Understand China's cross-border e-commerce industry: a market entry mode

Tan Choy Soon

Azman Hashim International Business School, Universiti Teknologi Malaysia

Email: tansoon@graduate.utm.my

ABSTRACT

Cross-border e-commerce is emerging explosively globally while China as the world's largest trading country is gradually shifted its traditional trading market to the online marketplace to fit new retail norms of buying online across borders. The supply-demand dynamism and infrastructure readiness are two key drivers governing the exponential growth; however, multiples factors including cultural differences in consumer behaviour, unstructured laws and regulation, the inefficiency of transformed value chain management, limitation on currency payment, and distancing logistics remain unsolved challenges. Hence, this paper aims to deliver some key takeaways for the foreign company to take advantage of cross-border e-commerce as the channel to entering China's consumer market. Using a combination of various keywords as the searching formula, a total of 17 relevant papers exacted from the Scopus database is in inclusion for the reviewing works. Only the journal paper published in the year 2021 and the content is highly relevant are included. From there, four predominant themes identify are the national-based regulatory environment, market-driven value creation, service-based ecosystem reformation, and digitally drive business transformation. Viewing the huge market potential, cross-border e-commerce is, therefore, a good start points for the foreign company to step into China market.

Keywords: *national strategy, market driven, service ecosystem*

1. Introduction

Globalisation is an integration process between people, organisation, and governments with varying cultural backgrounds. Globalisation accelerated since the 18th century amid the advancement of transportation and communication technology. While the border between nation diminishes, the cross-border transaction is becoming easier and simpler. Figure 1 demonstrates four types of international trade while Type 4 cross-border e-commerce (CBEC) is one of the current emerging industries that outgrown in tandem with the rapid evolution of globalisation process. Jue et al. (2018) explained the benefits that CBEC brings are materialising the country's comparative advantages, reshaping the business model of international trading, reducing trade barriers for small and medium enterprises (SME) to enter international standing, and enriching worldwide consumer values. The CBEC not only shifted the offline traditional retailing to online, as well as materialising the international trade at a lower transacted cost. The business model can be business-to-business (B2B) and business-to-customer (B2C), or a combination.

Figure 1: Four type of cross-border trade

United Nations Conference on Trade and Development (2020) (UNCTAD) announces the 2019 total e-commerce sales hit \$ 26.7 trillion, 82% in B2B sales and 18% in B2C sales. The YoY increment is 4% and contributes 30% of the global gross domestic product (GDP). Table 1 tabulated the top ten economies by sales. Worth noting that the World's B2C sales amounted to \$440 billion and mainly constituted by the United States and China with 26% and 32% market share, China is the only country that has B2C sales that exceeded B2B sales. This statistic reveals CBEC as a feasible strategy for the foreign company to reach China's consumer market.

Table 1: Top Ten Economies in 2018 e-commerce sales

Rank	Economy	Total sales (\$ bil)	Share of sales in GDP (%)	B2B sales (\$ bil)	B2C sales (\$ bil)	Online shoppers (mil)
1	United States	9,580	45	8,319	1,261	189
2	Japan	3,416	67	3,238	178	55
3	China	2,604	18	1,065	1,539	639
4	Korea	1,302	79	1,187	115	27
5	United Kingdom	885	31	633	251	42
6	France	785	29	669	116	38
7	Germany	524	14	413	111	56
8	Italy	431	22	396	35	19
9	Australia	347	25	325	21	12
10	Spain	344	25	280	64	23
World's Total		26,673	30	21,803	4,870	1,480

The statistics of the online shoppers in Table 1 discloses that about 20% of the world's population are online shoppers while 43% are in China. The China government revealed that China has 989 million internet users in 2020, the pandemic forced an additional 85 million citizens to go online (Evelyn, 2021). The e-commerce industry in China evolves daily, not only 79% of China internet users shopped online; 26% of them making the purchase through more recent way, the live streaming e-commerce. Cai & Wohn (2019) notes that the real-time interaction with influencer increase the audience's enjoyment and promote their purchasing intention. United Nations Conference on Trade and Development (2021) state that the extent to which people shop online is highly associated with the B2C e-commerce index. Three of the top five e-commerce companies by gross merchandise volume (GMV) are China enterprises, as in Table 2. Alibaba is the market leader dominating major market share. Overall, the annually increased GMV reflects the positive outlook of the e-commerce industry, the annual growth rate of online shoppers is about 8% but cross-border purchaser growth is as high as 25% (United Nations Conference on Trade and Development, 2020). While most online shoppers prefer local manufacturers, one in four orders cross-border purchase.

