

Intelligent E-commerce under the Trend of Integration of Artificial Intelligence and E-commerce: A Case Study of Alibaba International Station

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Abstract: China has fully entered the era of digital economy, and undoubtedly, the e-commerce industry needs to keep pace with the times and evolve into a new stage of development: integrating artificial intelligence with e-commerce. Nowadays, an abundance of new productivity tools have unveiled new opportunities for the e-commerce industry. This study focuses on Alibaba International, a premier global digital trading platform, to illustrate the applications of artificial intelligence tools in e-commerce, examine both the positive and negative impacts of these tools on e-commerce, and suggest strategies for enhancing e-commerce Operation Management. The aim is to offer enlightenments for small and medium-sized cross-border e-commerce businesses. Through this case analysis, it can be understood that intelligent e-commerce has provided many conveniences for the e-commerce industry, but also faces a series of challenges, such as AI generated false or infringing content, and increased operational management difficulties. In this situation, e-commerce companies should take strengthening the cultivation of intelligent talents as a guarantee, focusing on customer experience and valuing personalized product needs as advantages, and improving operational management efficiency through the reasonable use of favorable policies to bring profits to the enterprise.

Keywords: artificial intelligence, e-commerce, operation management.

1. Introduction

At present, e-commerce has become the largest, fastest-growing, most widely covered, and most active component of technological innovation in the digital economy [1]. AI technology, as the key to the digital economy, is becoming a powerful engine for high-quality development in various industries, providing a continuous source of power and innovation. AI technology, as the key to the digital economy, is becoming a powerful engine for high-quality development in various industries, providing a continuous source of power and innovation. In 2022, AI big models represented by ChatGPT have sparked a global trend, with major technology giants investing in research and application of big models, dedicated to developing an artificial intelligence personalized product suitable for e-commerce. This also reflects the infinite charm of intelligent e-commerce [2].

E-commerce, as a digital industry that relies on a large amount of data and content innovation, has become one of the key application areas of AI. E-commerce specialists use AI tools for big data

analysis and other auxiliary e-commerce operations, enabling e-commerce platforms to more accurately grasp consumer needs and provide personalized shopping experiences. According to predictions, by 2028, AI Generated Content (AIGC) refers to the use of artificial intelligence technology to generate content, with a core market size expected to reach 276.74 billion yuan. Artificial intelligence and e-commerce are both hot topics in today's market. Due to the lack of existing literature on the impact of AI tools on e-commerce operations, this article uses case analysis to explore the application of AI tools in e-commerce operation teams from the perspective of e-commerce operation teams under the background of intelligent e-commerce. Through the real case of Alibaba International Station AI Business Assistant, the article identifies the strengths and weaknesses of AI tools and hopes to provide some suggestions and inspiration for those who are about to enter the e-commerce application industry.

2. Analysis of Practical Cases of AI Tools as New Productivity Applied to E-commerce

2.1. Background of Alibaba International Station and Its launch of AI tools

Alibaba International Station was established in 1999 and is a globally leading digital platform for cross-border e-commerce B2B trade. The use of digitalization to assist Chinese cross-border seller brands in going global has accumulated 25 years of historical data. It has gone through three stages. The first stage, from its establishment to 2008, belongs to the information platform. Merchants publish products through the platform, and buyers can only browse the products but cannot directly conduct transactions on the platform. The second stage will be upgraded from 2010 to 2019 to a trading platform that not only allows browsing of products, but also enables online transactions. The third stage has entered the digital platform since 2019.

On March 1, 2023, Shopify took the lead in integrating ChatGPT, becoming the first intelligent operation e-commerce platform and playing a leading demonstration role. Subsequently, the AI business assistant launched by Alibaba International attracted the attention of many domestic small and medium-sized enterprises and even individual users. It provides multiple functions such as intelligent comment data analysis, title and keyword optimization, marketing copy writing, and website intelligent development programming for small and medium-sized e-commerce that urgently needs to explore overseas markets. Alibaba International Station Business Assistant, launched in 2023, is the first AI native tool that integrates 24 years of digital foreign trade practice, global business analysis, and innovative AI technology. It is designed to understand foreign trade and opens a new chapter in the AI era of cross-border trade. Which strives to provide one-stop services for small and medium-sized sellers, including product selection, website construction, marketing, warehousing, logistics, and customer management.

