

**Saule Joldybayeva** - PhD in Economics,  
Department of Accounting, Audit and Assessment,  
Narxoz University,  
55 Zhandosov Street, Almaty, Kazakhstan, 050035

**Karlygash Baisholanova** - Doctor of Science in Economics,  
Department of Information Systems,  
Al-Farabi Kazakh National University,  
71 Al-Farabi Avenue, Almaty, Kazakhstan, 050040

**Shmanova Nurgul** - master degree in Economics,  
accountant Limited Liability Company «Agrobiovetservis»  
264 Furmanov Street, Almaty, Kazakhstan, 050059

## **DEVELOPMENT OF RAILWAY SERVICES DIVERSIFICATION MECHANISM**

**Abstract:** In this article were considered problems facing the development of railway services diversification mechanism. During the problem solving process different diversification directions used by some countries were analysed. As a result, specific suggestions on how to improve the diversification mechanisms were given. In this connection, the implementation trends of managerial and organisational measures were defined.

**Keywords:** diversification, investment, management process, risk, Islamic financing, railway.

**Джолдыбаева Сауле** - Доктор PhD экономических наук,  
Кафедра бухгалтерского учета, аудита и оценки,  
Университет Нархоз,  
Улица Жандосова 55, Алматы, Казахстан, 050035

**Байшоланова Карлыгаш** - Доктор экономических наук,  
Кафедра информационной системы,  
Казахский национальный университет имени Аль-Фараби,  
Проспект Аль-Фараби 71, Алматы, Казахстан, 050040

**Шманова Нургул** - Магистр экономических наук,  
Бухгалтер Товарищество с ограниченной ответственностью  
«Агробиоветсервис»  
Улица Фурманова 264, Алматы, Казахстан, 050059

## **СОВЕРШЕНСТВОВАНИЕ МЕХАНИЗМОВ ДИВЕРСИФИКАЦИИ ЖЕЛЕЗНОДОРОЖНЫХ УСЛУГ.**

**Аннотация.** В статье раскрываются основные проблемы диверсификации железнодорожных услуг, в связи с этим проанализированы направления диверсификации услуг в сфере железной дороге. Также рассматриваются особенности применения диверсификации услуг разных стран. В результате исследования даны рекомендации по развитию диверсификации деятельности железнодорожных услуг и усовершенствованию механизмов.

**Ключевые слова:** диверсификация, инвестиция, управление процессами, риск, исламское финансирование, железная дорога.

**Introduction.** Nowadays a lot of attention is paid to the railway sector, because it has been the most efficient transport facility. In order to develop this sector of economy the state has been using different kinds of methods, it means, it has provided the measures for rebuilding or new lines of approach to the problem.

There are some issues that come into sight in the railway services diversification:

- poor quality of services rendered;
- high level of costs in the railway sector;
- high level of transport accidents and adverse impact of transport on the environment, especially on human health.

For this reason, it would be optimal decision to diversify this sector of economy. But the key factor of diversification depends directly on financial sector, and this can cause non-fulfillment of work performance. Furthermore, fundamental researches on the organizational and economic aspects of the railway services diversification are not sufficient enough and this defines the rationale of an article.

**Analysis of recent research and problems.** There are many scientists who raise issues on diversification strategy development of enterprises in the world practice. The first foreign researcher Kenneth Richmond Andrews was among them. He offered in his scientific article «Business Policy: Text and Cases» to diversify the enterprise activity through nomenclature increase of goods. That's to say, it is necessary to combine the activity of several enterprises into one or the bigger one has to open its smaller company [1].

Japanese researchers E. Yoshinara and A. Sakuma in their article «Diversification strategy of the Japanese company» have written that diversification is the strategic plan, it means, to provide financial stability of an enterprise and to reduce the market risk [2].

Among CIS countries researchers V. Bukhvalov, V. Katkalo have considered two directions of diversification in their scientific article «Modern interpretation of diversification strategies» [Reader: diversification strategy and results of firms, 2008 - pp. 57-64]. The first direction is about the competitive environment which can lead to diversification measures and the second one is devoted to using of several quantitative methods in enterprises that can develop diversification. The ideas of the following authors like A. Chandler, I. Ansoff, R. Ramelt, M.Porter, D. Tyss etc. are also given in this article [3].

