Resource Orchestration in Supply Chain Service-Based Business Model: The Case of a Cross-Border E-Commerce Company

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Abstract: E-commerce is gaining traction in academia, industry, and with policymakers. Along with this development, the intersection of supply chain management and e-commerce research has become increasingly important. This study explored Osell, a cross-border e-commerce company in China, through a resource orchestration perspective to understand how supply chain resources are deployed to create value in a supply chain service-based business model. We investigated and analysed Osell’s business model based on primary data collected from senior executives and managers, as well as secondary data such as online public resources, and found that the structuring and bundling of resources can be leveraged to enhance service capabilities, which in turn creates value, contributing to supply chain service-based business models with regard to trust improvement, risk mitigation, and consumer satisfaction. This study contributes to the supply chain service-based business model through propositions that have been developed regarding cross-border e-commerce.

Keywords: cross-border e-commerce; supply chain service; resource orchestration theory; business model; servitisation; online trade; capabilities; information; logistics; capital flows; case study

1. Introduction

Since the 2008 global financial crisis, the promotion of e-commerce has been assisted by a significant growth in internet penetration, third-party payment technology, online shopping, and modern logistics management [1]. These developments have led to diverse changes among e-commerce companies. Through the internet, these companies have established shared global trading platforms and have obtained worldwide business connections. The growing level of cross-border e-commerce has gradually become a new format of global trading, and has acquired the market share of physical or offline retail, a trend that has been accelerating since the advent of the COVID-19 pandemic.

In many countries, high street stores are being closed due to competition with online retailing. For instance, the UK has experienced an increasing number of high street store closures due to competition with online retailing. In 2018 alone, 2481 stores disappeared from the UK’s top 500 high street stores, which was 40% more than in 2017 [2]. Furthermore, data from the United States (US) suggest that the growth rate of online retail in 2019 rapidly increased to 14.9%, while online spending represented 16.0% of the total retail sales for the year [3]. This shift is reflected in many other contexts. For instance, the Macy department store, the largest American department store, began a wave of closures of offline stores in 2016, and gradually experienced a sharp decline in profitability. On the other hand, Amazon, one of the biggest e-commerce giants in the US, maintained its considerable revenue growth rate of approximately 20% in 2016, which allowed its net profit to reach $23.71 billion. Moreover, the profitability of many offline store chains has further reduced in the midst of the COVID-19 pandemic [4,5].

One of the leading conversations regarding the expanding role of China in world trade, concerns the Belt and Road initiative (B&R) [6,7]. This economic policy has resulted...
in China’s internationalisation strategy in Asia, Africa, and Europe. The policy currently concerns no less than 65 countries with a total population of 4.521 billion people, which represents 62.27% of the world’s total population [8]. The launch of the B&R policy triggered a steep rise in Chinese cross-border e-commerce [9]. Cross-border e-commerce accounts for an increasing proportion of China’s foreign trade volume [10,11]. Among the top countries that trade with China through e-commerce, mostly through two e-commerce platforms (Laza and Shopee), are Vietnam, Malaysia, and Thailand [8]. In 2017, the total import and export volume of Vietnam reached $98.68 billion while Malaysia and Thailand were at $87.54 billion and $76.19 billion, respectively [12]. Although the current developing trend of cross-border e-commerce has been stabilised by market competition, potential threats still exist in this optimistic environment. For instance, many small and medium-sized enterprises, (SMEs) which have flooded the industry, are weak. Compared with SMEs, large cross-border e-commerce companies generally possess more resources in the market. They are capable of thriving along the current trends through better developed abilities in international business management.

Several studies have explored how business models can enhance the competitiveness of enterprises [13,14]. Against this backdrop, supply chain management (SCM) research has focused on how business models can promote supply chain innovation [15]. However, few studies have focused on the supply chain context of cross-border e-commerce [16]. Wang et al. [16] assess the way that supply chain innovation activities may become core to a company’s business model innovation. The findings suggest that overseas warehouses, bonded warehouses, and supply chain finance are all capabilities that form part of the business model innovation in cross-border e-commerce. A recent study by Liu and Li [17] provides theoretical insights and guidelines on the integration of blockchain and SCM in the context of cross-border e-commerce. Wang et al. [18], based on service-dominant logic, provided suggestions on how best to manage supply chain resources in relation to resource flows for cross-border e-commerce companies, which can, as a result, foster relationship quality. Different business models can determine the capabilities in the supply chain of cross-border e-commerce companies using information, logistics, and capital flows alongside a consideration of the services they provide to customers. In addition, researchers have made only limited efforts to understand how supply chain services may be at the core of a business model. Furthermore, scholarship has provided a limited focus on understanding how supply chain resources and capabilities are managed to contribute to a service-oriented business model. More specifically, there is little clarity on the mechanism for orchestrating resources for a supply chain service-based business model in a cross-border e-commerce context. Potential insights in this direction are needed to illuminate the landscape of business innovation, especially in the Asia-Pacific region, such as identifying the possible roles of innovation managers and the factors that contribute to leading innovation firms; therefore, this study focuses on this area of the literature and is guided by the following research question:

RQ: How are supply chain resources and capabilities managed to contribute to a service-based business model in cross-border e-commerce?

Through the case study method and resource orchestration perspective (ROP), this study provides a response and further insights to answer the research question. We consider the single case of Osell which is one of the major business-to-business, Chinese cross-border e-commerce platforms [19]. In 2020, it was estimated that the company generated $11 billion from its trade flow, of which cross border trade accounted for more than 60% [20]. The company has overseas service centres in countries such as Russia, Kenya, Canada, and Saudi Arabia. In recent years, the company has attracted attention due to its presence in more than 60 cities across China. The company’s core strategy is to provide a channel for local Chinese industries and entrepreneurs to access the international market. Therefore, by focusing on the case of Osell, we can achieve the objective of the study because of its significant and unique attributes that can provide considerable insights on supply chain resources and the capabilities of a company to deliver a cross-border e-commerce business
model. Propositions have been provided based on the process of generating value to meet customer demand. However, to our knowledge, previous studies have not attempted to provide insights into the mechanisms by which supply chain resources are managed to contribute to cross-border e-commerce business models.

In terms of organisation, Section 2 presents a review of the relevant literature as the theoretical basis of this study. Section 3 describes the study’s research methods and data collection. Section 4 presents the details of Osell’s development with regard to the company’s background, development strategies, and the flow of its supply chain resources. Section 5 discusses the resource flows of Osell’s information, logistics, and capital for generating supply chain service capabilities and business models as the focal points for the analysis based on ROP. The study concludes by highlighting its contributions to the extant research and practical applications and addressing its limitations.

2. Literature Review

This section sets the theoretical foundation of the research by reviewing the literature related to the resource orchestration perspective, business model and servitisation, and resource flows in e-commerce SCM.

2.1. Resource Orchestration Perspective

The resource-based view (RBV) asserts that firms can attain a competitive advantage and achieve significant outcomes through resources and/or capabilities (assets, organisational processes, firm attributes, information, and knowledge) that are valuable, rare, inimitable, and non-substitutable [21–23]. Early proponents of the theory emphasise the importance of a firm acquiring unique organisational resources [23]. However, it has become clear to many that a firm must venture beyond the possession of heterogeneous resources and consider how resources can be used in effective ways to create valuable capabilities for a competitive advantage [24–27]. Thus, proponents of resource orchestration theory (ROT) build on the critique of RBV as being simplistic and underestimating the role of managers in explaining how resources and capabilities are used to create a competitive advantage. They argue that, in the process of creating competitive advantages, managers need to effectively deploy resources and capabilities to generate their full value [28].

