Review of previous studies on the expansion of e-commerce in the distribution sector

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Abstract

The purpose of this study is to review trends in empirical research on e-commerce (EC) in the distribution sector, particularly in China, based on the reality of EC, which is expanding rapidly worldwide and becoming a driving force behind the distribution revolution. Using Google Scholar to search for articles, we extracted and reviewed 24 prior studies from 2004 to 2022, which revealed the following points that (1) early analyses focused primarily on the convenience and reliability of the platform for consumers and SMEs using EC, trust in the transaction itself, attitudes toward risk, and the influence of culture and values on the transaction. In addition, the data used in the analysis were based on questionnaire surveys. (2) In 2010 and later, however, national and corporate data has been developed, and macro analysis of the impact of EC on national and regional economies, or time-series analysis of consumer purchasing behavior using big data provided by Taobao, a major EC company, has been conducted. (3) Finally, most recently, an empirical analysis of new EC using live streaming services has been conducted.

Keywords: E-commerce, Distribution Sector, Empirical Studies

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1. Introduction

E-commerce (EC) is expanding rapidly today. The term "electric commerce" first appeared in the academic world in the mid-1990s, but with the development of Internet technology, EC has penetrated the business world, whereby empirical studies on e-commerce have been actively conducted since the 2000s.

As noted in the study by Wu (2023), the EC market has expanded rapidly in the Japanese market, especially since 2010, bringing about a major innovation in apparel distribution. Although there is much interest in the academic field in the impact of these EC transactions on channel strategies and corporate performance based on the sale of products through traditional brick-and-mortar stores, very few studies have attempted to clarify these points through empirical analysis.

On the other hand, in China, which is also increasing its global presence in the academic field, many researchers are ambitiously conducting empirical analyses of EC, resulting in the accumulation of a large number of studies. Therefore, in this study, we would like to comprehensively collect previous studies on EC in China by using an online article search service (Google Scholar), investigate the research trends, and discuss future research directions.

The paper is structured as follows: First, after reviewing the historical evolution of the distribution structure in Japan, we will review previous studies that conducted empirical analysis of distribution transactions in Japan, particularly in the apparel industry; Second, in contrast to Japan, where empirical analysis of EC is still insufficient, we will review available previous studies based on the actual situation in China, which has accumulated a large number of previous empirical studies on EC in the distribution sector. Finally, we summarize findings from previous studies and provide suggestions for further research.

2. Review of changes in distribution structure and empirical studies in Japan

In this section, we will take the textile and apparel industry, which is changing its distribution structure ahead of other industries and summarize its characteristics in order to provide an overview of the distribution structure in Japan.

Japan's textile and apparel industry has developed ahead of other industries since the Meiji period and has been a driving force in Japan's economy. (Yuasa, 2001) However, as in other developed countries, manufacturing functions have transferred to overseas in search of cheaper labor, and the domestic apparel manufacturing industry has slowed down. In addition, the retail business has expanded in scale due to the deregulation of the Large-scale Retail Law, so retailers and manufacturers are bypassing wholesalers and dealing directly (this is so-called *Oroshi-no-Nakanuki* in Japan). This situation is

accelerated by the growth of logistics companies and the development of information technology (IT). (Urakami *et al.*, 2009, 2010; Urakami and Wu, 2010)

Rapid changes in the market environment and increasing market competition since the 1990s have led to changes in market structure. Figure 1 shows the transition of the Japanese apparel market environment. During the postwar reconstruction period, Japanese apparel distribution was driven by wholesalers and department stores, which contributed greatly to market expansion. In the 1970s and 1980s, in the midst of a period of rapid economic growth, apparel companies imported luxury and designer brands from overseas and rapidly increased their sales. However, when the bubble economy collapsed in the early 1990s, market competition remained fierce, and apparel makers owned and strengthened their own brands and switched to sales channels through direct management stores. This vertically integrated business model developed by apparel makers is called Maker-type SPA. In 2000s, fast fashion brand such as Zara and H&M expanded rapidly in the Japanese apparel market, exposing the fashion retail market to further competition. To counter this movement, apparel retailers expanded their own private brands (PBs). (The apparel retailers that are strongly committed to apparel planning and manufacturing is called Retailer-type SPA.)

