

вознаграждении сотрудников-экспатриантов, ведь число американских специалистов, работающих в дочерних компаниях на территории других стран, постепенно росло.

Успех японского менеджмента и глобальная нестабильность привели к признанию необходимости развития систем глобального лидерства и расширения каналов мобильности, оптимизации состава руководителей-экспатриантов и становления лидеров из принимающих стран для ключевых должностей компании в целях привнесения новых идей в глобальную стратегию.

Вслед за развитием процессов международной корпоративной интеграции, рост объединенных бизнес-структур и исследовательский фокус международного управления человеческими ресурсами сместился с первоначального акцента на системы управления персоналом, прибывшем из материнских компаний, к более широкому спектру направлений кадрового менеджмента, включающему перемещение сотрудников из одной страны в другую, согласование основной кадровой политики с местными культурными особенностями и использование уникальных перспектив и опыта принимающих стран.

Сегодня управление экспатриантами продолжает оставаться важным направлением деятельности и активной областью исследований, но проблемное поле международного управления человеческими ресурсами стало значительно шире, оно включает в себя такие вопросы, как: управление гражданами принимающей страны и третьих стран, интеграция мировых практик управления персоналом, развитие международного менеджмента и кросскультурной коммуникации, управление талантами и поиск глобальной компетенции.

Таким образом, проблемное поле международного управления человеческими ресурсами сегодня можно разделить на две основные области:

1. Привлечение и удержание работников в странах присутствия для достижения стратегических глобальных бизнес-целей.
2. Повышение глобальных компетенций и возможностей, например, путем создания глобальных центров передового опыта, центров совместного обучения и овладения кадровой экспертизой, необходимой при трансграничных слияниях и поглощениях.

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**RESEARCH ON POINT-TO-POINT ENERGY TRADING AND  
TRANSPORTATION METHODS FOR POTASH FERTILIZERS  
BETWEEN CHINA AND BELARUS**

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**Summary.** *As an effective solution to the "energy dilemma" faced by human society, peer-to-peer (P2P) energy trading has emerged and developed rapidly in recent years. This article mainly studies the energy transportation methods between China and Belarus under the peer-to-peer trade of potassium fertilizer energy between China and Belarus, and discusses the most convenient method of P2P energy trading and transportation between the two countries, hoping to bring benefits to academia and industry around the world. Come and trade shipping references and opportunities.*

According to data from Green Markets, Belarus' annual potash exports are approximately 6 million tons of K<sub>2</sub>O, accounting for 16.7 % of the total global potash trade volume. According to data from the Chinese Ministry of Commerce, Belarus is the third largest potash fertilizer producer in the world, accounting for 20 % of global potash fertilizer exports[1]. In 2021, Belarus' potash fertilizer service trade volume accounted for 5 % of the total gross national product, equivalent to RMB 4.94 billion. By 2022 [2], China's supply of potassium fertilizer energy to Belarus has reached 607,000 tons. Therefore, this article analyzes in detail the energy transportation methods of China and Belarus, and provides relevant suggestions for the methods of potassium fertilizer transportation between the two countries.

1.1 Railway transportation: A number of railway transportation lines have been established between China and Europe, such as the China-Europe freight train, to transport goods by rail. These trains usually depart from major cities in China, pass through Kazakhstan, Russia and other countries, and finally arrive at European destinations. Railway transportation has faster speed and lower cost, and has gradually become an important mode of transportation for trade between China and Europe.

1.2 Maritime transportation: There are also a large number of maritime routes between China and Europe to transport goods through the ocean. There are regular routes between major ports in China and major ports in Europe, and goods can be transported by container ships or bulk carriers. Ocean shipping is generally suitable for large quantities of goods and longer distances, but the transit time is longer.

1.3 Air transportation: For some goods that urgently need to be delivered quickly, there are also air transportation services between China and Europe. There are regular flights between major airports in China and major airports in Europe, and goods can be transported by cargo planes or passenger planes. Air freight is fast and suitable for urgent cargo and high-value goods, but the freight is higher.

1.4 Road transportation: There is also road transportation between China and Europe, and goods are transported by land. This method is usually suitable for the transportation of goods between countries that are relatively close to each other. The goods can be transported by trucks or trucks. Road transport offers flexibility

and convenience, but transport time is affected by traffic conditions and route selection.

2.1 Road transportation: The total length of the Belarusian road network is 102,900 kilometers, of which 89,900 kilometers are hardened pavement, accounting for 87.4 % of the total road length. The density of hardened pavement roads is 42 kilometers/100 square kilometers. The total length of expressways is 1,532 kilometers, accounting for nearly 1.5 % of the total highway mileage. In 2021, road freight volume was 155 million tons, a year-on-year decrease of 3.1 %, accounting for 40.2 % of the total freight volume; road passenger volume was 940 million, a year-on-year decrease of 5.2 %, accounting for 60 % of the total passenger volume.

