ABSTRACT

Chongqing Province in China is a comprehensive pilot area for cross-border e-commerce. Although the government has issued several policies to promote cross-border e-commerce, the cycle of cross-border e-commerce in Chongqing is short, and the experience in various aspects is not yet mature. This study, based on resource-based theory, explores the factors that influence the financial sustainability of cross-border e-commerce in the face of COVID-19 from the perspective of small and medium-sized enterprises (SMEs) managers in Chongqing Province, China. The data were collected through a questionnaire survey to gauge whether government support, innovation, and the usage of e-commerce platforms have impacted the financial sustainability of cross-border e-commerce for Chinese SMEs. One hundred and fifty-seven sample data were analyzed according to correlation analysis, regression analysis, and hypothesis testing. The results indicate a significant relationship between government support, innovation, the usage of e-commerce platforms, and financial sustainability. This study confirms the importance of national policies for the financial sustainability of small and medium-sized cross-border e-commerce enterprises. The use of cross-border e-commerce platforms should improve their comprehensive service capabilities and supply chain management. Thus, it enhances financial sustainability. Also, it may promote China’s cross-border e-commerce enterprises to play a greater role in foreign trade and achieve new growth in economic innovation and development.

Keywords: Financial sustainability, cross border e-commerce, innovation, usage of e-commerce, government support
INTRODUCTION

Trade promotes the development of China’s economy. Domestic and foreign trade is increasingly influenced by market demographics. A large percentage of customers prefer online shopping and remote delivery, which has led to the emergence of e-commerce. According to Qian Cai in the People’s Daily (2021), China’s cross-border e-commerce import and export volume in 2020 will be 1.69 trillion yuan, an increase of 31.1%, and the scale of cross-border e-commerce will increase by nearly 10 times in 5 years. The scale of market procurement trade will increase by 5 times in 6 years. In 2020 it broke through 700 billion yuan.

The booming consumer market has also prompted many small and medium-sized enterprises (SMEs) to quickly adjust, embrace digitization and networking, and invest in the cross-border trade industry (Huang, 2021). In an interview, reporter Wang Caijing, an expert from the APEC e-commerce business alliance and a professor at the University of International Business and Economics in China, said that cross-border trade is characterizing the fragmentation and high frequency of global trade. Large multinational companies will have much fewer arbitrage opportunities on a global scale. Many small, medium and micro enterprises have participated in global trade, which means global trade is more inclusive (Wei & Wang, 2021).

The COVID-19 outbreak started in China in early January 2020 and spread globally in the following three months (He et al., 2020). As COVID-19 spread, the Chinese government had begun taking stringent measures to save lives, such as banning outdoor activities, requiring citizens to stay indoors, and closing businesses, all of which have slowed the spread of COVID-19 and prevented the nation’s health system from overload. However, these measures also threatened the existence of many companies (Ozili & Arun, 2020; Lu, 2020). It could have potentially devastating consequences for individuals, societies, and economies, such as mass unemployment and social instability (Ozili & Arun, 2020). During the height of the outbreak, residents were also confined to prevent community spread. In many provinces, including Chongqing many factories and businesses across the country had been closed (Lu, 2020). The COVID-19 outbreak had affected the economic development of many countries, causing continuous huge losses to many industries and businesses (Lu, 2020).
According to the China Economic Survey for the first quarter of 2020, China’s cross-border e-commerce market was also facing challenges, as the outbreak disrupted e-commerce supply chains that were entirely dependent on customer demand. The e-commerce sector of Chinese SMEs had been severely affected by the epidemic. To alleviate the negative impact of the epidemic, the Chinese government vigorously promoted preferential policies, and the usage of cross-border e-commerce platforms such as Alibaba, Dunhuang, Lanting, and AliExpress actively improved their own construction and formulated effective marketing strategies. According to the economic survey in the second and third quarters of 2020, China’s cross-border e-commerce industry experienced reverse growth during this period (Li, 2021).

Media research data showed that during the epidemic, users’ purchasing power and overall purchase frequency continued to increase. During the outbreak of the epidemic in the first quarter of 2020, 40.3% of users increased their purchasing power, and 65.3% of users increased the frequency of the usage of cross-border e-commerce platforms (Chen, 2022; Xu & Dai, 2022). Although some consumer demand has been affected by the epidemic, the purchasing power of domestic consumers and the demand for the usage of cross-border e-commerce platforms were still rising.

So, this study aimed to explore how cross-border e-commerce SMEs in China’s Chongqing province overcame local and global barriers to financial sustainability development through government support, innovation, and knowledge of electronic platforms.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Overview of Cross-Border E-commerce

E-commerce refers to a wide range of business and trade activities around the world. In the open network environment of the Internet, based on the browser or server application model, buyers and sellers conduct various business activities without meeting each other. It is a new business operation mode that realizes online shopping for consumers, online
transactions between merchants and online electronic payment, as well as various commercial activities, transaction activities, financial activities, and related comprehensive service activities (Lu et al., 2021).