In the 2010s, the EC expanded rapidly, and apparel companies entered the online sales in addition to sales in real stores (multi-channel), and gradually integrated online sales and in-store sales inventory management and customer management (omni-channel).

Sales at department stores through consignment transactions with apparel wholesalers were the mainstream. 1970/80 ~ Designer's Brand and Specialty Stores Specialty store sales were dominated by designer brands and luxury brands imported from overseas. 1990 ~ Maker-type SPA The rise of the vertically-integrated SPA business model, which integrates the planning, production, and sales of apparel makers. 2000 ~ Retailer-type SPA The rise of vertically integrated SPA by fashion retailers developing their own brands.

Figure 1. Changes in the Japanese Apparel Distribution Structure (Source) Wu (2023), Fig. 14.2. and compiled by authors.

Online sales are growing rapidly due to the rapid expansion of e-commerce (EC).

In the above-mentioned transition of the apparel distribution structure, there have been very few empirical analyses of Japanese apparel companies, and Urakami and Wu (2010), Urakami *et al.* (2009), Urakami and Wu (2017), Wu *et al.* (2018) and Wu *et al.* (2023) are among the pioneering studies. Urakami and Wu (2010) analyzed SME's vertical integration/cooperation strategy and found vertical integration did not always improve financial performance for large companies. Urakami *et al.* (2009), Urakami and Wu (2017) and Wu *et al.* (2018) analyzed brand strategy in Japan and South Korea, concluding that owing brands turned out to be an effective strategy for both apparel wholesalers and manufacturers. Wu *et al.* (2023) conducted an empirical analysis of the impact of online sales on firm performance by regression analysis using published individual data on apparel manufacturers and additional data on whether or not the firms sell online. The results indicate that online sales have a more positive impact on firm performance for larger firms.

3. Review of empirical studies on e-commerce in China

As mentioned earlier, little empirical research on EC has been conducted in Japan. In China, on the other hand, a great deal of research has been accumulated, and it is difficult to review all of it in this paper. For this reason, we decided to limit our analysis to empirical analysis in the field of distribution sector in China, and to utilize only Google Scholar as the search site. The 24 previous studies selected were from 2004 through 2022. Although more papers could be extracted if a more detailed survey was conducted, since the purpose of this study is to provide an overview of trends in prior studies on e-commerce, we believe that the number of prior studies is sufficient to achieve this purpose. A list of previous studies is summarized in Table 1 in the Appendix.

In the early 2000s, during the early stages of the rapid development of Chinese academia, the environment for empirical research in China was not always favorable. Specifically, there was a lack of reliable published data and a lack of understanding of the data itself. As a result, in the early studies of the 2000s, questionnaires were the primary means of data collection. (Efendioglu & Yip, 2004; Xu et al., 2006; Tan et al., 2007; Teo & Liu, 2007; Yoon, C., 2009; Li et al., 2010; Lu et al., 2010) In contrast, since 2010, the government's publicly available data has become more reliable, and empirical analyses have been conducted using these data. (Qu & Chen, 2014; Chen & Zhang, 2015; Luo et al., 2019; Zhang, 2019; Chen et al., 2021) Furthermore, with the development of corporate platforms that enable e-commerce, e.g. Taobao, 360buy, Alibaba and JD, empirical analysis using data provided by the companies has also become active. (Lu et al., 2010; Wang et al., 2010; Liu et al., 2015; Fan, 2019; Luo et al., 2019; Wu et al., 2020; Huang & Suo, 2021) Thereafter, a chronological summary of each researcher's data sources, the purpose of the study, and the results obtained will be presented.

Efendioglu & Yip (2004) collected data from a questionnaire survey. The objective of the study was to analyze the impact of these infrastructural and socio-economic factors on e-commerce development in China. The following results were obtained that cultural issues such as socializing effect of commerce, transactional and institutional trust and attitudes toward debt were determined to be the major impediments to e-commerce in China.