The academic of NSA of the Republic of Kazakhstan Oraz Baimuratov in his book «National economic system» has written, that «diversification» pushes the

society forward through new technologies mastering and its main feature is the efficiency (rent ability). But in order to get good results from its growth and to develop it, it's necessary to enhance its service sector through diversification [4].

And problems of modern railway service's diversification, its methodological, organisational and economic concepts are needed to be researched and developed further. Therefore, it determines the relevance of scientific work.

**The purpose of this paper** is to analyze the development of enterprise's diversification direction and use of diversification in railway sector. As a result, to offer scientifically substantiated recommendations on how to use railway services diversification in the practice and on improvement of its economic mechanisms

**Results.** Every country diversifies its railway services development in different ways at the time of the research. But inspite of geographic diversity of the countries, there is a enormous need to use all the innovations of science and technology. It's well known, that the length of railway all over the world makes 1 million 250 thousand kilometers. The period of the diversification began with the reforms directed to the railway efficiency complement of highly industrialized countries in 80-90 years of XX<sup>th</sup> century. Some countries recognized reforms as privatization of the state enterprises and most of them followed this direction. Taking into account this, we can analyse the experience of developed countries that have good results in railway services diversification.

For Example, in Germany reforms of railway sector have been provided for a long time. Between 1950 and 1990 years in railway services sector, the public carriers dropped from 36% to 6% and transportation of freight decreased from 60% to 29%. In order to improve the situation 16 reforms were taken by government. One of these reforms was the joining of two big railway companies in Western Germany (DB) and Eastern Germany (DR) into Germany Joint Stock Company (Deutsche Bahn AG - DBAG) on January 1<sup>st</sup>, 1994. The main shareholder was the state itself. As a result of these reforms labor productivity increased for 80%, asset performance for 19% in the company. Furthermore, in the beginning of early 1990 freight turnover doubled. During the last 10 years, transport and logistics work was implemented in

all railway stations. So, labour productivity increased for 237%. It turned from the company that had 2 billion Euros expenses in 1999 into a company with 4,4 billion Euros earnings in 2005. Nowadays «Deutsche Bahn AG» is gaining the lead on European railway transportation and European vehicles transportation, in the world scale it takes the second place, globally the company ranks the third place on the volume of sea transport and on the volume of warehousing and logistics services for consumers it takes the fifth place [5; 6; 7].

The Public Republic of China is developing now its railway sector rapidly, it has been involved in implementation of many international projects. The length of its railway line is 103144 kilometers, 55 811 kilometers of them are electrified. China provides 20% of all railway transportation work. The Public Republic of China takes the third place after the USA and Russia by its railway line length. The state is planning to build 270 thousand kilometers railway line in 2020. According to «Macquarie Capital Securities» forecasts, China’s total investment flow for the railway sector development from 2011 to 2015 made 3,8 trillion Yuan (\$525,4 billion). In 2015 the total length of new speed railway line made 40 thousand kilometers, the speed of trains made 350 kilometers /hour [8; 9].

From 1960 to 1970 Japan developed the new kinds of trains, so-called «bullet-trains». The state used for the first time the fastest train (Bullet Train). There are laboratories of magnetic roads in Japan and in France. Available train samples are able to have the speed of 460 kilometers/hour. In spite of complicated geographical position of the country, the high speed railway line length makes 23464 kilometers (Fig. 1) [10].

