



Print ISSN: 1738-3110 / Online ISSN 2093-7717
JDS website: <http://www.jds.or.kr/>
<http://dx.doi.org/10.15722/jds.20.12.202212.59>

G-ASPOO-L: The Technopreneurship-Based Supply Chain Management Model for Souvenirs MSMEs to Reach Customer Value Creation

Edi NOERSASONGKO¹, Mila SARTIKA², Diana AQMALA^{3*}, Zainal Arifin HASIBUAN⁴

Received: October 19, 2022. Revised: November 04, 2022. Accepted: December 05, 2022.

Abstract

Purpose: The purpose of this research is to identify and design a model for the integration between marketing and supply chain management (SCM) of technopreneurship-based souvenirs MSMEs to fulfil customer value creation. **Research design, data and methodology:** This research method uses the system development life cycle method. This study draws its insights and conclusions from a literature review in several fields followed by an interactive research approach that helps identify, validate, and implement a theoretical framework so that the modelling results can be adopted in applicative manner for souvenir MSMEs. **Result:** Implementing the "G-ASPOO-L" supply chain management integration model based on technopreneurship to fulfil value creation in the 5.0 society era created three perspectives: an inter-functional perspective, a process perspective, and an integrated business concept perspective. The supply chain management involves enterprise integration, strategic customer integration, strategic supplier integration, and marketing strategy integration. **Conclusion:** The proposed model framework leads to managerial problems of supply chain management strategy, which urgently requires an interaction approach that challenges the traditional view of demand creation and implementation of supply chain management to fulfil value creation. This research leverages existing knowledge and advances our understanding of the strategic integration issues companies face in digital-based competition.

Keywords : Supply Chain Management, Integration, Distribution Strategy, Souvenir, Technopreneurship

JEL Classification Code: C4, D46, L11, L21, O32

1. Introduction

A network-based business model has evolved over the past few decades as companies have transitioned from a

hierarchical, vertically integrated format to a much looser, even virtual, network of partnerships with key suppliers. Given that a network is a series of “nodes” connected by “links”, it is vital that these connections be closely

* The authors would like to thank the willingness of officials at the Regional Personnel Agency and Souvenir MSMEs Association as informants. The authors also would like to thank the Republic of Indonesia Ministry of Education, Culture, Research and Technology through the Directorate General of Research and Community Service which has funded research to completion.

1 First Author. Rector, Faculty of Economics and Business, Universitas Dian Nuswantoro, Indonesia. Email: edi.noersasongko@dsn.dinus.ac.id

2 Second Author. Lecturer, Faculty of Economics and Business, Universitas Dian Nuswantoro, Indonesia. Email: mila.sartika@dsn.dinus.ac.id

3 Corresponding Author and Third Author. Assistant Professor, Faculty of Economics and Business, Universitas Dian Nuswantoro, Indonesia. Email: diana.aqmal@gmail.com

4 Fourth Author. Professor, Faculty of Computer Science, Universitas Dian Nuswantoro, Indonesia. Email: zhasibua@dsn.dinus.ac.id

© Copyright: The Author(s)

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

managed. As a result of the general trend within organizations to outsource those activities where they perceive they lack sustainable competitive advantage, the reliance on the broader network inevitably increases. Thus, if, for whatever reason, the network fails to act in concert, then the potential risks for the focal firm may be considerable.

Therefore, in network-based business models, integrating strategic decisions across the network from the customer end to the supplier end is a challenging yet crucial task. It can best be conceived as the integration of marketing strategies and supply chain strategies. Marketing strategy concerns customer segmentation, targeting and positioning based on product, price, distribution and promotion decisions. Supply chain strategies comprise a focal firm's behavioural orientation towards collaborative partners in the chain or network and include process configurations across the critical supply chain processes. As emphasized recently by Chams-Anturi et al. (2022), supply chain strategies are concerned with optimizing cross-organizational activities and depend on close interaction with in-company marketing and sales resources, processes and skills. Firm-level marketing strategies must be "infused" into cross-organizational business processes to ensure an end customer and market perspective across the companies within the supply chain network.

Recent business developments, together with global competition, have underscored the need for organisations to restructure their traditional management approaches. It has been widely accepted that the move forward for businesses is to compete not among each other but rather among supply chains. Conceptually, a supply chain reflects a linked set of resources and processes associated with moving goods from the sourcing of raw material stage through to the end-user. Along this line of discussion, proponents of supply chain management (SCM) recognise that SCM practices are a basis for enhancing organisational performance (Msimangira & Venkatraman, 2014). Extant literature also suggests that besides improving firm performance, SCM practices support value creation. Through value creation, firms can gain a competitive advantage. To evaluate SCM performance, firms need to develop or identify appropriate measures. It is generally difficult to quantify SCM benefits.

However, researchers tend to agree that effective SCM can be evaluated in terms of production, delivery and distribution cost savings, improved synergies, increased competitiveness, higher productivity and profitability. Similarly, Leroy et al. (2013) identified reduced costs of operation, improved inventory, lead times and customer satisfaction as the most critical objectives of implementing SCM practices. Many researchers attribute these beneficial results to specific SCM practices. Nowadays, competitiveness is a significant issue in business to

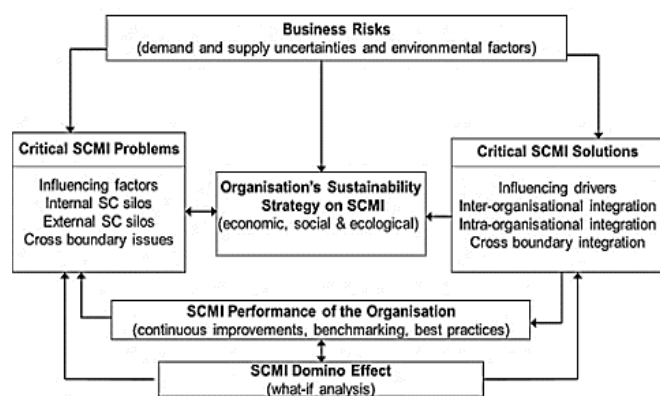
overcome market competition. Competition is a factor that affects the business environment in any industry. The concept of competitiveness is comprehensive, applied both at a macro-economic and micro-economic level in comparison with other firms in the industry, national and international level.