Cross-border e-commerce is a relatively advanced form of e-commerce application, and it has only appeared in China for ten years (Hu & Li, 2020). It refers to transactions between two parties in different countries or regions through the Internet and related information platforms. It is a new trade model that combines traditional international trade with networking and electronics relying on the Internet and international logistics to directly meet the needs of end customers. It has the advantages of low threshold, few links, low cost, and short cycle. Now, it is flourishing on a global scale (Wang & Lee, 2017).

Cross-border e-commerce refers to an international business activity in which transaction entities belonging to different customs borders complete transactions through e-commerce platforms, conduct electronic payment, settlement, and deliver goods through cross-border e-commerce logistics and off-site warehousing (Ma, 2015).

**E-commerce in Chinese SMEs**

China’s e-commerce industry developed relatively early as compared to other countries (Hu & Li, 2020). At present, China’s e-commerce industry has transitioned to a relatively stable stage (Liu, 2017). With the continuous integration and innovation of e-commerce and traditional industries, the e-commerce industry structure has also derived new ones (Ma, 2015). The online shopping mall system has enhanced corporate brand awareness, mobile e-commerce platforms have become a new trend, and all people can engage in e-commerce entrepreneurship. In recent years, the development of the usage of e-commerce platforms can be summarized into four major trends: involving cross-border e-commerce, rural e-commerce, mobile ecommerce, and O2O e-commerce. Among them, the development of cross-border ecommerce and rural e-commerce has received the most attention from the government (Li, 2020; Yu, 2021).

The competition among e-commerce platforms in China is very fierce (Li, 2020). The main competition is in service quality and supply chain. The
Development and standardization of e-commerce platforms can provide a greater profit space for the development of SMEs, mainly in the following points: Firstly, the export of SMEs can be directly obtained from the e-commerce service platform, which effectively solves the communication problems between the two sides. At the same time, it can also track and sort out the logistics information of the enterprise products, reducing the logistics capital investment of the enterprise.

Secondly, e-commerce service platforms all have integrity mechanisms, which can ensure the product quality of SMEs and help enterprises maintain brand integrity. At the same time, the e-commerce platform can also solve the problem of capital flow faced by SMEs, and timely solve the problem of capital transaction detention. Thirdly, there are many links involved in traditional export trade, and e-commerce can not only eliminate intermediate wholesalers and retailers, but also broaden the trade fields involved by enterprises. This can not only improve the export efficiency of SMEs, save the cost of export trade, but also improve the profits of enterprises fields involved (Li, 2020).

E-commerce, as an important business form of online retail, has slowed down in recent years, facing the challenge of high customer acquisition costs (Huang, 2021). It is urgent for innovative e-commerce models to drive growth. Transformation and innovation are the driving force to promote the continuous progress of economy and society. At present, the industrial internet is considered as one of the opportunities for innovation, and the force of change comes from SMEs and entrepreneurs. SMEs, under the pressure of living, have a keen ability to discover value and a flexible decision-making mechanism. They are the most innovative group.

Government support through the alignment with industrial policies, can guide the assistance of financial resources and private capital to specific SMEs. In addition, it provides sufficient funds for innovation activities of SMEs, promote enterprises to increase innovation, and stimulate the vitality of SMEs (Chen & Bei, 2019). SMEs innovation activities are often characterized by high risk, large investment, and long cycle, which is a complex process. Government support can reduce the research and development risk of new projects and release the potential of SMEs to a certain extent (Addai et al., 2017). In addition, government support has the
characteristics of the aftereffect. Through the regular performance evaluation of SMEs supported, it can effectively stimulate the innovation power of enterprises, help to create good research and development and innovation environment, and form an innovation industry (Ye, 2021).

This helps uncover the general impact of COVID-19 on SMEs across different industries. Most research is focused on large e-commerce companies and how they have been affected by the pandemic. However, only a few research reflected on the exact impact of the outbreak on Chinese SMEs, especially in terms of the role of the government, innovation, and electronic platforms in achieving financial sustainability in cross-border e-commerce.

Financial Sustainability of SMEs During Covid 19

COVID-19 has not only had a serious impact on people’s daily life, but also had a huge impact on the operation and development of SMEs (Gong, 2020). Affected by the epidemic, many SMEs were forced to stop production, and the products already produced could not be sold, resulting in a backlog of inventory. During this period, some SMEs had no output and could not obtain operating income. At the same time, they were faced with employee salary and remuneration expenses, rent expenses and matured bank loans, which caused some SMEs to make ends meet or even go bankrupt. Under the influence of the COVID-19, SMEs had problems such as capital disruption, investment and financing difficulties. During this period, for SMEs with limited funds, their financial management goal was no longer to promote enterprise development, but to ensure the continued survival of the enterprises.

