# Study on the Impact Factor Evaluation of Low Carbon Logistics Development in Shaanxi Province Based on Iron-wrist Haze Control

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Abstract: Shaanxi Province is relatively backward in economy, which is the disadvantage of logistics development in Shaanxi Province. Therefore, in order to protect the ecological environment and improve the air quality, local governments in Shaanxi and its surrounding areas have taken measures to control haze with iron wrists and issued a ban on pollution control and haze reduction in Shaanxi. Therefore, based on the iron fist treatment, the author evaluates and studies the influencing factors of the development of low carbon logistics in Shaanxi Province. Then explore the strategies and ideas for promoting the development of low carbon logistics in Shaanxi Province. Studies have shown that in this era of low-carbon economy, Shaanxi Province should actively comply with the requirements of the times, actively carry out low-carbon logistics research, and make logistics lower carbonization, in order to make Shaanxi's logistics development become a disadvantage.

#### 1. Introduction

Along with the continuous development of the economy, the world's energy consumption is rising, and environmental pollution problems are becoming increasingly prominent [1]. Logistics has a special status in a low-carbon economy, and the development of a low-carbon economy requires the support of low-carbon logistics [2]. As a big country, China is accompanied by the exhaustion of resources and the gradual deterioration of the natural environment while the national economy is developing rapidly [3]. In order to realize the sustainable utilization of resources and the improvement of environment, China has put forward resource-saving and environment-friendly economic development and low-carbon-based economic development mode. Low-carbon-based economic development refers to a friendly economic development mode with low energy consumption, low emissions, low pollution and high efficiency. Its goal is to reduce environmental pollution and resource consumption to achieve economic development [4]. This kind of development mode is becoming the preferred strategy of our country at present [5]. Reducing carbon pollution emissions, strengthening environmental protection and realizing the coordinated development of social economy and ecological environment have become a global consensus, which is also the focus of attention of academia and government at home and abroad in recent years [6]. In order to further control haze, China has formulated many measures, such as the "Ten Articles of the State" for air pollution prevention and control, which not only includes the optimization of industrial structure, but also covers many aspects such as energy structure and municipal projects.

With the acceleration of industrialization, urbanization and regional economic integration, China's environmental pollution, especially air pollution, has gradually changed from single urban pollution to regional complex pollution [7]. Logistics plays an indispensable role in the development of low-carbon economy. Logistics is a high-end service industry. Its development must also follow the path of low-carbon and pay attention to the development of green logistics services. The output value of China's logistics industry mainly comes from transportation, warehousing and postal industry. It is a major energy consumption and carbon emissions user in China [8]. On the one hand, logistics itself is a major energy consumer and a major carbon emitter. On the other hand, the development of logistics as an important measure to achieve a low-carbon economy, logistics must also lower the carbonization path and focus on the development of low-carbon logistics. As an important part of urban economic development, urban logistics, its efficiency and development

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level will have a significant impact on the healthy development of urban economy [9]. Some scholars have discussed the connotation of low-carbon logistics, and believe that low-carbon logistics is mainly based on the use of advanced low-carbon logistics technology and management methods to reduce carbon emissions in logistics activities. Thereby reducing the pollution of logistics activities to the environment and improving the utilization efficiency of logistics resources [10].

## 2. Development status of low carbon logistics

As an important part of the development of low-carbon economy, low-carbon logistics is regarded as one of the important ways to promote the development of low-carbon economy, and it has aroused the resonance of academic circles and accelerated the research on the exploration of low-carbon economy and its application. In the management of many maintenance projects, the focus of municipal maintenance project management is on the management and maintenance of municipal roads and their facilities along the route. In response to climate change, our government is committed to a 40%-45% decline in CO2 emissions per unit of GDP by 2020 compared to 2005. Among the total energy consumption and composition of Shaanxi Province, coal energy consumption accounts for the largest proportion of total energy consumption. Coal is the main energy consumption in Shaanxi Province at present. With the further development of logistics industry, the proportion of carbon emissions in China's logistics industry will rise, which means that there is a huge space for energy saving and emission reduction in logistics industry. At present, iron wrist haze control has become the core issue in most parts of China. Therefore, in the form of iron wrist haze control, we should improve the management level by improving the management consciousness and professional quality of maintenance personnel.

Among them, CO2 emissions are obtained by multiplying the consumption of raw coal, crude oil, gasoline, kerosene, diesel oil, fuel oil, liquefied petroleum gas and natural gas in the logistics industry with their corresponding CO2 emission coefficients, as shown in Table 1.

