

ANALYSIS OF PERFORMANCE IMPROVEMENT SUPPORTED BY SUPPLY CHAIN COLLABORATION AND COMPETITIVE ADVANTAGE

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ABSTRACT: *The concept of supply chain collaboration has been a key success factor in supply chain management to improve business performance. This concept is the best way to gain a competitive advantage and improve business performance. In addition, competitive advantages can bridge or support the level of supply chain collaboration in order to improve the performance of the Batik Small and Medium Enterprises (SMEs) business in Kulon Progo, Special Region of Yogyakarta, Indonesia. This research was conducted using a qualitative research design and the research technique used was a case study. The result of this research is that business performance (on-time delivery) can be built through supply chain collaboration supported by various competitive advantage strategies in 40 Batik SMEs in Kulon Progo Indonesia. As many as 40 Batik SMEs in Kulon Progo have successfully implemented supply chain collaboration and are able to implement a competitive advantage strategy, namely using the best prices coupled with quality, trust and innovation regarding the types, motifs and raw materials of batik aimed at customers so that business performance can increase optimally.*

Keywords - Supply Chain Collaboration, Competitive Advantage, Business Performance, SMEs

I. INTRODUCTION

In developing Asian countries, small and medium enterprises (SMEs) had made a significant contribution more than the years measured in terms of their share, especially in the number of companies, job creation, production, and added value, aggregate output, or gross domestic product (GDP), the number of businesses established by women entrepreneurs, and the distribution of regional industries (Tambunan, 2011). Competition is currently happening not only domestically but also between companies from various countries. This competition occurs as a result of globalization and the free market economy carried out by organizations such as AEC (ASEAN Economic Community), AFTA (ASEAN Free Trade Area), WTO (World Trade Organization), APC (Asia Pacific Economic Cooperation), and so on.

The development of globalization and changes in lifestyle make companies always make changes (Sugandini et al., 2020). The diverse social environment and economic situation, and increasingly fierce market competition have made companies increasingly aware of supply chain management's importance (Hui et al., 2015). Supply chain collaboration is a new trend when it comes to business relationship development. The collaborative relationship between organizations has received a lot of attention. In the last decade or so, companies have seen beyond their organization's boundaries the opportunity to collaborate with supply chain accomplices to guarantee efficiency and responsiveness within the supply chain. This collaboration will reduce development costs, a faster product The diverse social environment and economic situation, and increasingly fierce market competition have made companies increasingly aware of supply chain management's importance (Hui et al., 2015). Supply chain collaboration is a new trend when it comes to business relationship development. The collaborative relationship between organizations has received a lot of attention. In the last decade or so, companies have seen beyond their organization's boundaries the opportunity to collaborate with supply chain accomplices to guarantee efficiency and responsiveness within the supply chain. This collaboration

will reduce development costs, a faster product development process, more significant technological improvements, and improved product quality in dynamic market conditions (Hui et al., 2015).

The concept of supply chain collaboration has been a key success factor in supply chain management to improve business performance. This concept is the best way to gain a competitive advantage and improve business performance (Igwe et al., 2016). Based on the previous literature, business performance can be achieved through supply chain management mediated by competitive advantage. Supply chain collaboration is a collaborative relationship between companies that is based on mutual trust, openness, and sharing of risks and benefits that results in a better strategic competitive advantage compared to companies that run alone (Simatupang et al., 2002).

In essence, supply chain collaboration is a collaboration between companies involved in the supply chain to refinement performance, profit, improve and increase income, reduce costs, and work flexibly. Based on Igwe et al. (2016) research, supply chain collaboration can improve organizations' business performance. According to Heizer (2016), business performance results from an arrangement of trade forms at the cost of different sorts of assets, specific human assets, and company finances. If business performance increases, it can be seen from the ongoing business activities to generate maximum profit. Of course, profits or profits generated will be different depending on the size of the moving company.

