

Discussing the SWOT Development Strategy of Cross-border E-commerce in Macao Using Elite Interview Method

—Based on the Experience of Zhejiang Province and Guangdong Province

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Abstract. In the era of the digital economy, e-commerce has become a new means of economic expansion for our country. Cross-border e-commerce, as a novel business format and model of international trade, has not only garnered substantial backing from the government, but it has also indirectly contributed significantly to the restructuring of the company structure. While there is still much potential for expansion, Macao is presently engaged in large industrial diversification explorations and has significant advantages in the development of cross-border e-commerce. To have a thorough grasp of how cross-border e-commerce has evolved on the mainland, this study conducted a total of 22 interviews with elites in four cities (districts), namely Yiwu City in Zhejiang Province, Guangdong-Macao In-Depth Cooperation Zone in Hengqin in Zhuhai City, and Nansha District in Guangzhou City. The following four recommendations are made for the growth of cross-border e-commerce in Macao using the SWOT analysis approach and the real-world circumstances of the city:

1. Digital intelligence and policy support
2. Regional division of labor talent cultivation
3. Give full play to Macao's unique advantages
4. Cooperate to build an industrial platform

Keywords: Macau, cross-border e-commerce, SWOT analysis, interview method

1 Introduction

Cross-border e-commerce has grown in importance as a means of fostering international trade and economic cooperation, which has an impact on the political and economic landscape of the world. This is due to the acceleration of globalization and the widespread use of Internet technology. Cross-border e-commerce can break through geographical restrictions, reduce production costs, greatly improve global trade capabilities, create jobs and promote export diversification [1]. Countries all around the world are currently working hard to establish international e-commerce. According to a WTO analysis, worldwide B2C cross-border e-commerce is expected to continue growing at a rate of 27% until 2026 [2].

According to the General Administration of Customs, business-to-business and cross-border e-commerce import and export in China reached 2.11 trillion yuan in 2022, a 9.8% yearly rise [3]. Over 100,000 cross-border e-commerce businesses are presently operating in China. Less than 1% of cross-border e-commerce goods import and export five years ago is now around 5% of global trade, with nearly all trading partners playing a role. Given that it is the new type of international trade with the fastest rate of development, the most potential, and the strongest driving force, cross-border e-commerce is a powerful force and an essential place to start for the high-quality expansion of Chinese outside trade. Cross-border e-commerce, particularly in the dynamic and ever-changing context of global trade, has shown remarkable market vitality and development resilience by aggressively addressing the unpredictability of the external market with elevated growth expectations. Simultaneously, cross-border e-commerce also injects new energy into global economic and trade development [4].

Cross-border e-commerce has grown in importance as a vehicle for economic development and change as the globalized economy continues to grow. Geographical constraints, including Macao's tiny size and dearth of natural resources, have severely limited the growth of the city's primary and secondary sectors. However, with its unique geographical and historical background, Macao has become an important exchange hub for trade and culture between China and the West [5]. Cross-border e-commerce development may support Macao businesses in growing their exports, reaching new customers abroad, and generating more revenue. It can also foster collaboration and product, service, and cultural exchanges. On this basis, Macao can also strengthen its own infrastructure construction, including logistics and distribution, payment and settlement, and intellectual property protection. By operating on the cross-border e-commerce platform, Macao businesses can increase market share and engage in cost-effective and efficient trade, which will foster cross-border e-commerce and propel the upstream and downstream sectors of the west bank of the Pearl River toward sophisticated, upscale, and sustainable development [6].

Moderate economic diversification in Macau has been proposed for many years, and the central government and the SAR government have also provided policy support and promotion. Under the influence of the epidemic, Macau society has become more aware of the importance of moderate economic diversification. Therefore, the SAR Government launched a public consultation with all sectors of society on the "Plan for Moderate Economic Diversification of Macao SAR (2024-2028)" [7]. This study actively cooperates with the "Plan for Moderate Economic Diversification of Macao SAR (2024-2028)". In an effort to provide a practical strategy to expand international e-commerce in Macao, it combines the advantages of the Greater Bay Area with the specific conditions found in Macao. This will encourage Macao's economy to flourish in a varied manner.

