

## STUDY OF LOGISTICS SYSTEM IN KAZAKHSTAN: BARRIERS TO EFFICIENT LOGISTICS AND OPPORTUNITIES

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### Abstract

The process of globalization of economic activity in the world is gradually reaching a stage that means building a single economic space and a uniform economic environment. But experience shows that many countries are not included in this process on an equal footing. Therefore, there is a need to identify and address the problem of the protection of national interests and increase the competitiveness of Kazakhstan's economy in the world. The development of Kazakhstan's economy needs to find new ways to improve its competitiveness. One of these ways is to create nationwide logistics system at the macro level. The raw material orientation of the economy of Kazakhstan, along with the large distances and low population density, result in high economic dependence on transport. The growing demand for high-quality transport services is not satisfied in full because of the insufficient level of technological development of the transport system and gaps in the field of transport technologies. Based on the study we identified several key obstacles to the development of transport and logistics services: the poor quality of basic transportation services; poor transport infrastructure development, including the factor of underinvestment; the lack of high-quality and efficient logistics infrastructure, especially terminals and warehouses; customs, tariff and regulatory barriers at the borders; The lack of competence and lack scale of logistics companies' business.

**Keywords:** Logistics system, Logistics system in Kazakhstan.

### 1 INTRODUCTION

The process of globalization of economic activity in the world is gradually reaching a stage that means building a single economic space and a uniform economic environment. But experience shows that many countries are not included in this process on an equal footing. Therefore, there is a need to identify and address the problem of the protection of national interests and increase the competitiveness of Kazakhstan's economy in the world.

Kazakhstan's economy in 2014 ranked 50 in the world in terms of competitiveness and as it had been on the same spot in 2013. This assessment is contained in the Global Competitiveness Index, prepared by the World Economic Forum (Global Competitiveness report, 2014).

The development of Kazakhstan's economy needs to find new ways to improve its competitiveness. One

of these ways is to create nationwide logistics system at the macro level. The relationship between the increase in competitiveness of the economy and the development of logistics systems is obvious, this relationship illustrates the fact that the participating countries in the rankings «Index Logistics Performance» and «Global Competitiveness Index» position on both ratings are similar. To enhance the competitiveness of the economy further it is necessary to increase the efficiency of the logistics system. In this connection, the study of logistics system of Kazakhstan, its strengths and prospects are obvious and relevant.

## 2 THEORETICAL BACKGROUND

The relationship between logistics and economic growth is seen in many studies. Qian (2007) using the data on logistics development and investment in fixed assets from 1980 to 2005, indicated that they played an important role in China's economic growth. A similar study was conducted by Yang (2009), which deals with logistics development and economic growth from a regional dimension, and came to the conclusion that there existed a positive relationship.

Research in Western Europe, Japan and East Asia shows that the high local supply chains have been an important contributing factor to economic success in the local, regional and national aspect (Friedman, D. 1988), and economic success in Italy and Germany was due to largely effective logistics industrial relations (Pyke, 1992).

A good logistics system has a great power to attract foreign investment. For instance, Cilliers and Nagel [Cilliers, W.W. and Nagel, P.J.A.] argue that a relatively well-developed logistics system in South Africa increases its competitiveness and ability to attract foreign investment in relation to its neighbors.

A certain amount of research in countries in Eastern Europe, Asia and Africa, revealed a number of reasons for the poor state of logistics in developing countries. Weak logistics systems are common in many developing countries. For example, in the former Soviet Union, poor transport links, political instability, national rivalries, bureaucracy, lack of funds and ineffective organizational structure is a major obstacle to the development of logistics.