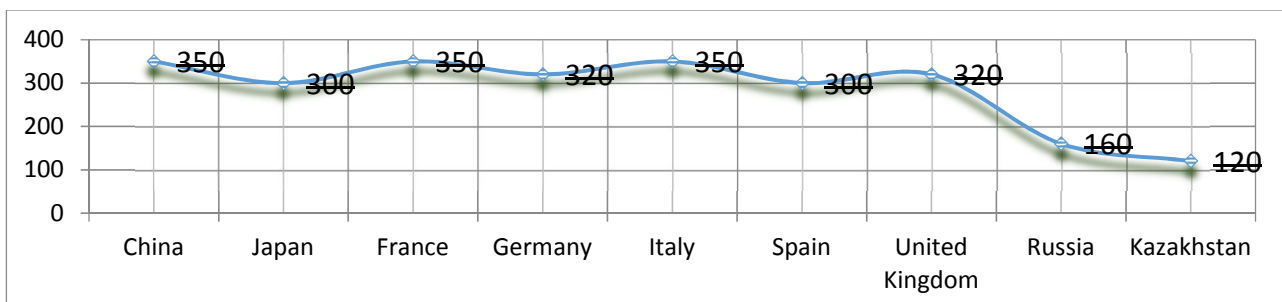


Figure 1. **Railway line lengths and their speed dynamics**

Source: made by the author

Kazakhstani railway density makes 5,23 kilometers /1000 square kilometers and in comparison with other countries, if we count line density for 1000 square kilometer, we will see that our country trails behind. We see this in the figure 2.

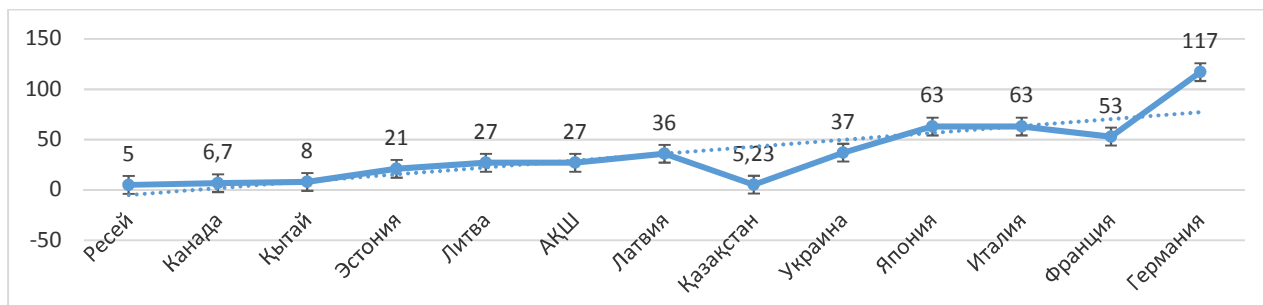


Figure 2. **Railway line density**

Source: made by the author

As we can see in Picture – 2, railway line density in Russia is 5 kilometers /1000 square kilometers; in Canada - 6,7 kilometers /1000 square kilometers; in China - 8,0 kilometers / 1000 square kilometers; in Estonia - 21,0 kilometers / 1000 square kilometers; in Lithuania - 27,0 kilometers / 1000 square kilometers; in USA - 27,7 kilometers /1000 square kilometers; in Latvia - 36 kilometers / 1000 square kilometers; Украинада - 37 kilometers /1000 square kilometers; in Japan and Italy 63 - 65 kilometers /1000 square kilometers; in France - 53 kilometers /1000 square kilometers; in Germany - 117 kilometers /1000 square kilometers. On the basis of these indicators we can see that Kazakhstan trails behind most European countries [11; 12]. It is also worth to say that Joint Stock Company «Kazakhstan Railway» National Company» is among 6 world's largest railway companies, it is after USA, China, India, Russia and Ukraine on the volume of cargo transportation. But railway line density in Kazakhstan is low and it doesn't satisfy the economic development of the country and the needs of foreign cargo transit.