Table 2: Top Five e-commerce companies by gross merchandise volume

Rank	Company	Country	Gross Merchandise Volume (\$ bil)		
			2018	2019	2020

1	Alibaba	China	866	954	1,145
2	Amazon	United States	344	417	575
3	JD.com	China	253	302	379
4	Pinduoduo	China	71	147	242
5	eBay	United States	90	86	100

Owing to the superior infrastructure readiness and evolving demand-supply dynamism (Accenture and AliResearch, 2016), continued growth in China's CBEC sales is prominent as the wide penetration of mobile internet, well-establish e-commerce platform, and constant expansion on B2C consumption market size. Nonetheless, numerous noticeable aspect that could hinder the explosive growth of CBEC is cultural differences in consumer behaviour (Ding et al., 2017), unstructured laws and regulation (Ma et al., 2018), inefficient value chain management (Wang et al., 2020), limitation on currency payment (J. Zhang, 2018), distancing logistics (Jue et al., 2018). With that, this paper aims to provide a comprehensive review of China's CBEC industry to identify possible driver and barrier for the foreign company to use CBEC as an entry mode to China's consumer market.

2. Literature review

The rise of China's CBEC is rapid, promoting China's international trade in a new regime. While China enjoys a steady online trading growth, the foreign company could concurrently overcome the risk of unfamiliar consumer behaviour and various trade barriers by entering China market through CBEC as a safer channel (Qi et al., 2020). Owing to CBEC enabled transaction faster trade processing at smaller volumes, without establishing any physical presence in the target market. most sellers are SMEs (Fan, 2019). Large multinational chain corporation often has an independent channel in international trade. The evolution of the CBEC industry is not solely as an importing and exporting business mode, more importantly, is the redevelopment of the whole international trade ecosystem as a service industry, including platform servicing, warehousing, transporting, and financing at a cross-border scale. The prosperity of China's CBEC is inseparable from its infrastructure readiness and consumption dynamism (Accenture and AliResearch, 2016). China's government is very supportive of this emerging industry, actively guides the private enterprise to participating in CBEC. The internationalise of the Renminbi, the establishment of the CBEC Pilot Zones (Giuffrida et al., 2021) and Belt and Road Initiative (BRI) (Guan, 2021) are some interventions in promoting sustainable growth in the CBEC industry. Nonetheless, the bottlenecks are cultural differences, regulatory variation, integration changes, currency fluctuation, and distancing logistics. Therefore, the following subsection describes the opportunity and challenges of the CBEC industry from various perspectives.

2.1. Infrastructure readiness

CBEC transformed the ecosystem of international trade by compressing the intermediaries of the long supply chain. As result, the consumer waiting time is lesser and able to enjoy the product at lower cost and better quality. Qi et al. (2020) indicated that NetEase Kaola, TMall International, and JD Worldwide are the top three China's CBEC platform that owns market share of 24.2 %, 20.3%, and 12.5% respectively. In fact, information and communication technology (ICT) plays a more important role in e-commerce, bringing offline retailing online. E-commerce platform functions as an accessible channel of vertical integration governance in compressing multiple intermediaries of traditional trade, connecting the consumer and reseller from two nations. Having that, the platform gaps the uncertainty of traditional trade by allowing resellers to have bigger controllability over the market volatility, especially since the foreign market is much more unpredictable. Well-developed ICT allowed consumers to cross invisible borders to shop online more easily, especially when smartphones widely diffuse as a necessity to human beings. The mobile internet causes the smartphone to complete a convenient ordering and secure payment process. As Evelyn (2021) reported that China has approximately 1 billion internet user, CBEC offers an easiness international trading option for the foreign company to enjoy China's demographic dividend.

2.2. Demand and supply dynamism

The business model of a company must build on to satisfy customer needs by creating value that able to perceived and capture by the target customer. The nature of CBEC is to generate more consumption

through the elimination of intermediaries to achieve cost leadership. The ecosystem of international trade was altered at reducing stages whereby the intermediate distributor was compressed (Qi et al., 2020). It opened up the opportunity for foreign companies to develop and penetrate international market coverage without having a physical distributor or offshore partner. With that, the accessibility of local consumers to foreign products increased. For now, millennials and Gen Z grow concurrently with technology evolution are the mainstream consumer group (Fan, 2019). This is the reason why the total number of the world's internet users is growing every year while this demographic segment is the internet population that can quickly adapt to online buying. Both generations prompt to adapt information from fingertips (Gutfreund, 2016). The finding of Ordun (2015) indicated that one obvious characteristic of millennials is they love to make purchase. They are well aware about their purchase power and purchase intention. Considering their income level, many of them are the middle and upper-middle class that afford to demand more quality and branded products from overseas markets; they boost the growth of the CBEC industry.