Understanding the environment in which a company operates is a vital part of strategic planning. Therefore, measuring competitive capabilities performance seems an excellent way to describe the manufacturing competitiveness of a company. There is high competition between companies in the industry. To achieve profit, companies increase supply chain efficiency and reduce costs. Therefore, companies must integrate their processes and compare them with other companies. This way, they can analyze, improve, benchmark processes, evaluate process analysis, and pinpoint performance measurements. These performance measurements can easily be measured and assessed. MSMEs have a substantial contribution to reaching 64.2 million with a contribution to Gross Domestic Product of 61.07 percent. MSMEs can absorb 97 percent of the total workforce and collect up to 60.42 percent of total investment in Indonesia (Demirkiran & Öztürkoğlu, 2022).

In addition, MSMEs were the strongest economic sector to survive the economic crisis that hit Indonesia in 1998 and also proven to survive during the Covid-19 pandemic. On the other hand, attention to promoting MSMEs has not been optimal. For example, the availability of infrastructure (roads, telecommunications, electricity) is still limited, the availability of capital is difficult to access, and assistance from experts to improve product quality is still minimal. As a result, the productivity of MSMEs is not optimal. One of the efforts to improve the performance of MSMEs is to ensure the supply chain from raw materials to products, besides continuing marketing. To realize the performance of MSMEs to increase technopreneurship-based interventions are needed. The system in question will integrate raw materials, finished products, and marketing. It is essential to revitalize MSMEs, especially in using ICT, with several objectives, including creating a source of competitive advantage, then creating better marketing and improving customer service (Power, 2015).

The technopreneurship-based system is expected to overcome the problems that MSMEs often face. The issues include: MSMEs have difficulty providing raw materials because information about how many raw materials are available to farmers or at large suppliers (middlemen) is still limited. In addition, information about the price of raw materials is still unclear, so sometimes there are price differences in each part of the supply chain in MSMEs, which ultimately causes the prices of MSMEs products to become expensive, which has an impact on the purchasing power of the product. Therefore, the role of universities is

needed to support the sustainability of MSMEs by creating a system that can optimize supply chain management performance. The purpose of making the system in this study are: 1) Ensure that the raw materials needed by MSMEs are not interrupted because with the system, it is expected that it can balance the supply of raw materials and consumer demand for products; 2) Optimizing the supply chain in MSMEs, with an integrated system; 3) Turn on the supply chain nodes to create a digital ecosystem for souvenir MSMEs (Ngetich et al., 2022).



Source: Ngetich et al. (2022)

Figure 1: The current Integrated SCM Model for Value Creation

Existing research addressing the interface between marketing and supply chain management (SCM) within both fields emphasizes the mutual benefits of a close alignment. It has been suggested that SCM can leverage marketing strategies and a firm's market orientation or facilitate marketing strategy in global supply chain contexts and create superior customer value. Initial empirical evidence suggests that a firm's supply chain strategy positively affects marketing performance and mediates the relationship between market orientation and financial and marketing success (Kumar & Reinartz, 2016). Similarly, Mishra et al. (2016) discuss some of the key theoretical constructs in both disciplines and conclude that the marketing concept, market orientation and relationship marketing are concepts which are inextricably linked with SCM. At an operational level, studies investigating the impact of marketing activities such as consumer price discounts or wholesale trade deals on the supply chain have illustrated the positive performance effects of a coordinated approach between marketing and SCM. Although the link between marketing and SCM has been addressed before, there is no framework that conceptualizes this interface in a supply chain network context from a strategy perspective.

Forslund and Mattsson (2021) considered SCM practices from the perspective of planning, JIT and delivery.

Their study aimed to examine the effect of information sharing, supply chain dynamism and SCM practices on performance. A survey by Forslund and Mattsson (2021) highlighted planning systems and the internet as components of SCM practices and previously identified practices (information sharing, long-term relationships, supply and distribution network structure). Along this line of discussion, Nurhaida and Pratama (2020) claims that information sharing is one of three dimensions of cooperation needed between the buyer and the seller. Hence, information sharing plays a crucial intermediate role in SCM practices. Despite these findings, studies on SCM practices within the Malaysian context are limited, particularly from a value creation perspective. From a broader perspective, Kumar et al. (2018) studied SCM practices of Malaysian companies from a healthcare supply chain point of view. Their study focused on inventory management of medicines from a wholesaler to a chain of clinics. A vendor-managed inventory system should be employed as an improvement strategy. On the other hand, the SCM practices as applied by consumer goods firms in Johor Bahru, Malaysia. They highlighted that SCM practices regarding strategic supplier partnership, customer relationships and information sharing are related to supply chain responsiveness and competitive advantage. From the above literature, it can conclude that various dimensions have been employed to describe SCM practices (Jääskeläinen, 2018).

Based on the problem background, this paper aims to close this gap by developing a technopreneurship-based integrated framework for managing aligned marketing and supply chain management strategies to reach customer value creation in 5.0 society era. It builds on the current body of knowledge on the interface and moves it onto a strategic level. Strategies are defined as the directional statements that describe the array of choices a company makes to limit and deliver value creation to customer segment. The research urgency is organized as follows: first, review and structure the literature addressing interplay between integrated marketing and SCM model from different perspectives. Second, we provide a strategic framework comprising four integration levels and identify the managerial issues within and between each group. Third, we close the framework managerial implications and highlight new directions.