It can be said that the business development and financial management of SMEs are affected by the economic environment, policy directives, cultural development, technical talents, and social environment. During the COVID-19 outbreak period, the financial management of SMEs is very important. Only by using scientific and reasonable financial management means and continuously optimizing the financial management activities of SMEs, can we effectively control risks and survive (Zhao, 2020; Gong, 2020).
For improving the financial sustainability of SMEs during the pandemic period, it is necessary to optimize the financing management of SMEs (Zhao, 2020). SMEs need to make full use of the government’s preferential policies to obtain more financial subsidies and financial support from the government during the epidemic period. Under the influence of the COVID-19 outbreak, many SMEs were in trouble. To support them, the government had issued some preferential policies and provided some subsidies, such as increasing credit support, reducing financing costs and delaying repayment, to help SMEs overcome difficulties (Xu & Dai, 2022).

In addition, in order to promote the financial sustainability development of SMEs and optimize the financial management of enterprises during the epidemic period, SMEs should make scientific investment management decisions, select investment projects with small risks, and reduce investment according to the actual situation of enterprises.

**Government Support and Financial Sustainability of Cross-border E-commerce for SMEs**

Government support comes in form of providing technology platforms for different SMEs to be used in different ways. It also includes providing e-commerce policies as a general enabling environment (Kumar & Ayedee, 2021). The sustainability of e-commerce for SMEs comes from government support, high levels of innovation, and knowledge of existing and future e-platforms (Indriastuti & Fuad, 2020).

The construction of policy environment is one of the important factors affecting the financial sustainability development of an enterprise economy (Mura, 2019). In order to support the financial sustainability development of something, local governments actively provide support in all aspects such as capital, tax, land, guarantee and supply of goods. Through this social construction, the comprehensive advantages can be brought into play, and the effect of policy support and government motivation can be realized.

In the absence of market-oriented conditions, local governments will give enterprises more subsidies and support to reduce the survival cost of enterprises (Kumar et al., 2021). From the perspective of industry life cycle, enterprises tend to get more government industrial policy support in
the growth stage. Government subsidies can bring profit advantages to new industries, and tax reduction policies can significantly promote innovative output (Jiang, 2021).

During the COVID-19 outbreak, different governments adopted different ways to support the development of small and medium-sized enterprises (Li, 2021). Their level of support varied and largely depending on local market conditions. The research of Albaz et al. (2020) which considered both the short-term survival and long-term strength of SMEs showed that the productivity of SMEs was much lower than that of large companies around the world. Therefore, when the crisis subsided, the government may choose to help SMEs enhance their resilience, such as helping them find new markets or digitalize faster. SMEs have the potential to become economic and employment avenues after the crisis, but the government’s response may be crucial (Huang, 2021).

In China, since the outbreak of COVID-19, Chen and Bei (2019) believed that the government had paid more attention to supporting the development of the real economy, increasing credit supply, reducing financing costs, and launched special relief policies to support small and medium-sized enterprises and individual enterprises. These policies had provided strong support for the prevention and control of the epidemic and the resumption of work and production of small and medium-sized enterprises. The core of the policy was deeply rooted in two aspects. First, to support enterprises solve cash flow problems. Second, assist enterprises make up for credit losses.

Therefore, this study put forward the following assumption:

H1: Government support has a positive impact on the financial sustainability of cross-border e-commerce of Chinese small and medium-sized enterprises.

The Innovation and Financial Sustainability of Cross-border E-commerce for SMEs

In the field of economics, the enthusiasm for the discussion of SMEs’ innovation has been high. Most scholars have found that SMEs’ innovation
has a significant positive role in promoting business performance. If SMEs want to achieve the growth of business performance, they must pay more attention to technological innovation (Alexy et al., 2018; Zhou, 2020; Ma, 2020; Liu, 2021). Other scholars hold different views. It is considered that SMEs’ technological innovation has no significant impact on the growth of enterprise performance. As technological innovation has been paid more and more attention, the research on the relationship between SMEs’ technological innovation and enterprise performance has become more and more extensive and in-depth (Yu, 2021; Zhao et al., 2022).

In exploring the drivers of e-commerce, Alfonso et al. (2021) asserted that the adoption of e-commerce by SMEs depends on the environment in which they operate, and a highly competitive environment motivates businesses to adopt e-commerce to increase market share. The results showed that SMEs were the most vulnerable during the COVID-19 pandemic. Sustainability through digital transformation can solve this problem. Innovation is the key to developing the usage of e-commerce platforms suitable for different SMEs in different contexts (Alfonso et al., 2021). However, some SMEs lack this knowledge (Indriastuti & Fuad, 2020).

Innovation and financial sustainability development of SMEs are considered to be the solution to ensure the future development of the whole society. Innovation plays an indispensable role in solving social and environmental problems and the financial sustainability development of enterprises. Krisciunas and Greblikaite (2007) believed that the innovation of SMEs shows that the enterprise has the main characteristics of social responsibility, competitiveness, progress, knowledge creation and use, innovation, and vitality, and seeks commercial interests to create social value.