2.3.Cultural and consumer needs

The flow of information and goods across borders will encounter demographic changes and cultural differences, especially uncommon language may cause misunderstanding and hinder foreign consumption, ultimately resulted in demand reduction and fewer sales. The consumer demands and needs could be either price-sensitive or quality-sensitive. This is where the market segmentation plays its role to materialise precise target positioning in accordance with consumer's behaviour. Nonetheless, Min (2017) explains brand images and service characteristics play a more important role than competitive pricing in driving e-commerce sales. Foreign consumers are more sensitive to product authenticity and originality, understandable product descriptions, preferably written in the local language, customer review, and rating. Owing to intense brand competition in the retail market, Qi et al. (2020) noticed that China market is highly dynamic and segmented. Considering China as the World's factory, China consumers have comparative higher expectations of their spending through both online and offline channels. Conventionally, the consumer has less trust in cross-border resellers due to massive counterfeit and piracy incidents. With the establishment of multiple reputable e-commerce platforms available in the market, its strong resources available, and high brand awareness have overcome such challenges and simplifies the entry process of the foreign company as compared to the traditional importing process. Moreover, some e-commerce platforms also introduce the concept of self-operated stores to increase consumer's confidence level in making the purchase.

According to Xu et al. (2020), the Post-90s or more commonly known as Gen Z is the main online consumption engine in China. Their consumer characteristic is rational but enthusiastic on premium and branded products. They have diversified needs in spiritual aspect and aesthetical sense. Simultaneously, Xu et al. (2020) noticed there is an increasing new account registering for the Post-50s or more commonly known as baby boomers started in the year 2018. From Alibaba's statistic, the annual average spending for Post-50s in Tmall increased 1.6 times, about 5,000 Renminbi per person. A foreign company shall not pay attention to pricing and quality only, the consumer segmentation and commodity preference identification in CBEC are equally important.

2.4.Policy and regulatory environment

Beijing has long kept a tight grip on the value of its currency, renminbi to limit the amount of outflow, although it strengthened as the sixth international currency (SWIFT, 2021), this control materialise the long keeps China-made product price competitiveness. From consumer perspective, value-added taxation, tariff and duties impose are additional cost that may affect consumer's decision to purchase abroad. From a consumer perspective, value-added taxation, tariff and duties imposed are all additional costs that may affect consumer's decision to purchase abroad. In order to promote foreign sales, China executes liberalisation policy on the CBEC perspective in recent years to maximise the exporting volume. Yin & Choi (2021) explained that specific trade arrangements could promote sustainable growth and protect the comparative advantages of one or more nations in international trade. Wong (2020) informed that China established 145 bilateral investment treaties, 110 double taxation agreements, 26 free trade agreements, and 21 free trade zone to promote international trade. The government openness in introducing favourable policy could catalyst foreign sales by lowering impose duties and concise customs clearance procedures. Zhang (2020) reported that China government launched another 46 CBEC Pilot Zones amid the COVID-19 outbreak, making now a total of 105 CBEC Pilot Zones in the whole of China

to cater for the increasing demand and stabilising quality foreign trade. The transaction in the CBEC Pilot Zones may enjoy exemption on corporate income tax and value-added tax. This is another extra effort to promote CBEC, on top of the import tax exemption program that announces in 2019. These policy changes are favourable to the foreign company as a stepping stone to tap into China market.

2.5.Value Chain alteration

Wang et al. (2020) reported that there are more than 200,000 CBEC enterprises and 5000 e-commerce platforms available in China as of 2016. The CBEC industry is more complex than trading merchandise through traditional importing and exporting, it integrates multiple service offerings, such as platform, warehousing, transporting, custom clearance and inspection, legal advising, and financing at international scale. Wang et al. (2020) decompose the cross-border supply chain and identified three interconnected resources are information, logistics, and finance. The new supply chain quality criterion are trust commitment, risk mitigation, and customer satisfaction

2.6.Currency and payment

Credit term is a dilemma for all enterprises, while cross-border financing is far more complicated especially since every country has its own preference on payment option. Cross-border payment is an important driver, also direct obstacle (Jue et al., 2018). The online seller must familiar with local payment preferences to safeguard the healthiness of the enterprise's credit policy. Some countries prefer the option of payment upon receive while most countries adopt an e-payment before delivery. As the payment received in foreign currency, the fluctuation and depreciation risk are unavoidable. As cryptocurrency seems to evolve as a future money source, China's central bank is issuing digital currency to monitor both its economy and people (Aredy, 2021). China's government positioned the digital yuan at the international trade level but the tight grip on the renminbi was not loosened as every new digital yuan issued is supersede one physical renminbi circulated. As the mobile internet diffuses at a rapid rate in China, Yu & Cho (2019) disclose that mobile payments are commonly accepted in the whole of China. Mobile payment is largely dominated by Alipay and WeChat; both are third-party institutions and not a traditional commercial bank. Foreigner companies must alert on the credit risk possess by the digital yuan, as well as any hidden regulatory clauses that the third-party payment institutions hold. Nonetheless, without having a localised favourable payment option, the market development is extremely difficult.