Price (2006) in his research tried to explore the supply chain construction in Kazakhstan and identified a number of obstacles to the construction of efficient supply chains, such as a) the poor condition of the telecommunications, energy and transport infrastructure, which practically does not allow to use advanced information technologies and telecommunications, which makes transportation and distribution cost-ineffective; b) the low level of national income and complex bureaucratic politics, which creates additional costs for bribery, smuggling and theft, as well as an atmosphere of distrust, which is very difficult to form a cooperative relationship in the supply chain. In Poland, the main difficulties arise around the country setting to a market economy, ownership and management of transport companies. Similarly, the major obstacles of the Bulgarian logistics system can be traced to the state ownership of production units, distribution systems, warehouses, transport companies. Lack of experience and training for the implementation of modern methods of logistics management were also identified as problems of logistics in Bulgaria.

An example of Ghana shows that the logistics network configuration problems in the enterprises is to extract short-term profits, the current system emphasizes the minimization of costs for the narrow purpose of customer service that lacks long-term vision.

Similar problems exist in Asia: the causes of the problems in the People's Republic of China are the lack of transport infrastructure, corruption, bureaucratic inefficiency. The list is supplemented by other problems: poor infrastructure, regulation, bureaucracy and culture, poor training, information and communication technologies, poor domestic industry, high transport costs, poor storage and safekeeping, regional imbalances and internal trade barriers. A comparative study of logistics management in Hungary, China, Korea and Japan indicates that in addition to issues related to the centrally planned economy, there is a lack of management skills in the field of logistics, especially in Hungary and China. Logistics in Thailand is characterized by poor transport infrastructure, lack of storage space. The lack of modern methods and techniques of logistics management, inefficient and inadequate information technology cost data tend to exacerbate the problem of decision-making.

From these studies it can be concluded that there is a positive relationship between logistics systems and development of the economy. The better and more efficient logistics systems will operate, the better the economy will function. This article attempts to examine the weaknesses of the logistics system of Kazakhstan and prospects of its development. In the sociolinguistic aspect a code-switching is considered from the point of view of the influence of political, demographic factors, ethnic and territorial affiliation, social status and other factors. Many researchers note that code-switching should be considered from the

sociolinguistic perspective. It is mainly due to the fact that the linguistic behavior refers to the (social) identity of the speaker and its features, i.e. aspects of a social life. According to P. Gardner-Chloros (2009), initial fundamental researches on the code-switching were developed together with research on sociolinguistics abroad and they are associated with names of such linguists as J. Blom and J. Gumperz (1972) in the ethnographic aspect, Sh Poplak (1980) and C. Myers-Scotton (1993) in the grammatical aspect. The scholars used data obtained in the study of natural conversational speech for subsequent analysis of code-switching. Secondly, code-switching is a construct formed from the behavior of bilinguals. Watching the daily interaction of people in the multicultural society, linguists noticed that speakers use two or more types of languages integrating them in socially significant ways. And, finally, socio-linguistic factors are the main and the primary source of variation in the code switching.

### **3 THE GENERAL CONDITION OF THE TRANSPORT AND LOGISTICS SYSTEM IN KAZAKHSTAN**

Sovereign Kazakhstan is a unitary state which has the area (2724.9 km<sup>2</sup>) of about 2% of the surface of the globe, 6.1% in Asia and among the top ten large countries in the world. By international standards, the economy of the republic has a medium size. GDP in 2013 was about 224 billion US dollars. GDP growth in Kazakhstan in the period from 2003 to 2012 was higher than the growth rate of freight by all modes of transport. As a result, there is a situation where the existing capacity of transport infrastructure hinders economic growth (Committee on Statistics). The future economic development of Kazakhstan with the expected GDP growth rate of 3.5% per year and an average annual growth rate of 7-8% of the manufacturing industry will inevitably entail a further increase in the load on the transport system. The share of transport in GDP has already reached more than 10%. A level of logistics costs in the manufacturing complex is one of the world's highest proportion logistic costs in the final product cost is an average of 20-25%, whereas in China - 15% in Europe - 7-8%. The difference between the Kazakhstani and world indices is partly due to the length of the Kazakhstan's territory, but mostly – due to low efficiency of its transport and logistics system. According to the Logistics Performance Index (LPI) in 2014 Kazakhstan took 88th place out of 160 countries (LPI Index The World Bank, 2014)

Here we can say that inefficient transport and logistics system is one of the key constraints on the development of Kazakhstan's economy. Here are just a few «bonuses» that the country will receive as a result of solving these problems: 1) If Kazakhstan will reduce transportation costs and logistics to world average (about 11% of GDP), it will free up additional capital. 2) Qualitative development of transport and logistics systems not only optimizes costs, but also helps to reduce the working capital of companies.