Schaltegger and Wagner (2011) believed that innovation not only contribute to the financial sustainability development of the organization itself, but also make significant contributions to the financial sustainability of the general market and society. Gerlach (2003) discussed the necessity of analyzing the role of SMEs towards the financial sustainability development from the perspective of innovation. SMEs are increasingly recognized as the driving force of innovation, entrepreneurship, and competitiveness, so they are regarded as one of the keys to financial sustainability development.
Innovation has a good role in promoting enterprises, but only relying on innovation, without a certain integration of resources, will lose the inherent role of innovation (Indriastuti & Fuad, 2020) and the improvement of the core competitiveness of enterprises is meaningless. Therefore, now more and more enterprises not only simply absorb external technology to improve their innovation ability, but also pay more attention to the efficient allocation and comprehensive integration of resources, to realize the optimal allocation of resources, and finally realize the increase of enterprise economic benefits.

Therefore, this study put forward the following assumption:

H2: Innovation has a positive impact on the financial sustainability of cross border e-commerce of Chinese small and medium-sized enterprises.

The Usage of E-commerce Platforms and Financial Sustainability of Cross-border E-commerce for SMEs.

Indriastuti and Fuad (2020) identified SMEs as the most vulnerable entities during COVID-19 and developed a financial sustainability framework for SMEs to use e-commerce. They pointed out that some SMEs lack understanding of the usage of e-commerce platforms and applications. The vulnerability of SMEs stems from the degree of digital transformation that they experienced prior to the pandemic. Additionally, Shahzad et al. (2020) investigated the impact of the COVID-19 outbreak on the use of e-commerce in the Malaysian healthcare sector. The results showed that only companies with e-commerce readiness, e-commerce knowledge, and the ability to integrate supply chain and e-commerce systems benefitted. The significance of this result is that it informs the increase in e-commerce usage during COVID-19.

In the information age, e-commerce platforms have increasingly become an important way of social resource allocation (Cao Yixing, 2018). Both traditional enterprises and individual entrepreneurs can establish extensive and close contacts with partners in different links of the supply chain through outsourcing, procurement and strategic cooperation. Effectively integrate social resources such as human resources, technology, production and capital, and efficiently provide products and services to
customers. This role of e-commerce platform is mainly reflected in its great impact on social information flow, capital flow, logistics and labour employment.

The promotion of e-commerce platforms such as Amazon and Tmall Global had pushed cross-border e-commerce to the climax of consumption (Bhatti et al., 2020). When dealing with costs such as information search and retailer buyer relationships, it is important to understand the locally and internationally available platforms. It helps to improve skills, find alternatives and understand industry trends in order to achieve financial sustainability development. In the process of developing cross-border e-commerce, these e-commerce platforms can deal with factors that affect enterprise performance, such as cultural differences, laws and regulations, transportation, and so on.

Based on the above discussion, the current research hypothesised that:

H3: The usage of electronic platforms has a positive impact on the financial sustainability of cross-border e-commerce of Chinese small and medium-sized enterprises.

Below is the research framework for the current study.

Resource Based Theory

The Resource-based Theory (RBT) establishes the relationship between the internal characteristics of the company and the market performance. It believes that the resources applied in the strategy of the
company should be heterogeneous resources, and these resources are difficult to flow between the companies. Barney (1991) asserted that to achieve competitive advantage (including financial sustainability) the following four conditions must be obtained: 1) the company’s resources must be valuable. In this sense, valuable resources can help the company find new opportunities or eliminate threats; 2) The company’s resources must be scarce among the company’s current or potential competitors; 3) The resources of the company must not be imitated; 4) This resource should be difficult to replace, so that there can be no substitute that can be copied without scarcity (Yanah, 2019).

Wangtienan et al. (2014) studied the cross-industry resource characteristics in order to find out which resource characteristics can bring competitive advantages to the company. The results showed that the value and scarcity of resources can bring competitive advantages to the company and turn the advantages into performance. Alexy et al. (2017) explained the success of the open strategy. They believed that the implementation of the open strategy by the company could reduce its costs and significantly increase the demand for its professional resources, thus helping to improve the company’s performance and further expand the RBT.

Prajgo (2016) complemented the impact of different innovation strategies on the company’s performance on the business environment. The data of 207 manufacturing enterprises in Australia were investigated. The results showed that dynamic environment improved the impact of product innovation on enterprise performance agency. These studies focussed on the relationships between main resources, supplementary resources with company performance and expand the RBT.

**RESEARCH DESIGN**

In order to determine the impact of government support, innovation and the usage of electronic platforms on the financial sustainability of cross-border e-commerce for Chinese SMEs, this study focussed on managers of SMEs’ as the respondents. This study applied a survey instrument to collect the data and used the SPSS to analysis the data to answer the research questions.
Population and Sample

Managers play an important role in enterprises (Yanah, 2019), especially for SMEs. Managers have a great influence on the culture and wellbeing of enterprises. Managers’ values and attitudes drive the direction and development of enterprises (Zhou, 2020). A good manager should not only constantly imagine how to face the future and establish a business philosophy to adapt to the ever-changing market conditions, but also start from reality and think from a long-term strategic perspective to determine the future development direction and goals of the (Xu, 2022). Thus, the target population of this study was managers.

The companies served by these managers were from the “China Cross-border E-commerce Strong List - 2021” released by the China Enterprise Confederation. Fifty companies located in Chongqing Province, China were shortlisted for the current study. These companies were involved in e-commerce business and met the criteria of SMEs.