2. Literature Review

The lack of digital tools can create a digital divide between large and small businesses and urban and rural industries. The most effective strategy to maintain the stability of raw materials is to use supply chain management.

MSMEs must ensure that the products produced can survive to meet consumer needs, limiting their activities and responsibilities only to the production process and the release of products from the warehouse. The MSMEs must be fully responsible for the entire production process, starting from the acquisition of raw materials, the production process, and then becoming a finished product that it will send to consumers through the distribution process (Putiithanarak et al., 2022).

The era of society 5.0 is believed to substantially improve the economy and quality of life on all lines but depends on the competitive and positioning strategies applied. Differentiation is a marked difference with nothing in common with other markets/markets within a company or institution, which provides reasons for consumers to buy products or use the company's services. Based on the findings of Hasan et al. (2022), they classify barriers to internationalization into two types, including obstacles that hinder export initiation and barriers that impede the internationalization process. Factors affecting the start of exports relate to internal barriers such as inadequate finance and inadequate information about potential customers, competitors, and foreign business practices. However, in the internationalization process, it identified three categories of barriers, namely (1) comparative market distance, differences in product use and cultural differences; (2) political risk, associated with home and host country interventions; and (3) commercial risks, such as delivery delays.

2.1. Value Creation

The New wave marketing era is an era where companies can collaborate with consumers on product development that is dynamic, interactive and based on multiple sources where there are processes related to value creation that is no longer just coordinating everything related to quality, cost and delivery but must be done collaboratively. The success of new products is influenced by product quality, market conditions, selection of target customers, and product launch time and market conditions. In the product development process in the new wave marketing era, the company tries to create experts who can identify and produce quality products (Hong & Kang, 2022). If the company has carried out the creation process well, then the value of the product will be better than the resulting product. Value creation is a way of creating, communicating and delivering value identified as the primary activity of any company. Value is "the capacity of goods, services, or activities to satisfy needs or provide benefits to a person or legal entity".

The measurement of value creation includes customer participation in helping companies improve customer status, customer participation in assisting companies to increase product prestige, customer participation in helping

companies improve their image, and customer participation in assisting companies to enhance customer self-image (Aqmala et al., 2021).

2.2. Supply Chain Management

Supply Chain Management is a set of interrelated activities and decisions to efficiently integrate suppliers, manufacturers, warehouses, transportation services, retailers and consumers. The process can distribute goods and services in the right amount, time and location to minimize costs to meet consumer needs. There is a difference between the supply chain management concept and the traditional logistics concept. Logistics generally refers to the activities that occur within an organization, while supply chain refers to a network of several organizations that work together and coordinate to meet consumer needs. Another difference is that logistics is more focused on procurement, distribution, maintenance and inventory management. Meanwhile, besides being carried out in logistics, the focus of supply chain management is also several other activities, including marketing, new product development, finance and consumer services. Effective supply chain management requires simultaneous effects in terms of customer service levels and the internal operating efficiencies of companies in a supply chain. It must consider the level of customer service, the level of order fulfilment, timeliness of delivery and the rate of product returns by consumers for various reasons. Meanwhile, in terms of internal efficiency, does an organization in a supply chain get good returns from investing in inventory and other assets and find ways to reduce operating and sales expenses. Or in other words, how to manage the supply chain to be responsive and efficient (Abdelilah et al., 2018).

Successful supply chain management requires an integrated system. Each unit in the supply chain becomes a single unit and does not stand alone, as with traditional supply chains. Operations in the supply chain require a continuous flow of information to produce good products at the right time according to consumer needs. In this case, the consumer becomes the focus of every operation (Kumar, 2020). An integrated supply chain, there are the following processes:

1. Customer Relationship Management

Managing good relations with consumers, starting with identifying who our customers are, their needs, and what specifications are desired by consumers.

2. Customer Service Management

Serves as an information centre for consumers, providing the information needed in real time regarding delivery schedules, product availability, product availability, prices and others.

3. Demand Management

Demand management balances consumer needs with the company's capacity to provide the required product or service.

4. Customer Order Fulfillment

The process of fulfilling consumer demands on time, even faster than agreed with the minimum fulfilment costs, requires good coordination from every supply chain member.

5. Manufacturing Flow Management

The production process strives to provide the required product with a minimum inventory level. This requires adequate preparation and suitability of demand with production capacity.

6. Product Development and Commercialization

New product development requires good cooperation with suppliers to ensure the availability of the required raw materials.

7. Returns

Management of return products is a necessary process and can be used as one of the company's competitive advantages.

2.3. Process Perspective

Whereas the inter-functional perspective often conceptualizes the interplay from an interdepartmental stance and focuses on relationships between organizational units, the process perspective is detached from organizational structures. By looking at business activities traditionally associated with marketing and SCM, the outlook is also extended to include customers and suppliers within the supply chain. In the SCM field, process integration within and between organizations in the supply chain is a key characteristic of the conceptual domain. From a marketing perspective, processes are seen as an element of the organizational context in which marketing is embedded and should be influenced to maximize customer value creation. Because of their cross-functional nature, processes cannot always be easily assigned to either marketing or SCM. The most widely held distinction, which still leaves room for interpretation, is between demand creation processes as marketing and demand fulfilment processes as supply chain processes. Integrating demand creation and fulfilment processes is the key to delivering products that convey superior customer value while deploying resources efficiently. Exploring the interdependencies between the processes should lead to marketplace success rather than focusing on individual process optimization (Eriksson et al., 2017).