For a long time local companies did not reflect the efficiency of logistics. In terms of macroeconomic recovery and higher prices for manufactured goods, shippers focused exclusively on growing the business. Accordingly, their logistics service had to solve the problem of delivery - to ensure production on time and in full. Given the large distances and low discipline of many carriers, these tasks completely absorbed the attention of specialists, pushing the optimization of logistics costs to the far periphery. Moreover, seeking to reduce the risks the companies operated in the logic of control over the assets: transport and logistics problems were solved by their own logistics department and by creating their own asset base (eg, steel, petroleum and petrochemical companies actively bought rolling stock). However, the economic boom gave way to stagnation, and optimization of costs, including transport and logistics had become one of the priorities of Kazakhstan companies. It can be noted that now shippers form the request to increase the efficiency of transport and logistics system. Moreover, in the face of increasing competition on the background of the crisis, efficient logistics becomes a lever for companies competitive. Domestic national manufacturers are under increasing pressure from both the local rivals and from international brands. The speed and reliability of delivery of the products are an important competitive advantage for them - an element of the business model, part of the brand, the condition of a stable market position.

The raw material orientation of the economy of Kazakhstan, along with the large distances and low population density, result in high economic dependence on transport. The growing demand for high-quality transport services is not satisfied in full because of the insufficient level of technological development of the transport system and gaps in the field of transport technologies.

### **4 BARRIERS TO THE DEVELOPMENT AND EFFICIENCY OF TRANSPORT AND LOGISTICS SERVICES**

Based on the research we have identified several key obstacles to the development of the market of transport and logistics services:

- a) Low quality of basic transportation services;
- b) The weak development of the transport infrastructure, including the lack of investment;
- c) Lack of qualitative and efficient logistics infrastructure, especially terminals and warehouses;
- d) Customs, tariff and regulatory barriers at the borders;
- e) The lack of competence and lack scale of logistics companies' business.

#### **a) Low quality of basic transportation services**

According to the poor quality of basic transportation services, Kazakhstani railways are experiencing difficulties: the speed of traffic on it has declined substantially, as well as the predictability of delivery times. In addition, the predictability of delivery times by rail has declined substantially in recent years. The potential of joint planning and consolidation of shipments has not yet realized in the segment of raw goods. The market of transportation is fragmented and largely operates on the flexible, including «gray» schemes, which leads to poor quality of services. The global trend in the airline industry is the displacement of freighter fleet of passenger planes, which carry loads in cargo compartments. However, passenger airlines in Kazakhstan pay insufficient attention to cargoes. They do not plan capacity utilization, whereby shippers can not plan their transportation. As a result, goods go to other types of transport, especially in the segment of road transport.

#### **b) Poor transport infrastructure**

Prospects for the development of transport infrastructure are a key issue for the Kazakhstani economy in general and national transport and logistics system in particular. In Kazakhstan the developed transport infrastructure is a basic condition of economic stability and implementation of export potential. Currently Kazakhstan is investing in infrastructure much smaller than both developed and developing countries (such as China) countries. Lagging behind other countries in terms of investment, Kazakhstan is seriously ahead of the share of the state participation: about 98% of all investments in the infrastructure are made by the state. In the world practice, the share of public investment in infrastructure, as a rule, does not exceed 30%. Stimulation of a private investment in infrastructure becomes a priority in the current situation of economic slowdown and reduce of the investment capacity of the state. This problem can not be solved without improving the regulatory framework (in particular, the concession law), and the tax system without reducing the risks of long-term investment.