Due to the limited contact information of the target group, it was difficult to get in touch with the target group. This study used snowball sampling. After each questionnaire survey was over, the researcher asked them to provide other contact information of the respondents who belonged to the research population, and conducted follow-up investigations based on the clues provided, or asked them to forward the questionnaire to the target population.

The survey was conducted from January to April 2022. A total of 447 questionnaires were distributed and 226 questionnaires were recovered, with a recovery rate of 79.64%. Finally, 157 valid questionnaires were obtained, with an effective rate of 69.47%.

The Survey Instrument

The questionnaire created for this study consisted of 22 questions on both variables and profile information. The first part, Part A of the questionnaire described the demographic background of the respondents. Part B of the questionnaire consisted of five (5) questions concerning the enterprise’s financial sustainability in terms of the company’s current
Part C consisted of four (4) questions related to whether the government had policies to support the respondent’s enterprise or changed its policy during the COVID-19 pandemic period, whether the government had provided economic support. In Part D consisted three (3) questions which measured the enterprise innovation. These questions mainly focussed on the level of innovation capabilities, innovation environment, and innovation cycle.

In the final section, Part E, five (5) questions were asked to measure the usage of cross-border e-commerce platforms in the respondent’s enterprise specifically, focusing on whether the current cross-border e-commerce platform in the respondent’s enterprise met the clients’ needs, better than competitors, whether the respondent knew, were satisfied, and were willing to go for training to improve the cross-border current e-commerce platform of the respondent’s enterprise.

For Part B, C and E, the respondents were required to indicate their response to each item of the questionnaire using a five-point Likert scale from strongly disagree (1) to strongly agree (5). For Part D which is on the enterprise innovation, the respondents were required to indicate their responses to each item of the questionnaire using a five-point Likert scale from not well (1) to very well (5).

**Dependent and Independent Variables Measurement**

Financial sustainability is understood as the ability of public administrations to continue now and in the future current policies without causing the debt to rise continuously. It is defined as investment decisions that consider the environmental, social, and governance factors of an economic activity or project (Rodríguez, 2016). Table 1 presents the indicators measuring financial sustainability which were adapted from Indriastuti and Martí and Quas (2018).

Government support means financial support provided by federal, provincial or municipal governments, including capital provided without
limitation, operating grants, subsidies, repayable loans, reimbursable tax credits, and loan guarantees (Zhao, 2020; Ma, 2020).

Innovation is about putting a new idea or approach into action. It is commonly described as “the commercially successful exploitation of ideas”. Successful innovation is mainly about creating or adding value by improving existing goods, processes, or services (process innovation), or by developing goods, processes or services of value that have not existed previously (Chen Qin, 2014; Bhatti et al., 2020).

<table>
<thead>
<tr>
<th>Table 1: The Dependent Variable and Sources of References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial Sustainability of SMEs’ E-Commerce</strong></td>
</tr>
<tr>
<td><strong>References</strong></td>
</tr>
<tr>
<td>Company currently performing</td>
</tr>
<tr>
<td>Economic sustainability of the company</td>
</tr>
<tr>
<td>Future sustainability security</td>
</tr>
<tr>
<td>Meet customers’ needs</td>
</tr>
<tr>
<td>Meet stakeholders’ expectations</td>
</tr>
<tr>
<td>Indriastuti and Fuad (2020)</td>
</tr>
<tr>
<td>Martí and Quas (2018)</td>
</tr>
</tbody>
</table>

For the usage of internet platform, the key benefit of e-commerce platforms such as online marketplaces and apps stores is enabling businesses to reach a wider market. This ranged from a small increase in sales to being essential to the business. Online platforms also provide a low-cost channel for gathering customer feedback. However, e-commerce platforms are much cheaper than bricks-and-mortar stores. Platforms serve important roles in bringing people and businesses together. They help facilitate social and commercial exchanges of goods, services and information which would not otherwise happen (Prajogo, 2016; Fu, 2020; Lin, 2021). Table 2 presents the indicators that measured the three independent variables.

<table>
<thead>
<tr>
<th>Table 2: The Independent Variables and Sources of References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government Support</strong></td>
</tr>
<tr>
<td><strong>References</strong></td>
</tr>
<tr>
<td>Provide supporting policies</td>
</tr>
<tr>
<td>Change the supporting policies</td>
</tr>
<tr>
<td>Provide economics supporting</td>
</tr>
<tr>
<td>Provide stability economic supporting</td>
</tr>
<tr>
<td>Kumar and Ayedee (2021)</td>
</tr>
<tr>
<td>Lamoureux et al., (2019)</td>
</tr>
<tr>
<td><strong>Enterprise Innovation</strong></td>
</tr>
<tr>
<td>Innovation capabilities level</td>
</tr>
<tr>
<td>Innovation environment level</td>
</tr>
<tr>
<td>Innovation cycle level</td>
</tr>
<tr>
<td>Alfonso et al. (2021)</td>
</tr>
<tr>
<td>Li (2020)</td>
</tr>
</tbody>
</table>
Usage of cross-border e-commerce platform