ROT draws on two frameworks, resource management and asset orchestration, to explain resource-based competitive advantages through the role of managers. Hitt el al. (2011) [24] (p. 64) explicitly mention that ROT ‘describes and examines the roles of managerial actions in the process of structuring a firm’s resource portfolio, bundling resources to build relevant capabilities, and leveraging these capabilities to eventually realise a competitive advantage.’ Hence, the theoretical lens of ROT categorises the process of value creation into three stages: structuring, bundling, and leveraging. Its proponents emphasise the need for top-level managers to be simultaneously involved in all stages and to scan the external environment for any important changes [28]. During the structuring stage, the firm acquires, accumulates, and divests its resource portfolio. The bundling of a resource portfolio involves three identified processes (stabilising, enriching, and pioneering) where the firm takes measures to uniquely integrate specific resources to develop a capability that is intended to generate value for customers. Leveraging includes three processes (mobilising, coordinating, and deploying) and illuminates the stage in which structured and bundled resource portfolios are used effectively to create value for the customers and owners of the firm. Further research has enhanced the foundation of the ROT by providing more insight into the horizontal (breath) and vertical (depth) integration of resource orchestration and its related life cycle [29,30]. According to Sirmon et al. (2011) [31], the breadth and depth perspectives in ROT draw on the need to understand the scope and managerial levels of a firm that orchestrates resources and capabilities, respectively. They also elaborate on the significance of the life-cycle perspective to emphasise the need to understand managerial actions during the different maturity stages of the firm.
Recently, ROT has gained popularity in operations management research [29]. The potency of the theory has been demonstrated to illuminate the use of resources and capabilities in SCM and its extended and related focus. Jiang et al. (2020) [32] utilise ROT to explore global sourcing practices toward sustainability. Liu et al. (2016) [33] draw upon ROT to present evidence of the nature of the interrelationships between supply chain integration and IT competency and their effects on firm performance. Gong et al. (2018) [29] explore how multinational corporations deploy their internal and external resources to enable their supply chains to learn to become more sustainable. Nonetheless, the application and study of ROT has not been as extensive as studies on theories such as RBV, transaction cost economics, and agency theory.

Essentially, every firm seeks to create and maintain its value [34]. Many SCM tools present managers with the opportunity to create value and a competitive advantage using different resources and capabilities [35]. However, the competitive context of the supply chain comprises important relationships that can influence the extent of the value that can be generated [36]. The e-commerce supply chain is characterised by a competitive environment, while little is known about how cross-border e-commerce firms position themselves to orchestrate resources within their supply chains. Cross-border e-commerce companies need to manage resources in their supply chains effectively to meet customer demands. The ROT presents an opportunity to respond to and answer the study’s research question. Therefore, this study focuses on elaborating the process that a cross-border e-commerce firm considers in deploying resources to deliver a service-based supply chain business model to meet the value demand of customers.

2.2. Business Model and Servitisation

Business models can be classified into three distinctive categories: business-to-business (B2B), business-to-customer (B2C), and customer-to-customer (C2C) [37]. However, a commonly accepted definition of the term ‘business model’ has not been formulated. This concept can be explained through diverse perspectives and layers [38], having various alternative terms such as business plans, process models, and business cases [39]. In general, Hawkins (2002) [39] (p. 308) presents the following definition for a business model, which is considered to be one of the most acceptable: ‘how an enterprise gears up its resources, planning capabilities and processes to the revenue producing potential of a specific product or service.’ Another definition provided by Dubosson-Torbay et al. (2002) [40] conceives of a business model as, ‘nothing else than the architecture of a firm and its network of partners for creating, marketing and delivering value and relationship capital to one or several segments of customers in order to generate profitable and sustainable revenue streams.’ (p. 3). Finally, Morris, Schindehutte, and Allen (2005) [38] (p. 727) define a business model as a ‘concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture, and economics are addressed to create sustainable competitive advantage in defined markets.’

Due to customer demand and other competitiveness concerns, there is a growing trend for many businesses to move from traditional business models based on product sales to models based on services [41,42]. Enterprises are increasingly offering additional advanced services to their traditional product-centric businesses, so as to generate stable revenue, market differentiation, and other competitive advantages [43]. Such a transition or transformation toward an advanced service process may require complex changes in the firm’s operating process, capabilities, and platforms [44]. Prior research has termed the transformative process as servitisation to explain the increasingly important service component in the market offerings of businesses [42,45]. Although many studies on servitisation focus on manufacturers or product firms, the service sector or service-based businesses can also servitise by increasing the bundling of their service offerings [46,47]. For instance, in service logic, a service sector business such as a restaurant focuses not on the food or menu but on the process of integration to create value for its customers.
Shah et al. (2020) [48] draw on the resource dependency theory and provide an analysis of the enabling role of supply chain integration in servitisation. Their study shows that a manufacturing firm’s strategic orientation toward servitisation relates to its supply chain practices. As a result, servitisation orientation necessitates a firm’s close collaboration with members of its supply chain to enhance supply chain integration. Other studies that focus more on the organisational or inter-organisational levels of analysis, with little emphasis on the roles of individuals, have also emphasised the need for servitisation to be underpinned by cooperative norms, tighter operational linkages, and high levels of communication [49–51]. The work of Vendrell-Herrero et al. (2017) [52] is positioned in the literature at the intersection of SCM, servitisation, and digital business models. The study’s empirical analysis confirms that digital servitisation transforms the structure of the supply chain and impacts the power of firms in vertical relationships. It provides evidence supporting prior studies that argue that digital servitisation empowers downstream firms when they acquire control of link channels to consumers, but upstream companies can regain their power when they control key resources that are desirable to the consumer. The extant literature considers the concept business model to be suitable for examining the process of servitisation within and outside of an organisation, as well as for analysing the key dimensions that are often characterised by challenges and changes related to network structure, transactions, interaction between revenue models and incentives, and access to capabilities [43,53]. Nevertheless, several major aspects of the servitisation process in business models are yet to be fully explored. Palo et al. (2019) [43] highlight the contestations of dominant product-based and emerging service-based business models in an attempt to explicate the process of servitisation as a bottom-up, emergent, and non-linear process. Their empirical insight elaborates on the move towards a service-based business model and highlights the five-way dominant product-based, emerging service-based business models framing and organisation practices in different and contesting ways. These practices include service development, sale and delivery activities, materiality, the understanding of services, and knowledge. They argue that servitisation involves the duality of managing parallel business models rather than transforming or shifting from one to another as configurational structures. Their study’s findings highlight the role of managers or other actors in servitisation. Although other studies have emphasised the need to understand the critical resources and capabilities required to implement e-commerce supply chains (e.g., [54]), it is equally important to understand how managers orchestrate these resources and capabilities to create value for customers.

2.3. Resource Flows in E-Commerce Supply Chain Management

Mentzer et al. (2001) [55] (p.4) define a supply chain as consisting of ‘all the upstream and downstream flows of products, services, finances, and information from the ultimate supplier to the ultimate customer.’ Resource flow management related to information, logistics, and finance can be considered as the three basic components of e-commerce SCM activities [16,18,56].

