

Research on the Impact of Artificial Intelligence on International Trade — Taking Alibaba International Station's Foreign Trade AI as an Example

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Abstract. This article delves into the profound impact of artificial intelligence (AI) on international trade. By reviewing the historical evolution of AI and its related policy frameworks, this research gained a clear understanding of its potential applications in international trade. Subsequently, by examining the shortcomings of traditional trade models and the evolving global economic landscape, this paper analyzes the unique advantages of AI in enhancing trade efficiency and optimizing trade structures. Taking the AI-powered foreign trade platform of Alibaba International Station as a case study, this article dissects its internal driving forces and the external factors that facilitate its development. Through an in-depth examination of its operational model, it leverages intelligent technologies to streamline trade processes, reduce costs, and introduce its primary functions and practical applications in international trade. Furthermore, this paper explores both the benefits and challenges of integrating AI into international trade, offering guidance for newcomers in the foreign trade industry on incorporating AI into their business practices. This includes advice on technology, talent development, and strategic planning.

Keywords: Artificial intelligence; international trade; business assistant.

1. Introduction

In recent years, facing the rapid development of the global digital economy, the direction of international trade competition has gradually shifted to promoting the innovative application of artificial intelligence in traditional trade fields and its digital transformation. Through literature review, it has been found that many scholars have conducted research on the application of artificial intelligence in international trade. Yao Tingting and Bao Yanan conducted research on the enhancement of service export technology complexity by artificial intelligence [1]. Xiang Xue and Jia Yuan conducted research on the impact of artificial intelligence on the construction of China's modern commercial circulation system from the perspectives of technical talents and technological innovation [2]. The term artificial intelligence (AI) has developed into a widely interdisciplinary and advanced science over the past fifty years since it was first proposed by the Dartmouth Conferences in 1956. Under the guidance of scientists, artificial intelligence has evolved from performing repetitive and complex tasks by imitating human body organs and brain functions to generative artificial intelligence (AIGC) with independent thinking and creative abilities. From a historical perspective, every technological change and change in direction will be the core of the country's breakthrough. Therefore, many countries have launched programs such as the "Human Brain Plan". "Japanese Robot Strategy: Vision, Strategy, Action Plan". "The National Artificial Intelligence Research and Development Strategy Plan and other artificial intelligence development strategies". The report of the 20th National Congress of the Communist Party of China emphasizes "innovating the development mechanism of service trade, developing digital trade, and accelerating the construction of a strong trading country." In January 2022, the State Council issued the "14th Five Year Plan for Digital Economy Development", which also clearly pointed out that digitization will drive the transformation of trade themes and trade methods, create a favorable environment for trade digitization, and improve policies to promote digital trade. This fully demonstrates the urgency and importance of deep integration between intelligent development and traditional trade industries.



However, for the commercial circulation industry, trade digitization is not simply about changing trading platforms to online. It requires reforms at multiple levels such as production, warehousing, marketing, and logistics to achieve full process digitization. It should be noted that the large-scale introduction of artificial intelligence will inevitably lead to the simplification of production relations, resulting in structural unemployment, and with the development of artificial intelligence technology, it will continue to normalize and form periodic outbreaks. Therefore, enterprises need to rely on digital technology to create new business models, and at the same time, the country needs to attach enough importance and actively respond to create new growth points.

In existing literature, most studies have explored the role of artificial intelligence in manufacturing, global supply chains, and product exports, and analyzed its impact on China's modern commercial circulation system from a macro perspective. However, there are few analysis about the role of artificial intelligence as a "business assistant" for communication and connection between products and customers. Based on this, this article will take Alibaba International Station's foreign trade AI, the first AI native application which truly delves into the industry, as an example to analyze the shortcomings of the traditional foreign trade industry. This article will base on the micro level to analyze the impact mechanism and application areas of artificial intelligence in the trade chain. The paper examines both the strengths and limitations of the AI, as well as its future prospects. It further proposes recommendations on how to achieve integration between merchandise trade and services trade, focusing on technological advancements, talent cultivation, and system enhancements, in order to promote sustainable economic and social development.

On September 2, 2023, multiple digital trade services on Alibaba International Station appeared at the 2023 China International Fair for Trade in Services, with the most eye-catching being the platform's recently launched full chain AI foreign trade products. This is the first AI product fully applied in the field of foreign trade by Alibaba Group, covering all aspects of domestic small and medium-sized enterprises conducting foreign trade business. This product includes two major services: "Business Assistant" and OKKI AI. It has multiple functions such as intelligent product release and management, market analysis, customer reception, real-time video chat translation, and enterprise management. This product can assist the seller in promoting and marketing the product, and based on customer consumption preferences, summarize core needs and provide consumption suggestions [3].