2.7.Logistics and transportation

CBEC is closely related to cross-border logistics while efficient warehousing and convenient transportation are two important aspects to reduce customer waiting time. For the CBEC industry, Zhang (2018) explains that warehousing could be located near-border or at the target market to expedite overall freight transit. In terms of the logistic finance model, three warehousing models are inventory pledge mode, confirmation warehouse mode, sea and land warehouse mode. The sea and land warehouse uses dynamic management of the pledge operation by combining the advantage of customs clearance, warehousing, and transportation with a financial product. Therefore, although the sea and land warehouse modes pose higher logistic risks, the corresponding benefit is greater. Hu (2021) evaluates the intermodal transportation mode uses in North America and opines that it is an efficient CBEC's logistics solution that suits China. Domestic transportation in China is largely dependent on road transportation, resulted in high fuel costs and environmental pollution. In view of explosive growth in China's CBEC sales, the logistics demand is concurrently increased. As CBEC could having both short-haul and long-haul transit, it is more appropriate to adopt the intermodal transportation mode. Railway transportation is suitable for long-haul freight while road transportation remains for short-haul freight.

3. Methodology

This paper examined published journal papers extracted from Scopus Database using content analysis. Only journal papers that match the relevant keyword combination are included in the review. Scopus Database is a reputable abstract and citation database launched by Elsevier in 2004. Currently, Scopus contains more than 75 million records, 24,600 publications, and 5000 publishers (Elsevier, 2019). Hence, this research paper utilises the secondary data available in Scopus Database. The data filtration is using a combination of the various keywords as the searching formula. The keyword is "Cross-Border", "E-commerce", and "China". As of 15 June 2021, a total of 177 related papers appeared to match the searching criteria. In order to keep the analysis latest, all papers published before 2021 is excluded. From

the 24 published paper in the year 2021, only 17 journal papers that are relevant in inclusion in the review. The review framework focusses on the opportunity and challenges of the foreign companies to enter China market through CBEC mode. Figure 2 demonstrates the overall research framework.

Figure 2 The research methodology

4. Result and discussion

In order to facilitate a quality synchronisation in reviewing work, all the important content of 17 finalised journal papers were tabulated in Table 3 by sorting the author's name in ascending alphabetical order. The summarised content is the main subject discussed, the instrument used, and the major finding, to ease further comparison and discussion purposes.

Table 3: Summary of the findings

No	Researcher	Subject	Instrument	Major finding
1	Giuffrida et al. (2021)	Uncertainties and risks in logistics	Questionnaire & interview	Uncertainty in CBEC logistics is related to risk management strategies. CBEC seemed an easy alternative to entering China but several logistic uncertainties include delivery, customer service, compliance, external, inventory management, product damage, and demand could hinder the global expansion. Among these, the most significant risks are compliance and regulation changes, and local partnership selection. The establishment of CBEC pilot zones has yet to come to standardisation, varying across regions. The exchange rate fluctuation also poses a high risk while finding a knowledgeable local partner or choosing an efficient platform is essential to facilitate overall business activity.
2	Guan (2021)	Smart logistics solution	Literature review	Nearly 99% of CBEC exporting centralised at three regions in China, the development is seriously unbalanced while huge untapped market opportunity existed. The smart logistics solution is required in supporting and boosting the entire CBEC economy to achieve sustainable development. Zhengzhou Airport Economic Zone as China's first smart city is one solid proof or digitally constructed success. Three duplicable strategies Zhengzhou Airport Economic Zone are built a modern logistic information platform, attract efficient logistic enterprises and cultivate talent in the smart logistic industry.
3	Hao (2021)	Supply chain management	Reflection	Due to cross-cultural, political, and economic differences, the quality of the international trade supply chain does not meet its rapid growth rate. In addition, countries are having varying development of information technology. Five significant challenges in international logistic management are high distribution cost, prolong delivery time, fluctuated payment issue, mismatched delivery information, and complicated custom clearance. Hence, China logistic enterprise shall incorporate the international standards into the supply chain management to comply enhance competitiveness.
4	Hu (2021)	Domestic logistics	Quantitative analysis	Intermodal-transportation logistics mode might an ideal solution for China in reducing high transportation costs and improve price advantage. It is a combination of railway and road transport for long-distance and short-distance. Despite China have a very well-established interconnected railway network, domestic transportation weighted using road transportation.
5	Hua et al. (2021)	Financing tool	Reflection	Blockchain is a feasible solution in tackling fragmented product information, strict regulatory restrictions, and inefficient e-payment. Blockchain decentralise the information tracing system, transparent the availability of product information, increasing the accessibility and credibility.
6	Lin (2021)	Policy	Reflection	China CBEC sales have unprecedented growth owing to rapid development in internet usage. However, intellectual property is still underway in view of weak awareness and massive copycatting issues. Creating strategic protection mechanism, optimising domestic and international management, and establishing a specific department in controlling the intellectual property are strategic action plans that require immediate implementation.