Information flow or a stream that contains a series of activities related to information exchange and sharing in the SCM context refers to a firm’s ability to exchange knowledge with its supply chain partners in an effective and efficient manner [57]. Information relevant to the flows in SCM could include pricing, location, inventory, product characteristics, performance metrics, and a demand information, among other types of information [58]. Information flow not only represents one of the most fundamental abilities in the supply chain process [59], but it is also the foundation for supply chain integration [60].

In today’s highly information-intensive business environment, information flow is expanding its influence in the field of e-commerce. Relevant resources such as e-commerce technologies, business models, and practices are developed upon a solid basis of information flow. Consequently, information flow has become a unique resource for modern firms’ competitive advantages and inimitable capabilities [58].
Logistics comprises one of the largest costs involved in international trade [61]. It is part of the supply chain process that plans, implements, and controls the efficient flow and storage of goods and services from the point of origin to the point of consumption to meet customers’ requirements [62]. Thus, logistics flow refers to both the forward physical distribution activities of goods from the origin of the raw material to the final consumers, and the reverse physical distribution activities, which moves from downstream to upstream players. It can generally be understood as a stream of actions linked to logistics among supply chain partners.

E-commerce constitutes a considerable proportion of today’s world business activities, including logistics activities such as transportation and warehousing, which represent a key component of SCM [63]. Rabinovich and Knemeyer (2006) [64] identify logistics service providers that support internet supply chains as a new type of logistics-related firms. These logistics service providers assist online sellers in integrating with the myriad of available logistics firms to fulfil customer orders more effectively and efficiently. Logistics service providers establish relationships with both online sellers and third-party logistics providers and integrate the sales and flow processes throughout the supply chain through the provision of what Rabinovich and Knemeyer (2006) [64] term ‘hub functionalities’ [65], which is the equivalent to what has been termed the ‘service provider’ by Skender et al. (2016) [66].

The capital or financial flow in SCM encompasses the flow of financial resources across the supply network [67]. The financial supply chain runs parallel to the physical supply chain, which implies the flow of money from firm to firm, including expenses, receipts, and investments, as well as the processes established to engage and interact with trading partners from a financial perspective. The payment for goods and services and the financing of production and trade activities are intrinsic to any supply chain. Therefore, the existence of the financial supply chain is common to all economic supply chains, regardless of the products, services, or the information flow along the supply network [67].

3. Methodology

Considering the limited research on service-based business models in the cross-border e-commerce supply chain context and our research question, this study adopts a single case study method [68]. A single case study is suited to explore the complex structure of the business model and the process of generating value through resources in the SCM [16,69]. In this regard, an exploratory case study that relies on several sources of evidence is an appropriate research strategy to analyse the phenomenon under investigation within its complex context [68].

The study’s aim is to explore the business model dynamic process to answer the research question of how supply chain resources and capabilities are managed so as to contribute to the service-based business model in cross-border e-commerce. Through the single case study, we adopt a retrospective longitudinal case study approach and trace the analysis back to the establishment of the case company in 2010 by asking interviewees for their recollections and by scrutinising secondary data (company documents and open online resources) on the evolution of the business model. The study follows the processes recommended in the operations management literature on conducting case study research and ensuring rigour [69–71]. After designing the interview questions based on the rationale of the conceptual framework, field interviews were conducted by interviewing managers and collecting data from various secondary sources. Subsequently, an in-depth case analysis was conducted from the case description and case themes. Additional field data was also gathered to enrich and complete the case. In order to ensure the triangulation of data sources, multiple data sources are considered to contribute to the case. Finally, the case was discussed and compared to the extant literature for a final conclusion and recommendations following the study.
3.1. Case Selection

Osell, established in 2010, is one of the largest trading platforms for transnational e-commerce, approved by China’s Ministry of Commerce [72]. The company’s estimated turnover is no less than $1.5 billion, and it claims to have over 1000 employees. The platform has successfully transformed over 15 million Chinese manufacturing enterprises into well-known global brand owners, global suppliers, and global cross-border e-commerce enterprises.

Due to Osell’s outstanding achievements, it received the Chinese National E-commerce Model Enterprise award in 2012 from the Ministry of Commerce. Since 2010, a number of institutions and industry leaders, such as Northern Light Venture Capital, Susquehanna International Group, and F&H Fund Management have invested in the platform. Osell achieved a milestone in 2016 when the company obtained $2 billion from Jiuding Investment to construct 100 cross-border e-commerce towns in China. Moreover, an agreement signed by Osell and AL-MOBTY secured a cross-border industry upgrade project between China and Saudi Arabia [73].

Osell has distinguished itself in developing transformative and innovative services through the flow of resources in the company’s SCM, including networked electronic platform services, financial services, and logistics services. Therefore, this company proves to be an outstanding case through which to explore our research question.

3.2. Data Collection

The data used in this research were obtained through face-to-face interviews, phone interviews, and secondary materials obtained from Osell’s website. The president and vice-president of Osell, Jianfeng Feng, and Fuxing Zhu, each provided a two-hour interview before the COVID-19 pandemic. The first interviews were conducted face-to-face in July 2017, and were followed by phone interviews in July 2019. During the interviews, the main questions focused on the company’s current businesses, services, performance, target markets, policies, and its prospects for future growth. Appendix A presents the interview protocol that functioned as a guide during the interviews. The research team also interviewed five managers during their visit to Osell (Table 1 provides the details). All the interviews were conducted before the COVID-19 pandemic. Hence, the interviews are not explanatory of the greatly increased use of online platforms as a result of the COVID-19 pandemic. Table 2 lists the main website sources for the secondary data.

| Number | Company | Title | Interview Method | Number of Interviews | Length of Interview |
|--------|---------|-------|------------------|----------------------|---------------------|
| 1      | Osell   | Co-Founder and Vice President Overseas Executive President | Face to Face Telephone | 1 | 2 h—Same period of time |
| 2      | Osell   | Overseas Executive President | Face to Face Telephone | 2 | 3 h—Same period of time |
| 3      | Osell   | Vice President National Investment Vice President | Face to Face | 2 | 2 h—Total hours in different period of time |
| 4      | Osell   | National Investment Vice President | Telephone | 3 | 2 h—Total hours in different period of time |

3.3. Coding and Data Analysis

This case investigation relied on qualitative data analysis techniques. Specifically, an inductive content analysis method was employed. Microsoft Excel was used to analyse the secondary data (sample shown in Table 3) and interview transcripts for data reduction and coding. The data coding involved relating the data together to reveal the codes, conducted in an iterative manner. Thus the data were synthesised and organised more coherently into hierarchically structured first- and second-order concepts that allow for nuance and further
dimensions to emergent concepts and their potential relationships to other framework elements. For instance, an identified first-order concept such as ‘end-to-end logistics knowledge’ links to a second-order concept on ‘information flow and logistics flow’, which directly connects to the aggregate dimension of ‘supply chain service capabilities’. This process of analysis leads to the clarification and, on occasion, redefinition of the constructs and to a discussion on the evidence. The research team reached a consensus on all constructs before the end of the process. In the first step of the analysis, we coded the interview transcripts and observations from the Osell website to identify the company’s milestones, development strategies, business models, and market services. In the second step, we examined how Osell managed resources to create value in business models. Therefore, to facilitate the analysis of the study’s research question, the first part of the study’s analysis provides a summary of Osell. This is followed by the discussion section, which focuses on how the company’s resources, in terms of information flow, logistics flow, and capital flow are structured and bundled. It includes an analysis of the capabilities and services generated to leverage Osell’s supply chain service-based business model. Finally, it addresses the constructs of Osell’s business model value propositions, key resources, key activities, and key partners.

