

E-Commerce and Its Contributions to China's Economic Development: Basis for Strategic Plan

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Abstract. This study examined the practical role of Chinese e-commerce enterprises in promoting economic development and proposes a comprehensive strategic plan. Descriptive quantitative research methods were used to collect data from 5 e-commerce enterprises. This study revealed the diversity of e-commerce enterprises in terms of business scope, transaction models, operating years, number of employees, and asset size. Most enterprises believe that the e-commerce industry has played a positive role in the development of the economy, and have reached a strong consensus on the current status of e-commerce development, its contribution to the economy, challenges and risks faced. They have identified comprehensive methods to address the risks and ensure security of e-commerce enterprises, and to strengthen various challenges in the construction of e-commerce infrastructure. In order to address these challenges, e-commerce enterprises should seek support from e-commerce associations and relevant government departments, coordinate resources to adjust their economic structure, provide more development opportunities for e-commerce enterprises, strengthen their comprehensive capabilities, increase investment and construction in network information technology, provide a stable and high-speed network environment, ensure the safety of online shopping, and improve consumers' shopping experience; Strengthen the construction of network information facilities, improve relevant software and hardware supporting facilities, strengthen basic research, intellectual property protection and other related work, and protect the innovation ability of enterprises; Strengthen the infrastructure construction of intelligent warehousing and distribution in logistics, improve logistics level, and serve the development of new industrial economy. Implementing these strategic plans can effectively address the risks and security issues faced by the e-commerce industry, and establish an effective and feasible e-commerce strategic development plan to continue contributing to the sustainable development of the Chinese economy.

Keywords: *E-commerce Enterprises, Economic Structure; Information Security; Risk Identification; Strategic Planning*

1. Introduction

The rapid evolution of modern information technology, particularly the Internet, has elevated its significance, reducing user costs and creating substantial economic benefits. The internet's global prevalence has laid the groundwork for e-commerce, offering a platform for online communication, information browsing, and transactions. This birthed a novel business model, transforming the e-commerce industry. China's robust internet technology growth, coupled with advancements in digital payment methods and mobile device popularity, has facilitated the flourishing of e-commerce, especially in mobile transactions. E-commerce transcends geographical constraints, easing cross-border trade and aligning with economic integration trends.

The rise of China's e-commerce, influenced by various factors, resonates across business, technology, and society, impacting macroeconomic indicators. E-commerce's influence extends beyond commerce, reshaping traditional economic operations and yielding societal benefits. The pivotal shift from physical to electronic transactions distinguishes e-commerce, significantly reducing human and transaction costs, expanding commercial transaction timelines, and enhancing efficiency. This transformation has given rise to diverse business models like online retail, subscription services, and the sharing economy, altering conventional business practices. E-commerce's impact spans job creation, technological innovation, and digital transformation, making it a vital force in modern society.

The burgeoning e-commerce sector has become integral to China's economic development strategy, providing solutions for high-tech, resource-efficient, and environmentally friendly growth. E-commerce, aligned with the nation's economic transformation, addresses unemployment challenges, propels logistics industry expansion, and enhances the global trade environment for enterprises. Furthermore, it introduces innovative payment methods, contributing to transaction convenience and cost reduction. Beyond mere commercial activity, e-commerce significantly influences production, management, societal functions, laws, and education, ushering people into the information society and reshaping economic development. Consequently, a strategic focus on e-commerce's development is imperative for steering China's economic transformation towards a more efficient and sustainable path.

In order to study the role and impact of the e-commerce industry on China's macroeconomic development, this study focuses on the impact and role of the e-commerce industry in online trade methods, optimizing resource allocation,

promoting foreign trade economic development, guiding China's industrial structure adjustment and economic transformation, and other aspects on economic development. This study describes the development process of China's e-commerce industry through the development of several representative enterprises, proposes a strategic development plan for e-commerce, discusses how to solve existing problems, promote China's economic transformation and sustainable development, find new economic growth points, and contribute to economic development.

2. Methodology

This research used a descriptive research design to investigate the contribution of China's e-commerce industry to macroeconomic development, which can serve as a basis for policy recommendations. Descriptive methods require more than just data collection. The true meaning of the obtained data should be provided based on project objectives and core assumptions. This study followed a survey design, where data was collected through a survey questionnaire. This research method and design are suitable for the research needs of this study (Domingo, 2023a; Domingo, 2023b; Domingo, 2023c).

2.1. *Sampling Procedure*

Purposive sampling of non-random sampling techniques was employed in the study. It is a non-probability sampling strategy in which the researcher chose the members of a population to participate in the study based on his judgment. As a result, the researcher selected a "representative" sample to meet their objectives or approach individuals with specific qualities.