2 Literature review

2.1 The cross-border e-commerce development of China

2.1.1 The development history

Alibaba International Station, which was established in 1999 to facilitate business-to-business exports, was the first instance of cross-border e-commerce in China. From then on, the

popularity of cross-border e-commerce websites has continued to expand. In 2013, the State Council announced "Guiding Opinions to Promote Healthy and Rapid Development of Cross-Border E-Commerce" and created the first set of comprehensive cross-border e-commerce pilot zones. All attempts have been made by the customs to support pilot programs for cross-border e-commerce trade and to actively investigate pertinent laws and regulations that would facilitate the growth of this type of business. Four new types of supervision for customs clearance were suggested simultaneously by customs: online shopping bonded, special area export, direct purchase import, and general export [8]. At the beginning of 2014, the General Administration of Customs of China added two new customs supervision mode codes, "9610" [9] and "1210" [10]. The establishment of regulatory models 9610 and 1210 would standardize the oversight of cross-border e-commerce companies by customs authorities and encourage the growth of retail e-commerce import and export. Simultaneously, the implementation of a novel regulatory framework for international electronic commerce will facilitate customs clearance for enterprises, primarily focusing on international retail export trade. In addition to guaranteeing the legitimacy of cross-border e-commerce, the "9610" and "1210" legislative approaches offer a more practical way for customs clearance, which facilitates the growth of cross-border e-commerce [11]. Construction of the China (Hangzhou) Cross-border E-commerce Comprehensive Pilot Zone was approved on March 7, 2015. This is the first large-scale cross-border e-commerce pilot initiative [12]. When cross-border retail items are imported by domestic e-commerce businesses through the special customs monitoring area or bonded logistics center (type B), the customs supervision mode code "1239" was added in 2016 [13]. 2018 saw additional tax policy optimization for retail import and export products by the Ministry of Finance and four other ministries, as well as clarification of the exemption policy for cross-border shipments without tickets [14]. On January 1st, 2019, the new cross-border e-commerce import policy and the "E-Commerce Law" came into force. In June 2020, the General Administration of Customs released the "Announcement on Launching the Pilot Project for Cross-Border E-Commerce Business-to-Business Export Supervision" (General Administration of Customs Announcement [2020] No. 75), which included the addition of the customs supervision mode codes "9710" and "9810" to improve cross-border e-commerce business-to-business exports [15]. The State Council made explicit in a number of its 2021 policies that it supports the use of new technologies to further the international trade growth and strengthen regulations governing cross-border e-commerce. Representative businesses at the moment include Vipshop, JD International, Tmall International, etc.

2.1.2 Research hotspot

By searching CSSCI journal documents on China National Knowledge Internet (CNKI) with the keyword "cross-border e-commerce" and sorting them by the citation number, there are 31 documents with more than 100 citations, published between 2014 and 2020, and the research directions mainly focus on modern logistics, Digital economy, One Belt and One Road and other topics. Based on the current policies and natural background, the import and export e-commerce platforms are summarized as follows:

Modern logistics: A major component of cross-border e-commerce is logistics. Cross-border e-commerce sites work with logistics companies to effectively ship products to different end users. Yan Pang (2015) posited that cross-border e-commerce activities are experiencing a

bottleneck due to the adaptation of the international logistics operation model. Given issues including lengthy transit times, high rates of packet loss, expensive transportation, a narrow reach of collecting, and coverage of international markets, it can be By developing an international logistics service capacity assessment system and enhancing the sector's unique service offerings, this issue may be resolved [16]. Xiaheng Zhang and Hailing Guo (2016) stated that there are limitations on both a horizontal and vertical level, as well as a lack of independence and cooperation between international logistics and international e-commerce. It is necessary to strengthen collaboration and communication and promote network collaboration [17]. From a collaborative standpoint as well, Liu Yousheng and Chen Dubin (2016) suggested that the composite system cooperation model will drive further growth in the orderliness of each subsystem of contemporary logistics and cross-border e-commerce. But rather than growing in tandem, the synergy between contemporary composite logistics systems and cross-border e-commerce has been sporadic at best. Therefore, it is necessary to not only stimulate the functions of each subsystem but also promote collaborative cooperation and in-depth integration among governments, enterprises, industry associations and other parties [18].