Based on Igwe et al. (2016) research in 2016, there were several indices of supply chain collaboration, namely incentive alignment, decision synchronization, dedicated investment, and information sharing. However, because this study will examine SMEs (Small and Medium Enterprises), supply chain collaboration indexes that are suitable for this study are information sharing, dedicated investment, and decision synchronization. Information sharing is data information that is processed into a useful form for making decisions (Igwe et al., 2016). Dedicated investment (special investment) refers to an investment made by a producer or distributor (Heide & John, 1990). According to Simatupang et al. (2002), decision synchronization includes a handle whereby chain accomplices are curious about making choices, planning and arranging, then actualizing choices all through the supply chain. Based on previous research, it turns out that competitive advantage can bridge or support supply chain collaboration to boost business performance (Hatani, 2013). Thus, a study on analysis supply chain collaboration to boost business performance supported by competitive advantages with SME objects becomes interesting to study

SMEs themselves are productive businesses owned by an individual person and business contingent that have met the micro-business benchmark. In large countries such as China, India, and Indonesia, SMEs' growth is also considered very crucial. SMEs have an opportunity to contribute to increased income distribution, job creation, poverty alleviation, growth in manufacturing exports, and development of manufacturing industries, rural economies, and entrepreneurship (Tambunan, 2011). According to data from the Ministry of Cooperatives and Small and Medium Enterprises, SMEs in Indonesia contributed 60.34 percent to Indonesia's Gross Domestic Product (GDP). Also, the SMsE sector has also assisted the absorption of labor in the country with the following data translation:

Table 1. Employment Absorption of SMEs in 2010-2019

Year	Number of Workers (in millions)
2010	96.2
2011	98.2
2012	101.7
2013	107.7
2014	114.1
2015	123 , 2
2016	112.8
2017	116.4
2018	117
2019	121

Source: Ministry of Small and Medium-sized Cooperatives

Given the large role of SMEs in Indonesia's economy, especially in employment, the increase in business performance in SMEs is very significant to do. Kulon Progo Regency is one of the districts in the

province Special Region of Yogyakarta, Indonesia. Kulon Progo Regency is one of the communities that continuously empowers the development of SMEs. Increasing the business performance of SMEs in Kulon Progo is very important today. Coupled with the operation of the new Yogyakarta airport, which is located in Kulon Progo, namely the New Yogyakarta International Airport (NYIA), it is hoped that it will have a beneficial effect on the advancement of SMEs in Kulon Progo. NYIA is one of the largest entrances for local and foreign tourists visiting Yogyakarta. In Yogyakarta itself, two mainstay sectors can seize opportunities for a new airport, namely tourism and the creative industry. However, this opportunity has not been optimal due to the Covid-19 pandemic at the beginning of 2020 until now. Instead of increasing, batik sales from Batik SMEs in Kulon Progo have decreased. However, batik craftsmen admit that the decline is not too significant because they already have a structured market that purchases every certain period. The decline was only experienced for products purchased by end consumers directly. Batik SMEs' challenge in Kulon Progo is more on the supply chain from upstream to downstream, which has experienced a decline in supply due to the Covid-19 pandemic.

Batik is a creative industry that can be developed to seize opportunities in a pandemic like this time. Thus an increase in business performance is essential for Batik SMEs in Kulon Progo. One way to improve business performance and bring Batik Kulon Progo to compete globally is to have a competitive advantage. Thus, with an increase in supply chain collaboration, companies can achieve a competitive advantage and improve business performance in Batik SMEs in Kulon Progo.

II. LITERATURE REVIEW

II.1 Supply Chain Collaboration

Collaboration is characterized as a long-term connection in which on-screen characters, for the most part, carry out working connections, share data and mutually planning and arrange then, indeed, adjust their trade hones to improve mutual performance (Whipple et al., 2010). Meanwhile, coordination performance is communicated to convey products and services within the right amount and at the correct time, concurring to customer needs. This capability can be assessed by delivery speed, delivery flexibility, and reliable delivery to customer satisfaction needs (Bowersox, et al., 2013; Ghofar et al., 2020).

Each activity supply chain has its uniqueness, which has different effects and handling for each case. Companies in supply chain activities must make decisions independently and collectively regarding activities that cover five things, namely production, supplies, location, transportation and information. The things that determine the above decisions will define the capabilities and effectiveness of the activities supply chain company's (Baker, et al., 2010;Ghofar et al., 2020).

In the intercourse of the supply chain, the partnership relationship also has a long-term introduction born from a relational approach. When viewed based on the type of relationship that exists, this partnership relationship is divided into cooperative, contractual, collaborative, and alliance relationships (Liu et al., 2021). Collaborative relationship is defined as a more stable relationship (Allaoui et al. 2019). Each side tries to bring the organization to a modern structure with full commitment, the same vision and mission, and a better belief level. In essence, supply chain collaboration is a collaboration between companies involved in the supply chain to reform performance, profit, increase income, reduce costs, and work flexibly.