No	Researcher	Subject	Instrument	Major finding
7	Ma et al. (2021)	Economic impact	Quantitative analysis	The author examines the impact of CBEC on economic growth (export behaviour and bilateral trade) and economic convergence (labour input and human capital). CBEC exports strongly promoting total productivity, technical efficiency, and technological change in provinces with low GDP. CBEC reduces the productivity difference between economically backward and developed regions, merging the economic convergence.
8	Mi et al. (2021)	Future growth	Simulation	The author develops a transaction model to forecast industry growth. The finding reveals the importance of information technology to overcome unprecedented dynamic environment change, for example, the US-China trade war and pandemic. The model predicts that China's CBEC industry will continually have stable growth.
9	Peng (2021)	Future growth	Simulation	The author uses regression model to evaluate relationship between CBEC and traditional import and export trade. China's CBEC transaction volume is nearly a one-to-one association to the international trade volume. However, three significant challenges are transaction insecurity, misunderstanding concept, and insufficient management.
10	Qing et al. (2021)	Industry analysis	Empirical study	The author conducts risk analysis using the data mining method and identifies an increasing trend in B2B exporting activity among minimal industry concentration. The more foreign company are entering China using CBEC's channel.
11	Qiu & Yang (2021)	Industry nature	Simulation	CBEC is a servicing industry to the traditional manufacturing cluster. The author investigated the relationship between CBEC industry and manufacturing cluster to provide some evolutionary ideas for export-oriented transaction.
12	Wang (2021)	Industry nature	Reflection	SMEs are the major driving force in the CBEC industry. The authors identify four main challenges SMEs faced amid pandemic are weak supply chain management, blocked logistic, loose platform functionality, and capital turnover pressure.
13	Xu et al. (2021)	Consumer behaviour	Qualitative analysis	The author analyses consumer values in CBEC through four perspectives: economic, efficiency, progress, and quality. The consumer's purchasing intention and perceived value is associated with platform characteristic. The product value, shopping efficacy, shipping progress, and product quality are important form consumer's perspective.
14	Yang et al. (2021)	Consumer behaviour	Simulation	The main platform to govern CBEC is the internet while traditional bulk trade did also give a significant effect on CBEC. Using the gravity model, the author demonstrates that the traditional factor including weight, price, quantity, value, freight, and country origin could positively drive consumer behaviour to contribute more sales volume. On top of the traditional determinant, internet popularity acts as a catalyst to lift the sales volume up.
15	Yin & Choi (2021)	Industry nature	Simulation	CBEC has a greater impact on trade service than the trade in goods. The nature of the CBEC is different than conventional bilateral trade whereby both service and goods could be exported through CBEC mode. The service trade evolves faster than the goods trade especially in the stages of information, technology, and e-payment. With stable growth in China's CBEC industry, the exporting volume are to be increasing sustainably.

No	Researcher	Subject	Instrument	Major finding
16	Yu et al. (2020)	Supply chain management	Quantitative analysis	The author uses the resource-based view to examine the effect of information technology on CBEC's supply chain management. The result shows that the information management system for supply chain integration, from both supplier and customer ends, is equivalently important in resulting an efficient operational mode. The information technology could improve supply chain visibility, strengthen communication loop, enhancing efficient transaction, and effective system integration.
17	Zhou (2021)	Risk on intellectual property	Reflection	While China has a high development rate on internet technology, the weakness of unprotected intellectual property rights was exposed more obviously. All enterprises shall put forward risk control measures and protection plan to safeguard their intellectual property rights from local as well as overseas perspective.

4.1. National based regulatory environment

China's regulatory environment for the CBEC industry is fast-changing but toward positive growth in promoting internationalisation. The establishment of CBEC pilot zones is one of the government policy to drive regional's economic growth and convergence, reduce the productivity gap between economically backward and developed regions through GDP improvement (Ma et al., 2021). Giuffrida et al. (2021) explain that the establishment of CBEC pilot zones poses many compliance uncertainties. As it is an independent-basis pilot project, the main governance is at the regional level and full control by the local authority. Neither the comprehensive standard nor proper guideline is well-established, the governance is varying across different pilot zones. The foreign company may find difficult to adopt a similar strategy in various pilot zone concurrently. Nonetheless, with BRI and the latest dual circulation strategy, the CBEC industry growth is promising. The overall regulatory and legal system will surely be getting more structure and internalising friendliness very soon.

On the other hand, intellectual property protection is still underway in view of weak awareness and massive copycatting issues in China (Lin, 2021). While China has a high development rate on internet technology, the weakness of unprotected intellectual property rights was exposed more obviously. All enterprises shall put forward risk control measures and protection plan to safeguard their intellectual property rights from local as well as overseas perspectives (Zhou, 2021).