2.2 Railway transportation: The total length of Belarusian railways is 5,474.1 kilometers, of which 1,369.5 kilometers are electrified railways. The railway network density is 2.6 kilometers/100 square kilometers. In 2021, railway freight volume was 129 million tons, a year-on-year increase of 2.9 %, accounting for 33.4 % of the total freight volume; railway passenger volume was 61.2 million, a year-on-year increase of 2 %, accounting for 3.9 % of the total passenger volume. There is a regular container train "Mongolian Victor" operating between Brest, Belarus - Ulaanbaatar, Mongolia - Hohhot, China. The total investment of the Belarusian Railways in 2012 exceeded US \$ 730 million.

2.3 Air transportation: Belarus has 7 international airports: Minsk International Airport, Minsk 1 Airport etc. These airports are not only responsible for domestic air transportation, but also international scheduled flights and charter passenger flights to various countries. There are three main airlines in Belarus: Belavia Airlines, Gomel Airlines and Air Transport Export Company. In 2021, Belarus' air cargo volume was 40,000 tons, a year-on-year increase of 33.3 %; air passenger volume was 1.9 million, a year-on-year increase of 11.8 %.

2.4 Water transport: Belarus's inland water transport network is about 2,000 kilometers long, transporting passengers and goods to various residential areas and goods processing points along the river through 10 river ports. These 10 river ports are located in the Pripyat, Dnieper, Sozh, Berezina, Neman and West Dvina river basins. In 2021, Belarus's inland waterway freight volume was 2.4 million tons, a year-on-year decrease of 11.1 %. Belarus is a landlocked country with no outlet to the sea. Now they are mainly transshipped through Russian ports.

After research and analysis, trade transportation between Belarus and China mainly adopts water transportation, railway transportation, and multimodal transportation. Although Belarus's inland water transportation system ensures 2,000 kilometers of domestic waterway passenger and cargo transportation and reaches 10 river ports, it does not have an outlet to the sea and cannot carry out large-scale trade transportation with China. Air transportation is relatively expensive, and the cost of transporting a large amount of potash fertilizer energy is too high, which is not conducive to the development of the GDP of the national economy. Multimodal transport is a transportation method based on the customer's time require-

ments, mainly based on transportation timeliness and supplemented by price. Customers can choose different transportation methods such as sea transportation, rail transportation, air transportation, truck transportation, and multimodal transportation. The price is only Second to air transportation, it is more suitable for express and small cargo transportation. There are many railways, Eurasian trains and land transportation between Belarus and China. Railway transportation is an important part of the trade between the two sides and is cheap. Although water transportation is cheaper, potash fertilizer energy is easy to react with water and is soluble in water, so water transportation cannot be used. Therefore, rail transportation is chosen, from Minsk to Brest, then to Moscow to Mongolia, and then transported to China through the Inner Mongolia port in China.

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## **ЛОГИСТИЧЕСКОЕ СОТРУДНИЧЕСТВО РЕСПУБЛИКИ БЕЛАРУСЬ И КИТАЙСКОЙ НАРОДНОЙ РЕСПУБЛИКИ**

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***Summary.** This work is devoted to the relations of the Republic of Belarus and China in the logistics and economic spheres. In September 2022, the countries withdrew relations to a new level of “all-weather and comprehensive strategic partnership”. Relations between Belarus and China are characterized by active political dialogue and a friendly climate favorable for the development of pragmatic interaction in the logistics and economic sphere.*

По итогам 2022 года двусторонний товарооборот достиг нового исторического максимума, составив 5,8 млрд долл., темп роста – 113,7 % к 2021 году и 111,8 % к 2020 году [1]. Экспорт белорусских товаров в КНР составил 913,3 млн долл., темп роста 117,5 % и 128,2 % соответственно. Импорт из Китая в Беларусь – 4,2 млрд долл., темп роста 110,6 %. Таким образом, белорусский экспорт в Китай растет опережающими темпами. Сальдо торгового баланса с КНР традиционно отрицательное.

В структуре белорусского экспорта в Китай ярко выраженное преимущество в поставках пищевой и сельхозпродукции. Беларусь находится в топ-10 поставщиков в Китай калийных удобрений (3 место), молочной сыворотки (5 место), мясной продукции (мясо курицы и говядина (9 и 10 места), рапсового масла (10 место) [2].

Осуществление роста приведенных выше экономических показателей невозможно без логистики. Логистическое сотрудничество между Республикой Беларусь и Китаем имеет стратегическое значение для обеих стран, особенно в контексте развития торговых и экономических отношений. Существует несколько аспектов сотрудничества в области логистики между этими двумя странами.