Table 2. Resources from secondary data.

| Source of Data       | Type of Information                                                                 |
|----------------------|--------------------------------------------------------------------------------------|
| chyxx.com            | Industrial information website                                                      |
| ec.com.cn            | Information on China’s international trade                                          |
| china.osell.com      | Osell’s website                                                                      |
| silkroad.news.cn     | Website information on Belt and Road Initiative                                      |
| world.huanqiu.com   | International Trade website                                                         |
| cc.cn                | Information on China’s economy                                                      |
| iyiou.com            | Think tank platform focus on technology, finance and investment                      |
| cifnews.com          | News on China’s cross-border e-commerce                                             |

Table 3. Sample elaboration of the use of interviews and additional data sources over the two rounds of data collection.

| Rounds         | Primary Sources (Interviews)                                                                 | Additional Data Sources (Osell and Other Websites)                                                                 | Constructs Identified                                      |
|----------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Round 1 (July.2017) | • Co-founder and Vice-President of Osell (face to face interview)                           | • Osell website (Osell Model, GemPay Bitcoin, etc.), Other websites (Chyxx.com, Ec.com.cn, Silkroad.news.cn, World.huanqiu.com, Ce.cn, Iyiou.com, Cifnews.com) | • Resource Flows                                           |
|                | • Overseas Executive President of Osell (face to face interview)                           |                                                                                                                   | • Osell Business Model                                      |
|                | • Vice president                                                                             |                                                                                                                   | • Internal and external information                         |
| Round 2 (July.2019) | • Co-founder and Vice-President of Osell (Telephone interview)                             | • Osell website                                                                                                   | • Supply Chain Relationship Quality                         |
|                | • Overseas Executive President of Osell (Telephone interview)                             |                                                                                                                   | • Supply chain service capabilities’                       |
|                | • National Investment Vice President (Telephone interview)                                |                                                                                                                   |                                                            |

4. Case Description

4.1. Company Profile and Vision

Osell has focused on developing a multinational e-commerce market and enabling Chinese companies to export goods and services from China to the rest of the world since its establishment in 2010. It has more than 10 overseas branches and more than 20 overseas
subsidiaries. It operates across more than 200 countries. The company has nearly 1000 employees working across more than 20 warehouses worldwide [72]. The company not only exports Chinese products overseas, but also introduces overseas products to China. After years of operation, Osell has developed to become the largest cross-border e-commerce trading platform in China.

Osell’s business philosophy is grounded in handling data, adapting to local conditions, and effectively catering for all of China. The company has successfully established an integrated system for cross-border e-commerce through its online-to-offline (O2O) model that connects Chinese manufacturers and global retailers. Concurrently, it directly provides user feedback and other market data to Chinese manufacturers for their business development. Osell has integrated more than 50 logistics channels, more than 70 payment methods, and various language service providers and brand suppliers into its mobile application (app). Moreover, it encourages its employees to launch their own businesses within the company and promotes internal entrepreneurship by providing funding.

Figure 1 and Table 4 provide a summarised history of Osell’s development.

**Figure 1.** The development history of Osell [73].

**Table 4.** Resource flows of Osell.

| Build the Information Systems | Build the Logistics Systems | Build Payment Systems |
|------------------------------|----------------------------|-----------------------|
| Dinodirect.com was formally launched, which means that they began to set up a one-stop service for cross-border e-commerce (2009). | Osell built a cloud warehouse in the European and American markets (2009). Osell established an overseas branch in Moscow and built an overseas warehouse in India (2013). The General Administration of Customs’ cross-border trade e-commerce customs clearance service platform was launched, Osell passed the first cross-border e-commerce customs clearance in China (2014). The first overseas cross-border e-commerce industrial park was formally launched in Dubai, which opened the “two-state park” model (2016). Osell established logistics service and customer immersion experience centres in many countries, such as Russia (Moscow), Poland (Warsaw), Vietnam (Ho Chi Minh), UAE, India (New Delhi), Canada (Toronto), Germany (Duisburg), Indonesia (Jakarta), Cambodia (Phnom Penh), Brazil (Sao Paulo), Saudi Arabia, and Bahrain (2017). | DinoWallet payment tool was established online (2014). Cooperated with UnionPay International in cross-border online business to fully accept UnionPay cards in business trades (2015). OsellPAY was formally incorporated in Hong Kong. It cooperated with many foreign banks to support more than 90 types of payment methods in the world and more than 30 types of popular international currencies. It covers more than 200 countries and regions in the world and the payment channel success rate is as high as 90% (2015). |

4.2. Osell Business Model and Service Provision Resource Flows in E-Commerce Supply Chain

The following four types of services characterise Osell’s business model: information services, logistics services, financial services, and integration platform services. Information
processing and trust services allow Osell customers to analyse market information and process their own information. They receive a good credit rating for making information more reliable. Osell (FBO) service provision’s logistics service and fulfilment include international transportation, customs clearance, and overseas warehouses. Further, their capital services provide financial loans to customers, and their integration platform service aims to provide integrated information, logistics, and finance solutions to its customers.

4.2.1. Information Services

Osell has two main business models (the Osell app and public service, trade, and finance platforms). The Osell app is the world’s first cross-border trading business social media application. It provides instant messaging and translation services for merchants worldwide, which resolves the language barriers between businesses. With this social media application, business users can communicate freely, which enhances mutual trust among users.

The greatest benefit of the Osell app is that it provides online members with a supply and demand matching system and social business system. Chinese suppliers can use the Osell app to establish partnerships. For example, if a drug purchaser in the United States wants to purchase a certain type of drug in China, it only needs to publish its demand on the app; Chinese suppliers who have registered the product in the app system are automatically matched as potential suppliers. In addition, the app offers automatic translation services in 71 languages and includes real-time manual rendering to meet the anytime, anywhere communication that is essential for conducting business, and enhances customer understanding.

Market Intelligence

The ‘Osell Cross-border B2B franchising service centre’ is a product the company designed to address the lack of the market experience and product trend judgement ability of small- and medium-sized Chinese manufacturers. Through Osell’s resources overseas, Chinese companies can directly place their products in target countries that indicate potential demand. Overseas consumers can test products and provide regular feedback reports to Chinese companies to allow them to understand changes in demand and to enable potential upgrades in the export products. In this regard, the Osell staff suggest that the company’s core value is not only to open channels for Chinese manufacturing companies but also to allow these companies to gain more incisive market insights.

Osell is primarily engaged in cross-border B2B and B2C (supplier–cross-border e-commerce–national retailer–consumer) or M2B (manufacturer–retailer–consumer) business using O2O service. Osell sends local consumption big data to domestic manufacturers via online portals, including overseas demand records, so that Chinese companies can learn specific details to assist them in making business decisions. Osell integrates all the information that has been sent, so that it can significantly assist the receivers.

Information Processing and Trust

Osell launched and named its own blockchain platform, SilkChain. The main purpose of this platform is to perform distributed billing. At the same time, it helps to improve trust between merchants. Based on the prevailing international trading conditions, Osell structures and bundles international upstream and downstream logistics providers, buyers, sellers, financial institutions and service agencies, and their own customers to achieve SilkChain’s optimal positioning.