2.4. Integrated Business Concepts

In the last ten years, several business concepts have emerged that build on an integrated perspective between

marketing and SCM; among them, quick response (QR), agile SCM, and the most recently introduced demand chain management (DCM) approach. All three concepts aim to bridge the gap between the supply chain and the market by increasing the supply chain's response time, flexibility or differentiated customer focus. The QR movement began in the North American textile and apparel industries and was introduced as a competitive response to low-cost competition from offshore manufacturers. DCM can make demand-driven decisions at the last moment through fast exchanges of demand information between retailers, apparel manufacturers, and textile producers. Hence, collaboration, information exchange and response time were the fundamentals of customer orientation within the supply chain (Trienekens & Wognum, 2013).

DCM is still evolving and lacks a consensus on its defining characteristics. Some proponents define it as a set of practices aimed at managing the whole supply chain, from the end customer and working backwards to a supplier, others criticize this broad understanding which implies that the term demand chain could effectively replace the supply chain. Instead, they recommend restricting the concept to demand chains for products with innovative demand, where supply chain efficiency is traded off for customer service (Üstündağ & Urgan, 2020).

Regardless, the idea of DCM stresses the need to link the supply chain to the characteristics of the market. It builds on earlier realizations that as customers become increasingly sophisticated and demanding, it is unlikely that needs can be represented by one segment and fulfilled by one supply chain strategy. Closely aligned demand creation and fulfilment processes enable companies to understand current and future customer expectations and to develop available response alternatives to meet these. Thus, the concept supports the notion of differentiated or adaptive supply chains comprising multiple pipelines aligned with the firm's defined customer segments (Malsinghe et al., 2022).

2.5. Strategy Development in Supply Chain Management Contexts

Investigating strategic integration links activities from marketing and SCM to customer value creation. The strategic integration links activities across organizations within the supply chain. In other words, the supply chain parties are "strategically" and "operationally" integrated. This prompts the question about the suitable unit of analysis. While we agree with the conceptualization of SCM at a system level, we still suggest that the focal firm in the supply chain or network is the appropriate unit of analysis. We know that only one contribution captures supply chain strategizing as "collective strategizing processes" at a system level. However, in line with prior work, our research

suggests that individual firms develop strategies which are affected by the relationships with external partners in the supply chain context. The strategy is a set of defined processes for strategy implementation. Thus, in line with the customer value theory of the firm, the framework highlights the importance of a process-focused organization for customer value creation (Bag et al., 2018).

2.6. Previous Studies

To support the success of G-ASPOO-L: the technopreneurship-based supply chain management model research, so this is several previous conceptual results, as seen in table 1.

Table 1: The Previous Studies

No	Authors	Title	Result
1	Kumar et al. (2018)	Measurement of Effectiveness of Flexibility in Sustainable Supply Chain	MSMEs have not been too proactive in implementing supply chain management. These organizations face many problems coordinating their operations with other supply chain members. MSMEs face many obstacles in the export sector due to a lack of resources and poor innovative capabilities.
2	Abdelillah et al. (2018)	Flexibility and Agility: Evolution and Relationship	The competition in the global market requires organizations to install digital technology and frameworks in their existing physical supply chains. Digitizing supply chain methods will optimize the organization to keep up with the latest consumer trends successful.
3	Elgazzar et al. (2019)	Key Characteristics For Designing A Supply Chain Performance Measurement System	The information sharing, informal contracts and trust between MSMEs and their suppliers can positively affect supply chain performance to build better information sharing, informal contracts and trust as a bottom line for economic and non-economic growth of businesses.

Note: Authors (2022)

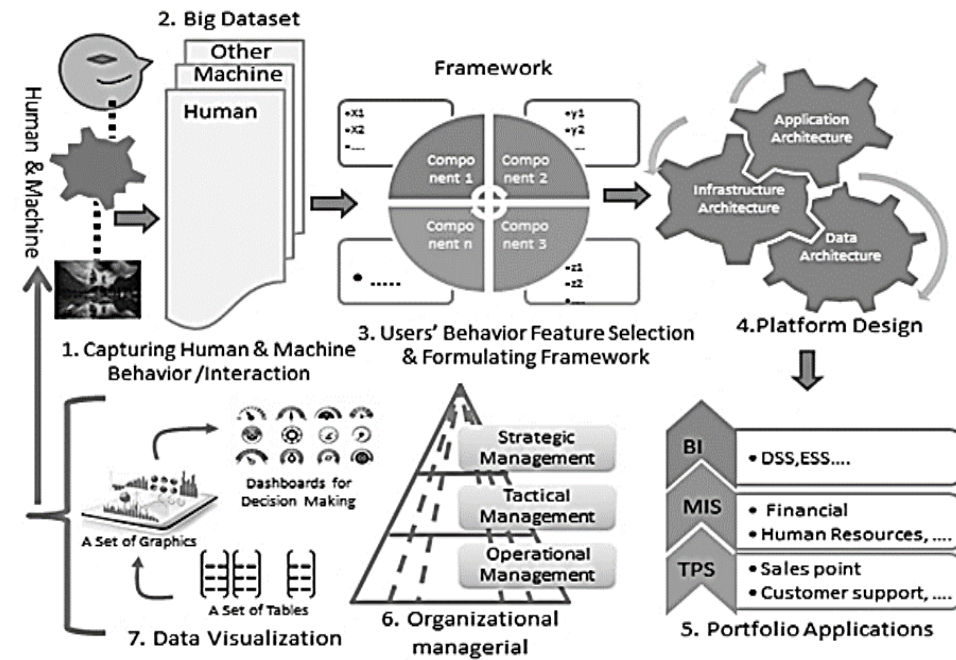


Figure 2: Conceptual Framework

3. Research Methods and Materials

A qualitative approach is used in this study to examine the integrated technopreneurship-based supply chain

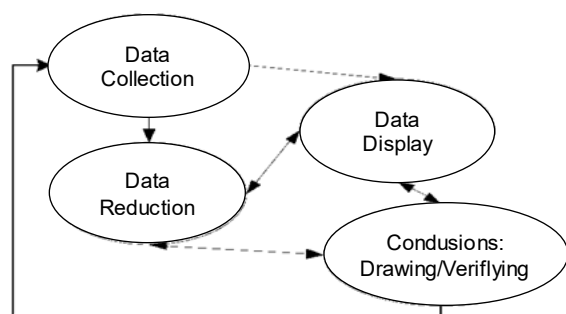
management model of souvenir MSMEs (Chams-Anturi et al., 2022). Thus, given that the nature of value-creating supply chain management practices among MSMEs is largely unexplored, the qualitative method is perceived to be the most appropriate research strategy to be adopted.