Xu et al. (2006) collected data from a questionnaire survey. The objective of the study was to analyze the problem of B2C and C2C consumers' attitudes towards trust of the business transaction process in China. The following results were obtained that the opinion that consumers in China of different ages and genders with different purchasing power have the same concerns during the on-line transaction process was disproved. If the e-commerce companies in China want to make more profits, the most important factor is the strengthening of on-line payment security, because the consumers spending large amounts of money on-line pay a lot of attention to this factor.

Tan et al. (2007) collected data from a questionnaire survey. The objective of the study was to analyze EC adoption by B2B and SME businesses in China from internal, external, and contextual perspectives. The following results were obtained that the important inhibiting factors in China are restricted access

to computers, lack of internal trust, lack of enterprise-wide information sharing, intolerance towards failure, and incapability of dealing with rapid change.

Teo & Liu, 2007 (2007) collected data from a questionnaire survey. The objective of the study was to examine the antecedents and consequences of consumer trust in the United States, Singapore, and China. The following results were obtained that reputation and system assurance of an Internet vendor and consumers' propensity to trust are positively related to consumer trust. Consumers' trust has a positive relationship with attitude and a negative relationship with perceived risk.

Yoon (2009) collected data from a questionnaire survey. The objective of the study was to investigate the effect of culture on perceived usefulness, perceived ease of use, trust, and intention to use. The following results were obtained that uncertainty avoidance and long-term orientation had moderate effects on the relationship between trust and intention to use and that masculinity also had a moderate effect on the relationship between perceived usefulness and intention to use and the relationship between perceived ease of use and intention to use. Power distance and individualism had no significant effect.

Li et al. (2010) collected data from a questionnaire survey. The objective of the study was to develop a theoretical framework describing the purchasing-intention model in C2C e-commerce of China. The following results were obtained that internet consumers' trust, perceived benefit and perceived risk have strong impacts on their intention of purchase. Reputation of sellers, website security, familiarity with websites and group purchase have strong effects on consumers' trust. Only seller accessibility has a significant impact on perceived risk. Group purchase has a strong impact on perceived benefit.

Lu et al. (2010) collected data from a questionnaire survey in Taobao VCs. The objective of the study was to analyze what factors affect trust building among Virtual Community members and how this trust influences the trust in the C2C website or vendor. The following results were obtained that familiarity, perceived similarity, structural assurance, and trust propensity are important antecedents to trust in members in VCs. Trust in members' ability significantly affects three dimensions of trust in the vendor/website in terms of ability, integrity, and benevolence. Trust in members' integrity and benevolence stimulates the purchase intention and trust in the vendor/website's ability positively affects the intention to get information and the purchase intention.

Wang et al. (2010) collected data from a 360buy.com website through crawler programs. The objective of the study was to discover customer purchasing patterns or behavior characteristics, which are indispensable knowledge for the expansion of Chinese EC market. The following results were obtained that in most situations the time intervals approximately obey the power-law distribution over two orders of magnitudes. Time interval on customer's successive purchase can reflect how loyal a customer is to a specific product category. Human behaviors could be related to psychology of customers.

Kwahk et al. (2012) collected data from a questionnaire survey. The objective of the study was to

examine the role of instant messenger in the C2C EC context and to find how it impacts buyers' purchase intentions. The following results were obtained that use of instant messenger did not directly influence purchase intention but had positive effects both on trust for vendor and customer satisfaction, which in turn influenced purchase intention.

Qu & Chen (2014) collected data from 1997- 2012China Statistical Yearbook. The objective of the study was to analyze and expound the meaning, characteristics and classification of EC, the factors affecting EC development and impact mechanism of EC development to the national economy growth. The following results were obtained that the five important EC factors have the significant positive correlation with GDP, especially the number of Internet users, the number of EC enterprises, the increasing number of online shopping users. EC development play influence to economic growth. Chen & Zhang (2015) collected data from a China statistic yearbook. The objective of the study was to explore how EC influences sales growth in the short- and long-term as well as to explore the causality relationship and influence degree. The following results were obtained that IT Investment is the most important factor to achieve success, what competitive advantage can be achieved largely

depends on whether enterprises will effectively use the network technology. The expansion of the enterprise size can promote transaction volume increase of SMEs in the short term. Internet availability has a positive effect on the trade volume of EC, but the intensity is not obvious, and the

