press.
15. Nordhaus, W. (2005) 'Schumpeterian Profits and the Alchemist Fallacy', working paper, Yale university: 20-23.
16. World Bank. Doing Business 2013, Kazakhstan - Smarter Regulations for small and Medium-Size Enterprises-comparing business regulations for domestic firms in 185 economies.
17. The Global Competitiveness Report 2013-2014, World Economic Forum, Geneva 2013.
18. Kuchukova N., (2010) 'Sources of financing for the industrial-innovative development of Kazakhstan': Astana Economic Forum.
19. Camison, C., Monfort, V., (2012) 'Measuring innovation in tourism from the Schumpeterian and the dynamic-capabilities perspectives', *Tourism management*, 33: 45-49.
20. State Program for Accelerated Industrial innovative development of the Republic of Kazakhstan 2010-2014 (approved by the President decree No 958 on 19 March 2010). Astana, Kazakhstan.
21. Second Report under the studies on International/Regional trade integration (2012): 'Kazakhstan: taking advantage of trade and openness for development', Astana.

Danabayeva Rauan Ibraimovna, PhD student of the "Management and Marketing" department, Al-Farabi KazNU, Almaty; Phd sandwich student within the academic mobility of "Erasmus Mundus" in Santiago de Compostela University, Spain.
 Mob.tel. +34615875948, +77073358666, rauan.danabaeva@mail.ru

Данабаева Рауан Ибраимовна, PhD докторант кафедры «Менеджмент и Маркетинг», Аль-Фараби КазНУ, Алматы; PhD докторант в рамках программы академической мобильности «Эразмус Мундус».
 Моб.тел. +34615875948, +77073358666, rauan.danabaeva@mail.ru

Shedenov Utegaly Kadirgalievish, Doctor of economic sciences, Professor of "Management and Marketing" department, Al-Farabi KazNU, Almaty.
 Mob.tel. +77073358666.

Шеденов Утегали Кадыргалиевич, д.э.н., профессор кафедры «Менеджмент и Маркетинг» ВШЭИБ.
 Моб.тел. +77073358666.