Let's consider the following directions of railway sector diversification - Table 1

**Table-1 Fluctuation of railway service sector diversification**

		Technologies	
		Available	New
Consumer	Available	Rapid growth	Horizontal diversification
	New	Consolidated diversification	Conglomerate diversification

Source: Conglomerate and concentric diversification; <http://www.executive.ru/wiki/index.php>

As a result of the study we come to the conclusion that diversification types and aims are the same for all countries of the world, but each country chooses the diversification trend on the assumption of its peculiarities. Based on activity and objectives, we can note that the consolidated diversification and the horizontal diversification were used in the railway service sector. Because it is very difficult to create conditions for the conglomerate diversification, no country needs to use this type of diversification. The conglomerate diversification needs a long time to use and significant amount of capital to raise. It should be noted in this regard that railway service sector's problems are the financial investments and railway's rolling stock doesn't meet the standard. The necessary thing to be taken from foreign experience for Kazakhstan is the experience of horizontal diversification.

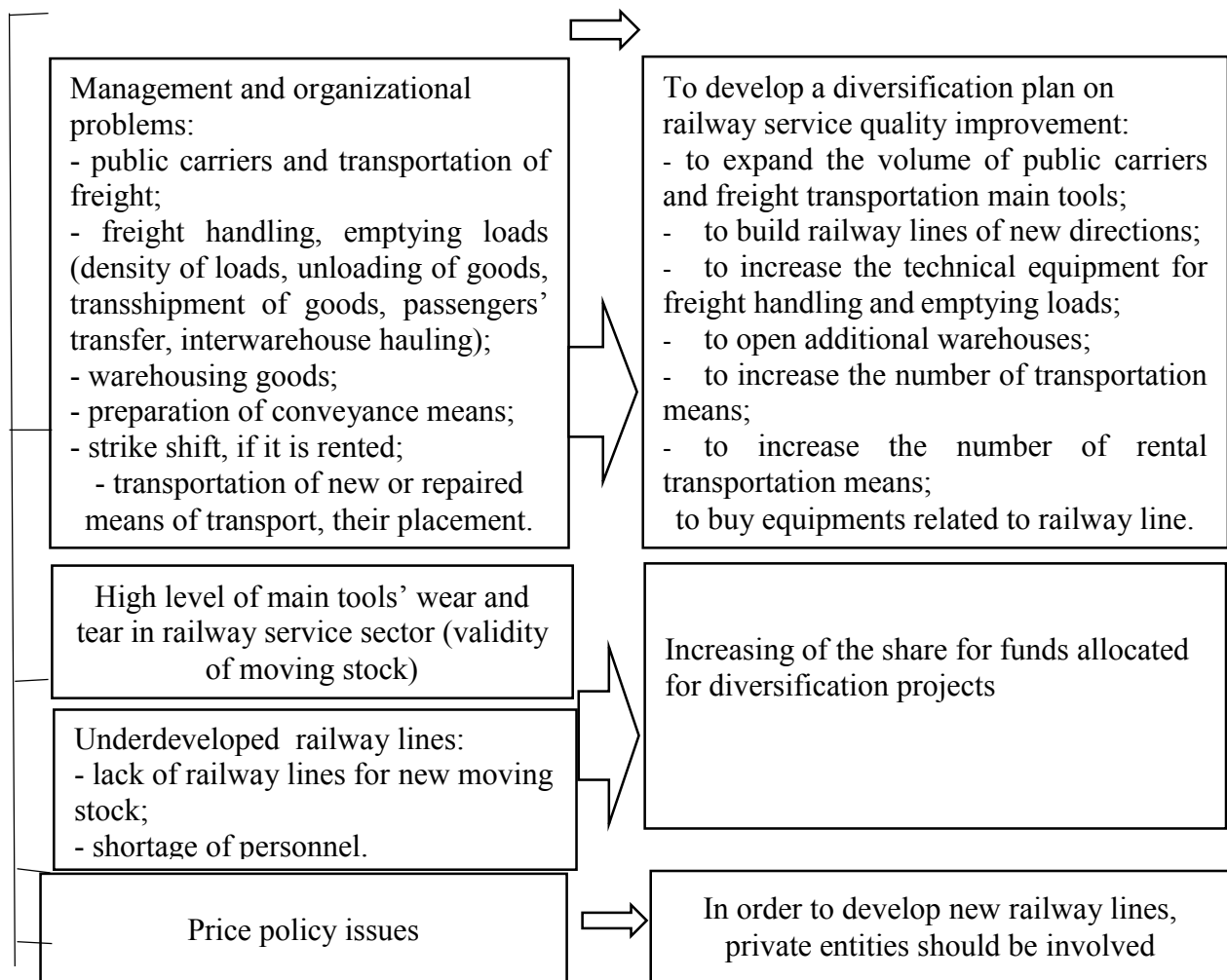
Diversification is needed in the following cases:

- 1) when the service sector goes bankrupt by the main types of services;
- 2) when the competitiveness reputation of the service sector lowers;
- 3) when the demand on service sector declines.