Therefore, the selected MSMEs provided a good illustration of the critical issues that may reflect implementation of the integrated technopreneurship-based supply chain management model of souvenir MSMEs. The type of data is primary data that get answers directly from the main informant or resource person. Data collection techniques use in-depth interviews. The sampling design uses non-probability sampling (snowball), a method used to identify, select, and take samples in a continuous network or chain of relationships.

The sample must-have criteria represent MSMEs in each cluster, business legality, and broad links connecting suppliers and distributors/customers. In addition, the sample of this study is also the association of MSMEs souvenirs and the government. This research addressed all issues mainly through structured interviews with the key personnel of the MSMEs who have been actively involved in the implementation of supply chain management.

This research examined other sources of evidence, including public documentation such as documents from internet-enabled MSMEs social media and annual reports. The qualitative data analysis used pattern matching and coding of constructs to analyze the interview transcriptions and archival data for consistent patterns and themes relevant to the study. The data obtained will be explored through data collection, reduction, presentation, and conclusion.

The questions asked in the in-depth interview process included: (1) How did you learn about technopreneurship-based supply chain management practices for value creation?, (2) What did you do when you received information about technopreneurship-based supply chain management practices for value creation? Do you immediately apply it?, (3) What are the main advantages that make you interested in implementing a technopreneurship-based supply chain management scheme for value creation?, (4) What are the steps you take? Did you do it yourself or use a vendor? (5) What are the advantages of implementing technopreneurship-based supply chain management practices for value creation?



Source: Chams-Anturi et al. (2022)

Figure 3: Qualitative Research Method

4. Results and Discussion

4.1. Readiness of Souvenir MSMEs to Face 5.0 Society Era

Several provinces in Indonesia, such as Sumatra, DKI Jakarta, Java, and Bali, are Indonesian assets that have implemented the industrial revolution 4.0 scheme for almost nine years and are still proliferating. The government continues to strive to improve the quality of supply chain management practices, especially souvenir SMEs, through educational support, mentoring, and the addition of sophisticated infrastructure. Currently, the ability of the souvenir MSMEs business process is still limited because other entities have the required data, so there is a need for collaboration to create safer and more effective supply chain management practices.

The government must provide regulations in each region so that souvenir SMEs can produce highly competitive products and have high customer value. According to Ryu (2022), there are three benefits of digital platforms based on technopreneurship in the era of society 5.0 that must be implemented, namely: (1) Innovations that include new technopreneurship-based supply chain management practices in souvenir businesses; (2) Inclusiveness through a digital platform based on technopreneurship means that all types of services can be easily provided and can reach many markets in various regions; (3) Efficiency shown by the development of new supply chain management practice based on technopreneurship which automatically business processes will become more effective and efficient both in terms of manufacturing and marketing.

The challenges of souvenir SMEs facing the era of society 5.0 include: (1) The problem of controlling the digital economy, which has an impact on the behaviour of people who used to shop at retail stores, are now turning to online shopping on a massive scale. The socio-cultural aspects that are getting used to this need special attention so that there are not many physical retail stores that fall; (2) The problem of inequality caused by current work can be done with an automated system, so it is necessary to prepare skills for the future and relatively large capital; (3) The issue of unfair competition when the supply chain management practice is not controlled so that MSMEs cannot determine the most appropriate distribution channel to meet customer value creation in the 5.0 society era, so many improvements in the technological aspect because it is the key to determine the success of technopreneurship-based supply chain management practices.

Table 2: Income Turnover of Souvenir MSMEs for 2018-2021 Period (IDR)

Comodity	2018	2019	2020	2021
Handy Craft	32,531,600,000	31,513,750,000	30,495,900,000	29,478,050,000
Batik	1,310,995,700	1,320,600,400	1,330,205,100	1,339,809,800
Beverages	702,550,000	680,100,000	657,650,000	635,200,000
Food	19,858,674,400	23,409,677,300	26,960,680,200	30,511,683,100
Fashion	1,011,811,380	1,155,646,610	1,299,481,840	1,443,317,070
Convection	214,001,400	203,502,800	193,004,200	182,505,600

Note: To et al. (2021), modified by authors

4.2. Overview of the "G-ASPOO-L" Technopreneurship-Based Supply Chain Management Model for Souvenirs MSMEs

The digitalization program builds a technology-based industry that is globally competitive through the acceleration of industry 4.0 and society 5.0, which is marked by the application of the "G-ASPOO-L" Technopreneurship-Based Supply Chain Management Model for Souvenirs MSMEs as a road map and strategy to adapt to the current digital era. The "G-ASPOO-L" model can provide a clear direction for the movement of technopreneurship-based supply chain management schemes according to the needs of the souvenir industry to create high customer value. The preparation of this road map needs to involve various relevant stakeholders ranging from government agencies, MSME associations, industry associations, technology providers, and research and educational institutions. Applying the "G-ASPOO-L" model will undoubtedly be successful and on target through all parties' commitment and active participation. The souvenir industry focuses on implementing the "G-ASPOO-L" model, namely packaged food and beverage processing. This industry is expected to become the backbone and make a significant economic contribution to the economic recovery and increase in regional tourism. This will be a

clear example of a scheme that encourages new job creation and investment based on new technologies. Furthermore, the souvenir MSME ecosystem is expected to harmonize the rules and policies that promote the government in other provinces to adopt the "G-ASPOO-L" model so that the business performance of the souvenir MSME business can increase.