Current platform can meet clients’ needs
Current platform better than competitors
Current platform’s satisfaction level
Current platform’s knowledgeable level
Training willingness to improve current platform

Kumar et al. (2020)
Gabor (2010)
Fuertes et al. (2020)

ANALYSES AND DISCUSSION OF RESULTS

Descriptive Analyses

In order to understand the background of cross-border e-commerce applied by the managers, the following information were gathered. 63.87% of the managers agreed that “an integrated website linking suppliers and customers had been established to perform the electronic cross-border transactions” and 57.42% confirmed that “online payment transaction website was developed to performed cross-border and domestic sales”. In addition, 40.65% of the managers agreed that “third-party platforms were used to achieve cross-border transactions such as Amazon, Alibaba, Taobao, Lotte, and Ebay”.

It can be seen from the Table 3 that the average scores of the corporate financial sustainability, government support, enterprise innovation, and the usage of e-commerce platforms were 3.361, 3.510, 3.450 and 3.418, respectively. The average number of corporate financial sustainability, government support, enterprise innovation, and cross-border e-commerce platform was greater than 3, indicating that the respondents “agree” with these dimensions. The average number of employees in the respondents’ enterprises was 42.

<table>
<thead>
<tr>
<th>Item</th>
<th>Sample</th>
<th>Min.</th>
<th>Max.</th>
<th>Average</th>
<th>Standard Deviation</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of employees</td>
<td>157</td>
<td>10.0</td>
<td>97.0</td>
<td>42.739</td>
<td>19.216</td>
<td>39.000</td>
</tr>
<tr>
<td>Enterprise financial sustainability</td>
<td>157</td>
<td>1.0</td>
<td>5.0</td>
<td>3.361</td>
<td>1.395</td>
<td>3.800</td>
</tr>
<tr>
<td>Government support</td>
<td>157</td>
<td>1.0</td>
<td>5.0</td>
<td>3.510</td>
<td>1.323</td>
<td>3.500</td>
</tr>
</tbody>
</table>
The normality analysis conducted indicated that the absolute value of kurtosis was less than 2 and the absolute value of skewness was less than 2, which meant that the data was acceptable to be normally distributed. According to Pallant (2005) and Tabachnick and Fidell (2007), the normality can correspondingly be assumed if the value of skewness and kurtosis ranged between +2 and -2.

**Reliability Analysis**

Reliability refers to the stability and consistency of questionnaire results when the same method is used to investigate the same object, that is, whether the measurement tool (questionnaire or scale) can stably measure the measured object or variable. It can be seen from Table 4 that the total Cronbach’s Alpha coefficient is 0.897, and the Cronbach’s Alpha coefficient of the four dimensions was above 0.7. According to George and Mallery (2003), the reliability coefficient should be more than 0.7 to ensure that the items in the questionnaire are valid and can be used for further analysis. This indicated that the reliability of the questionnaire of the current study was high, that is, there was a high internal consistency, and the measurement results were reliable and stable.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>No of Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Sustainability</td>
<td>5</td>
<td>0.876</td>
</tr>
<tr>
<td>Government Support</td>
<td>4</td>
<td>0.842</td>
</tr>
<tr>
<td>Enterprise Innovation</td>
<td>3</td>
<td>0.765</td>
</tr>
<tr>
<td>Cross-border e-commerce platform</td>
<td>5</td>
<td>0.855</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>0.897</td>
</tr>
</tbody>
</table>
Correlation Analysis

The Pearson correlation coefficient is used to measure the correlation between corporate financial sustainability, government support, enterprise innovation, and the usage of cross-border e-commerce platforms. The results are shown in Table 5.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Financial sustainability</th>
<th>Government Support</th>
<th>Enterprise Innovation</th>
<th>Cross-border e-commerce platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial sustainability</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government support</td>
<td>0.360**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation</td>
<td>0.427**</td>
<td>0.404**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cross-border e-commerce platform</td>
<td>0.440**</td>
<td>0.452**</td>
<td>0.285**</td>
<td>1</td>
</tr>
</tbody>
</table>

** significant at 0.01 level

It can be seen from the Table 5 that thePearson correlation coefficient analysis of enterprise financial sustainability, government support, enterprise innovation, and the usage of cross-border e-commerce platforms were all moderate and significant at a p-value of < 0.01. This reflected that there was a positive and significant correlation between the variables. Correlation analyses assist in determining the strength and direction of the linear relationship between two variables.

Regression Analysis and Hypotheses Testing

The F-test was performed on the model. It was found that the model passed the F-test (F=25.518, p=0.000) as shown in Table 6.