One Belt, One Road: Since the nation's adoption and deployment of the strategic "Belt and Road" plan in 2016, a number of academics have studied and analyzed cross-border e-commerce as well as the logistics and warehousing that enable it, hoping to collaborate with countries and regions along the "Belt and Road" development [19], give the provinces' and municipalities' unique advantages full play along the route, and accelerate the cross-border e-commerce development [20]. With the strategy's slow progress and the growth of international e-commerce, evolution of big data has also turned into a national priority. A growing area of study focuses on the application of big data technologies to lower trade risks, enhance trade efficiency, and improve the nation's standing in international commerce [21]. Aside from the backdrop of China, the G20, and the nations along the "Belt and Road" in 2015, several researchers have also experimented with the idea of whether cross-border e-commerce may lower trade costs. Based on Alibaba's ECI cross-border e-commerce connection index [22], and other research has supported the idea that, when seen from both the importer's and exporter's point of view, cross-border e-commerce may significantly lower trade costs [23], enhance resource allocation and, via the upgrading of different development techniques, encourage the expansion and transformation of China's import and export commerce [24].

Digital economy: For most nations, encouraging the growth of the digital economy has become a crucial strategic focus. Making the decision to take the lead in development and create new national competitive advantages is also a strategic one. Global digital trade, according to Shuzhong Ma and Gangjian Pan (2019), will represent the most sophisticated type of cross-border e-commerce development. The completion of the cross-border commerce cycle will be aided by the platformization, globalization, digitization, and personalization of global digital trade. In the future, international trade will mostly take place through the digital economy, which will also establish a common transaction paradigm. In order to take advantage of The Times' prospects and encourage the quick growth of cross-border e-commerce, it is necessary for the government to develop pertinent policies. Developing cross-border e-commerce at the same time will help advance the global digital trade strategy's iterations throughout time [25]. Global development and the pursuit of common prosperity can be attained through the deep integration of blockchain technology into cross-border

e-commerce, digital trade, and the digital economy according to Xiaheng Zhang and Doudou Li's (2020) proposal. This integration can also help modernize traditional manufacturing and transform international trade [26].

2.2 Cross-border e-commerce in Macau

2.2.1 Development history

There are still several policy and infrastructural gaps in Macao, which has hindered the cross-border e-commerce growth. Towards the end of 2014, the Macau government started to prioritize the cross-border e-commerce growth and worked to open up the Macau market to mainland customers. E-commerce promotion encouragement measures and the Small and Medium Enterprises and Youth Entrepreneurship Assistance Program are two of the many initiatives Macau has launched to support and encourage businesses in various industries and give young people using Internet technology the opportunity to develop e-commerce. Since 2016, E-commerce is one of the policy targets for encouraging moderate economic diversification in Macau, according to the official list [27]. The SAR Government's "One-stop Service for Cross-border E-commerce" was introduced in 2017 by the Economic Bureau. To aid cross-border e-commerce businesses operating in Macau, the "Cross-border E-commerce Promotion Association" was founded in the same year. Launched the "Macau E-Commerce Festival" in 2018, the Macau International Technology Industry Development Association got backing from the Macau Economic and Technological Development Bureau. Together with the SAR government's "Electronic Consumption Preferential Plan," it established a cross-border e-commerce business network designed for small and medium-sized businesses, starting with popularizing electronic payment in Macau and encouraging online electronic transactions. This helped to encourage the digital upgrading of local small and medium-sized enterprises through e-commerce. On March 29, 2023, the SAR Government's IPIM will introduce a subsidy package for e-commerce promotion. Its goal is to stimulate Macao's small and medium-sized businesses to use well-publicized B2B website trading platforms to open up new business opportunities and cross-regional markets. It also intends to use the "Internet" and "Internet +" promotion and B2C e-commerce platform sales model to grow the market and take advantage of e-commerce development opportunities [28].

2.2.2 The cross-border e-commerce situation of Macau

Macao enjoys the excellent system of "one country, two systems" and has the long-term development positioning of "one center", "one platform" and "one base". Many and various imported goods from abroad can enter Macao duty-free. The epidemic has accelerated Macao's electronic and digital trends, and accelerated the transformation and upgrading of digital payments and e-commerce in Macao.