2. Background and Influence of this AI

2.1. The Reason Why Alibaba Choose New Product for Oversea Trade

2.1.1. The current crisis of international trade.

The COVID-19 in 2020 will have a serious impact on the global industrial chain and supply chain. Except for daily necessities and food and medicine, the demand for most other products has stagnated [4], and the number of orders has sharply decreased. And with the economic downturn, the consumption capacity and willingness of residents have declined, and corporate funds have stagnated, resulting in a huge gap. As the haze of the epidemic gradually dissipates and the world economy gradually recovers, the increasing market demand has accelerated the rise of the digital economy and the development of international trade such as cross-border e-commerce, expanding the international market. With the increasing consumer demand, traditional forms of trade are no longer able to meet the increasing market demand year after year. Firstly, the competition in foreign trade exports is very fierce. Due to differences in culture, customs, and other factors, enterprises first face difficulties in selecting customer groups. How to target their products, extract the best selling points of products, and explore the consumption preferences of overseas buyers to increase search volume is the root cause of many enterprises' difficulties. At the same time, customers also face the problem of how to find products that match their preferences and needs in the vast trading market. Secondly, due to language and time differences, both buyers and sellers sometimes face differences in product

understanding due to language barriers. At the same time, time differences can also cause salespeople to be unable to communicate with customers from other countries in a timely manner, resulting in a loss of some customer traffic. Therefore, in order to create new trade growth points, continuous innovation is necessary to attract customers.

2.1.2. The increase of international trade.

According to the "Development of Digital Trade in China 2022" published on November 23, 2023, according to statistics from the World Trade Organization (WTO), the global export volume of digital deliverable services in 2022 was 4.1 trillion US dollars, a year-on-year increase of 3.4%, accounting for 57.1% of global service exports. As shown in figure 1, from 2012 to 2022, the annual average growth rate of global digital delivery service exports was 6.1%, which was 1.6 percentage points higher than the annual average growth rate of global service exports during the same period. In 2022, developed economies exported \$3.14 trillion in digital services, accounting for 77.2% of the global market. At the same time, the import and export volume of services that can be digitized and delivered in China was \$372.71 billion, a year-on-year increase of 3.4%, reaching a new historical high in scale. Among them, exports reached 210.54 billion US dollars, a year-on-year increase of 7.6%; Imports amounted to 162.17 billion US dollars, a year-on-year decrease of 1.6%; Realized a surplus of 48.37 billion US dollars, an increase of 17.54 billion US dollars from the previous year. The import and export volume of cross-border e-commerce reached RMB 2.11 trillion, a year-on-year increase of 9.8%. Among them, the export value reached 1.55 trillion yuan, a year-on-year increase of 11.7%.

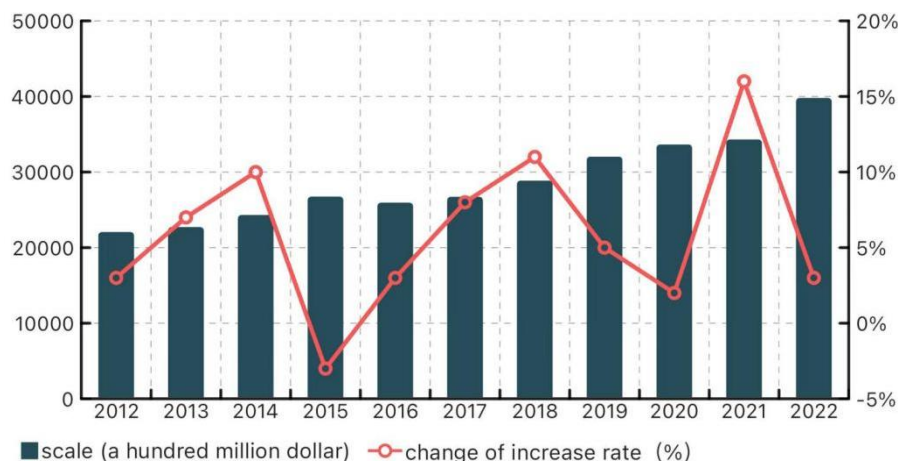


Figure 1. Global digital service export scale and growth rate from 2012 to 2022 (Data source: WTO database)

2.2. Page Numbers the Use of Alibaba International Station Foreign Trade AI

2.2.1. The drawbacks of traditional foreign trade.

Firstly, the continuous changes in the global economy can cause market instability. If it takes a long time to complete orders and production, it will inevitably lead to losses caused by exchange rate fluctuations and other issues; Secondly, many small and medium-sized enterprises do not have a complete account management system for importers, and there are not enough experienced salespeople to connect with them, discuss pricing, and collect payments [5]. Finally, traditional cross-border e-commerce has a relatively simple process throughout the entire trade process, with most customers using contact tools such as email and phone during the customer service process. Subsequently, merchants choose third-party logistics companies for delivery on their own. Therefore, it may cause errors in the delivery process of logistics companies, causing interference and losses to trade circulation. The payment process often involves offline payments or credit cards, as well as online banking, which can lead to trade barriers caused by different currencies. Related services are often not provided in customs clearance, tax refunds, and finance, which can lead to communication difficulties and unnecessary losses [6].

