

The Evolutionary Trajectory and Innovation Mechanisms of Cross-Border E-Commerce Logistics Modalities

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Abstract: *Amid rapid socioeconomic advancement, the intensification of urban construction imposes increasingly stringent demands on the evolution of logistics systems. Within this context, cross-border e-commerce logistics models have gained considerable traction, effectively addressing several long-standing operational deficiencies while simultaneously introducing new opportunities and challenges for the e-commerce sector. To accelerate the advancement of these logistics models, a systematic assessment of their current developmental status is essential. Accordingly, this study investigates the innovation patterns and developmental trajectories of cross-border e-commerce logistics models, aiming to provide theoretical insights and practical implications for their sustained evolution.*

Keywords: Cross-Border; E-Commerce Logistics; Innovation; The Development Trend.

1. MANAGEMENT SYNERGY MODE

In the context of the rapid development of cross-border e-commerce, the realization of cross-border logistics mode has become a necessary trend of social development in the new era in order to achieve the desired effect. First of all, under the condition of logistics resources, logistics and transportation technology and e-commerce management should be combined to promote the mutual development of the two, while technical management personnel need to use the connecting point of e-commerce and logistics and transportation to assist each other and play a management role by improving the work efficiency of the two [1].

As cross-border logistics services are operating enterprises, in order to implement the advanced ideas of e-commerce management on each employee, it is necessary to focus on the overall operation of the enterprise and timely complete tasks related to cross-border logistics and transportation. At the same time, relevant personnel also can use the remote processing technology, electronic commerce further optimize logistics transportation way and the management method, which is advantageous to the logistics of e-commerce to achieve unified management, help enterprises save a lot of logistics transportation cost, achieve win-win situation, better promote national orderly cross-border e-commerce logistics model.

2. LITERATURE REVIEW

At present, the research on independent innovation incentives of R&D personnel in domestic and foreign theoretical circles can be roughly divided into three viewpoints. One is the independent innovation incentives of R&D personnel based on human resource management. Sun Jinting et al. believe that the salary level of R&D personnel should be motivated according to the market value of R&D results [3]. The salary level of R&D personnel depends on the value of R&D results. Yu Guixue et al. advocated that the performance incentive method can be used to motivate R&D personnel in combination with the ranking method for comprehensive performance evaluation [4]. Yang Dafeng believes that private enterprises should provide focused equity incentives to R&D personnel with core technologies [5]. Yu Zhong believes that companies should pay more attention to the role of performance on the basis of increasing basic wages and post wages [6]. Liu Hong et al. pointed out that due to differences in professional orientation, the methods and needs of incentives are also different. The incentives for employees can be carried out in terms of salary, tasks and organizational environment [7]. The second is independent innovation incentives for R&D personnel based on team management. Huang Jianbai et al. believe that rewarding R&D teams based on performance is conducive to the implementation of the team system [8]. Fan Ling et al. found that the motivation that stimulates the creativity of the R&D team is the goal motivation, which is more clear than other types of motivation [9]. Zhang Yunsheng et al. believe that shareholding is not conducive to R&D performance [10]. Chao-ying Tang found that to improve the internal motivation of R&D team members and improve the independent innovation ability of R&D team members, more attention should be paid to the

growth and development needs of members. The growth needs of team members may be more important than payment [11]. The third is independent innovation incentives for R&D personnel based on knowledge management. Li Weidong et al. believe that the behavior of helping others to obtain satisfaction in internal incentives is the biggest factor that causes the willingness of R&D personnel to share knowledge [12]. Wang Yongqiang et al. believe that the motivation of R&D personnel should first solve the problem of the degree of effort of R&D individuals to transform tacit knowledge and carry out knowledge sharing [13]. Hu Xinping introduced the fairness preference factor into the knowledge sharing incentive model, and proposed that different incentive measures should be given according to the different sympathy preferences of R&D personnel [14].