4.2. Market driven value creation

With the exponential growth of online purchasers, the demand for the timeliness, competitive pricing, and premium quality is concurrently increasing. Xu et al. (2021) explain product value, shopping efficacy, shipping progress, and product quality are four important value attainment criteria for CBEC's consumers. These factors are traditional determinants that could govern sales volume, both conventional retailing and e-commerce. Meanwhile, additional drivers for e-commerce in influencing consumer's purchasing intention and perceived value are associated with platform characteristics. Yang et al. (2021) note that internet popularity acts as a catalyst to lift the sales volume up. China's market has more than 989 million internet users in 2020, while 79% of them shopped online (Evelyn, 2021). The number is increasing daily especially amid the pandemic season where social distancing and lockdown expedite the penetration process for the internet. This particular market segment has irresistible growth. Moreover, Qing et al. (2021) report that the current trade structure of China's CBEC industry is still exporting-dominant but the importing sector is expanding annually. With that, this is definitely a golden opportunity for the foreign company to import their product to China market using the CBEC as the channel; as China consumer is more demanding for a more diversify and internationalise product variety.

The prediction model of Mi et al. (2021) predicts China's CBEC industry will continually have stable growth. The regression model established by Peng (2021) discloses a nearly one-to-one association between CBEC trade volume to international trade volume for China. The data provided by Qing et al. (2021) demonstrate an increasing B2B exporting trend in China's CBEC industry, an increased number of exporting traders move their sales channel online. For a reseller to stay afloat in this emerging industry, the overall value chain must be sensitive toward market change to remain competitive. One of the most important elements in the CBEC supply chain is logistics. Hao (2021) summarise five challenges in international logistic management are high distribution cost, prolong delivery time, fluctuated payment issue, mismatched delivery information, and complicated custom clearance. Hu (2021) proposes to use intermodal-transportation logistics mode in China to reduce logistic costs and improve price advantage. China has well-established interconnected railway network that is suitable for long-haul freight while road transportation can remain as short-haul freight. Giuffrida et al. (2021) conclude that finding a knowledgeable local partner or choosing an efficient platform could assist the foreign company to tackle logistics challenge.

4.3. Service based ecosystem reformation

The review of Wang (2021) identifies four main challenges SMEs faced amid pandemic are weak supply chain management, blocked logistic, loose platform functionality, and capital turnover pressure. CBEC is a feasible solution to assist SMEs to overcome such challenges. As CBEC is a new regime to international trade, the whole supply chain ecosystem was redeveloped. The intermediaries in the CBEC industry offering services, not merchandise. For example, the Hangzhou CBEC Pilot Zone initiates "six systems;

two platforms" to facilitate value chain transformation. The systems are information sharing system, financial service system, intelligent logistics system, e-commerce credit system, statistics monitoring system, and risk prevention and control system; while the platforms are online integrated service platform and offline industrial park platform (Zhang, 2020). There is still a big gap of untapped business opportunity existed somewhere in between the whole value chain ecosystem that worth exploring. Yin & Choi (2021) states that the nature of the CBEC is different than conventional bilateral trade whereby both service and goods could be exported. The service trade evolves faster than the goods trade especially for the division of information, technology, and e-payment. Qiu & Yang (2021) defines CBEC as a servicing industry to the traditional manufacturing cluster. The servicing cluster in CBEC could obtain immediate market trend data and consumer feedback, that very essential to manufacturing cluster to innovate their product offerings.

4.4. Digitally drive business transformation

Amid the 4th industrial revolution, Yu et al. (2021) identify numerous advantages of information technology on CBEC's supply chain integration. The information technology could improve supply chain visibility, strengthen the communication loop, enhancing efficient transaction, and effective system integration. Nonetheless, adopting information technology is inadequate to support the explosive growth in the CBEC industry. The current focus is adopting digital solutions such as artificial intelligence technology and big data analytics to enhance a highly efficient operating condition in foreign trade. Hao (2021) notice countries are having varying development of information technology. China logistic enterprise shall incorporate the international standards into the supply chain management to comply enhance competitiveness. Zhengzhou Airport Economic Zone the China's first smart city proven its success through a smart logistics model using a combination of artificial intelligence technology and big data analytics (Guan, 2021). Mi et al. (2021) shows the importance of a stable information technology system in overcoming unprecedented dynamic environment change in a timely manner, materialising market penetration instantly.

5. Conclusion

To sum up, given the huge potential of the Chinese market, this paper proposes four key points that foreign companies can make good use of in using CBEC as a channel to penetrate the China market:

1. Align the business nature to suit China's national strategy;
2. Align the product offerings to fit market-driven value attainment;
3. Align the operation nature to fit the industry ecosystem;
4. Align digital solution to improve the company's productivity and efficiency