Macao has contributed somewhat to the growth of international e-commerce as a region with a strong mass organization atmosphere. Along with this, Macau today boasts a number of industry business associations, including the Macau Live Broadcasting Association, the Macau E-Commerce Association, and the Macau Cross-Border E-Commerce Industry Association. Through bases such as the Macau Live Broadcasting Service Center, they assist the SAR government in helping small, medium and micro enterprises solve their problems. Problems encountered in cross-border logistics, settlement, live streaming, operations, etc., encourage

the superior growth of live streaming e-commerce, help small and medium-sized enterprises find solutions, build channels, and expand markets, and assist the government to collaboratively support the industry's growth.

Four rules and regulations, all issued by the state, fall under the category of international e-commerce and must be adhered to, according to public information obtained from the Macau Economic and Technological Development Bureau (as of August 31, 2023). In August 2023, the most recent "Consultation Text on Moderate Economic Diversification Development Plan (2024-2028)" six times emphasized the significance of international e-commerce. It stated that businesses should have the authority to conduct international e-commerce, along with the support of relevant industry associations. Launching a "one-stop service for cross-border e-commerce" would help lower industry costs associated with cross-border e-commerce while also assisting Macao businesses in their exploration of the mainland market. Commodity traceability systems will also be investigated and promoted. Nevertheless, no tax or support policies published by the Macau Special Administrative Region (SAR) government for cross-border e-commerce and associated platforms have been discovered, nor have policies and regulations explicitly referencing "cross-border e-commerce" in the file name been located. No published policy guidelines exist for regulatory measures pertaining to the cross-border e-commerce business, nor do cross-border e-commerce platform registration and operation requirements or practitioner practice standards exist.

3 Research method

This study mostly makes use of the unstructured interview research technique in order to gain a thorough knowledge of the growth of cross-border e-commerce in China and to serve as a model for the expansion of international e-commerce in Macao. The research team conducted in-depth investigations and visits from June to July 2023, including a total of 22 interviews were conducted in four cities (districts) including Hangzhou City in Zhejiang Province, Yiwu City in Zhejiang Province, Guangdong-Macao In-Depth Cooperation Zone in Hengqin, and Nansha District in Guangzhou City (The list of interviewees will be shown in Table 1). The interview subjects cover four categories: government departments, public institutions, industry enterprises, and social organizations. Table 1 lists the subjects of the interviews. Selected interviewees have extensive practical experience and are able to examine the prospects and problems in the growth of cross-border e-commerce from diverse angles.

The interview outline primarily addresses the following topics: cross-border e-commerce from an intelligent perspective; government policies; models and experiences of information flow, logistics, and capital flow in the e-commerce transaction mechanism; current development status; competitive environment; primary products and target markets; and cross-border e-commerce. How to see the growth of international e-commerce in Macao, as well as support and corporate supply chain ecology. Depending on how well-versed the interviewee is on the topics, the percentage of content will be modified accordingly. The appropriate verbatim transcripts were created after the interviews were taped with the participants' knowledge to guarantee the content's accuracy. The following article is a one-to-one correspondence between the interviewee numbers and the interview material.

Table 1. Chinese Mainland List of interviewees.

Hangzhou and Yiwu of Zhejiang Province (A)	Guangdong-Macao In-Depth Cooperation Zone in Hengqi (B)	Nansha District of Guangzhou (C)
1.Hangzhou dream technology Co., LTD (A1) 2.China (Hangzhou) Cross-border E-commerce Comprehensive Pilot Zone (Xiasha Park) (A2) 3.Alibaba Group (A3) 4.Zhejiang Province article coding center (A4) 5.Yiwu Beiyuan street e-commerce service center (A5) 6.Yiwu International Dry Port Group express center (A6) 7.Yiwu river north Xiazhu e-commerce town (A7) 8.Yiwu Cross-border E-commerce Association (A8)	1.Second-line supervision center (B1) 2. Hong Kong-Zhuhai-Macao Group (B2) 3. Hengqin planning exhibition Hall (B3) 4.Hengqin financial Development Bureau (B4) 5.Rongguan Yunzhou Digital Technology Co., LTD (B5) 6.Innovative company (B6) 7.Dachang Hang Logistics Center (B7) 8."Cross-border said" e-commerce company (B8)	1.Nansha District Bureau of Commerce (C1) 2.DSTP digital services trading platform (C2) 3.Guangzhou Nansha global Traceability Center (C3) 4.Junde food logistics supply chain (C4) 5.Vipshop (C5) 6.Xiang song logistics (C6)