Energy	Coefficient of carbon dioxide	Energy name	Coefficient of carbon dioxide
name	emission		emission
Raw coal	1.9042Kg-CO2/Kg	Kerosene	3.0144Kg-CO2/Kg
Crude oil	3.2582Kg-CO2/Kg	Diesel oil	3.0987Kg-CO2/Kg
Fuel oil	3.3458Kg-CO2/Kg	Liquefied	3.1035Kg-CO2/Kg
		petroleum gas	
Gasoline	2.9741Kg-CO2/Kg	Natural gas	2.1365Kg-CO2/Kg

Table 1 Emission Coefficient of CO2 from Energy Sources

At present, the development of logistics industry in China is extensive, the level of specialization and socialization is low, and the economic growth has paid a large logistics cost. Large-scale mining and use of coal will bring about environmental pollution and ecological damage. Therefore, facing the changes of the new situation, the development of low-carbon logistics in Shaanxi Province is conducive to improving the utilization efficiency of resources and taking the road of sustainable economic development. From the research on the connotation and development of low-carbon logistics, there is no unified concept definition in the practice of low-carbon logistics in domestic academic circles and countries. As a result of the transformation of the national balanced regional development strategy, Shaanxi economic belt has once again become the key axis of national economic development. Shaanxi Province is becoming a strategic channel for inland regions to participate in international division of labor and regional cooperation. Its logistics industry has become one of the pillar industries of the local economy and one of the most important modern service industries, so its importance is self-evident. For a long time, for the municipal maintenance projects, China's management awareness is to focus on building light management. This wrong thinking and understanding is very outdated in the ironclad era. In this situation, a low-carbon economic development model must be adopted. As a key industry in China, the logistics industry has the obligation and ability to make achievements in the development of low-carbon economy.

As can be seen from Figure 1, the carbon dioxide emissions of China's logistics industry are generally on the rise. This shows that with the continuous development of China's logistics industry, the carbon dioxide emissions of the logistics industry have increased year by year, and carbon dioxide emissions have accelerated in recent years.

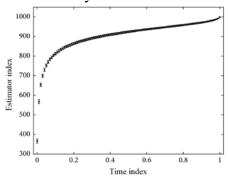


Fig.1. Estimation of CO2 Emission in China's Logistics Industry

## 3. Improvement Measures of Low Carbon Logistics Development

The impact factor evaluation of low-carbon logistics development is a work involving multi-variable, multi-relationship and multi-layer system. As for the concept of low-carbon logistics, there is no specific definition at present. It can be summarized as follows: low-carbon logistics is based on the theory of low-carbon economy and green logistics, integrating the concept of "sustainable development" into the operation of distribution, circulation and processing, information processing and other logistics systems. In accordance with government policies and industry standards, advanced logistics technology and management means are adopted to achieve the virtuous promotion and circular development of logistics economy. In the differentiation of industrial systems in various countries, there is no separate logistics industry, and so is China. Therefore, drawing on the research of scholars in the past, the three departments of cargo transportation, warehousing and postal services are defined as logistics. In recent years, with the economic development and environmental changes in Shaanxi Province, the development concept has gone from recycling logistics to green logistics to low-carbon logistics. However, the promotion of low-carbon logistics development concept has not been deeply rooted in people's minds and requires deep practice. development of. Therefore, in the form of iron fists, the management process of municipal maintenance projects should be promoted by improving the supervision mechanism. Under the situation of iron fists, the improvement of supervision mechanism is of great significance for promoting the management of municipal maintenance projects.

In Figure 2, carbon dioxide emissions from road transport in developed countries are slightly lower. Compared with foreign developed countries, the CO2 emissions from road transport in China's river industry are significantly higher in the display of Figure 2.