Reference

- Accenture and AliResearch. (2016). *Global Cross Border B2C e-Commerce Market 2020*. https://unctad.org/meetings/en/Presentation/dtl_eweek2016_AlibabaResearch_en.pdf
- Areddy, J. T. (2021). China Creates Its Own Digital Currency, a First for Major Economy. *Wall Street Journal*. <https://www.wsj.com/articles/china-creates-its-own-digital-currency-a-first-for-major-economy-11617634118>
- Cai, J., & Wohn, D. Y. (2019). Live Streaming Commerce: Uses and Gratifications Approach to Understanding Consumers' Motivations. *Proceedings of the 52nd Hawaii International Conference on System Sciences*, 6, 2548–2557. <https://doi.org/10.24251/hicss.2019.307>
- Ding, F., Huo, J., & Campos, J. K. (2017). The development of cross border e-commerce. *Advances in Economics, Business and Management Research*, 37, 370–383. <https://doi.org/10.2991/ictim-17.2017.37>
- Elsevier. (2019). *Scopus Factsheet* (Issue February). https://www.elsevier.com/_data/assets/pdf_file/0017/114533/Scopus_GlobalResearch_Factsheet2019_FINAL_WEB.pdf
- Evelyn, C. (2021, February 4). China says it now has nearly 1 billion internet users. *CNBC*. <https://www.cnn.com/2021/02/04/china-says-it-now-has-nearly-1-billion-internet-users.html>
- Fan, Q. (2019). Cross Border e-Commerce in China: What Does This Mean to Australian Small to Medium Size Enterprises (SMEs)? *Journal of Economics, Business and Management*, 7(2), 50–54. <https://doi.org/10.18178/joebm.2019.7.2.580>
- Giuffrida, M., Jiang, H., & Mangiaracina, R. (2021). Investigating the relationships between uncertainty types and risk

- management strategies in cross-border e-commerce logistics. *International Journal of Logistics Management*. <https://doi.org/10.1108/IJLM-04-2020-0158>
- Guan, S. (2021). Smart e-commerce logistics construction model based on big data analytics. *Journal of Intelligent and Fuzzy Systems*, 40(2), 3015–3023. <https://doi.org/10.3233/JIFS-189340>
- Gutfreund, J. (2016). Move over, Millennials: Generation Z is changing the consumer landscape. *Journal of Brand Strategy*, 5(3), 245–249. <http://search.ebscohost.com/login.aspx?direct=true&AuthType=cookie,ip,shib&db=bsu&AN=121940910&lang=de&site=ehost-live>
- Hao, J. (2021). Research on the construction of international logistics supply chain based on cross-border e-commerce. *Proceedings - 2nd International Conference on E-Commerce and Internet Technology, ECIT 2021*, i, 331–334. <https://doi.org/10.1109/ECIT52743.2021.00075>
- Hu, X. (2021). The influence of logistics mode on cross border e-commerce business scale. *E3S Web of Conferences*, 235. <https://doi.org/10.1051/e3sconf/202123503006>
- Hua, Z., Be, K., & Shi, Q. (2021). Research on the information tracing model for cross-border e-commerce products based on blockchain. *E3S Web of Conferences*, 235, 1–4. <https://doi.org/10.1051/e3sconf/202123503018>
- Jue, Z., Junbo, L., Zhiping, H., & Mang, C. (2018). A study of the research hot topics and visualization analysis of cross-border ecommerce in China. *Proceedings of the International Conference on Electronic Business (ICEB)*, 2018-Decem, 82–89.
- Lin, C. (2021). Exploration of intellectual property protection strategies for cross-border e-commerce. *E3S Web of Conferences*, 245. <https://doi.org/10.1051/e3sconf/202124501062>
- Ma, S., Chai, Y., & Zhang, H. (2018). Rise of Cross-border E-commerce Exports in China. *China and World Economy*, 26(3), 63–87. <https://doi.org/10.1111/cwe.12243>
- Ma, S., Lin, Y., & Pan, G. (2021). Does cross-border e-commerce contribute to the growth convergence? *Journal of Global Information Management*, 29(5), 86–111. <https://doi.org/10.4018/jgim.20210901.oa6>
- Mi, C., Wang, Y., & Xiao, L. (2021). Prediction on transaction amounts of China's CBEC with improved GM (1, 1) models based on the principle of new information priority. *Electronic Commerce Research*, 21(1), 125–146. <https://doi.org/10.1007/s10660-020-09434-z>
- Min, J. K. (2017). How to promote e-commerce exports to China: An empirical analysis. *KDI Journal of Economic Policy*, 39(2), 53–74. <https://doi.org/10.23895/kdijep.2017.39.2.53>
- Ordun, G. (2015). Millennial (Gen Y) consumer behavior their shopping preferences and perceptual maps associated with brand loyalty. *Canadian Social Science*, 11(4), 1–16. https://doi.org/10.3968/pdf_294
- Peng, Q. (2021). A study on the influence of internet cross-border e-commerce on China's import and export trade and development strategy. *Proceedings - 2nd International Conference on E-Commerce and Internet Technology, ECIT 2021*, 255–258. <https://doi.org/10.1109/ECIT52743.2021.00062>
- Qi, X., Chan, J. H., Hu, J., & Li, Y. (2020). Motivations for selecting cross-border e-commerce as a foreign market entry mode. *Industrial Marketing Management*, 89(November 2018), 50–60. <https://doi.org/10.1016/j.indmarman.2020.01.009>
- Qing, H., Zheng, G., & Fu, D. (2021). Risk data analysis of cross border e-commerce transactions based on data mining. *Journal of Physics: Conference Series*, 1744(3). <https://doi.org/10.1088/1742-6596/1744/3/032014>
- Qiu, L. P., & Yang, L. H. (2021). The research of co-evolution mechanisms between cross-border e-commerce and manufacturing cluster: An Agent-based model. *E3S Web of Conferences*, 235. <https://doi.org/10.1051/e3sconf/202123503048>
- SWIFT. (2021). RMB Tracker Monthly reporting and statistics on renminbi (RMB) progress towards becoming an international currency - May 2021.
- United Nations Conference on Trade and Development, T. (2020). *Estimates of global e-commerce 2019 and preliminary assessment of COVID-19 impact on online retail 2020*.
- United Nations Conference on Trade and Development, T. (2021). *The UNCTAD B2C e-commerce index 2020: Spotlight on Latin America and the Caribbean*.
- Wang, N. (2021). Research on the influence of the cross-border e-commerce development of small and medium-sized enterprises in Dongguan in the post-epidemic era. *Proceedings - 2nd International Conference on E-Commerce and Internet Technology, ECIT 2021*, 176–180. <https://doi.org/10.1109/ECIT52743.2021.00047>
- Wang, Y., Jia, F., Schoenherr, T., Gong, Y., & Chen, L. (2020). Cross-border e-commerce firms as supply chain integrators: The management of three flows. *Industrial Marketing Management*, 89(December 2018), 72–88. <https://doi.org/10.1016/j.indmarman.2019.09.004>
- Wong, D. (2020). China ' s FTZ Count Rise to 21 After Beijing , Hunan and Anhui Are Newly Added. *China Briefing*.