Liu et al. (2015) collected data from the real transaction data from Taobao. The objective of the study was to extract and investigate Chinese online purchaser behavior indicators and classify them into six types by cluster analysis. The following results were obtained that economical purchasers are the most sensitive to discount promotion; direct purchasers are the most sensitive to advertising promotion; active-star purchasers are the most sensitive to word-of-mouth promotion.

effect is relatively stable.

Ting & Nam (2016) collected data from a questionnaire survey. The objective of the study was to identify causal relationships between EC website traits and consumer satisfaction and along with loyalty. The following results were obtained that website trustworthiness, convenience and interactivity were all positively related to consumer satisfaction. Higher satisfaction led to stronger customer loyalty, which may well increase revisit intentions. The path from website convenience to satisfaction is the strongest among the three website traits. Chinese consumers are more concerned about the website convenience than interactivity and trustworthiness when they make cross-border EC purchases.

Fan (2019) collected data from web-based document of the relevant government agencies and the EC firms such as Alibaba.com and JD.com. The objective of the study was to discuss the unique EC systems in China using a qualitative approach. The following results were obtained that successful exporting through cross border EC requires more China-savvy in understanding and interpreting Chinese middle-class consumer's online behavior, the potential size of the market, business practice

and government systems and regulations in relation to cross border EC.

Kwak et al. (2019) collected data from an interview data from Alibaba's stakeholders, including suppliers, consumer groups, and R&D partners. The objective of the study was to connect the emergence and development of EC with infrastructure, culture, and regulations; by approaching technological and platform acceptance from the perspective of legitimacy building. The following results were obtained that Alibaba's continuous efforts to build legitimacy facilitated platform evolution despite its exposed weakness in intellectual property rights. These efforts rendered Alibaba as a de facto standard e-business model.

Luo et al. (2019) collected data from the information provided by the Alibaba Group, China Statistical Yearbook, and the Population Census 2010. The objective of the study was to investigate how EC development has shaped household consumption growth in China. The following results were obtained that EC development is associated with higher consumption growth. The relationship is stronger for the rural sample, inland regions, and poor households, suggesting that e-commerce development helps reduce spatial inequality in consumption. The consumption of durable goods and in-style goods has grown faster than the consumption of local services.

Zhang (2019) collected data from National Bureau of Statistics (2014, 2015, 2016, 2017). The objective of the study was to examine the geography of EC in China within a theoretical framework grounded by social theory and neoclassical economics. The following results were obtained that the growth of EC in China presents a nationwide inequality constrained by local economic, politic, and infrastructure conditions. The growth of EC in China presents a hybrid feature in terms of spatiality, which relies on structures in both cyberspace and physical space.

Gao & Liu (2020) collected data from an interview in Dongfeng Village and the nearby area. The objective of the study was to advance understanding of the process and mechanism of endogenous inclusive development of information and communications technology (ICT) solutions, to achieve sustainable furniture EC development independently. The following results were obtained in the first stage, EC development in a disadvantaged area can start from a seed business model targeting a niche market with simple products, which will incur low costs and low skill requirements for entrepreneurs and is thus able to scale up within local BoP community. In the second stage, BoP entrepreneurs must engage in intensive learning from the seed entrepreneur and other early movers to gain the required capabilities for operating the seed business model. In the last stage, BoP entrepreneurs need to focus on business model innovation and scoping and form a local value chain and ecosystem for EC development.

Wu et al. (2004) collected data from a Taobao. The objective of the study was to analyze the dynamic performance effect mechanism of EC fraudulent signals of counterfeit products under multiple game conditions. The following results were obtained that Selling of counterfeit products by using fraudulent signals can improve the current sales performance, but it will cause a long-term

performance decline consequently.