For this reason, taking into consideration problems facing the railway service sector we offer the following recommendations on the solution of these problems (Fig. 3).

**Main problems in railway services diversification**

**Ways of problem solving**



**Figure 3. Problems arising in railway services diversification and ways of their solution**

Source: made by the author

As we can see, the given direction needs a lot of money. That's why, we advise for developing countries to use the service of Islamic financing as one of the key mechanisms of diversification problems solution in the railway service sector. In our opinion, Islamic financing is the mechanism that can make a positive contribution to this sector and its main difference from other financial centers is integrity, spiritually developed service, shadowless business and an interest-free loan service.

The greatest share of the global Islamic financial assets in in the Persian Gulf belongs to the Council of the Arabian countries like Saudi Arabia, Oman, Bahrain,



Kuwait, Qatar, United Arab Emirates, their share makes 42,9%, Iran is a leader in the size of the Islamic financial assets, its share - 35,6%, Malaysia - 10,5 % and Great Britain's share is 2,5%. Nowadays following countries use the service of Islamic financing: USA, France, Spain, Denmark, Luxemburg, Australia, Germany, Cayman Islands, Japan, Singapore, Thailand, and the Public Republic of China, South Korea, Kyrgyzstan, Russia and Turkey. The peculiarity of this funding is an interest-free loan, direct investments in the industry, the work carried out in good faith, fair deals, to prevent the cases when money manage people.

This trend, no doubt, will create the need for a new world economic order. We believe strongly that this won't aim people just at material enrichment, but it will combine them with spiritual progress, minimize the level of unemployment in the country and to establish justice. It is also important in a competitive environment to implement actions on 4 main factors that influence railway service (Fig. 4).