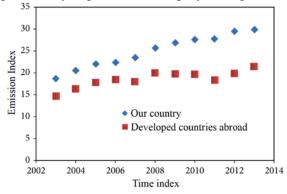


Fig.2. Comparison of CO2 Emissions from Road Transportation in Logistics Industry between China and Foreign Developed Countries

With the development of science and technology, municipal maintenance project management should also pay attention to the application of modern equipment, such as the application of information platform and Internet platform. "In recent years, Shaanxi Province has continuously strengthened the prevention and control of air pollution, and carried out the control of gas-related enterprises, motor vehicle exhaust, dust and cooking fume. As well as a series of pollution prevention and control work such as straw burning ban, coal ban, clean energy transformation, the implementation of thermal power, iron and steel, cement, glass and other industries desulfurization and denitrification facilities transformation, shut down some high-polluting industry enterprises. In order to protect the environment and the health of the people. Xi'an and its surrounding local governments are determined to fight the haze with an iron fist and declare war on air quality. The main measures of pollution control and haze reduction in the field of engineering construction are to suppress dust and reduce emissions. Regarding the carbon emissions in China's logistics sector, the basic statistics are still relatively lacking, and can only be compared from the energy consumption data. At present, China is at the stage of rapid economic development. Therefore, it is necessary to follow the path of scientific development. A low-carbon economy can be said to be an ineviTable choice for the scientific development concept. Through analysis, find out the effective countermeasures and measures for developing low-carbon logistics in Shaanxi Province, which is conducive to promoting the development of low-carbon economy, reducing the consumption of social resources and reducing carbon emissions in the process of logistics development in Shaanxi Province. At the forefront and leading level.

#### 4. Conclusion

Study low-carbon logistics, take precautions in the process of logistics development, pay attention to "energy saving and carbon reduction", pay great attention to environmental protection, and pay less "expensive tuition fees" that others have paid or are paying, and take less of others' passing, detour. Among them, paying attention to the integration of awareness in the management of maintenance projects, strengthening the supervision and management of municipal maintenance projects and paying attention to the application of modern information equipment are more effective measures. In addition, while increasing the scale of production in the logistics industry, it is necessary to strengthen internal management, scientifically plan all resources invested in the logistics industry, and coordinate and coordinate. In the pursuit of the economic benefits of the logistics industry, we will pay more attention to environmental benefits and adhere to the path of sustainable development. Therefore, in the environment of low-carbon economy, logistics enterprises alone cannot solve many problems in their own development of low-carbon logistics. It is difficult to create a mature and modern low-carbon logistics industry solely by the self-development of low-carbon logistics enterprises, which requires the government to intervene and play an important role. On the other hand, all aspects of logistics involve the operation of relevant practitioners, such as logistics transport personnel using various information platforms to formulate the optimal transport routes to maximize the reduction of carbon emissions. Therefore, the development of low-carbon logistics will have a positive and important impact on the development of logistics in Shaanxi Province.

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#### References

[1] Lu M, Nie Y Q. Development of Low Carbon Logistics of Qinhuangdao Port [J]. Advanced Materials Research, 2014, 962-965:1709-1712.

- [2] Yuan Q M, Ning N N, Qin C C. Measurement and Evaluation of the Low-Carbon Port Logistics and Region Sustainable Development of Tianjin [J]. Advanced Materials Research, 2013, 869-870:963-966.
- [3] Yang T, Cai W W, Wang B. Research of the Strategy and Planning for Low-Carbon Logistics Development [J]. Advanced Materials Research, 2013, 869-870:954-957.
- [4] He Z, Chen P, Liu H, et al. Performance measurement system and strategies for developing low-carbon logistics: A case study in China[J]. Journal of Cleaner Production, 2017, 156:395-405.
- [5] Ming L, Huiqin Y, Xian X, et al. Industry Linkage and Low-carbon Development--Based on Logistics Industry & Manufacturing Industry[J]. Meteorological and Environmental Research, 2017(05):10-22.
- [6] Lv H, Han W H, Yang X J T. China\"s Logistics Development Path under a Low-Carbon Environment [J]. Advanced Materials Research, 2014, 962-965:2296-2300.
- [7] Wang J, Li Y F, Hua G. Research on Problems of Logistics Park Layout Optimization Based on Low-Carbon Concept [J]. Advanced Materials Research, 2014, 962-965:1654-1659.
- [8] Zhao C, Liu Y. Efficient Allocation and Reasonable Transportation of Logistics Enterprises under Low Carbon Economy [J]. Advanced Materials Research, 2013, 850-851:1086-1089.
- [9] Liu W F, Gong H J, Jie S. Research on the Development of Wisdom Logistics of Regional Economical Integration of Beijing, Tianjin and Hebei Base on Low Carbon Economy[J]. Applied Mechanics and Materials, 2014, 644-650:5970-5973.
- [10] Wang Y. Low-Carbon Logistics and Sustained Economic Cycle for Manufacturing Engineering [J]. Applied Mechanics and Materials, 2014, 484-485:264-267.