Beginning with Osell’s announcement of their participation in the digital public chain through SilkChain in international trade, ‘Blockchain + cross-border e-commerce’ has become a key topic in the field of cross-border trade. The blockchain community built by Osell consists of all the buyers, sellers, and distributors. The specific information regarding all the trade links, such as which factory produces an item, when it is packaged, when it is shipped, and even the final payment information and links are displayed on the blockchain.
platform network. Osell inspects and ensures the information quality of the reports. The defects and advantages of the goods are displayed on the blockchain network for the buyers’ reference. All the processes are also traceable.

Osell also applied blockchain technology to resolve information processing and trust issues. Blockchain technology uses blockchain data structures to verify and store data. It uses distributed node consensus algorithms to generate and update data and cryptographic methods to secure data transmission and access and to harnesses the intelligence of an automated script code [74].

4.2.2. Information Services

The use of blockchain technology creates a transparent digital platform for all parties in the global trading ecosystem. Osell has a solid foundation to implement such technology as a leading e-commerce company with more than ten years of industry experience.

Blockchain is a new protocol mechanism that is expected to surpass the existing centralised database model. The decentralised blockchain, trust consensus, and non-derogable features make it possible to reclassify new opportunities and challenges. Feng Jianfeng, chairman of the Osell Group, stated the following:

Today, with traditional cross-border trade, SMEs have become protagonists. Order fragmentation and high-frequency trading have resulted in high transaction service costs. Blockchain technology provides new solutions to these problems. From the very beginning, Bitcoin applied blockchains to trade payments. Although Bitcoin is stimulated by the financial crisis, it can be said that the blockchain was borne out of trade. The application of blockchain technology to global trade has always been a significant challenge. Payment is just one important aspect. At this stage, there were no projects in the industry. This is an opportunity for us. One of the reasons for this network is to apply our rich cross-border e-commerce experience using blockchain.

4.2.3. Logistics Service

The logistics issue has always been a major difficulty in cross-border e-commerce, but Osell aims to resolve this (Osell.com, 2018). Osell’s FBO service (Figure 2) is a global order fulfilment service for its global suppliers; it solves the difficulties of exporting SMEs. The supplier only needs to deliver its goods to the FBO warehouse, and Osell delivers those goods abroad on their behalf. Through FBO services, Osell enables Chinese SMEs to improve the efficiency of customs clearance, shortens transaction time, reduces the complexity of customs clearance, and to simultaneously obtain a reasonable tax refund. Because Osell provides the sorting of logistics and goods in FBO services, the security of the goods in logistics is also guaranteed. Thus, as a one-stop service model, the FBO reduces SMEs’ operational costs and increases revenue. For example, through an established overseas warehouse, small wholesalers can ship directly to Russia. Normally, Chinese producers take 45–60 days from customization to the delivery of wedding goods to Russia, but the Osell network can shorten this to within 25 days. On average, it takes 15 days for domestic Chinese overseas warehouses to send the goods to Russia and 7 days to ship them from the overseas warehouse to the farthest places in Russia.
FBOs require higher-order processing capabilities and cargo tracking capabilities. Therefore, the real-time docking of logistics systems with order information processing and enterprise resource planning (EPR) systems have become required capabilities and resources for FBO services. RFID is a radio frequency (RF) data acquisition technology method preferred for cargo tracking. Proved to be better than barcode recognition technology, RFID can identify high-speed moving objects dynamically and can track multiple electronic tags simultaneously [76]. Its recognition distance is large and can be adapted to harsh environments. RFID technology can exchange information across the entire supply chain, enabling Osell to accurately predict inventory shortages. Osell can reduce the scale of inventory, shorten the return cycle of investment, improve the quality of products and services, and accelerate the company’s response to the market. At the same time, RFID devices can improve the accuracy of shipments and reduce shipping errors. In this way, after a variety of goods are delivered through the LCL (less than container load) process, the goods can be accurately directed to the target retailer. In addition, ERP provides process management for FBO services, avoiding errors caused by human factors [77]. Logistics data can be simultaneously recorded in detail to make it easier for customers to track commodity logistics.

4.2.4. Financial Services

Financial services include payment services and supply chain finance services.

Payment Service

Because of the difference in currency, cross-border payment means that when a consumer buys a foreign product online or an overseas consumer buys a local business product, completing the transaction requires a currency exchange between two countries or regions through certain tools and payment systems.

The following our types of financial systems dominate the current cross-border payment market: bank wire transfer, professional remittance companies, international credit card companies, and third-party payment companies. The first three types prove to be expensive and time-consuming, have limitations on amount and currency type, and may not be safe for merchants because of potential issues such as fraud.

As a cross-border e-commerce company, Osell has over 70 payment methods. UnionPay and Osell exercised initiative to cooperate in cross-border online business. Osell’s B2C and B2B platforms and related websites accept UnionPay cards for payments. Further, Osell launched the Dino Wallet Service in 2015; consumers can use Dino Wallet with ease to transfer money from their bank account to their Dino Wallet and spend money on Osell. This payment method negates the need for a middle-man and makes the shopping process simpler and more efficient.

Moreover, in September 2015, Osell officially signed a strategic cooperation agreement with China’s first cross-border Bitcoin payment platform, GemPay [78,79]. Osell opened a GemPay Bitcoin payment channel on its website, and GemPay provided Bitcoin cross-border payment solutions. Bitcoin is a password currency. Both the invention and
conversion of Bitcoin are based on blockchain technology, which provides greater security for cross-border payments. With Bitcoin payments, Osell can attract new customers, and its payments are more diverse. Osell Deputy General Manager Zhu Fuxing explained:

Currently, China does not have its own cross-border payment channels. Common payment channels are owned by foreign financial institutions such as Visa or Master. The decentralisation of Bitcoin and the nature of borderless trade manage to somehow break the deadlock.

Supply Chain Finance Service

In terms of supply chain finance, Osell integrated the management of capital flow and logistics flow for SMEs, so that the uncontrollable risks incurred by individual companies are transformed into controllable risks. Osell also provides loan services to SMEs. Since it is difficult for SMEs to obtain loans from banks without fixed assets under the traditional approach, Osell assists them in applying for loans from banks by conducting a special risk analysis and credit rating, as Osell has their transaction histories. At the same time, Osell provides Chinese suppliers with tax refund services. The normal general trade tax rebate lasts from three to six months. Through Osell’s risk control system of financial services, companies receive tax refunds within three to five days.

4.2.5. Integration Platform Service

Osell simplifies the transaction process through the integration platform to provide value for clients/customers, as Figure 3, a framework of Osell’s business model, illustrates. In the traditional foreign trading model, the overall chain for transactions is considerably long and it generally includes manufacturers, exporters, importers, channel distributors, wholesalers and retailers, and, ultimately, the end consumers. The advantage of Osell’s integration platform is that it allows Chinese suppliers to bypass this lengthy process and increase sales profits simultaneously. Chinese suppliers can connect with terminal buyers online to sell products, obtain a higher product premium, and increase sales. Osell’s platform not only provides information regarding goods and merchants but also tracks the logistics information of goods, which can increase trust between merchants. Finally, through the integration platform, customers can also enjoy after-sales services and facilitate transactions.

![Figure 3. Osell business relationship diagram [80].](attachment:image.png)
5. Results Case Analysis and Discussion

This section analyses the structured and bundled resources that characterise cross-border e-commerce in Osell’s SCM. It also addresses the capabilities generated to leverage Osell’s supply chain service-based business and develops related conclusions with regard to Osell’s value proposition, services, key resources, key activities, and key partners. Further, this section discusses and clarifies the findings of the case analysis by comparing them with the literature. We find that the structuring and bundling of resources can be leveraged to enhance service capabilities, which in turn creates value to contribute to supply chain service-based business models in terms of trust improvement/commitment, risk mitigation, and consumer satisfaction. Our findings support the argument that a company’s capabilities are enhanced by its processes and resources [81].