4 SWOT analysis of the development of cross-border e-commerce in Macao

The primary themes from the three locations' interviews are condensed into Table 2 through conversations with the interviewees. Three of these were supply networks and ecological chains, the creation and implementation of standardized product information, and the use of the digital economy to foster international e-commerce. In the cross-border e-commerce growth, each of the three locations has unique features as well; Table 2 will display these qualities. The division of labor and internal change in Zhejiang Province are more clearly advantageous. There are several notable policy benefits in the Guangdong-Macao In-Depth Cooperation Zone in Hengqin. In the meantime, Guangzhou province's Nansha District has fully seized the advantages of the Bay Area integration.

Table 2. Characteristics of three places.

Hangzhou and Yiwu, Zhejiang Province (A)	Hengqin Guangdong-Macao In-depth Cooperation Zone (B)	Nansha District, Guangzhou (C)
1.Cross-border e-commerce division and transformation 2.Standardized product information and its application 3.Supply chain construction 4.Innovation and entrepreneurship Internet celebrity economy Training system	1.Integrated development of Qin and Macao 2.Standardized product information development 3.Supply chain construction 4.Financial support 5.Policy advantages Digital economy	1.Integrated development of the Bay Area 2.Standardized product information development 3.Ecological chain construction Digital economy

Once the interview material has been summarized, researchers utilize SWOT analysis to evaluate Macao's SWOT factors—Strengths, Weaknesses, Opportunities, and Threats—in relation to the cross-border e-commerce growth. Table 3 presents the findings from the SWOT analysis.

Table 3. The result of SWOT.

Strengths	Weaknesses
Location Strengths (S1) Advantage of "One country, Two Systems" (S2) Basic Strengths (talent, exhibition, Logistics) (S3)	Microeconomic system (W1) Single industrial structure (W2)
Opportunities	Threats
Central Policy Support (O1) Integrated Development Opportunities for Hengqin and Macao (O2)	Fierce competition in the industry (T1) Short development time window (T2)

4.1 Strengths (S)

4.1.1 System and location advantage

With respect to both system and geographic location, Macao enjoys exceptional benefits as a special administrative territory within China's "one country, two systems" framework. One advantage of Macao as a free trade port and internationally oriented location is its connectivity to the mainland and other nations. Macao is also near the Guangdong-Macao In-Depth Cooperation Zone in Hengqin. The Guangdong-Macao In-Depth Cooperation Zone in Hengqin may provide assistance for the development of Macao's cross-border e-commerce industry. Since they have already made their mark in Macao or the Guangdong-Macao In-Depth Cooperation Zone in Hengqin, several enterprises are presently enjoying the growth benefits of Macao's cross-border e-commerce.

4.1.2 Talent, exhibition, logistics and other basic advantages

In terms of talents, Macao has a certain number of universities with relatively strong comprehensive strength and teaching staff. At the same time, combined with Macao's location advantage in connecting with the world, it will be easier for Macao's talents to have a forward-looking vision and a global perspective. In terms of conventions and exhibitions, Macao has a good foundation for conventions and exhibitions. Macao's hardware and software facilities for the convention and exhibition industry are in a leading position in the world, and the influence of international brand conventions and exhibitions continues to expand. Macao also has an absolute advantage in logistics, and many interviewees believe that the Macau International Airport is a very important link. Compared with Hong Kong's airport, Macau's airport has a lower occupancy rate, making it easier to apply for new routes. Therefore, how to make good use of Macau International Airport to integrate into the supply chain of the Bay Area has been mentioned many times.

4.2 Weaknesses (W)

4.2.1 Microeconomic system

As a typical micro-economy, Macau is only about 30 square kilometers and has a population of less than 700,000. The micro-economy system is characterized by a small population, lack of human capital, limited land area, and losses in economic capacity. Macau will be at a significant disadvantage in the course of economic growth since it has fewer companies and customers. Due to its microeconomic features, Macao will find it challenging to build an entire ecological chain throughout the cross-border e-commerce growth and will not be able to produce a large-scale industrial structure chain.