2.2. *Respondents*

The respondents to this study were managers and employees of the e-commerce companies participating in the survey for a total of 115 respondents. They were the respondents to this study through them the contribution of China's e-commerce industry to promoting macroeconomic development was described and was used as a basis for policy recommendations.

2.2.1 Research Site

This study was conducted in several provinces in China, such as Beijing, Hangzhou, Guangdong, Guangxi, etc. Representing different regions of the country.

Table 1 Distribution of respondents

Company	Managers	Employees
JD Technology Information Technology Co., Ltd.	3	10
Hangzhou Chunke Network Technology Co., Ltd.	3	30
Guangzhou Green Tianyuan Agricultural Technology Co., Ltd.	3	30
Guangdong Rio Tinto Network Technology Co., Ltd.	3	20
Guangxi YijiuQifei Technology Co., Ltd.	3	10
Total	15	100

3. Results and Discussion

3.1. Overview of Chinese E-commerce Enterprises

The majority of the five companies, constituting 60%, are primarily engaged in e-commerce platform services and internet sales, emphasizing the industry's focus on digital transactions. Regarding operational experience, 40% of the companies have been in business for 5 years, while another 40% have a 6–10 year history, with one company operating for 11–15 years. In terms of transactional modes, B2C is the dominant model, representing 60%, followed by B2B at 40%, with no companies involved in C2C transactions. Workforce distribution shows that 60% of the surveyed companies have 1–50 employees, indicating a prevalence of smaller enterprises. Additionally, the analysis of asset

sizes as of December 2022 revealed that most companies fall within the 1–5 million range, emphasizing the prevalence of small to medium–sized enterprises in the e–commerce sector. Finally, the assessment of average sales in December 2022 underscores that the majority of companies (60%) report sales revenue exceeding 50 million yuan, indicating a trend of higher sales within the e–commerce industry.

3.2. The current situation of e–commerce enterprises

Respondents strongly agree (weighted average of 3.73) that online payment methods, particularly WeChat, Alipay, enhance the online shopping experience and contribute to the rapid development of e–commerce. While indicator 2, regarding government support policies, has a slightly lower weighted average of 3.53, it still falls within the range of "strong agreement." The overall comprehensive weighted average across all indicators is 3.63, indicating a robust consensus. Regarding the digital maturity of Chinese e–commerce enterprises, respondents express strong agreement (weighted average of 3.56) with the idea that e–commerce has enhanced marketing efficiency, reduced costs, and increased competitiveness through digital tools. Despite a slightly lower weighted average of 3.41 for indicator 5, relating to improving laws and regulations, it still falls within the "strongly agreed" range. In terms of the transaction volume of e–commerce enterprises, respondents strongly agree (weighted average of 3.47) that cross–border e–commerce is promoting international trade and cooperation. The lowest weighted average, 3.44, is for indicator 1, emphasizing the creation of new markets and business opportunities. However, the overall comprehensive weighted average is a strong 3.46, indicating widespread agreement on the positive state of China's e–commerce transaction volume. Lastly, in evaluating the importance and future development trends of e–commerce enterprises, respondents strongly agree (weighted average of 3.59) that e–commerce allows low–cost expansion of market boundaries, reaching a wider customer base and expanding domestic and international market share. While indicator 4, emphasizing the standardized development of the e–commerce industry, has a slightly lower weighted average of 3.43, it still falls within the "strongly agreed" range. The comprehensive weighted average across all indicators is 3.51, signifying a strong consensus among surveyed enterprises. The research suggests that China's e–commerce

industry plays a crucial role in the country's economic development, with optimism about its future growth and impact on various industries.

This viewpoint is also explained in literature on the role of e-commerce in economic development (Chang & Chen, 2010). This shows that, on the whole, China's e-commerce development is in a relatively good era, not only the generation of electronic payment methods such as WeChat Alipay provides a convenient and fast online shopping experience, but also the rapid development of Internet technology can provide excellent technical support and services for e-commerce enterprises, and the development of logistics distribution industry also ensures the rapid development of e-commerce enterprises

3.3. The Contribution of E-commerce Enterprises to China's Economic Development

The survey results on the impact of e-commerce enterprises on various aspects reveal strong agreement among respondents. In terms of their contribution to GDP, respondents most agree (3.54 weighted average) that e-commerce enterprises have broken through geographical restrictions, expanded market size, and stimulated economic activities. While the impact on consumer spending and GDP growth is slightly lower (3.18), the overall comprehensive weighted average remains strong at 3.37, indicating widespread agreement on the positive impact of e-commerce on China's economic development. Regarding the total value (productivity) of produced goods, respondents strongly agree (3.51) that the e-commerce industry encourages innovation in business models, technologies, and services, leading to improved productivity and competitiveness. The comprehensive weighted average across all indicators is 3.42, emphasizing the perceived significant impact of e-commerce on the productivity of goods. In terms of employment opportunities, respondents express strong agreement (3.5 weighted average) with the notion that the e-commerce industry has given rise to new economic growth points and employment opportunities, especially for small businesses, entrepreneurs, and vulnerable groups. The comprehensive weighted average of all indicators is 3.49, indicating a robust consensus on the positive role of e-commerce in creating jobs. Finally, regarding the impact on people's quality of life, respondents strongly agree (3.54) that e-commerce allows for the online purchase of goods worldwide, saving time and costs in cross-border transactions. While there is a