The above research results explained the necessity of stimulating R&D personnel and the measures for improvement or optimization from multiple angles. Research in the field of human resource management focuses on the individual needs of employees and explores how to use incentive measures such as salary, performance evaluation, and career management to stimulate employee enthusiasm. Research in the field of team management no longer only focuses on individual employees, but uses the team as the main body of research to discuss how to motivate. Research in the field of knowledge management focuses on the sharing and transformation of individual knowledge. However, the above-mentioned studies often overemphasize the needs of R&D personnel themselves, blindly emphasize the use of various incentives to stimulate R&D personnel, and ignore the different situations in which R&D personnel are located under different environmental conditions. In addition, the above research emphasizes the impact of various incentives and various single factors on the R&D personnel themselves, and rarely sees a clear incentive combination, does not give a specific incentive combination plan, and does not consider the incentives of the R&D personnel and the R&D personnel themselves. The relationship of different situations. Therefore, this article combines the incentives of R&D personnel in private enterprises with the different situations of R&D personnel themselves, and analyzes the incentive strategies and combination schemes that private enterprises should choose to focus on in different R&D personnel's independent innovation scenarios and construct R&D personnel independent innovation incentives. The model is expected to provide a reference for increasing the willingness of private enterprise R&D personnel to improve their independent innovation capabilities.

3. STRONG ALLIANCE, COMMON PROGRESS

In order to achieve e-commerce mode, it is necessary to increase the strength and market competitiveness of logistics enterprises, and make reasonable use of e-commerce management advantages combined with their own development. Therefore, it is necessary to pay more attention to the joint work of local logistics enterprises, promote cross-border logistics management and logistics transportation work together, and do not go beyond the prescribed work area, so as to effectively play the role of local management. To achieve this goal, cross-border logistics enterprises must recruit staff with rich experience and strong logistics management ability to provide great help for important decisions. At the same time, according to the current development situation, they can plan future work goals and provide power support for the subsequent sustainable development. For example, under the relevant institutional management environment, a well-known cross-border logistics enterprise in our country fully integrates its own development situation and regional differences, which is also an important decision of the enterprise in the fierce market competition. With the help of overseas warehouses, the heads of logistics enterprises continue to expand the market scale, so that the scope of influence is also expanding, greatly reduce the gap between logistics outlets, accelerate the realization of resource sharing, so as to provide great convenience to relevant personnel.

Under the same development environment, some port cities in our country will also be affected by similar logistics and transportation, so large-scale ports can be built in coastal cities by means of strong cooperation and scientific management, which is conducive to the rapid completion of the expected goals of logistics and transportation. Most logistics enterprises rely on coastal areas to achieve sustainable development, which not only maximize economic benefits, but also avoid cross-border logistics service conflicts in the process of transportation, and improve the speed of logistics and transportation.

3.1 Logistics mode resource sharing

Cross-border e-commerce forms agglomeration effect in the development process, especially in the process of logistics and transportation, which usually needs support from various aspects to complete the work. Secondly, in the process of carrying out cross-border transportation, the logistics and transportation industry will have substantive contact with customs situation, entry of destination country, commodity inspection and other aspects.

To be specific, cross-border logistics is much more complex than other logistics enterprises in terms of transport links, mainly reflected in transport time and distance, and also associated with other logistics modes. In the process of cross-border e-commerce, logistics enterprises will face global customers of different shapes and colors, and need to maintain high-quality communication with all countries, including developed countries and developed countries, and even special countries. As countries have different development rates, their economic levels will also differ, leading to certain differences in the development of logistics among countries. In addition, there are a wide variety of cross-border transactions, and distribution methods will also be completely different, so the establishment of resource-sharing vouchers in logistics mode is particularly important [2].

3.2 To develop the logistics outsourcing model

Although many cross-border e-commerce build independent logistics management systems internally, third - party cooperation is still used to complete logistics distribution in international logistics and transportation. Because logistics has many complex processes, scientific selection of logistics outsourcing mode to accelerate the efficiency of logistics distribution, fundamentally reduce transport risks. Actually in the process of concrete use, logistics outsourcing model development speed has become increasingly apparent, mainly is that they are with their own advantages, combined with the existing logistics chain, continuously adjust the logistics transportation, greatly reduce logistics inventory problems, and combined with the customer requirements, to carry out targeted logistics mode, is beneficial to cross-border logistics various aspects can be orderly, Promote the industrialization of cross-border logistics outsourcing.