4.2.2 Single industrial structure

The casino and gaming junket business is the main driver of the Macau economy and holds a prominent position in it. However, economic development is also quite unstable because to its heavy reliance on the export of gaming services. The epidemic has dealt a huge blow to Macau's economy, which is dominated by the gaming industry; at the same time, due to the single industrial structure, Macau's relevant resources are limited. Even if there are chances for businesses to grow international e-commerce, their options will still be restricted since microeconomies have certain restrictions.

4.3 Opportunities (O)

4.3.1 Central policy support

Macao's unique policy advantages include the "one country, two systems" policy and the free port policy of the central government, which also present clear potential for the cross-border e-commerce growth in Macao. The central government has implemented a number of initiatives to assist Macao in recent years, including full support for the development of infrastructure, significant projects aimed at improving people's livelihoods, and moderately diversified economic growth in order to help the island's economy become more diversified [29].

4.3.2 Opportunities for integrated development of Hengqin and Macao

Researchers discovered that in order to foster international e-commerce in Hengqin and Macao, the Guangdong-Macao In-Depth Cooperation Zone in Hengqin can fully utilize the customs tax declaration mode (9610 mode, 1210 mode). This information was obtained through interviews with interviewees from the zone. In the meanwhile, researchers will fully utilize Hengqin's advantages in terms of managing the second line and liberalizing the first, as well as the benefits of the Guangdong-Macao In-Depth Cooperation Zone in Hengqin with regard to the movement of commodities. A number of advantageous policies are offered by the Guangdong-Macao In-Depth Cooperation Zone in Hengqin to entice talent and businesses, such as lower corporate and personal income taxes for eligible persons or businesses. This has become an opportunity to attract more leading enterprises and high-level technical talents.

4.4 Threats (T)

4.4.1 Competition in the industry is fierce

All parts of our country are actively developing international e-commerce, and it is not a business model unique to a single city on the mainland. During the literature review and interviews, it was found that more than 160 places in the mainland are developing cross-border e-commerce. At present, the international e-commerce market is growing rapidly, and there is also "involution" in the industry.

4.4.2 Short development time window

Some interviewees emphasized that the current time window for Macao to develop cross-border e-commerce does not have an absolute early advantage, and neighboring regions also have a trend of developing cross-border e-commerce. It is important to grasp core competitiveness and grasp the opportunity before completely launching cross-border e-commerce related firms in nearby areas.

5 Strategy and suggestion

Macao faces both opportunities and challenges from the growth of international e-commerce. The expansion of cross-border e-commerce has the potential to not only help Macao's economy grow in a moderately diversified direction, but also to give the special administrative region new opportunities for economic growth, maximize its institutional advantages, and meet the goals set forth by the Chinese central government for Macao's development. In light of the real scenario in Macao, which will be displayed in Table 4, this study offers workable recommendations for the growth of cross-border e-commerce in Macao from four perspectives: SO, WO, ST, and WT. These recommendations are based on the findings of the SWOT analysis and the substance of the interviews.

Table 4. Macao development feasibility proposal.

SO Strategy	WO strategy
Fundamental Strengths Promote Talent Aggregation (SO1) Develop Short Video Matrix Track (SO2) Standardized Product Information (SO3) Policy Assistance (SO4) Reverse Foreign trade/Reverse Overseas Holdings (SO5)	Regional Specialization (WO1) Joint development of talents by regional organizations (WO2)
ST Strategy	WT strategy
Enhancing Macau Airport Functions (ST1) Support for the financial sector (ST2)	Jointly build Cross-border E-commerce Industrial Park (WT1) Connecting Guangdong and Macao Public Service Platforms (WT2)

5.1 Data intelligence and policy support (SO)

5.1.1 Digital support technology

At present, live-streaming goods and short-video band goods are the more mainstream sales forms of e-commerce. Its characteristics of low entry cost and fast realization speed provide good conditions for the development of the network red economy. Therefore, entrepreneurs can use the outlet of short video to develop short video tracks, develop the overseas market of Douyin, and use Macao's language advantages to develop the market of Portuguese-speaking countries. (A1, A5, B6)