relatively lower agreement (3.5) with the idea that social e-commerce and live streaming increase dependence on online shopping, the overall comprehensive weighted average remains strong at 3.52. The research suggests that e-commerce is perceived as a key driver of economic growth, innovation, employment, and enhanced quality of life in China.

This viewpoint is also explained in literature on the factors influencing e-commerce (Feng, et al., 2006). This indicates that China's e-commerce has a high degree of digital automation, which can utilize the advantages of big data analysis to analyze customer preferences and shopping characteristics, provide personalized shopping services, help enterprises improve marketing efficiency, reduce marketing costs, and allow many consumers to enjoy convenience and security.

3.4. Challenges Encountered by Chinese E-commerce Enterprises

The survey on risks and challenges faced by Chinese e-commerce enterprises reveals strong agreement among respondents. In terms of economic structure and innovation, respondents strongly agree (3.54 weighted average) that China needs to adjust and upgrade its economic structure, emphasizing the importance of innovation and high-tech industries. There is also agreement (3.34) that the laws and regulations in the e-commerce industry lack effective security guarantees, leading to consumer skepticism. The comprehensive weighted average across all indicators is 3.49, indicating a robust consensus on the identified risks.

Regarding security issues, respondents strongly agree (3.48) that e-commerce platforms can simplify government procurement processes, improving efficiency and promoting fair competition. While there is slightly lower agreement (3.4) on the stability of China's investment in the e-commerce industry, it still falls within the "strongly agreed" range. The overall comprehensive weighted average is 3.44, signifying a strong consensus on the effective handling of security issues in the development of Chinese e-commerce enterprises.

Infrastructure construction issues are also acknowledged by respondents, with strong agreement (3.48) that the development of e-commerce has prompted the government to improve supporting facilities, including software and

hardware infrastructure. While there is slightly lower agreement (3.27) on the government's efforts in basic research, intellectual property protection, and related work, it still falls within the "strongly agreed" range. The comprehensive weighted average is 3.41, indicating a collective belief that infrastructure challenges are being effectively addressed to support the growth of Chinese e-commerce enterprises. These are also explained in the literature on e-commerce risks (Huang & Zhu, 2013).

3.5. Proposed e-commerce strategic plan

The proposed strategic development plan for e-commerce enterprises based on the survey results explains a comprehensive approach to address the risks and security issues of e-commerce enterprises, as well as various challenges in strengthening e-commerce infrastructure construction. The E-commerce Association and relevant government departments should coordinate resources to adjust the economic structure, provide more development opportunities for e-commerce enterprises, improve laws and regulations on e-commerce, strengthen the comprehensive capabilities of e-commerce enterprises themselves, increase investment and construction in network information technology, provide a stable and high-speed network environment, ensure the safety of online shopping, and improve consumers' shopping experience; Strengthen the construction of network information facilities, improve relevant software and hardware supporting facilities, strengthen basic research, intellectual property protection and other related work, and protect the innovation ability of enterprises; Strengthen the infrastructure construction of intelligent warehousing and distribution in logistics, improve logistics level, and serve the development of new industrial economy.

4. Conclusions

The findings from the survey paint a comprehensive picture of the e-commerce landscape in China, highlighting its digital-centric nature with a significant focus on e-commerce platform services and internet sales. The operational diversity, ranging from 5 to 15 years in business, underscores the industry's dynamic evolution. Notably, the dominance of B2C transactions and the prevalence of small to medium-sized enterprises, as reflected in the workforce distribution and asset sizes, contribute to the sector's vibrancy. The positive outlook shared by Chinese e-commerce companies on digital maturity, transaction volume, importance, and future trends suggests a favorable

development environment, further validated through qualitative and quantitative research methods. The substantial contribution of e-commerce to China's economic development is evident, impacting market scales, business models, and overall economic activities. However, challenges such as economic structure adjustment and financial risks necessitate strategic measures, including strengthened financial supervision, improved regulations, and enhanced information security. The proposed e-commerce plan offers a comprehensive approach to address these challenges, emphasizing collaboration with industry associations and government departments, technological investments, online shopping safety, and improvements in logistics and infrastructure as key components for sustainable and secure e-commerce development in China.

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