II.1.1 Information Sharing

Information sharing may be a ceaseless stream of communication between accomplices, both formal and casual and contributes to better planning and supervision in an arrangement (Miguel & Brito, 2011). Information sharing in question is concerned with a reliable and timely information dissemination process that will help managers control channel operations and plan effectively. Information sharing can be seen as a deliberate act of promptly exchanging essential and reliable information between channel partners. Network partners share important information to create comprehensive visibility in the supply chain (Igwe et al., 2016).

Fawcett (2012) states that information sharing is vital because every critical process in the supply chain information appears as a major role. All information in the process supply chain must be distributed because it is from the organization's concept to the consumer. A network supply chain is successfully shared and the flow of information synchronizes its activities. Sharing information is also the key to a successful relationship.

2.1.2. Dedicated Investment

Alludes to a venture started by a committed maker or wholesale (Heide & John, 1990), dedicated investment combines flexibility, simplicity, and freedom. They are ideal for investors looking for management and personalized information about their investments. They maintain consistency and integrity for family investments in the same portfolio.

2.1.3. Decision Synchronization

Simatupang et al. (2002) show that decision synchronization's main structure is to provide a guide/framework on planning and implementing good processes for each member in the supply chain. According to Simatupang et al. (2002) decision synchronization is describe as an attitude to support coordination in the planning and implement decisions between related supply chain members. This definition is supported by Zanon et al. (2021) that independent decision-making will only contribute to less than optimal decision-making performance and only affects the part that does it, while joint decision making results in synergistic benefits for members supply chain.

II.2 Business Performance

Business Performance is a benchmark for assessing the success of management in achieving the Company's goals that have been set. Heizer (2016) argues that company performance results from a series of business processes at the expense of various resources. Among others, the Company's human and financial resources. The ongoing activities of the Company mark the increase in company performance to generate maximum profit. Different sizes of companies, foreign profits are generated. A large company has more resources to invest, so the bigger the company size, the bigger the investment.

Performance is a explanation of the achievement of implementing an activity program or policy in realizing the vision, mission, goals, and objectives of the organization as exposed in the strategic planning and arrangement of an organization (Gao et al., 2016; Ghofar et al., 2020). Company performance can be interpreted as the result of implementing a series of activities carried out by all elements within the Company as a process of achieving goals (Hifman et al., 2020). A good company performance will be seen from the level of productivity, effectiveness, and good efficiency. According to Kotler and Keller (2016), companies will act wisely by measuring customer satisfaction regularly because one of the keys to retaining customers is customer satisfaction. According to Kotler and Keller (2016), maintaining customers is important rather than attracting customers because when a company manages to retain customers, it means the Company has created customer satisfaction.

II.3 Competitive Advantage

According to Porter (2015) competitive advantage is the fundamental of marketing performance to confront competition. Competitive advantage is describe as the benefits strategy of organization collaborating to make an effectively competitive advantage in their market. Maintaining a good competitive advantage in the Company depends on the resources and ability to manage the Company. The main keys in maintaining a competitive benefit are resources and the ability to survive in long-term business performance.

According to Hatani (2013), competitive advantage or competitiveness is that its performance is effect by the organization's unique or inimitable resources and capabilities. The impact of competitiveness on company performance is examined here based on the theory that the implementation of *supply chain management* integrated can open up strategic opportunities to create competitiveness and ultimately support company performance. Competitive advantage is the factor in which the organization can create conditions that can survive against competitors and includes states that allow the organization to differ from its competitors and asymmetries or differences in each. Organization or dimensional attribute allows one organization to serve customers better and create value, better customers.