2.2. Case Study of Alibaba International Station Using AI Tools

In the CCTV News on the evening of May 20, the foreign trade personnel of "Deyang Machinery" from Yiwu Ali International Station told about their experience in using AI foreign trade tools to win large overseas orders. He showcased the AI foreign trade tools he used: Alibaba International's AI Business Assistant and OKKI AI. He uses AI to generate product names, descriptions, and introduction videos in foreign languages, and can also translate them into more than ten languages with just one click, quickly listing and selling them in various markets; AI can even generate various styles of product images based on the characteristics of the local market. Almost all aspects of foreign trade can be solved with just one click using this AI foreign trade tool. Just a few months after the launch of AI foreign trade tools, over 17000 small and medium-sized enterprises have subscribed to and used AI business assistants, and Alibaba International's foreign trade SaaS revenue has increased by 74% year-on-year.

2.2.1. AI Design - Images and Videos

AI tools will change the image style based on the main content of the image and intelligently recommend suitable backgrounds. Foreign trade specialists upload product images, and AI business assistants not only automatically adjust parameters such as lighting, brightness, and color of the images, but also provide optimization suggestions based on image quality, and even convert them into videos. AI tools will also create product images that meet consumer preferences based on market demand characteristics, thereby increasing the attractiveness of products.

2.2.2. AI Copywriting Tools - Personalization and Attraction

AI generated copy is more accurate in capturing customer needs compared to manual copy. Copywriting staff input keywords in the dialogue box with AI, and AI copywriting tools can accurately generate personalized and attractive product descriptions based on users' browsing history and purchase records. This not only quickly caught the attention of users, but also effectively increased their willingness to purchase by emphasizing the characteristics and advantages of the product. In addition, AI copywriting can automatically generate more infectious advertising slogans and promotional information based on promotional activities or market trends, further stimulating users' purchasing desire. This copy generation method based on big data and algorithm support not only has clear logic, but also can accurately meet user needs. It is also more time-saving than manual copy, bringing higher conversion rates and sales to e-commerce platforms.

2.2.3. AI Customer Service - Intelligent Reception and Communication

Natural language technology is used in intelligent customer service applications to communicate with users, which have the characteristics of timely response and high-speed operation [3]. Due to the current inability of intelligent customer service to completely replace the position of human customer service. Many businesses are transitioning to a work mode that combines manual customer service with intelligent customer service. By utilizing the standardized, highly repetitive, and 24-hour standby characteristics of intelligent customer service, combined with human responsibility for handling personalized and difficult to answer questions, the optimal effect of "artificial intelligence+human" can be achieved. Not only does it reduce labor costs, but it also improves service efficiency.

2.2.4. AI Placement - Precise

In the field of e-commerce, the application of AI advertising technology has surpassed traditional marketing methods, shaping a new marketing landscape with its scientific and accurate analysis capabilities and real-time optimization capabilities. It can deeply explore consumers' shopping preferences and achieve precise personalized advertising push, with the aim of accurately making every advertising display resonate with consumers. At the same time, AI advertising systems can intelligently adjust pricing strategies, promotional plans, and integrate marketing resources across channels to maximize brand value. More importantly, through real-time data analysis, it can quickly capture market changes, optimize advertising strategies, and ensure that every penny spent on advertising can be converted into significant commercial returns. This comprehensive, efficient, and intelligent operational scenario demonstrates the powerful charm and irreplaceable value of AI e-commerce advertising technology.

3. Positive Impact

3.1. Cost Reduction and Efficiency Improvement

Firstly, AI tools greatly improve the efficiency of design. Through automation and intelligence technology, design solutions can be quickly generated and optimized, thereby accelerating product launch time and enhancing market competitiveness. Secondly, AI design can be based on massive data and advanced algorithms, accurately insight consumer needs and market trends, provide customized design solutions for businesses, and enhance user experience and satisfaction. In addition, AI design can assist merchants in risk assessment and prediction, help e-commerce platforms optimize logistics inventory in the supply chain, better manage supply chain resources, reduce costs, and increase profits. In short, it has provided strong impetus for the development of the e-commerce industry and has important application value.