International e-commerce is currently evolving into a digital economy. Cross-border e-commerce will grow more effectively and efficiently if the product supply chain and places of sale are effectively digitalized. This will create an ecological chain. At the same time, it will cooperate with the use of GS1 and local trace source code to help products clear customs and integrate into the market. GS1 (International Article Coding Organization) develops, manages and maintains the most popular global Uniform identification system (GS1 system for short), effectively promotes the global trade circulation and supply chain efficiency, and can help products enter the international market. Through the improvement of standardized product technology, the Macao government seeks out and examines enterprises trusted by the government, and judges the dependability and trustworthiness of enterprises. Then the government provides the data to the enterprise and uses the enterprise's mature core technology of data processing to position the product development. (A4, B5)

5.1.2 Promoting advantages policy

Optimize the collection of relevant product and consumer data in Hengqin and Macau. By analyzing more data to master the product flow and more accurate product positioning. For example, the overseas headquarters of Douyin, which has been located in Hengqin, can be a suitable target for cooperation. TikTok has the world's top big data algorithms, as well as a large audience. Therefore, both the amount of data and the core technology of Douyin can be an important force in helping Macao achieve cross-border e-commerce. As an innovative application of Hengqin, AoYou code provides multiple functions such as one-click traceability, quality assurance, digital marketing and value feedback. The AoYou Code is now applicable to the traceability process of some foods and drugs. Tight detection of international food e-commerce and traditional Chinese medicine non-food goods can be resolved if the AoYou code is expanded to interface with traditional Chinese medicine logistics. (A3, B2) Combining Macao's benefits, businesses look to regulatory support in order to foster the cross-border e-commerce development. Give Hengqin and Macao their due as a block, seek central government policy assistance to align with the growth strategy, and identify appropriate development techniques for international e-commerce. (A2, A3, B2)

At the same time, Hengqin can also help Macao develop reverse overseas warehouse and reverse foreign trade business. According to the laws 9610 and 1210, some merchants will store the goods sent by direct mail overseas in the warehouse. As a result, the Hong Kong-Zhuhai-Macao Bridge can be used to house the international logistics section, international payment and trade, and warehousing. Additionally, Zhuhai's strength can be used

to support development by situating the warehousing in Hengqin, a cross-border park or logistics park. (A2, A3, B2)

5.1.3 Promote talent aggregation

The majority of respondents believe that Macao's fundamental advantages will promote talent aggregation and the opportunity to form a team with forward-looking awareness and decision-making ability. Based on their professional decision-making experience and international vision and ideas, they should grasp the overall direction of development in the process of development and deal with problems that may arise at any time. (B2, B7)

5.2 Talent training for regional division of labor (WO)

5.2.1 Regional specialization

The cross-border e-commerce growth necessitates the integration of all parties' features, the utilization of each region's advantages, and the concentration of pertinent sectors in one area. Macao can be used as a place for the establishment of trade entities, and the trade payment and other links can be carried out in Macao. High-priced procedures like packaging and sealing must fully utilize Zhuhai's advantages. For example, the final production link of the factory is placed in Hengqin or in the cross-border park in Zhuhai-Macao, and the domestic packaging materials, auxiliary materials and accessories are directly placed in the park. (A4, B2, B7)

5.2.2 Co-construction of talent training by regional groups

It is advised to set up shop in Hengqin, mentor Macao talent in the areas of operation, marketing, and anchoring, and cultivate talent in cross-border e-commerce. The operation need to be conducted in line with commercial and market-oriented paradigms. Simultaneously, cross-border e-commerce majors at universities and colleges around the nation will train students through the chance of live streaming contests, as well as offer job and entrepreneurship prospects, in collaboration with colleges and universities. Through the training of network celebrity anchors who understand the culture and life of Macao, the stories of Macao will be presented to the platform audience in the form of short videos, and the products of Macao will be promoted. (A1, A5, A6, A7, A8)