II.4 Conceptual Framework

Based on the foundation of the issue, the explanation of the theory, and previous research results. A framework for thinking in this study can be arranged as follows:

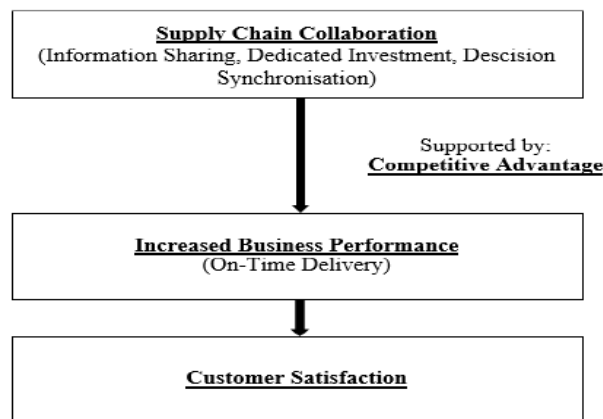


Figure 1. Conceptual Framework

Source: Observation and Interview Results, 2020

III. METHODS

This research was conducted using a qualitative research design in which this method is described systematically related to the problems that occur. The qualitative approach to this research is based on considering that research requires in-depth or exploratory information from various sources. The research technique used for this research is a case study. The case study or case study undertakes an in-depth exploration and analysis of a phenomenon in its context by using various data obtained from various sources.

The case study was chosen because of this design. A phenomenon can be explored and collected in detail a variety of information that can be used following data collection procedures for a certain period. The research design is qualitative, utilizing a case study research technique by taking SMEs (Batik Kulon Progo Small and Medium Enterprises). In this study, a qualitative method is used to analyze a process *collaborative supply chain* that can improve business performance supported by measurable competitive advantage activities of each SME.

IV. RESULT

IV.1 Overview of Batik SMEs in Kulon Progo

This research was conducted on SMEs that are scattered throughout the Kulon Progo Regency, Special Region of Yogyakarta, Indonesia. Based on observations, research, and interviews from several sources, the results show that supply chain collaboration in 40 Batik SMEs in Kulon Progo applies three factors to support the success of their business performance, including *information sharing*, *dedicated investment*, and *decision synchronization* in their Batik SMEs. Also, SMEs are also endorsed by *competitive advantage*. This is done because they know that information, investment cooperation, and synchronization of decisions are important things; coupled with increasingly fierce competition, they must be supported by competitive advantages that include price, quality, trust, and innovation to create customer satisfaction. There are so many Batik entrepreneurs in Indonesia, especially in Kulon Progo, but researchers see that 40 Batik SMEs in Kulon Progo have implemented Supply Chain Collaboration so that business performance can be maximized. The following is the data of Batik SMEs in Kulon Progo (Table 1):

Table 2. List of names of Batik SMEs in Kulon Progo

No	Name	Old Business
1.	Darminto Batik	4 years
2.	Sambayung Batik	3 years
3.	Karina Batik	2 years
4.	Sinar Abadi Batik	13 years
5.	Griya Batik Senok	10 years
6.	Yoga Batik	15 years
7.	Banyu Sambrang Batik	3 years
8.	Sembung Batik	12 years

9.	Sekar Langit Sugito	10 years
10.	Connect Roso Batik	4 years
11.	Aricha Batik	3 years
12.	Manggala Batik	9 years
13.	Estin 2 Batik	3.5 years
14.	Haryanti Batik	4 years
15.	Setian Batik	2 years
16.	Kartini Batik	6 years
17.	Rina Batik	4 years
18.	Sekar Arum Batik	2 years
19.	Sugito Batik	7 years
20.	Raharjo Batik	3 years
21.	Thok Thil Batik	10 years
22.	Tumirah Batik	8 years
23.	Sutini Batik	2 years
24.	Kencono Progo Batik	4 years
25.	Ting Ting Batik	6 years
26.	Sekartini Batik	8 years
27.	Batik Rahayu	6 years
28.	Anissa Batik	8 years
29.	Sugeng Batik	7 years
30.	Patini Batik	4 years
31.	Flower Batik	6 years
32.	Menoreh Kyai Demang	9 knows n
33.	Canting Manis	6 years
34.	Dwi Batik	7 years
35.	Lily Batik	4 years
36.	Batik skipper	11 years
37.	Farras Batik	13 years
38.	Batik Kulur	8 years
39.	Barman Batik	7 years
40.	Kismi Batik	3 years

IV.2 Overview General Batik SMEs Group in Kulon Progo

Kulon Progo Batik SMEs is a batik business owned by people in Kulon Progo area, Special Region of Yogyakarta, Indonesia. Batik SMEs has various types, motifs and basic materials for making batik. Starting from the types of batik, printed batik, printed batik and so on. In general, the motive that characterizes the Batik SMEs in Kulon Progo is the Geblek Renteng Batik, famous throughout Indonesia and has the potential for export. Even Indonesian artists have started to recognize and use this Geblek Renteng Batik. In addition to the well-known types of batik and batik motifs, the basic materials for making batik are also very concerned, namely for the coloring and cloth used. For inheritance, Batik SMEs in Kulon Progo generally use fabric dyes which are then processed so that the waste does not pollute the environment. However, some materials use natural dyes from vegetables or fruits.