3.3 Improve relevant systems and systems

In order to promote the innovation of cross-border e-commerce logistics mode, it is necessary to fully implement the relevant systems. In the context of cross-border e-commerce logistics in the new era, targeted internal management mechanisms should be developed according to the current development of enterprises to cater for future development. At the same time, combined with the global economy and cross-border e-commerce current situation of the development of logistics mode, it shall timely optimize logistics management mechanism, to develop advanced management mechanism, which fully reflects the rationality of the management system, and to implement it to logistics enterprise internal, highlights the logistics enterprise and the advantages and characteristics of electronic commerce development, accelerate the cross-border e-commerce logistics model to achieve innovation. In addition, a sound relevant system can strictly regulate the staff in the implementation process, prevent bad behavior in the work, hinder the progress of enterprise development. In addition, the cross-border e-commerce logistics mode is quite different from other logistics. the cross-border e-commerce logistics mode has international characteristics and can travel around the world. Once problems occur in any link in the transportation process, it is easy to paralyze the whole logistics, so the management mechanism must be improved based on the actual situation. So as to realize the innovation and development of cross-border e-commerce logistics mode.

4. SCENARIO ANALYSIS OF PRIVATE ENTERPRISE R&D PERSONNEL

In today's fast-changing science and technology, private enterprises rely more on the technical capabilities and performance of R&D and R&D personnel than ever before [15]. For the core employees of an enterprise, their first job is to externalize their own proprietary skills and knowledge and creatively apply them to the research and development process. In this process, the level of R&D personnel's scientific research ability directly affects the efficiency and quality of enterprise R&D. Especially for private enterprises, due to their limited scale and capital, they cannot afford the costs brought by a large R&D team. In order to save costs, private enterprises need to make full use of the scientific research capabilities of each R&D personnel. In addition, as the role of consumers in the value creation process is becoming more and more obvious[16], R&D personnel must not only understand consumer psychology, but also be proficient in product development. R&D personnel also reflect the importance of the technology and product development process. Market-oriented characteristics [17]. For enterprises, the R&D personnel's scientific research capability is the manifestation of its fundamental value, and market-oriented R&D can maximize the value of R&D. Therefore, this article believes that the R&D personnel's scientific research business capability dimension and the independent innovation market-oriented dimension are the key dimensions to measure R&D personnel's independent innovation capability.

4.1 Dimension of R&D Personnel's Scientific Research Business Capabilities

R&D personnel's scientific research business capabilities can be specifically divided into professional business capabilities and auxiliary business capabilities [18]. Professional competence is the core competitiveness of R&D personnel and its core value. It mainly refers to the professional knowledge of R&D personnel and the quality level of scientific research business. Different from the difficulty of imitating professional business ability, auxiliary business ability can often be obtained quickly through training, so auxiliary business ability is also easy to be imitated and replaced. In actual operation, private enterprises often pay more attention to the professional competence of R&D personnel when they introduce R&D personnel, and adopt a series of training to improve the auxiliary business capabilities that are not outstanding. In view of this, this article introduces the degree of scientific research business specialization to indicate the proportion of R&D personnel's own professional capabilities in scientific research business capabilities, and uses this as one of the dimensions to analyze and construct R&D personnel's independent innovation context. The high degree of professionalization of scientific research business means that the professional competence of R&D personnel accounts for a relatively high proportion of the total scientific research business competence, while the auxiliary business competence is relatively low. Professional business capabilities are more prominent than auxiliary business capabilities. R&D personnel are highly specialized and have sufficient knowledge and skills. For private enterprises, such R&D personnel are of higher value. The low degree of professionalization of scientific research business means that the professional capabilities of R&D personnel account for a relatively low proportion of the total capabilities, the auxiliary business capabilities dominate, and the professional knowledge and expertise of R&D personnel are relatively weak. At this time, for private enterprises, the value of such R&D personnel is relatively low. Take ZTE Software as an example. As a national key private software company, the company implements a grading system for R&D personnel, divides R&D personnel into different levels according to their scientific research capabilities, and proposes different levels of R&D personnel according to different skill levels. Skill requirements, even employees in the same position, because of the difference in skill level, enjoy different benefits. This article introduces the degree of professionalization of scientific research business to intuitively see the degree of technical specialization of R&D personnel, and better construct and analyze the independent innovation incentive situation of R&D personnel.