5.3 Promoting macao's unique strengths (ST)

5.3.1 Strengthen the functions of Macao Airport

Respondents believe that many aspects of Macao Airport are not fully developed. From the perspective of routes, the number of routes in Macao Airport is not full, and there are still opportunities to continue to apply for new routes. From the perspective of route, the direct flights in Macao are concentrated in East Asia and Southeast Asia, so it is very suitable to introduce the specialties of such countries. Take Macao as an international and continental transportation hub, import fresh products from East Asia and Southeast Asia to Macao, and sell them through cross-border e-commerce to fill the national product gap during the fishing moratorium. (B2)

5.3.2 Assistance from the financial industry in macao and hengqin

It was discovered that the financial industries of Macao and Hengqin were fiercely competitive and extremely resilient during the pandemic period during the interview with the Financial Development Bureau of the Guangdong-Macao In-Depth Cooperation Zone in Hengqin. As such, the financial industry's assistance is crucial to the cross-border e-commerce development in Macao. Given that the massive cash flow necessary for the growth of international e-commerce may put financial strain on the expansion of businesses, entrepreneurs may approach the Macao government for policy help. The Macao government will establish links between the financial sector and the small and medium-sized businesses in the area to facilitate capital flow assistance, foster cross-border e-commerce, and ease the burden on businesses. Promote the opening of personal foreign exchange settlement accounts by individual industrial and commercial households, encourage banks, third-party payment institutions, and cross-border e-commerce platforms to develop innovative online cross-border payment products and services, and facilitate and promote cross-border transactions and e-commerce operations. For instance, by working with the banking industry and the government guarantee to help reduce interest rates and the difficulties involved in loan evaluations for SMEs involved in international e-commerce. As their capital chains fill up, small and medium-sized enterprises should become more ready to participate in the industry and be less concerned about the expansion of cross-border e-commerce enterprises. (B4)

Furthermore, because international e-commerce involves international trade, the process of creating international e-commerce may often entail the circulation of foreign currencies, and the settlement currency used for products in various regions may vary. To allay fears that small and medium-sized businesses won't dare to develop cross-border e-commerce businesses because they don't understand economic policies, the Macao government can encourage certain professional financial companies, in addition to banks, to help small and medium-sized enterprises manage relevant cross-border settlement transactions in a reasonable and legal manner. Simultaneously, this is also the idea that Macao hopes to develop the modern financial industry in the new four major industries, and take cross-border e-commerce as an opportunity to introduce modern financial **talents** and drive the development of Macao's modern financial industry. (B4)

5.4 Cooperative building industry platform (WT)

5.4.1 Jointly build cross-border e-commerce industrial parks

By merging with industry-leading companies, the Hengqin cross-border e-commerce industrial park linkage is developing. At the same time, favorable policies are being offered to attract related businesses, resulting in the creation of an extensive global ecosystem for cross-border e-commerce that includes logistics, warehousing, and other services, all of which are favorable to business interaction and collaborative development. (A4, B7, B8)

5.4.2 Build a common platform

For this reason, Macao must develop a public platform for cross-border e-commerce in order to give relevant businesses the chance to handle issues online and cut costs. Based on this, Macao will create a public service platform for international trade, investigate the creation of certification and data standards, and progressively implement information sharing and data

exchange between the departments of trade, customs, taxation, market supervision, public security, postal service, and foreign exchange in order to manage issues that may arise during international trade in a systematic manner. After the establishment of the platform, through systematic and orderly management, it can solve the problems of high cost and difficult settlement in the declaration of a single enterprise, achieve the efficiency of industry incubation, and provide comprehensive online services for enterprises. The public platform is used to strengthen the development of digital economy, provide public services for different industries, and assist Macao's industry in upgrading and undergoing digital transformation. (B8, C2, C3)

6 Conclusion

Combined with the analysis results of SWOT, this study proposes corresponding strategies for the development of cross-border e-commerce in Macao based on the diversified industrial development background of Macao. The study provides detailed development plans for the development of cross-border e-commerce in Macao from the perspectives of digitalization and policy support, regional division of labor talent cultivation, giving full play to Macao's unique advantages, and jointly building an industrial platform. Effectively utilize Macao's policy and geographical advantages. Meanwhile, cross-border e-commerce will link up the industrial mutual assistance between Macao and Hengqin, build an effective public platform, and leverage the advantages of each region to cultivate talents, further promote the diversified development of Macao's industries as Macao's new development direction.

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