- <https://www.china-briefing.com/news/chinas-ftz-count-rise-to-21-after-beijing-hunan-and-anhui-are-newly-added/>
- Xu, X.-Y., Tayyab, S. M. U., Chang, F. K., & Zhao, K. (2021). Hierarchical value-attainment paths of CBEC consumers: a means-end-chain perspective. *Internet Research*, 31(2), 699–736. <https://doi.org/10.1108/INTR-10-2019-0397>
- Xu, X., Bu, Z., & Fan, Z. (2020). *Research on Marketing Strategy of B2C E-Commerce Platform Based On Marketing Strategy Triangle Model*. 126(Icfied), 314–319. <https://doi.org/10.2991/aebmr.k.200306.055>
- Yang, G., Wang, Y., Lu, F., Yu, L., & Ma, S. (2021). What determines the pattern of China's cross-border e-commerce with the world? *Journal of Global Information Management*, 29(5), 55–70. <https://doi.org/10.4018/jgim.20210901.oa4>
- Yin, Z. H., & Choi, C. H. (2021). The effects of China's cross-border e-commerce on its exports: a comparative analysis of goods and services trade. In *Electronic Commerce Research* (Issue 0123456789). Springer US. <https://doi.org/10.1007/s10660-021-09483-y>
- Yu, G., & Cho, N. (2019). A study on the sustained use of mobile payment services: Comparison of Alipay and WeChatpay in China. *Journal of Information Technology Applications & Management*, 26(5), 1–12. <https://doi.org/10.21219/jitam.2019.26.5.001>
- Yu, Y., Huo, B., & Zhang, Z. (Justin). (2021). Impact of information technology on supply chain integration and company performance: evidence from cross-border e-commerce companies in China. *Journal of Enterprise Information Management*, 16, 460–489. <https://doi.org/10.1108/JEIM-03-2020-0101>
- Zhang, J. (2018). Cross-border e-commerce development strategy under the "Internet + Logistics Finance" model. *Proceedings of the International Conference on Electronic Business (ICEB)*, 193–203.
- Zhang, Z. (2020). 46 New Cross-Border E-Commerce Zones Unveiled by China. *China Briefing*. <https://www.china-briefing.com/news/china-unveils-46-new-cross-border-e-commerce-zones-incentives-foreign-investors-faqs/>
- Zhou, B. Y. (2021). A study of the risk prevention and protection establishment of the intellectual property rights of the cross-border e-commerce, based on the law-and-economics analytic model. *Proceedings - 2nd International Conference on E-Commerce and Internet Technology, ECIT 2021*, 10–15. <https://doi.org/10.1109/ECIT52743.2021.00010>

Author's biography

Dr Choy Soon Tan is currently a MBA student of Azman Hashim International Business School of Universiti Teknologi Malaysia. He is a doctorate holder of Civil Engineering in the same Univesity that he pursuing his MBA study as now. He worked as an assistant professor in UCSI university after he obtained his PhD degree, *Systematic Literature Review and Meta-Analysis*, 2021