Chen et al. (2021) collected data from a report on the Development of Nationwide Digital Agriculture and Rural E-commerce in Counties in 2020. The objective of the study was to analyze the spatial distribution characteristics of sustainable development of EC for agricultural products in China at the county-level. The following results were obtained that the top 100 counties of agricultural products EC mainly concentrate in southeastern China, spreading along the northeast and southwest; The county-level agricultural products ecommerce shows significant negative spatial spillover effects; The level of economic development and public services have a positive impact on the development of county-level agricultural products EC, while the level of industrial development shows a negative correlation; The level of agricultural development and industrial development have a significant negative external effect on the development of agricultural products EC.

Huang & Suo (2021) collected data from a Taobao. The objective of the study was to investigate four factors including price promotion, time pressure, interpersonal interaction and visual appeal influencing the impulse buying decision of live streaming EC consumers in China. The following results were obtained that price promotion, time pressure, interpersonal interaction, and visual appeal these six factors have a significantly positive effect on consumer impulse buying decision. Perceived risk was found negatively related to consumer impulse buying decision. Price promotion and visual appeal played the most important role in influencing consumer impulse buying decision of live streaming than any other factors.

Liu et al. (2021) collected data from a household survey in Shandong, Henan and Shaanxi. The objective of the study was to present about the factors that affect farmers' decisions to adopt EC, and how much farmers benefit from as well as cost on the adoption. The following results were obtained that Education level, smartphone use, off-farm employment and social capital significantly impact farmers' decisions to adopt EC. EC adoption drives a significant increase in selling price; simultaneously causes a tremendous increase in marketing costs for farmers.

Liu et al. (2022) collected data from an open data. The objective of the study was to identify the factors that reflect the impacts of EC and applying the Pearson correlation coefficient and the LASSO model, to quantify and evaluate the changing factors that impact shop rents. The following results were obtained that the scattered and smaller highest-rent centers indicate the decreasing influence of central place logic. The decline of some traditional spots with the highest commercial values and rise of new catering services centers in suburban areas have been observed, suggesting the changing impacts of the agglomerated externalities.

Wang et al. (2021) collected data from a questionnaire survey and interview. The objective of the study was to systematically analyze how consumers make shopping decisions when engaging with LSC. The following results were obtained that LSC enables merchants to exchange information with consumers based on their needs and provide additional customer services. Because of the appropriate

information about the products, they acquire and the enjoyable shopping atmosphere, consumers are willing to purchase products in LSC.

4. Conclusions

The purpose of this study is to review trends in empirical research on e-commerce (EC) in the distribution sector, particularly in China, based on the reality of EC, which is expanding rapidly worldwide and becoming a driving force behind the distribution revolution. Using Google Scholar to search for articles, we extracted and reviewed 24 prior studies from 2004 to 2022, which revealed the following points that, firstly, early analyses focused primarily on the convenience and reliability of the platform for consumers and SMEs using EC, trust in the transaction itself, attitudes toward risk, and the influence of culture and values on the transaction. In addition, the data used in the analysis were based on questionnaire surveys. Secondly, in 2010 and later, however, national and corporate data has been developed, and macro analysis of the impact of EC on national and regional economies, or time-series analysis of consumer purchasing behavior using big data provided by Taobao, a major EC company, has been conducted. Thirdly, most recently, an empirical analysis of new EC using live streaming services has been conducted.

Based on the findings from this study, we would like to point out three future research directions for empirical analysis of e-commerce. The first is that e-commerce technology is advancing daily, and consumer purchasing behavior may be changing as well. Therefore, it is necessary to empirically clarify the relationship between corporate strategy, performance, and consumer behavior based on a detailed examination of changes in consumer purchasing behavior. The second point is the possible expansion of business in e-commerce by individuals as an intermediate form between C2C and B2C. Therefore, it would be very interesting to empirically clarify this point. Lastly, the relationship with global environmental issues is of great interest, as people's attention is turning to the environment on a global scale in relation to the SDGs. Empirical studies on how e-commerce contributes to the diffusion and expansion of environmentally friendly products and services will be required in the future.