3.2. Maintain Consistency and Accuracy

AI copywriting tools can ensure consistency and accuracy of text content. Maintaining consistency and accuracy of information is crucial in brand communication and public relations activities. AI can generate text content that conforms to the brand image by learning and imitating the language style and tone of the brand, thereby ensuring the accuracy and consistency of brand information.

3.3. Personalized Advantages

AI tools can accurately capture consumers' shopping habits, preferences, and points of interest, providing them with personalized product recommendations and shopping experiences. Make every consumer feel valued and respected, as they can quickly find products that meet their needs from a vast array of products and enjoy a convenient and efficient shopping process. This personalized service not only improves user satisfaction with shopping, but also promotes an increase in sales conversion rate. This consumer centric service model can unleash more potential for AI e-commerce in a fiercely competitive market.

4. Negative Effects

4.1. Risk of AI Tool Infringement

There are numerous AI tools on the market, but most of them do not yet have infringement detection capabilities. Even due to the defects of existing technology and the unreliability of training data, the product may exhibit "hallucinations" and thus openly "talk nonsense" [4]. It is possible to generate false information and images, which means that the information is not truthful. This means that the content generated by AI is likely to hold service users (merchants) legally responsible. This is not conducive to e-commerce practitioners avoiding infringement risks and may allow them to use unauthorized or false information, thereby increasing the risk of infringement. Through reading a large number of agreement terms for AI tools, it has been found that the vast majority of AI tools uniformly transfer ownership of their output results to service users (merchants) in software terms, meaning that when there are problems with AI generated products, all legal risks are borne by the service users (merchants).

Obviously, some content generated by generative artificial intelligence carries legal risks and cannot be directly publicly used. It is only intended for a specific group of people and is not entirely suitable for profit oriented production activities. Therefore, large-scale dissemination is not advisable.

4.2. Differences between Merchant Expectations and AI Generated Effects

When designing images or writing copy, if the merchant does not provide detailed text information to the AI, the AI generated product will be difficult to meet the merchant's psychological expectations and may even lead to significant disappointment. This requires merchants to have a clear understanding of the structural framework they ultimately want in their minds and provide AI tools with sufficient information and clear prompts. AI tools may deliver satisfactory results to merchants. If there is a lack of authenticity between the information generated by AI tools and the products provided by merchants, it will result in consumers being unable to fully trust the products, which will have a negative impact on merchants.

4.3. Social Crisis

It is foreseeable that the widespread use of AI tools in e-commerce will lead to a more severe employment situation, highlighting the "ruthless" side of capitalism. The competition brought by AI tools will lead to problems such as wage decline and extended working hours [5]. In this context, the e-commerce industry often attracts more professionals who possess new skills, knowledge, or are able to adapt to new industry models; Due to the application of AI tools, workers' mental and physical energy consumption will be reduced, so capitalists will extend their working hours and maximize the exploitation of every penny of their employees' value [6].

4.4. Increased Complexity of Enterprise Management

Due to the phenomenon of artificial beings being replaced by generative artificial intelligence, the complexity of management objects has increased from the original "manager to employee" to the current "manager to AI employee" [7]. Managers face a series of unique management difficulties when dealing with artificial intelligence (AI) employees. Firstly, the behavior and decisions of AI employees are based on algorithms, lacking the intuition and emotions of human employees. This requires managers to adjust traditional leadership and management methods to adapt to interactions with AI employees. Secondly, understanding and interpreting the decision-making process of AI employees is a major challenge, as the decision-making logic of AI is often complex and difficult to intuitively comprehend. Finally, as AI employees take on more tasks within the organization, balancing work allocation and collaboration between AI and human employees is also a challenge that managers need to face.