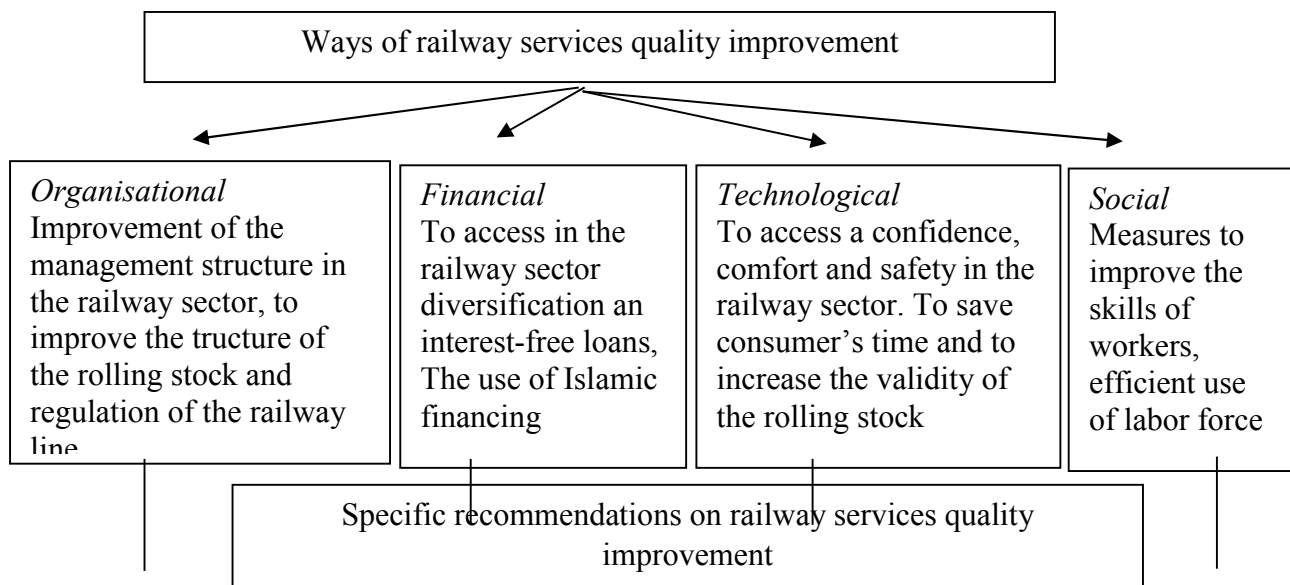


Figure 4. **Ways of railway services quality improvement**

Source: made by the author

The use of Islamic model as diversification trend in railway sector development would help a number of political, strategic projects that will contribute to the effective implementation and good results. This can lead to fulfillment of the

following scheme (Fig. 5).

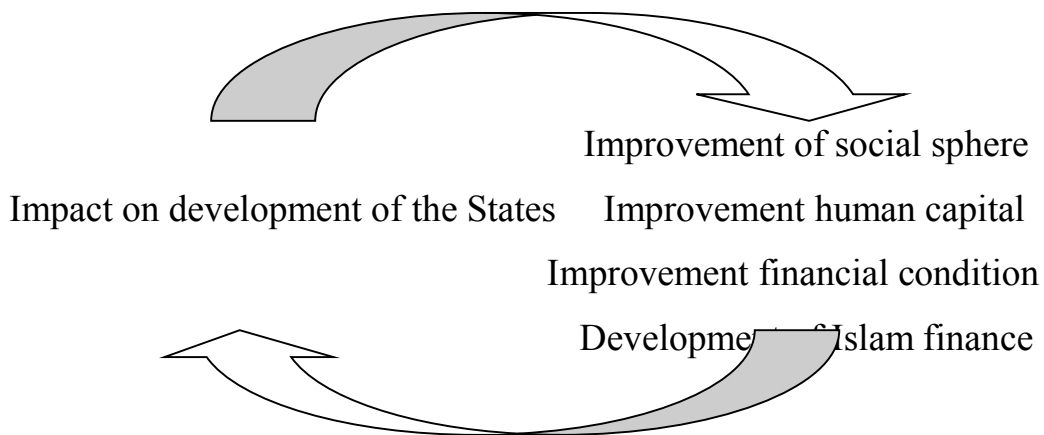


Figure 5. **Influence of Islamic model on railway sector**

Source: made by the author

This financial system is also the main factor which can give an opportunity for continuously work of railway services, increase of population's well-being through employment. Islamic financing improves the confidence and puts into effect the self-development mechanism of the system. One more peculiarity of the Islamic financing is that it's the main factor in establishing of harmony in society. Islamic model helps people and countries to establish harmony in the world through confidence.

**Conclusions.** In order to have quality service in railway sector in developing countries and to develop it constantly, it's necessary to investigate thoroughly the trends in railway diversification. The reason for this is that many companies have observed cases where the capital invested does not meet the expectations. It's necessary to provide a cost-effective way of railway service diversification in the current financial conditions. This directs us to earn money despite the crisis. It's also worth to say that in a competitive world to make the railway service be in demand it's necessary to innovate the sector service, to supply new techniques and technologies and diversify them.

Among them are:

- to create conditions for strengthening of railways capacity;
- to update the moving stock with most advanced technology or repair them;
- to provide innovative technologies and increase the number of trained staff. To do this, the organizational ability of experts must be properly used, because a term of diversification requires a great deal of financial, organizational and financial resources. In the high-risk situations, attraction of investments is of great importance, which is the main driving force in the diversification of the railway. Therefore, the best way to improve the profitability of the industry is the strategic direction and it requires timely implementation. In this regard, it is necessary to solve the problems related to the railway security system, increasing the length of the railway line, to raise its technical level, to form a single line in the country and improve the organization of international rail corridors.

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