The main advantage of the "G-ASPOO-L" model is the complexity of technopreneurship-based supply chain management practices that facilitate MSMEs with souvenirs to obtain suppliers according to their needs, and their availability is always maintained. In addition, this model also enables the best distribution process so that souvenir MSME products can be delivered to customers appropriately, thereby creating high customer value. The entire practice process of the "G-ASPOO-L" model is carried out through a sophisticated technological infrastructure to facilitate access to data and information. This model significantly provides security and accuracy in the transaction process because "G-ASPOO-L" can control all operational activities through a computerized system with various advanced features such as encryption security, ease of use of applications, ease of access, and ease of reporting. The rapid increase in technology infrastructure has also become one of the key factors in opening access to information for MSMEs for souvenirs to create high customer value.

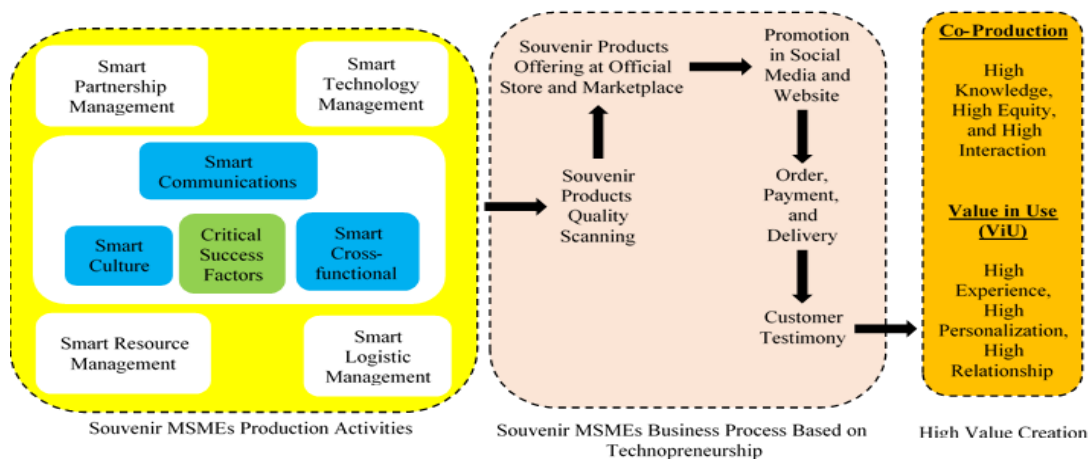


Figure 4: The "G-ASPOO-L" Technopreneurship-Based Supply Chain Management Model for Souvenirs MSMEs

In Figure 4, logistics practice is one of four components of integrated supply chain management based on technopreneurship. The leading logistics principle in supply chain management based on technopreneurship is to ensure a seamless flow of physical supply and information from suppliers to end customers. A JIT system supports an effective logistic management practice that creates value. Demirkiran and Öztürkoğlu (2022) noted that JIT is increasingly recognized as part of supply chain management based on technopreneurship today, although, in the past, it was commonly viewed as a waste elimination and inventory reduction programme. The advent of just in time (JIT) philosophy, among others, has provided the appropriate technique for ensuring that materials or supplies are purchased and issued for production just at the right time when it is needed while simultaneously reducing waste.

The use of JIT tools enables resources to be utilized more efficiently and thus enhance delivery performance. Smart technology consists of “a set of tools, processes, and methodologies (such as coding/programming, data communications, data conversion, storage and retrieval, systems analysis and design, systems control) and the associated equipment employed to collect, process, and present information”. The role played by information technology in the "G-ASPOO-L" integrated model are highlighted, especially in controlling complex supply chains. Smart technology, such as electronic data interchange (EDI), enterprise resource planning (ERP) and materials requirement planning (MRP), enable better coordination of actions among supply chain members by facilitating efficient and effective information exchange between them. Although smart technology appears necessary for successful "G-ASPOO-L" integrated model practices, it may not be sufficient. However, we proposed that this could be due to a lack of firms' readiness to utilize smart technology.

Figure 4 also suggests that the "G-ASPOO-L" integrated model could achieve value creation through smart resource management that mainly views the supply chain as process-based involving internal and external stakeholders. The smart resource management as the extent to which a manufacturer strategically collaborates with its supply chain partners and collaboratively manages intra- and inter-organizational processes. Such integration aims to achieve effective and efficient flows of products and services, information, money and decisions to provide maximum value to the customer. It has been increasingly accepted that supply chain integration creates strategic advantages. Furthermore, smart resource management, considered one of the main strategies, has been identified as an essential prerequisite to pursuing sustainable performance growth.

4.3. Discussion

Souvenir MSMEs have realized that it is difficult to compete effectively and profitably without collaborative relationships and mutually beneficial partnerships between firms and their supply chain partners. Smart partnership management practices involve strategic, proactive and long-term buyer-supplier connection. Several features of this practice include recognizing purchasing functions at the strategic level, having fewer suppliers, and implementing supplier development activities. Common activities that firms undertake to help improve their supplier relationship management include goal setting, plant visits, supplier audits, supplier training, performance measurement, supplier certification, supplier recognition and efforts to newest a philosophy of continuous improvement in the supplier. Furthermore, that effective two-way communication, long-term commitment, ongoing assistance and a collaborative posture are critical to the success of the supplier development effort.