5. Paths for Artificial Intelligence to Promote E-commerce Operation Upgrade

5.1. Strengthen the Cultivation of Digital Talent Teams

Firstly, the operations specialist needs to possess data analysis skills and learn to collect, analyze, and interpret data, such as the e-commerce data automatic analysis tool ChatExcel, in order to better grasp market trends, seize market opportunities, and avoid the risks of experience. Secondly, they also need to proficiently master how to use AI tools such as ChatGPT for product copywriting, Midjourney for text generation and drawing, and Designs. AI for detail page poster design platform to assist in improving work efficiency. Finally, practitioners need to keep up with the times. For example, in AI systems for e-commerce, the products and their contents recommended by different systems will have different impacts, which requires personnel to identify them.

5.2. Pay Attention to New Industry Trends and Flexibly Develop Operational Mechanisms

Given the limited digitalization level of small and medium-sized e-commerce, managers should flexibly adjust their organizational structure [8]. Nowadays, the entry threshold for cross-border e-commerce platforms is relatively low, attracting a large number of buyers and fierce product price competition. Compared with the online promotion strategies of traditional foreign trade companies, online marketing has significant differences. To stand out among them, the role of marketing strategy cannot be ignored. This requires practitioners to have sharp market insights, be able to quickly adjust supply chain strategies, and develop the best marketing strategies in real-time based on market changes [9].

5.3. Utilizing New Policies and Regulations for Cross border E-commerce Trade

According to a press statement from the Chinese Ministry of Commerce, in the first quarter of 2024, cross-border e-commerce imports and exports amounted to 577.6 billion yuan, an increase of 9.6%, of which exports amounted to 448 billion yuan, an increase of 14%. As for the cross-border e-commerce industry, it is currently in a stage of rapid development and vitality. The Chinese government continues to increase its attention to the cross-border e-commerce market and has successively introduced a series of policies, allowing the entire market to steadily advance in exploration [10]. This requires relevant responsible persons to attach importance to the strategic development planning and policies issued by the country for cross-border e-commerce enterprises, seize the new round of policy benefits in the cross-border e-commerce market, and more effectively achieve the economic benefits of the enterprise itself.

5.4. Making Customer Experience a Business Advantage

Merchants should make reasonable use of AI technology and leverage their own advantages, such as creating a small-scale, precise, personalized, and customized e-commerce operation. By utilizing AI technology, personalized product recommendations and shopping experiences are provided to consumers, accurately capturing their shopping habits, preferences, and points of interest [11]. This can make every consumer feel valued, as they can quickly find the products they need from a vast array of goods and enjoy a convenient and efficient shopping process. Personalized service not only enhances user satisfaction with shopping, but also promotes an increase in sales conversion rate. This consumer centered service model may become the key to AI e-commerce standing out in a fiercely competitive market.

6. Conclusion

From the analysis of the case, the application of AI technology has made e-commerce more intelligent and personalized, meeting the increasingly diverse needs of consumers. Through applications such as intelligent recommendation, intelligent copywriting, and intelligent customer service, AI e-commerce has brought significant benefits. The application of AI tools in e-commerce has replaced repetitive and tedious work, improving the operational efficiency of e-commerce platforms and achieving cost reduction and efficiency improvement. Consumers can quickly find their desired products, and businesses can more accurately grasp market demand, achieving sales growth. The impact of AI e-commerce is profound. It has changed the traditional e-commerce model and promoted the transformation and upgrading of the e-commerce industry. At the same time, AI e-commerce has also promoted data-driven business model innovation, bringing new growth points to enterprises. This article also has obvious shortcomings, as the case analysis is not comprehensive enough and lacks theoretical support. Subsequent research should pay more attention to successful cases of AI tools

being applied in e-commerce, and further analyze how AI e-commerce can sustainably develop. Looking ahead, the trend of AI e-commerce will become clearer. With the continuous advancement of technology, AI will play a more important role in the e-commerce field. Future AI e-commerce should pay more attention to user experience, provide more accurate and personalized services, and innovate development. The advancement of AI technology not only drives continuous innovation in the e-commerce industry, but also brings more opportunities and challenges to the industry.

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