<table>
<thead>
<tr>
<th></th>
<th>sum of square</th>
<th>df</th>
<th>mean square</th>
<th>F</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>regress</td>
<td>101.285</td>
<td>3</td>
<td>33.762</td>
<td>25.518</td>
<td>0.000</td>
</tr>
<tr>
<td>residual</td>
<td>202.430</td>
<td>153</td>
<td>1.323</td>
<td></td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>303.715</td>
<td>156</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
R-squared is a statistical measure that represents the proportion of the variance for a dependent variable that’s explained by an independent variable or variables in a regression model. Whereas correlation explains the strength of the relationship between an independent and dependent variable, R-squared explains to what extent the variance of one variable explains the variance of the second variable. So, if the $R^2$ of a model is 0.50, then approximately half of the observed variation can be explained by the model’s inputs. So, R-square value of the model was 0.333 meaning that government support, enterprise innovation, and the usage of cross-border e-commerce platforms could explain 33.3% of the changes in enterprise financial sustainability, DW is used to test the correlation of residual series, the DW value was around the number 2, indicating that there was no autocorrelation in the model.

It can be seen from the above the Table 8 that government support, enterprise innovation, and cross-border e-commerce platform were used as independent variables, and the financial sustainability of enterprises was used as the dependent variable for linear regression analysis. According to Hair et al. (2006), a VIF value of less than 10, is the acceptable range of
collinearity in the regression analysis. As can be seen from the Table above, the regression model formula was:

Financial Sustainability = 0.666 + 0.252 Government Support + 0.256 Enterprise Innovation + 0.271 Cross-border E-commerce Platform.

The specific analysis was as follows:

The regression coefficient value of government support was 0.252 (t=3.060, p =0.003<0.01), which meant that government support had a significant positive impact on financial sustainability. Hence the Hypothesis 1 was accepted. The regression coefficient value of enterprise innovation was 0.256 (t=3.521, p=0.001<0.01), which meant that enterprise innovation had a significant positive impact on financial sustainability. Hence the Hypothesis 2 was accepted. The regression coefficient value of the usage of cross-border e-commerce platform was 0.271 (t=3.476, p=0.001<0.01), which meant that the cross-border e-commerce platform had a significant positive impact on the financial sustainability of enterprises. Hence, the Hypothesis 3 was accepted.

DISCUSSIONS OF THE REGRESSION RESULTS

The Relationship Between Government Support and Financial Sustainability of Cross-border E-commerce for Chinese SMEs.

The result of the current study is consistent with the research of Songling et al. (2018), which believed that government financial and non-financial support has a significant positive impact on the financial sustainability of cross border e-commerce of SMEs. In addition, it was consistent with the research of Lamoureux et al. (2019), which believed that if the local government has wiser and more targeted government projects to support SMEs, it will help to improve the resilience of the local economy and the financial sustainability of enterprises.

In addition, the findings are also consistent with Li Yating (2019). In Li Yating (2019), the tax preference given by the government can alleviate
the financing difficulties of enterprises. Government support policies are more helpful to optimize the debt financing structure of SMEs and guide the financing choice of SMEs from short-term financing to long-term financing. Although the impact of government support on the financing structure is uncertain, reasonable government policy support can establish a good relationship between government and enterprises.

Fu (2020) emphasized that the government plays an important role in the economic exchange cost of SMEs. These costs include taxes and duties, security, and law enforcement costs. The government provides infrastructure, policies and guidelines for the identification and use of e-commerce tools, which may promote the financial sustainability of SMEs. The main impact of government support on small and medium-sized enterprises is that it can effectively alleviate the financing constraints of enterprises and reduce the transformation risk. Government financial investment has the characteristics of precise support for science and technology orientation, which can select high-efficiency and high potential enterprises, inject funds into them through fiscal and tax subsidies, reduce tax rates and other ways, reduce enterprise investment costs, to provide guarantee for enterprise innovation activities.

The current study found that government support had a positive impact on the financial sustainability of cross-border e-commerce of Chinese SMEs. However, Luo and Ke (2021) found that government subsidy support had no significant regulatory effect on the relationship between mature SMEs. Although government support helps to reduce the cost of cross-border e-commerce of SMEs, the support effect of government policies has an impact but is not obvious in improving the high cost of financing funds.

**The Relationship Between Innovation and Financial Sustainability of Cross-border E-commerce for Chinese SMEs**

This study found that innovation had a positive impact on the financial sustainability of cross-border e-commerce of Chinese SMEs. Although there are still many problems in the current product innovation, it is very vulnerable to the influence of market environment and external conditions. The current study confirmed that the innovation behavior of SMEs is the condition for their survival in the market and the main factor for the long-term economic competitiveness and financial sustainability of SMEs, which is consistent with the research of Benda-Prokeinova et al. (2017).
Through innovation, we can solve the problem of high logistics costs caused by the lag of the logistics industry, build a cross-border e-commerce express distribution centre and overseas warehouse network, build a global supply chain system and reduce logistics costs, so as to meet the logistics needs of cross-border e-commerce and promote the economic development of cross-border e-commerce.

Innovation plays an important role in cost search (Chatzoglou et al., 2010). Even though the cost of searching information, the cost of bargaining and decision-making, and the total cost of innovation are huge, innovation promotes the creation of new or customized existing technological infrastructure suitable for specific SMEs and industries. It is generally believed that there is a significant positive correlation between innovation and firm performance.