Table 5 shows the related resources of information flow, logistics flow, and capital flow that Osell manages, structures, and bundles to generate capabilities and services. The section begins by discussing the capabilities generated through the structuring and bundling of information-related resources. It then examines the capabilities generated by combining the three flow-related resources (in pairs or as a triad). Finally, it discusses how the management and execution of resource flows and capabilities contributes to the supply chain service-based business model.

Table 5. Related resources and capabilities of Osell’s information flow, logistics flow, and capital flow.

| Resources | Services & Capabilities |
|-----------|-------------------------|
| Information flow | |
| Company staff | Innovation, Improvement |
| Market data of customer feedback | Product positioning, Customer segmentation, |
| Knowledge management | Matching customers and products |
| BlockChain (SilkChain) | Case analysis, Experiential learning |
| Finance module | Inquiry of logistics chain information, Product information, Transaction information |
| Logistics flow | Collect and analyze financial information |
| FBO | One-stop customs clearance service |
| RFID | Accurate cargo tracking, Logistics accuracy improvement |
| ERP (Enterprise Resource Planning) | Logistics management, Reduces human error, Logistics query, Order classification |
| Capital flow | |
| Osell app | Record and provide transaction information |
| Dino wallet | Provide diversified payment methods and provide a secure trading platform |
| Bitcoin payment | Reduce payment risk, Prevent fraud |

5.1. Service Capabilities Generated from Information Related Resources

Service Capabilities Generated from Information Flow Related Resources from Internal, Customer, and Knowledge Orientations

Information flow management provides e-commerce firms with a large amount of useful customer information to facilitate the understanding of targeted buyers and allows for the continuous creation of customer value [82]. This supports the arguments presented by Teece (1998) [83] and Grawe, Chen, and Daugherty (2009) [84], that information exchange supports the development of capabilities, and that customer orientation is positively related to service capabilities.

Market positioning can be generated by the flow of information for customer orientation. The flow of information assists in exploring customers’ real needs, distinguishing different customer groups, and with product positioning. By collecting market feedback information, Osell can acquire business opportunities. At the same time, companies can use Osell’s online trading platform to analyse data based on purchased information. These data not only allow Osell to understand the situation in which the product is sold on the market but also attract new customers. In addition, the customer’s response can provide improved information for Osell, which can help Osell reform and improve supplier management.

Osell’s technical and knowledge-management capabilities also help in the flow of information. Osell collects data from customers through an ERP system and combines the
necessary data for SMEs to learn, which allows them to acquire the most current knowledge. Simultaneously, the use of blockchain technology in the SilkChain platform ensures the reliability of transaction data and protects data from hackers. Following the acquisition of new corporate knowledge, companies can improve their ability to reduce the time, cost, and risk of transactions. To minimise risks and increase costs, all companies are willing to absorb the latest data, which also promotes new flows. Based on the discussion and case analysis, we develop the following propositions:

P1: Information flow management can assist companies in understanding internal and external information, enable the company to find the target customers, reflect the company’s internal information, and help the company respond to market changes promptly.

The bundling of information flow and blockchain technology can protect data transmission and access through encryption methods, which guarantees the accuracy and security of information transmission [74]. However, blockchain technology has some shortcomings. One issue involves the policies and legal frameworks that exist in different countries. Each country has different methods and laws for the supervision of virtual currency, which can cause SilkChain and blockchain parties to encounter obstacles on the journey to internationalisation. However, in the past two years, Osell has actively maintained its sharing of transaction information and service information with customs enforcement, national taxation entities, and government departments of various countries, as well as financial institutions such as banks, funds, and private equity firms. As a result of these actions, the resistance to blockchain promotion in target countries may potentially decrease. According to Osell managers, many logistics companies worldwide are currently interested in researching and developing a matching alliance chain. The company is in contact with some logistics companies to study seamless connections between different industry blockchains. Hence, the following proposition is provided:

P2: In the information flow, the use of blockchain technology can increase the accuracy of logistics information, increase the security of payment, increase trust between the parties, and shorten the transaction time.

5.2. Service Capabilities Generated from Structuring and Building the Three Resource Flows

5.2.1. Service Capabilities Generated by Structuring and Bundling Information Flow and Logistics Flow Related Resources

The information flow platform is the basis for logistics and capital flow platforms. Without the information flow platform for technical support, the logistics platform and capital flow platform cannot operate effectively [27].

As an indispensable element in the process, FBO provides firm guarantees for suppliers to participate in the cross-border B2B market and to obtain higher overseas profits. It helps customers who are not professionals in the export process to deliver products to the B2B cross-border market quickly. However, FBO requires resources to support its operation. Although FBO supports Chinese SMEs by providing complete export services, the small quantity of exported goods generates the problems of increased export times and increased costs. To enhance FBO’s profitability for cross-border trade, Osell has provided LCL services to companies with a small number of commodities for export.

The FBO service packages goods that are intended for the same purpose and utilises the minimum number of containers to ship as many goods as possible to the destination warehouse. Although FBO can increase profits through consolidation, compared with traditional trade, there may exist a larger number of different types of goods for each shipment after LCL, and a small quantity of each type of good. Therefore, FBOs require higher-order processing and tracking capabilities, meaning that real-time interactions of logistics systems with order information processing and EPR systems are the major resources and capabilities required from FBO services.

In FBO services, ERP can manage order information, intelligently classify a large amount of order information, and provide delivery information to customers. Moreover, ERP can classify products according to different logistics distribution rules to adapt to
the different purposes of LCL services. Some examples include regional countries, order amounts, and product categories.

5.2.2. Service Capabilities Generated from Combining Information Flow and Capital Flow Related Resources

The structuring and bundling of information flow and capital flow can reduce the invoice and receivables cycle times, facilitate faster payments and increase the availability of decision-making financial information [85].

To ensure logistics information, transaction information, and the accuracy of the flow of personal information and the flow of funds between transaction parties, Osell must transmit information through a reliable and secure platform to provide customers with secure transactions. Based on its previous experience, Osell built an exclusive electronic platform through its own technical expertise, so as to provide customers with information inquiry, information matching service networks, and a safe and convenient transaction.

Osell’s information has mainly been published in its app. In this way, Osell can obtain user information through its own platform, classify users through big data, and recommend products for each type of user. By using Osell’s platform, buyers can access both corporate and product information. The non-modifiable nature of the information in the blockchain guarantees the authenticity of the information, which enables Osell to provide customers with accurate information search services through electronic platforms, such as product quality information and business reputation information. At the same time, the traceability function of the blockchain at the source can provide customers with logistics tracking services through the Osell platform to ensure reliable and accurate logistics information.

Osell successfully avoided the risk of relying on third-party payment platforms by launching its own Dino Wallet service. Using Dino Wallet, every customer transaction is recorded, and the available transaction information service can be accessed at a user’s convenience. To ensure the security of customer funds, customers receive an email reminder each time they operate through Dino Wallet. Osell not only provides consumers with more payment services through Dino Wallet but also ensures the accurate and real-time delivery of information, thereby assisting cross-border e-commerce customers to successfully avoid the multiple risks posed by fund payments. In addition, Osell provides Bitcoin payment services to provide a variety of methods for its customers to make payments. The availability of Bitcoin not only helps customers reduce payment limits, but also provides more profits for Osell. Bitcoin is a virtual currency based on blockchain technology, therefore, using Bitcoin transactions also has the effect of preventing fraud.