4.2 The Market-Oriented Dimension of Independent Innovation

Independent innovation of private enterprises refers to the process by which private enterprises organize and establish their own R&D departments, through their own exploration and efforts, to achieve technological breakthroughs and innovations, and to market products or services. The market orientation of independent innovation refers to a series of research and development activities that start from customer needs and create and meet customer needs during the process of independent innovation by enterprise R&D personnel. R&D personnel coming out of closed laboratories are no longer limited to enterprise-centric technology research in the traditional sense, but market-oriented features are becoming more and more obvious. They pay more attention to market demand and carry out targeted innovations. The creation of new technologies for products. In enterprises with a high market orientation for independent innovation, R&D work is closely focused on consumer needs, and the effectiveness of R&D has been maximized [19]. In enterprises with a low degree of independent innovation market orientation, the research and development activities of R&D personnel have no clear direction, and the products developed may not be favored by the market, which will lead to a certain degree of waste of R&D resources. This will undoubtedly cause huge cost losses for private enterprises. Therefore, in the wave of "Internet +", the research and development of private enterprises should also pay full attention to market demand, pay attention to the market orientation of R&D personnel's independent innovation, and regard the degree of independent innovation market orientation as another key factor affecting R&D personnel incentives. Give incentives for sex.

4.3 Independent Innovation Situation of R&D Personnel

Under the "Internet+" vision, the two key factors affecting the independent innovation situation of R&D personnel in private enterprises are the degree of professionalization of scientific research business and the degree of market orientation. Based on this, from the two dimensions of R&D personnel's R&D professionalization and market orientation, conduct contingency analysis on the independent innovation situation of private enterprise R&D personnel, and organize R&D personnel from two levels of R&D professionalization and market orientation. The context of independent innovation (see Figure 1). A high degree of specialization of scientific research business means that professional business is more prominent than auxiliary business, and a low degree of specialization of scientific research business means that its auxiliary business is outstanding, and the professional level gap is obvious. A high degree of market orientation means that R&D personnel have obvious market-oriented characteristics, while a low degree of market orientation means that R&D personnel's market-oriented

characteristics are not obvious [20].

5. CONCLUSION

Therefore, in the context of global economic integration, cross-border e-commerce has become the current future development direction. Compared with other developed countries, China's logistics industry started late, but with the rapid development of the Times, our country's logistics industry has developed rapidly, in line with the international, so as to occupy a dominant position in the global economy. In addition, cross-border e-commerce logistics model life brings a lot of convenience to people, expand the scope of people's consumption, can satisfy people's material needs in a short time, but the cross-border e-commerce logistics mode in the process of development still exist many problems, but still need to strengthen cross-border e-commerce logistics, must actively assist in internal logistics, optimize logistics resources, Only in this way can we ensure the smooth development of cross-border e-commerce logistics mode.

REFERENCES

- [1] Zhang Hongsheng. ZHANG Xiaolong. Cross-border e-commerce platform promoting global inclusive trade: Theoretical mechanism, Typical Facts and policy suggestions [J]. *International Business Studies*, 201, 42(04):74-86.
- [2] GUO Weiguang. Research on the Innovation and Development Trend of Cross-border E-commerce Logistics Mode under the Background of "Internet +" -- Comment on Cross-border E-commerce Theory and Practice [J]. *our country science and technology papers*, 2020, 15(11):1352.
- [3] Zheng Yana. ZOU Wentao. ZHANG Jijun. A Literature review on Cross-border E-commerce in our country -- Based on Influencing Factors, Models and Interaction with Trade Growth [J]. *our country Business Review*, 2016(24):77-82+84.
- [4] Niu Mengfan, Huang Kai. Applied Research on Flat Visual Elements in Graphic Design: A Case Study on Yiguang Tanaka's Japanese Dance [J]. *Journal of Beijing Institute of Printing*, 2019, Vol. 27(12): 49-51, 75.
- [5] Zhang Xin. Application of Visual Symbol in Flat Interface Design [J]. *Arts Exploration*, 2013(6): 104- 105.
- [6] Wang Tingru. Application of Flat Design Style in Graphic Design [J]. *Western Leather* ,2020, vol.42(7):65-66.
- [7] Si Dongmei. Application of Flat Design Style in Graphic Design [J]. *Cultural and Educational Materials*, 2019, (18): 78-79/43.
- [8] Cui Yue. A Study on the Application of Graphic Flatness Design in Contemporary Visual Communication Perspective [D]. *North China University of Technology*, 2018.
- [9] Zou Jiagao. Flatness of design [J]. *Western Leather*, 2018, Vol. 40(20): 131.
- [10] Lu Yanli. Application of Flat Design Style in Plane Design in Multimedia Age [J]. *Education and Teaching Forum*, 2016, (27): 265-266.
- [11] Tao Weili. Application of Flat Style in Logo Design from Brand Logo Redesign [J]. *Packaging Engineering*, 2017, 38(24): 282-285.