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Appendix: Table 1. A survey of previous studies regarding empirical studies in the Chinese distribution sector

Authors	Year	Journal	Title	Data	Purpose	Findings
Efendioglu & Yip	2004	Interacting with computers	Chinese culture and e-commerce an exploratory study	Questionnaire Survey	To analyze the impact of these infrastructural and socio-economic factors on e-commerce development in China.	Cultural issues such as socializing effect of commerce, transactional and institutional trust and attitudes toward debt were determined to be the major impediments to e-commerce in China
Xu et al.	2006	Scholarship and Professional Work - Business	Consumers_ attitudes of e- commerce in China	Questionnaire Survey	To analyze the problem of B2C and C2C consumers' attitudes towards trust of the business transaction process in China	The opinion that consumers in China of different ages and genders with different purchasing power have the same concerns during the on-line transaction process was disproved. If the e-commerce companies in China want to make more profits, the most important factor is the strengthening of on-line payment security, because the consumers spending large amounts of money on-line pay a lot of attention to this factor.
Tan et al.	2007	Information & Management	Business-to- business adoption of eCommerce in China.	Questionnaire Survey	To analyze EC adoption by B2B and SME businesses in China from internal, external, and contextual perspectives	The important inhibiting factors in China are restricted access to computers, lack of internal trust, lack of enterprise-wide information sharing, intolerance towards failure, and incapability of dealing with rapid change
Teo & Liu	2007	Omega	Consumer trust in e-commerce in the United States, Singapore and China.	Questionnaire Survey	To examine the antecedents and consequences of consumer trust in the United States, Singapore, and China	Reputation and system assurance of an Internet vendor and consumers' propensity to trust are positively related to consumer trust. Consumers' trust has a positive relationship with attitude and a negative relationship with perceived risk

Yoon	2009	Information & Management	The effects of national culture values on consumer acceptance of e-commerce Online shoppers in China	Questionnaire Survey	To investigate the effect of culture on perceived usefulness, perceived ease of use, trust, and intention to use	Uncertainty avoidance and long-term orientation had moderate effects on the relationship between trust and intention to use and that masculinity also had a moderate effect on the relationship between perceived usefulness and intention to use and the relationship between perceived ease of use and intention to use. Power distance and individualism had no significant effect
Li et al.	2010	Proceedings of the 12th International Conference on Electronic Commerce: Roadmap for the Future of Electronic Business	A purchasing-intention model in C2C e-commerce of China The role of perceived risk, trust, perceived benefit and their antecedents. In	Questionnaire Survey	To develop a theoretical framework describing the purchasing-intention model in C2C ecommerce of China	Internet consumers' trust, perceived benefit and perceived risk have strong impacts on their intention of purchase. Reputation of sellers, website security, familiarity with websites and group purchase have strong effects on consumers' trust. Only seller accessibility has a significant impact on perceived risk. Group purchase has a strong impact on perceived benefit
Lu et al.	2010	Electronic Commerce Research and Applications	From virtual community members to C2C e-commerce buyers Trust in virtual communities and its effect on consumers' purchase intention	Questionnaire Survey in Taobao VCs	To analyze what factors affect trust building among Virtual Community members and how this trust influences the trust in the C2C website or vendor	Familiarity, perceived similarity, structural assurance, and trust propensity are important antecedents to trust in members in VCs. Trust in members' ability significantly affects three dimensions of trust in the vendor/website in terms of ability, integrity, and benevolence. Trust in members' integrity and benevolence stimulates the purchase intention and trust in the vendor/website's ability positively affects the intention to get information and the purchase intention