Prior research efforts which have examined value creation along the supply chain have reported widely dispersed and disjointed results. For instance, value creation from inter-organisational relationship perspectives. Similarly, Nguyen and Mai (2022) examined value creation as it applies to collaborations in supply chains which lead to efficiencies and cost savings across a wide range of business processes. Others focused on value generated in terms of smart technology usage in the "G-ASPOO-L" integrated model and logistics efficiency. The value creation in the "G-ASPOO-L" integrated model via strategic supplier networks such as knowledge sharing, learning and innovation perspectives.

Customers were asked to imagine the experience and interaction with one of these products/services. Analysis showed that each of the six faces is unique, predicts the activity of value creation, and is measurable. We tested the whole model against customer value creation using general service contexts. Results supported that relationships persist through value creation to enhance high customer satisfaction.

5. Conclusions

Our conceptual framework has several managerial implications. First, the framework challenges the view of integrated supply chain management functions based on technopreneurship. In line with Sugandini et al. (2020), we have shown that supply chain management based on technopreneurship strategies is critical and not integrating one function into the other discipline's conceptual domain. The framework reflects the realities in organizational structures and processes by illustrating how the "G-ASPOO-

L" integrated model can align supply chain management based on technopreneurship strategies to defined customer segments. It shows how a coordinated approach can infuse and energize the actions of managers in supply chain management based on technopreneurship positions.

Second, the interactive nature of the interplay of supply chain management based on technopreneurship challenges the souvenir MSMEs traditional view of a demand creation and fulfilment role. Interestingly, the role of supply chain management is based on technopreneurship in understanding the souvenir customer value creation and in defining value propositions, particularly the emerging "service-dominant" marketing logic with its emphasis on co-creation value. The framework guides managers with supply chain management based on technopreneurship responsibilities and illustrates the benefits of souvenir product value creation.

Third, by linking the integrated supply chain management based on technopreneurship strategies to shareholder value creation, the framework appeals to corporate-level management by acknowledging the potential of the proposed approach for enhancing the souvenir MSMEs strategic asset base. Furthermore, it should help to convince top-level management of the need to evaluate souvenir MSMEs ventures against supply chain capabilities. In line with this aim, the framework makes a case for supply chain management based on technopreneurship roles to be represented at the board level.

Various questions arise from the "G-ASPOO-L" integrated model presented in this study, which is beyond our scope but is expected to stimulate further research. The integrated model of "G-ASPOO-L" is suitable for a resource-based view of souvenir MSMEs where intangible organizational variables are seen as the impact of implementing the chosen strategy. It is based on the understanding that customer and supplier relationships are a strategic resource for gaining a competitive advantage. Context sensitivity is a further general limitation that can apply to our study. Although the framework we suggest is informed by fairly robust management practices in various contexts, it assumes that souvenir MSMEs are still limited to control over their implementation decisions both internally and over customers and suppliers. We suggest that future research further investigate the impact of market and supply chain orientation on the strategic choice and implementation process of souvenir MSMEs meeting customer value creation. A further issue for future research is adopting a broader supply chain management model rather than the MSMEs view being focused on as a unit of analysis for developing a strategic perspective. Our research shows that applying an integrated supply chain management approach based on technopreneurship can be found in each

souvenir MSMEs strategic management from four integration levels.

References

- Abdelilah, B., El Korchi, A., & Balambo, M. A. (2018). Flexibility and agility: evolution and relationship. *Journal of Manufacturing Technology Management*, 29(7), 1138–1162. <https://doi.org/10.1108/JMTM-03-2018-0090>
- Aqmal, D., Ardyan, E., & Putra, F. I. F. S. (2021). Increasing Salesperson Performance through Relational Penetration Capability: The Implementation of Insurance Service Company Distribution*. *Journal of Distribution Science*, 19(5), 35–48. <https://doi.org/10.15722/jds.19.5.202105.35>
- Bag, S., Telukdarie, A., Pretorius, J. H. C., & Gupta, S. (2018). Industry 4.0 and supply chain sustainability: framework and future research directions. *Benchmarking*, 28(5), 1410–1450. <https://doi.org/10.1108/BIJ-03-2018-0056>
- Chams-Anturi, O., Soto-Ferrari, M., Gomez, A. P., Escorcía-Caballero, J. P., Romero-Rodriguez, D., & Casile, M. (2022). A Comprehensive Business Process Management Application to Evaluate and Improve the Importations Practices on Big-box Stores. *Operations and Supply Chain Management*, 15(2), 164–173. <https://doi.org/10.31387/oscm0490338>
- Demirkiran, Y., & Öztürkoglu, Ö. (2022). Key Performance Measures and Digital-Era Technologies in Warehouses. *Operations and Supply Chain Management*, 15(2), 193–204. <https://doi.org/10.31387/oscm0490340>
- Elgazzar, S., Tipi, N., & Jones, G. (2019). Key characteristics for designing a supply chain performance measurement system. *International Journal of Productivity and Performance Management*, 68(2), 296–318. <https://doi.org/10.1108/IJPPM-04-2018-0147>
- Eriksson, M., Persson Osowski, C., Malefors, C., Björkman, J., & Eriksson, E. (2017). Quantification of food waste in public catering services – A case study from a Swedish municipality. *Waste Management*, 61, 415–422. <https://doi.org/10.1016/j.wasman.2017.01.035>
- Forslund, H., Jonsson, P., & Mattsson, S. A. (2021). Supplier flexibility in the order-to-delivery process – a customer perspective. *International Journal of Physical Distribution and Logistics Management*, 51(1), 4–24. <https://doi.org/10.1108/IJPDLM-08-2019-0265>
- Forslund, H., & Mattsson, S. A. (2021). In search of supplier flexibility performance measurement. *International Journal of Productivity and Performance Management*, 3(8), 1–17. <https://doi.org/10.1108/IJPPM-11-2020-0599>
- Hasan, M. M., Hossain, B. M. S., Sayem, A., & Afsar, M. (2022). Effect of Agricultural Exports and Imports on Economic Growth in Bangladesh : A Study on Agribusiness Supply Chain. *Journal of Distribution Science*, 20(11), 79–88.
- Hasibuan, Z. A. (2020). Towards Using Universal Big Data in Artificial Intelligence Research and Development to Gain Meaningful Insights and Automation Systems. *International Workshop on Big Data and Information Security (IW BIS)*, 9(4), 9–15. <https://doi.org/10.1109/IWBIS50925.2020.9255497>
- Hong, J., & Kang, E. (2022). Food Delivery Applications