#### **c) Lack of quality and efficient logistics infrastructure**

Now multi-modal transport and logistics terminals (centers) are not effectively operating in Kazakhstan, which severely limits the development of logistics. These terminals are widely distributed in Europe and America - they allow seriously optimizing supply chains and reducing the time of cargo handling and transportation of goods. Multimodal systems combine the functions of a transit point equipped for efficient transfer of goods between different modes of transport and storage. Due to the storage capacity, it is possible to «hold» the goods until convenient transportation time, and bundle the group of goods («bundling»). All this together greatly improves the efficiency of transportation means use, in particular, motor vehicles.

#### **d) Customs, tariff and regulatory barriers at the borders of countries**

One of the main obstacles to increase the efficiency of the market of transport and logistics services are the customs, tariff and regulatory barriers to the export/import and international transit of goods.

Kazakhstan receives a score of 2.33 out of 5 (121 place) in terms of «customs procedures» in the ranking of the World Bank in 2014. This relatively low score reflects the objective difficulties faced by almost every company in the Kazakhstani Customs: procedures are ineffective, not transparent and are a source of high-risk business. The lack of electronic document when cross-border transportation of goods creates barriers to export, import and transit. The main task in the area of tariff regulation is the harmonization of railway tariffs. Export/import and transit cargoes go through the territory of several countries, respectively, the tariff policy of one of the participants in the transport corridor can make unprofitable entire corridor.

An additional barrier to the development of transport and logistics services and the formation of an optimal balance between different modes of transport are high barriers to entry for certain types of transport. It is clear that the barriers to entry into the segment of rail and air transport are high. At the same time due to the high fragmentation of the sector and a relatively weak level of regulation in this sphere of activity of the

state (in comparison with rail and air sectors of the market), barriers to entry here remain low.

#### **e) The lack of competence and lack of scale logistics companies**

To date, the Kazakhstan market of transport and logistics services is highly fragmented. Small scale of business logistics companies leads to the fact that high-quality logistics services to major clients in the required volume can not be provided. It is no coincidence that in the World Bank in terms of «quality and level of competencies of logistics» Kazakhstan has received a modest score of 2.72 (out of 5). To increase the level of competence of transport and logistics services in Kazakhstan it is necessary to change the scale of its participants: only big companies and business networks formed by small and medium-sized companies will be able to offer the largest retailers and manufacturers of consumer goods an adequate level of service at an acceptable level of tariffs

## **5 OPPORTUNITIES FOR DEVELOPMENT OF TRANSPORT AND LOGISTICS SYSTEM IN KAZAKHSTAN**

There is a possibility to use Kazakhstan's geographical position. Kazakhstan is located between two global markets - China and Europe. Trade turnover between the two countries reaches \$ 800 billion US dollars. Flows are conducted through several routes: the sea (across the Indian Ocean - the Suez Canal) - 45-48 days; railway (Transsibirskaya main) - 18-19 days; air - 1-2 days. It is currently growing volume of FMCG by the type of product which requires the speed of delivery. Delivery of cargo by sea and rail routes is too long, and its delivery by air is expensive. Therefore, carrying out the routes through Kazakhstan may be beneficial for the speed and cost of delivery. The international highway of Western Europe - Western China (WEWC) (delivery - 14-15 days) has been built now, where about 3.5 million tons of cargo will be transported. Besides, it is supposed to pave the double track «Nurly Zhol Transit», which can transmit the load of 20 million tons per year. The cost of delivery in this track will be lower, but faster than the existing land routes. An integral part of the transport and logistics systems are the logistics centers, which provide a full range of services for the processing, storage, transportation, shipping, and manage a growing trade flows in today's global economy.

This will give impetus to further development of logistics services in Kazakhstan and increase export services by transit traffic.

«WEWC» and «Nurly Zhol Transit» open vehicle access to international markets of products of domestic production - the prices will be lower, higher availability of transport, delivery time is shorter.

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