5.2.3. Stabilizing, Enriching, and Pioneering Related Resource Flows for Service Capabilities

In e-commerce, information flow, logistics, and capital flows are inseparable. Logistics activities produce a large quantity of raw material supply and finished product consumption, and accurate feedback for all aspects of logistics operations is required. The progress of information technology has created conditions for the dissemination of information, thus promoting the improvement of logistics capabilities and their efficiency [25]. Furthermore, logistics flows are accompanied by capital flows. The B2B cross-border e-commerce service platform provided by Osell was obtained by bundling information, logistics, and capital flow.

Through internal information flow, Osell obtains local market information through localised company employees in overseas markets, which helps Osell’s overseas ware-
houses to improve and accommodate for local situations. The customer-oriented data in the information flow enables Osell to receive feedback from international consumers, which helps Osell accurately inform local consumer demand for goods and achieve a high degree of matching between goods and consumers. After a case analysis, these experiences can be shared with new customers who, after learning and analysing the reported cases, can acquire useful information and which can help them to improve.

For logistics, Osell provides FBO one-stop customs clearance services. After integrating the three flows, logistics requires RFID and EPR support. RFID ensures that goods are accurately categorised when dispatched from China, which reduces the time required for goods to pass through customs. In addition, ERP protects FBOs and assists in managing product information in FBOs, classifying orders, and reducing human errors. Moreover, ERP provides the entire logistics information of goods.

The Osell app, Dino Wallet, and Bitcoin payment stocks ensure the regular circulation of Osell capital flows. All logistics information and transaction information on Osell apps can be tracked by both parties. As a result, relevant information regarding when the supplier sends the goods and when the consumer receives them, is available on the Osell app, which is accurate and reliable. Once the goods arrive at the destination, the payment is made to the seller through the Osell app. The Dino Wallet provides a variety of payment services for consumers in many countries. It provides the opportunity for Chinese products to be sold globally, even where challenges such as differences in payment methods or currency types are present. At the same time, Osell launched Bitcoin payment services. Bitcoin payment services based on blockchain technology provide Osell customers with secure transactions and avoid the risk of cyber fraud.

P5: Through the process of bundling resource flows, e-commerce companies can gradually increase and enrich capabilities as well as pioneer new capabilities to transfer logistics and capital flows into information which can be accurately delivered to customers. Therefore, the services provided by cross-border e-commerce can be made more reliable and deserving of customer trust.

5.3. Osell Information Flow, Capital Flow and Logistics Flow Integration

The supply chain consists of several enterprises, with logistics flowing from upstream suppliers to downstream retailers, funds flowing from downstream to upstream, and information flowing in both directions. An effective interaction between the three components constitutes a complete e-commerce model [86]. Osell’s information flows through their networked electronic platform, logistics connects Chinese and overseas customers through FBO services, and the funds flow through Osell’s Dino Wallet and financial services. When consumers need to buy goods, they first need information about the goods. Through the Osell electronic platform, customers can find information on the products they need. Subsequently, they can purchase goods and pay through Osell’s trading platform.

Consumer transaction information, such as the type and quantity of goods purchased, is passed on to logistics. Funds for purchasing goods flow to Osell’s trading fund transit platform. After the consumer’s order is confirmed, the goods are sent to the country’s domestic warehouse first by Osell’s logistics partner, after which they are sent through international logistics to the destination country, then, they are sent to Osell’s overseas warehouse for sorting and are delivered to consumers by local Osell logistics partners. During the delivery of goods, the logistics information of the goods is provided to consumers through an electronic platform. When the goods arrive, the customer’s confirmation receipt information is sent to the Osell trading platform. Finally, after the trading platform receives the confirmation information, the reimbursement for the goods is paid to the merchant’s account.

Through the above process, we can infer that the direction of information flow is bidirectional. It provides customers with goods and logistics information as well as merchants with purchase and address information. The flow of logistics occurs from merchants to customers. The money is directed from the customer to the merchant. Information
flow is the basis of logistics and ensures the accuracy of the logistics flow. Logistics is the foundation of capital flows. Only when goods are accurately delivered by logistics do funds flow from customers to merchants.

Information flow provides accurate consumer information for logistics, which provides customers with logistics information and enables logistics to deliver goods accurately. At the same time, information flow also provides consumers with reliable commodity information and facilitates the flow of funds. The role of logistics and information flow centres on the idea that information flow provides logistics information to ensure the accurate delivery of logistics. Simultaneously, logistics can also provide feedback on information during the delivery of goods.

P6: Through bundled information flow, logistics, and capital flow, cross-border e-commerce companies can provide customers with information integration, increase the credibility of cross-border e-commerce, and facilitate more convenient customs clearance, reliable logistics, and secure transaction services.

5.4. The Relationship between Supply Chain Service Capabilities and Supply Chain Relationship Quality

Cross-border e-commerce involves logistics, information exchange, and financial exchange. Inevitably, when these three streams are exchanged, there are risks related to human or non-human reasons. There are two main risks for Osell: a credit risk and a policy risk. For credit risk issues, Osell specifically offers risk control services to its customers. Osell can utilise the electronic platform to evaluate the credit rating of the customer based on the customer’s transaction information and bank records and record this in the system.

By controlling credit risk, Osell protects information flow and capital flow. The quality of logistics can be guaranteed by ensuring the correct exchange between information and capital flows. Osell has established a policy risk research centre that studies the risks caused by different countries’ policies and legislation. At the same time, this research centre also supervises possible political changes at home and abroad, as well as any potential problems. Through research on national policies, Osell can obtain information on logistics and capital flows such as the taxation of goods or restrictions on the type of goods shipped. In this way, Osell can manage and integrate its logistics chain to obtain more revenue.

In terms of consumer satisfaction, Osell considers ‘customer value as the top priority’ and has established a customer service centre to provide their customers with 24 h a day, 7 days a week service. Furthermore, through Osell customer evaluations platforms such as the third-party authoritative evaluation site, ‘Sitejabber’, some problems with the company’s logistics can be known. Through the collection of information from the customer service centre and feedback from the electronic platform, Osell can improve its logistics to achieve better services.

P7: The supply chain service provided by cross-border e-commerce companies is more inclined to mobilise and coordinate the capabilities needed to provide one-on-one service and can provide accurate advice for each customer’s needs and problems. Therefore, e-commerce companies can deploy quality supply chain services to consumers.

5.5. Osell Value Proposition and Products or Services

The value proposition is the value that the customer obtains from the products and services provided by the company, reflecting the actual meaning of the company to the customer [87]. Products and services can be offered by businesses to customers.

In terms of information flow, Osell provides cloud passwords, cloud storage, electronic trading platforms, and public service platforms to ensure the circulation of information. Through these resources, Osell provides customers with market analysis information to assist company management plans, predict risks, and provide after-sales service and data storage activities. To ensure the smooth progress of these activities, Osell requires network technology support, information processing companies, and governments as partners. Osell allows customers to collect and analyse financial information in the market through professional financial services to reduce exchange rate fluctuations and traders’ risks.
through macroeconomic policy adjustments. At the same time, Osell’s financial services department helps companies’ operations and development by providing risk assessments that can be utilised by companies that are unable to obtain loans from banks. The cross-border B2B brand and trade centre platform provide Osell’s customers with information management services such as data management, data visualisation, and market demand analysis, and helps merchants improve their products to better meet market demands. Osell’s product, SilkChain, guarantees the authenticity of information and increases trust between the parties in the transaction.