**The Relationship Between the Usage of E-commerce Platforms and Financial Sustainability of Cross-border E-commerce for Chinese SMEs**

The current study found that the electronic platform had a positive impact on the financial sustainability of cross-border e-commerce of Chinese SMEs. In the context of the increasingly severe overall trade situation at home and abroad, Li Huashuo (2018) confirmed that the cross-border e-commerce platform contributed to the advantages of its new “trade middleman” and has become a new driving force to promote the transformation and upgrading of China’s foreign trade, which was consistent with the view of this study.

Consistent with Hossain et al., (2022) and Cao Yixing (2018), which agreed that that the cross-border e-commerce platform had formed a new virtual agglomeration effect for foreign trade enterprises, reduced the market access threshold for SMEs to participate in foreign trade, improved the transaction efficiency of China’s foreign trade and promoted the innovation of enterprise.

Small and medium-sized cross-border e-commerce enterprises are limited by capital, technology, talents, reputation, and other factors and driven by short-term profits. Cross border e-commerce transactions through
the development of more mature comprehensive third-party platforms have become the main forms, such as entering express, Amazon, Dunhuang, eBay, wish and Lazada. These are relatively mature third-party comprehensive service platforms. Entering these mature e-commerce platforms can not only get rid of the difficulties of capital, technology and talents brought by self-built websites and enjoy the one-stop services provided by e-commerce platforms, but also because these platforms have high popularity and extensive and stable consumer groups overseas. Joining these platforms can bring them more foreign customers, help them to expand in overseas markets and in turn, achieve stable financial sustainability.

**CONTRIBUTIONS OF THE STUDY**

The current study contributes to the existing literature in the following ways. The impact of COVID-19 on world trade is a new area of research, as the pandemic, as a new phenomenon, has disrupted the social and economic relationships of international trade. The trajectory of the pandemic is still unknown, but many SMEs in China have stopped or reduced the speed of operations (Lin, 2021). The current research enriches the arguments of the RBT that through enhancing innovation, which is a unique company competency and government support, being a non-substitutable resource, can assist to revitalize China’s SME industries.

This study confirmed the importance of national policies for the financial sustainability of small and medium-sized cross-border e-commerce enterprises. According to the authoritative report of Zhiyan Consulting, the proportion of e-commerce retail in total retail has continued to grow from 2016 to 2021. The proportion of global online retail in total retail sales is expected to grow from 8.64% in 2016 to 21.98% in 2023, a nearly triple increase (Zhiyan Consulting, 2023). The consumption scale of overseas e-commerce has been maintaining rapid growth. This growth is expected to last for decades, and cross-border e-commerce will still maintain rapid growth in the future.

Against the grim development of foreign trade, China’s cross-border e-commerce has become an important driving force for China’s foreign trade and achieved new growth points. The main reason is that the Chinese
government’s strong support and good policies in recent years help more enterprises provide favorable upgrading and transformation channels, which is conducive to the financial sustainability development of their economy. Therefore, small and medium-sized cross-border e-commerce enterprises, should follow the national policies to carry out business. In the environment of favorable policies, they should be more proactive to develop rapidly, lay a solid economic foundation and prepare for the future.

CONCLUSIONS

The cross-border e-commerce industry is developing rapidly, but it needs to be improved and explored in many aspects. In the face of relevant national supporting policies and the convenience provided by the Internet era, cross-border e-commerce should seize the opportunity, cooperate with the national policy development strategy, deeply explore the fields that can improve the core competitiveness, continue to innovate, explore personalized business models, optimize and control the cost from procurement, logistics, after-sales and other links in order to create a high-quality consumer experience for cross-border e-commerce enterprises to obtain continuous development power.

In view of the positive impact of innovation on the economic sustainability of cross-border e-commerce of small and medium-sized enterprises, cross-border e-commerce of small and medium-sized enterprises should carry out comprehensive innovation in improving product quality, ecology and health, so as to promote the financial sustainability. To maintain competitive advantage and financial sustainability, the SMEs need to be innovative in marketing activities. They can improve profitability and sustainability by matching customer response and market driven innovative pricing policies with products.

The government has issued a number of policies to support SMEs’ e-commerce, by providing a good opportunity for innovation and development (Li, 2020). The usage of cross-border e-commerce platforms established by Chinese enterprises throughout the world has brought great convenience to the international trade business of Chinese SMEs and provided a convenient place for Chinese SMEs to participate in the
international area (Wei and Wang, 2021). How to use this place to promote the development of SMEs’ e-commerce in China will be the opportunities and challenges faced by SMEs in the Internet era

Limitations of Study and Future Research

Limited by the scope of data group, research direction, time and ability, this study did not involve the impact of product quality assurance on the financial sustainability of cross-border e-commerce of SMEs small and medium-sized enterprises. Product quality assurance is essential due to the diversified needs of users and overseas brands products entering the domestic market. In addition, future studies should consider factor such as supply chain management as it has been proven as determinant to users’ loyalty.

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REFERENCES