Wang et al.	2010	Information Security and Applications	Empirical analysis of customer behaviors in Chinese e-commerce.	downloaded from 360buy.com website through crawler programs	To discover customer purchasing patterns or behavior characteristics, which are indispensable knowledge for the expansion of Chinese EC market	In most situations the time intervals approximately obey the power-law distribution over two orders of magnitudes. Time interval on customer's successive purchase can reflect how loyal a customer is to a specific product category. Human behaviors could be related to psychology of customers
Kwahk et al.	2012	Asia Pacific Journal of Information Systems	The Effects of Use of Instant Messenger on Purchase Intention The Context of Chinese C2C E-Commerce	Questionnaire Survey	To examine the role of instant messenger in the C2C EC context and to find how it impacts buyers' purchase intentions	Use of instant messenger did not directly influence purchase intention but had positive effects both on trust for vendor and customer satisfaction, which in turn influenced purchase intention
Qu & Chen	2014	WHICEB 2014 Proceedings	The Impact of e-commerce on China's Economic Growth	1997- 2012China Statistical Yearbook	To analyze and expound the meaning, characteristics and classification of EC, the factors affecting EC development and impact mechanism of EC development to the national economy growth	The five important EC factors have the significant positive correlation with GDP, especially the number of Internet users, the number of EC enterprises, the increasing number of online shopping users. EC development play influence to economic growth

Chen & Zhang	2015	Sustainability	Does e-commerce provide a sustained competitive advantage: An investigation of survival and sustainability in growth-oriented enterprises	China statistic yearbook	To explore how EC influences sales growth in the short- and long-term as well as to explore the causality relationship and influence degree	IT Investment is the most important factor to achieve success, what competitive advantage can be achieved largely depends on whether enterprises will effectively use the network technology. The expansion of the enterprise size can promote transaction volume increase of SMEs in the short term. Internet availability has a positive effect on the trade volume of EC, but the intensity is not obvious, and the effect is relatively stable
Liu et al.	2015	Annals of Operations Research	Online purchaser segmentation and promotion strategy selection evidence from Chinese E- commerce market	The real transaction data from Taobao	To extract and investigate Chinese online purchaser behavior indicators and classify them into six types by cluster analysis	Economical purchasers are the most sensitive to discount promotion; direct purchasers are the most sensitive to advertising promotion; active-star purchasers are the most sensitive to word-of-mouth promotion
Ting & Nam	2016	Asia Marketing Journal	A Comparative Study on Antecedents to the Customer Satisfaction with Cross-Border E- commerce in Korea and China	Questionnaire Survey	To identify causal relationships between EC website traits and consumer satisfaction and along with loyalty	Website trustworthiness, convenience and interactivity were all positively related to consumer satisfaction. Higher satisfaction led to stronger customer loyalty, which may well increase revisit intentions. The path from website convenience to satisfaction is the strongest among the three website traits. Chinese consumers are more concerned about the website convenience than interactivity and trustworthiness when they make cross-border EC purchases

Fan	2019	Journal of Economics, Business and Management	An exploratory study of cross border e-commerce (CBEC) in China opportunities and challenges for small to medium size enterprises (SMEs)	Web-based document of the relevant government agencies and the EC firms such as Alibaba.com and JD.com.	To discuss the unique EC systems in China using a qualitative approach	Successful exporting through cross border EC requires more China-savvy in understanding and interpreting Chinese middle-class consumer's online behavior, the potential size of the market, business practice and government systems and regulations in relation to cross border EC
Kwak et al.	2019	Technological Forecasting & Social Change	Legitimacy building and e- commerce platform development in China: The experience of Alibaba	Interview data from Alibaba's stakeholders, including suppliers, consumer groups, and R&D partners.	To connect the emergence and development of EC with infrastructure, culture, and regulations; by approaching technological and platform acceptance from the perspective of legitimacy building	Alibaba's continuous efforts to build legitimacy facilitated platform evolution despite its exposed weakness in intellectual property rights. These efforts rendered Alibaba as a de facto standard e-business model
Luo et al.	2019	World Bank Policy Research Working Paper	E-Commerce development and household consumption growth in China	The information provided by the Alibaba Group, China Statistical Yearbook, and the Population Census 2010	To investigate how EC development has shaped household consumption growth in China	EC development is associated with higher consumption growth. The relationship is stronger for the rural sample, inland regions, and poor households, suggesting that ecommerce development helps reduce spatial inequality in consumption. The consumption of durable goods and in-style goods has grown faster than the consumption of local services