P8: The value proposition of cross-border e-commerce companies is to realise their own business interests through the services or products provided by customers in information, logistics, and capital flows.

5.6. Osell Key Resources, Key Activities, and Key Partners

A company’s capabilities and resources for executing business models are known as key resources. The key activities defines elements of a company’s important business that makes the business model operational, and the key partners describes the company’s collaborative network of systems with other organisations and companies that provide value to the company through commercialisation [87].

The key resources required by Osell for logistics include overseas warehouses, domestic warehouses, and overseas exhibition warehouses. The main activity provided by Osell in logistics is the FBO one-stop customs clearance service, which involves product certification, storage, shipment declaration, inspection and quarantine, international logistics, customs declaration, taxation, overseas logistics, sorting, and loading and unloading activities. Because the goods are transported from one country to another, they are inspected by customs and sent to the destination by local logistics. Thus, the key partners in logistics are logistics providers, customs inspectors, and the government. For these reasons, the logistics service provided by Osell (FBO) include international transportation, merchandise clearance services, and merchandise sorting in overseas warehouses. Through FBO services, Osell assists companies in reducing the difficulty of exporting, simplifying the passage of goods through customs processes, ensuring the safety of goods in the logistics process, accurately delivering goods to consumers, and providing convenient logistics services for Chinese SMEs. Key resources for cross-border e-commerce companies, include domestic and overseas warehouses and professional financial service departments.

In terms of capital flow, the main activities include services provided by Osell’s professional financial services department, Dino Wallet, and Bitcoin payments. Osell provides Bitcoin payment services to customers and launched its own trading platform product, Dino Wallet. Bitcoin payments, based on blockchain technology, ensure the security of the flow of funds between the parties to the transaction. The availability of Dino Wallet ensures the security of customer transactions while reducing the cost to the customer. The loan service provided by the Osell financial team for enterprises also ensures the flow of funds when SMEs purchase resources. The financial services department allows customers to export products to provide tax rebate activities, perform risk assessments, and accept loan activities for Osell customers. Dino Wallet and Bitcoin payments provide financial product settlements and transaction payment settlement activities. To ensure the regular operation of these activities, Osell requires key partners such as governments and banking institutions. Hence, the key activities in creating value include financial services and one-stop customs clearance services. The key partners include logistics providers, customs agencies, and the government.

6. Conclusions

Given that e-commerce has gradually become a common means of conducting business in terms of enabling a business environment with new technologies and government policies, such as China’s B&R initiative, the intersection of SCM and e-commerce research has received much attention. A detailed understanding of the business models that enable
enterprises to manage information flow, logistics, and capital flow in their supply chains so as to achieve their goals in cross-border e-commerce raises interesting questions that relate to the business innovation of many enterprises, especially in Asia-Pacific countries, where there has been a high growth in various high-technology and knowledge-intensive sectors.

This study attempts to provide insights into how supply chain resources can be structured and bundled to generate capabilities for the service business model of cross-border e-commerce. The analysis delineates the various types of services that a cross-border e-commerce company can offer to customers through the capabilities of its supply chain’s structured and bundled resource flows of information, logistics, and capital. Subsequently, this study has contributed to the literature through the development of several propositions developed.

At the level of the supply chain, this study suggests that cross-border e-commerce companies can generate capabilities from information flow to identify and manage target customers and respond promptly to market changes. It emphasises that the use of enabling information technology such as blockchain can increase trust between companies and shorten the transaction time required for conducting business. Additionally, it reveals that service capabilities can be generated by the bundled flow of information and logistics-related resources to deliver goods to the market and provide quick and accurate feedback to companies. Moreover, it confirms the bundled flow of logistics and information to customers provides a secure space for business transactions in terms of information, and creates opportunities for different methods of delivery. The study shows that, as a result of structuring and bundling information flow, logistics, and capital flow, cross-border e-commerce companies in the supply chain can provide reliable logistics, secure transactional services, and expedite customs clearance. As such, they can increase their credibility, be more reliable, and prove to be deserving of customer trust. Such companies are incentivised to provide quality-customised supply chain services that meet individual expectations.

With regard to companies, including Osell, this research supports previous studies that argue that the capabilities of a company are enabled by processes and resources. Therefore, the potential for cross-border e-commerce companies to achieve their business goals or objectives relies on the services or products provided by customers in information, logistics, and capital flows.

Some of the many practical implications for cross-border e-commerce companies presented in this paper are structured insights into the various kinds of services and capabilities that can be generated from resources related to information flow, logistics flow, and capital flow to meet customer and consumer demands. This can inform companies on the best practices for achieving their goals. The case of Osell’s integrating resources and system operations to establish a ‘cross-border e-commerce online and offline service ecosystem’ through the ‘three-in-one’ model can provide many lessons for other companies. Companies in Asia-Pacific countries, particularly in emerging economies such as Malaysia and Singapore, can draw much insight from Osell’s case. In addition, this study might prove to be instrumental in informing policymakers to support the growth of cross-border e-commerce.

Despite the level of thoroughness and the perspectives included, in this study, it presents some limitations. Having analysed a single case, this study cannot be generalised. It may be interesting for future research to consider multiple case studies or the development of similar business innovations in other Asia-Pacific countries or emerging economies. Future studies should further validate the propositions developed in this study.

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Appendix A. The Interview Questions

1. General Situation
   1.1. What is the business model of the company? What is the business scope and core business? What is the development history of the company? What kind of business will be developed in the future?
   1.2. What is the core competitiveness of the company? (cooperation with suppliers, self-built platforms, systems, low prices, channels, service capabilities, good relationship with the government?) What are their advantages compared with other enterprises (such as AliExpress, Zongteng, BriArt, etc.)?

2. Supply Chain Service Resources
   2.1. What are the core elements of the cross-border e-commerce supply chain? (product, process, partner, geographic location, customer). What is the relationship between the resource flows?
   2.2. In terms of system development, has the system been built by a third party or internally? Does each department have an independent system, or does it exist in a system? What systems have been developed? What are the basic and characteristic functions? What specific problems can be solved?
   2.3. As big data drives the supply chain, which key data will the company collect and analyze at present? (C2B2C) Is data collection and analysis performed by the technology development department, supply chain management department or external organizations?

3. Supply Chain Service Capabilities
   3.1. How can the design of supply chain logistics information and capital flow be optimized? How can customer demand management, such as a purchase forecast analysis, logistics and warehousing be performed?
   3.2. How can logistics capacity be developed? Which aspects should be considered when choosing self-built or out-sourcing logistics? How can logistics visualization and perceptible application (by intelligent robot, VR, camera, etc.) be realised. Should an overseas warehouse be built? What is the best method for selecting overseas warehouse? What are the functions of an overseas warehouse? How is operation supervision conducted? How are long tail goods and returns managed?
   3.3. Are cross-border e-commerce financial services provided? What are the financial products (customized for small and medium-sized cross-border e-commerce sellers, precision risk control and high value-added services)? What is the process? What is the current situation and future development of supply chain finance?

4. Supply Chain Relationship Quality
   4.1. Is there a commitment to customers? What measures can increase the trust of customers? Do you take the interests of customers into account when making decisions?
   4.2. Is there a dedicated customer service department? How is the overall customer satisfaction? Which business has the highest customer satisfaction and which business has the lowest? Why?
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