- Becoming Alligator of Hotel Supply Chain: An Empirical Analysis. *Journal of Distribution Science*, 20(9), 97–107. <https://doi.org/10.15722/jds.20.09.202209.97>
- Isnaini, D. B. Y., Nurhaida, T., & Pratama, I. (2020). Moderating effect of supply chain dynamic capabilities on the relationship of sustainable supply chain management practices and organizational sustainable performance: A study on the restaurant industry in Indonesia. *International Journal of Supply Chain Management*, 9(1), 97–105.
- Jääskeläinen, A. (2018). Comparison of performance measurement in different purchasing and supply management practices. *International Journal of Productivity and Performance Management*, 67(8), 1290–1309. <https://doi.org/10.1108/IJPPM-06-2017-0148>
- Kumar, Pawan, Kumar, D., & ma, S. (2018). Measurement of Effectiveness of Flexibility in Sustainable Supply Chain. *International Journal of Science and Management Studies (IJSMS)*, October 2018, 7–11. <https://doi.org/10.51386/25815946/ijms-v1i3p102>
- Kumar, P. (2020). Green service production in healthcare and role of value chain flexibility. *International Journal of Productivity and Performance Management*, 69(8), 1721–1742. <https://doi.org/10.1108/IJPPM-12-2019-0602>
- Kumar, V., & Reinartz, W. (2016). Creating enduring customer value. *Journal of Marketing*, 80(6), 36–68. <https://doi.org/10.1509/jm.15.0414>
- Leroy, J., Cova, B., & Salle, R. (2013). Zooming in VS zooming out on value co-creation: Consequences for BtoB research. *Industrial Marketing Management*, 42(7), 1102–1111. <https://doi.org/10.1016/j.indmarman.2013.07.006>
- Malsinghe, M. T. D., Gunathilaka, M. H. A., Dinesh Bandara, I. P. C., Wijerathne, A. I., Nagendrakumar, N., & Madhavika, W. D. N. (2022). Sustainable Supply Chains of Sri Lankan Manufacturing Organizations: A Study on Operational Excellence Models During the COVID-19 Pandemic. *Operations and Supply Chain Management*, 15(2), 228–239. <https://doi.org/10.31387/oscm0490343>
- Mishra, R., Pundir, A. K., & Ganapathy, L. (2016). Article information : Empirical assessment of factors influencing potential of manufacturing Purpose : The descriptive study aims to develop an understanding of factors and their. *Business Process Management Journal*, 18(3), 1–33.
- Msimangira, K. A. B., & Venkatraman, S. (2014). Supply Chain Management Integration: Critical Problems and Solutions. *Operations and Supply Chain Management: An International Journal*, 7(1), 23–31. <https://doi.org/10.31387/oscm0160101>
- Ngetich, B. K., Nuryakin, N., & Qamari, I. N. (2022). How Research in Sustainable Energy Supply Chain Distribution Is Evolving: Bibliometric Review. *Journal of Distribution Science*, 20(7), 47–56. <https://doi.org/10.15722/jds.20.07.202207.47>
- Nguyen, B. T., & Mai, A. T. Van. (2022). The Effect of Supply Chain Dynamic Capability on Competitiveness and Business Efficiency of Vietnamese Wood Enterprises. *Journal of Distribution Science*, 20(2), 31–41. <https://doi.org/10.15722/jds.20.02.202202.31>
- Power, D. (2015). Supply chain management integration and implementation: A literature review. *Supply Chain Management*, 10(4), 252–263. <https://doi.org/10.1108/13598540510612721>
- Putithanarak, N., Klongthong, W., Thavorn, J., & Ngamkroeckjoti, C. (2022). Predicting Consumers' Repurchase Intention of Ready-to-Drink Coffee: A Supply Chain from Thai Producers to Retailers. *Journal of Distribution Science*, 20(5), 105–117. <https://doi.org/10.15722/jds.20.05.202205.105>
- Ryu, C. (2022). Investigation of Impact of Revenue Sharing Contract on Performance of Two-Stage Supply Chain System. *Journal of Distribution Science*, 20(6), 125–135. <https://doi.org/10.15722/jds.20.06.202206.125>
- Sugandini, D., Muafi, M., Susilowati, C., Siswanti, Y., & Syafri, W. (2020). Green supply chain management and green marketing strategy on green purchase intention: SMEs cases. *Journal of Industrial Engineering and Management*, 13(1), 79–92. <https://doi.org/10.3926/jiem.2795>
- To, T. H., Than, T. T., Nguyen, D. T. K., & Nguyen, D. N. (2021). Distribution of supply chain capabilities and firm's sustainable development. *Journal of Distribution Science*, 19(5), 5–12. <https://doi.org/10.15722/jds.19.5.202105.5>
- Trienekens, J., & Wognum, N. (2013). Requirements of supply chain management in differentiating European meat chains. *Meat Science*, 95(3), 719–726. <https://doi.org/10.1016/j.meatsci.2013.03.035>
- Üstündağ, A., & Urgan, M. C. (2020). Supplier flexibility and performance: an empirical research. *Business Process Management Journal*, 26(7), 1851–1870. <https://doi.org/10.1108/BPMJ-01-2019-0027>