Zhang	2019	Growth and Change	Investigation of e- commerce in China in a geographical perspective	National Bureau of Statistics (2014, 2015, 2016, 2017)	To examine the geography of EC in China within a theoretical framework grounded by social theory and neoclassical economics	The growth of EC in China presents a nationwide inequality constrained by local economic, politic, and infrastructure conditions. The growth of EC in China presents a hybrid feature in terms of spatiality, which relies on structures in both cyberspace and physical space.
Gao & Liu	2020	Growth and Change	Endogenous inclusive development of e-commerce in rural China A case study	Interview in Dongfeng Village and the nearby area	To advance understanding of the process and mechanism of endogenous inclusive development of information and communications technology (ICT) solutions, to achieve sustainable furniture EC development independently	In the first stage, EC development in a disadvantaged area can start from a seed business model targeting a niche market with simple products, which will incur low costs and low skill requirements for entrepreneurs and is thus able to scale up within local BoP community. In the second stage, BoP entrepreneurs must engage in intensive learning from the seed entrepreneur and other early movers to gain the required capabilities for operating the seed business model. In the last stage, BoP entrepreneurs need to focus on business model innovation and scoping and form a local value chain and ecosystem for EC development
Wu et al.	2020	Mobile Information Systems	An empirical study on sales performance effect and pricing strategy for E-commerce from the perspective of mobile info	Taobao	To analyze the dynamic performance effect mechanism of EC fraudulent signals of counterfeit products under multiple game conditions	Selling of counterfeit products by using fraudulent signals can improve the current sales performance, but it will cause a long-term performance decline consequently.

Chen et al.	2021	Sustainability	The spatial characteristics of sustainable development for agricultural products E-commerce at county-level based on the empirical analysis o	Report on the Development of Nationwide Digital Agriculture and Rural E-commerce in Counties in 2020	distribution characteristics of sustainable development	The top 100 counties of agricultural products EC mainly concentrate in southeastern China, spreading along the northeast and southwest; The county-level agricultural products ecommerce shows significant negative spatial spillover effects; The level of economic development and public services have a positive impact on the development of county-level agricultural products EC, while the level of industrial development shows a negative correlation; The level of agricultural development and industrial development have a significant negative external effect on the
Huang & Suo	2021	Asian Social Science	Factors affecting Chinese consumers' impulse buying decision of live streaming E- commerce.	Taobao	To investigate four factors including price promotion, time pressure, interpersonal interaction and visual appeal influencing the impulse buying decision of live streaming EC consumers in China.	development of agricultural products EC Price promotion, time pressure, interpersonal interaction, and visual appeal these six factors have a significantly positive effect on consumer impulse buying decision. Perceived risk was found negatively related to consumer impulse buying decision. Price promotion and visual appeal played the most important role in influencing consumer impulse buying decision of live streaming than any other factors

Liu et al.	2021	Journal of Rural Studies	The adoption and impact of E-commerce in rural China Application of an endogenous switching regression model.	Household survey in Shandong, Henan and Shaanxi	To present about the factors that affect farmers' decisions to adopt EC, and how much farmers benefit from as well as cost on the adoption	Education level, smartphone use, off-farm employment and social capital significantly impact farmers' decisions to adopt EC. EC adoption drives a significant increase in selling price; simultaneously causes a tremendous increase in marketing costs for farmers
Liu et al.	2022	Land Use Policy	What matters in the e-commerce era Modelling and mapping shop rents in Guangzhou, China.	Open data	To identify the factors that reflect the impacts of EC and applying the Pearson correlation coefficient and the LASSO model, to quantify and evaluate the changing factors that impact shop rents	The scattered and smaller highest-rent centers indicate the decreasing influence of central place logic. The decline of some traditional spots with the highest commercial values and rise of new catering services centers in suburban areas have been observed, suggesting the changing impacts of the agglomerated externalities
Wang et al.	2022	Computer Supported Cooperative Work	How Live Streaming Changes Shopping Decisions in E- commerce A Study of Live Streaming Commerce	Questionnaire Survey and Interview	To systematically analyze how consumers make shopping decisions when engaging with LSC	LSC enables merchants to exchange information with consumers based on their needs and provide additional customer services. Because of the appropriate information about the products, they acquire and the enjoyable shopping atmosphere, consumers are willing to purchase products in LSC.