2.2.2. The advantage of Alibaba international station foreign trade.

When launching online products, sellers only need to input the title in Chinese, and AI can automatically translate it into English and polish the promotional text; If the seller chooses to upload images and basic videos, AI can combine them into an introduction video with text and commentary, greatly reducing promotional costs. At the same time, the AI provides intelligent product distribution. For a large number of international buyers, it can extract selling points based on product attributes, add keywords based on buyer search and click effects, improve readability based on buyer reading experience, and have an intelligent business assistant mode. When communicating with overseas buyers, it can automatically summarize the meaning and translate it into English for reply, with targeted and efficient order completion.

Alibaba International Station's foreign trade AI is based on 24 years of global cross-border trade accumulation on the international station, with automatic learning and professional analysis of massive market data both inside and outside the station. It can analyze and diagnose products, provide market conclusions and business suggestions. This AI application uses RFQ intelligent quotation to summarize the key procurement requirements of buyers and match them with suitable sellers. At the same time, providing buyers with product diagnosis, estimating the ranking and potential of the product, based on global customs data, helps to explore overseas markets. Last year, Alibaba International launched a digital transit trade platform in Hong Kong, China, which built an overseas logistics network and supported payments in over 20 currencies. At the same time, the AI's intelligent business assistant model effectively improved trade efficiency.

2.3. Practical Suggestions for Firm

Alibaba International Station has launched a digital transshipment trade platform in Hong Kong, China, building an overseas logistics network and providing a platform for export trade for small and medium-sized enterprises. This platform provides new products with rich marketing and promotion tools, effectively attracting target customers through targeted advertising, precise push, and other methods, gaining a huge user base, increasing exposure, and seizing market opportunities. This business assistant can effectively lower trade barriers and significantly enhance the inclusiveness of international trade. Many small and medium-sized enterprises, who are in a disadvantaged position in traditional trade, and other foreign trade beginners or enterprises in the early stages of operation can choose to purchase this AI to help with marketing. However, the price of this AI is too expensive, with annual consumption often exceeding tens of thousands, which is difficult for some small and medium-sized enterprises to afford; And due to excessive reliance on platforms, once policy or economic crises occur, it is more likely to have an impact on enterprises, resulting in capital loss; Furthermore, whether the intelligent synthesis of promotional texts and videos provided by the AI is too simplistic and mechanized to achieve the ability of manual production to attract clients is also a factor that needs to be considered. Therefore, for new enterprises that are not familiar with the operation and marketing methods of foreign trade and do not know how to take pictures to explain and communicate, using this AI business assistant is a reasonable choice. For mature large and medium-sized enterprises, this AI can be appropriately applied for product analysis and intelligent customer docking to save costs and create new growth points.

3. Conclusion

This study found that applying the latest foreign trade AI technology on the basis of traditional foreign trade can effectively save trade costs, reduce operational and graphic pressure, and improve transaction efficiency. With the increasingly refined division of labor in the entire industry chain, international trade needs to shift from traditional single goods trade to a new form of trade that integrates goods trade and service trade. This article analyzes the application of artificial intelligence in international trade at a micro level, and conducts research on the current level of trade, the drawbacks of traditional foreign trade, and the advantages and disadvantages of AI applications. It

helps to promote this product, and at the same time, its reduction in operating costs also helps enterprises to undergo digital transformation, thereby promoting the export of goods and achieving sustainable economic and social development. However, in the future, further refinement can be made on whether the foreign trade AI is competitive enough in communication and marketing with customers, in order to facilitate further research on this topic. To this end, the following suggestions are proposed Firstly, it is crucial to continue innovating existing artificial intelligence-based technologies, emphasizing their interactive and text-detection capabilities, and to foster new growth dynamics in finance, logistics, taxation, and marketing. Secondly, it involves strengthening talent recruitment and cultivation through research funding for universities and enterprises. This aims to foster consensus among regional industrial chains and trade partners, share law enforcement information, and achieve open and transparent platform management.

Third, Strengthen institutional innovation. To encourage enterprises to move towards digital transformation and improve their performance, it is necessary to first provide a good sales platform and environment and improve the comprehensive service level of the platform.

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