In addition to running its business independently, this Batik SMEs in Kulon Progo has the full support of the Kulon Progo Regency government to develop its SMEs further. The government's trust in Batik SMEs in Kulon Progo is because they remain committed to actively building a business and continue to develop over the years as a form of responsibility and evaluation material in the future.

IV.3 Supply Chain Collaboration of Batik SMEs in Kulon Progo

As many as 40 Batik SMEs in Kulon Progo implement supply chain management that collaborates on 3 factors, namely sharing information, working with batik producers and distributors, an investment can be in human resources, working capital, technology, and supporting equipment production. In addition, and synchronization of decisions within the organization is useful for improving business performance or expected timeliness in inventory level decisions, inventory requirements, demand forecasts, optimal order quantity, and customer-specific requests. In addition to maximizing supply chain collaboration starting from suppliers of raw materials for batik cloth, batik dyes, and other materials to end-users (boutiques), Batik SMEs also apply a price advantage strategy, a quality excellence strategy, trust, and Batik innovation.

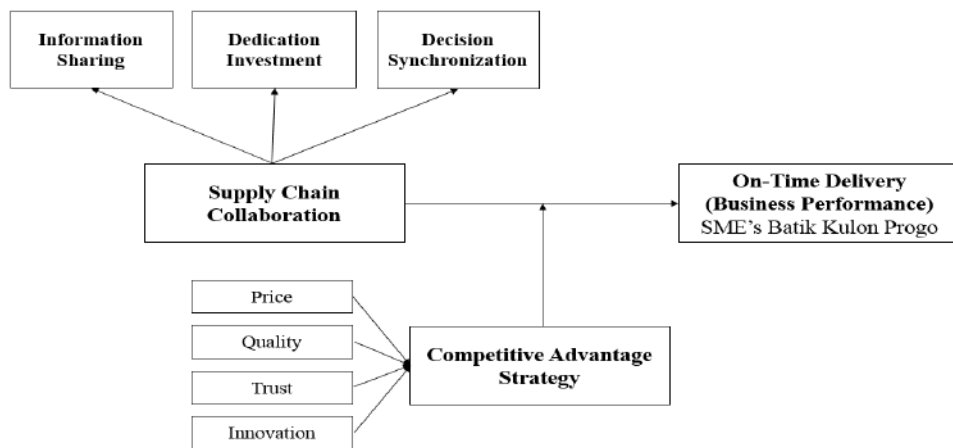


Figure 2. Supply Chain Collaboration Structure of Kulon Progo Batik SMEs

Source: Observation and Interview Results (2020).

IV.4 Mapping of the Success of the Business Performance

SMEs Batik Kulon Progo SMEs has pursued various strategies in its supply chain collaboration. This is certainly able to provide an increase in their business performance. The following is a description of supply chain collaboration strategies and competitive advantage strategies to support successful business performance (Table 2.)

Table 3. Specifications for Success Strategies for Business Performance of Batik Kulon Progo

Business Success Factors for Business Performance	Types of Strategies Description of	Strategies
Supply Chain Collaboration	<i>Information Sharing Information</i>	a. Dissemination about levels of inventory of goods b. Dissemination of information on inventory policies c. Dissemination of information when supply disruptions occur d. Dissemination of information when order status or tracking of orders is being sent e. Dissemination of information about delivery schedules
	<i>Dedication Investment</i>	a. Tangible investment of personnel / employees / supply chain partners b. Tangible investment working capital c. Tangible investment technology d. investment Tangible investment production support equipment
	<i>Decision Synchronization</i>	a. Decision on availability level b. Decision on supply requirements c. Decision on demand forecast d. Decision on quantity optimal order bag e. Decisions regarding customer special order / request exclusion.
Competitive Advantages		a. Determination of the Best Price b. Guaranteed Quality and Dare to Compete c. Increased Trust in Customers d. Continuous innovation

V. CONCLUSION

Based on the reported research, three reports can be retrieved. A total of 40 Batik SMEs in Kulon Progo have implemented an effective and efficient supply chain collaboration. However, some Batik SMEs have not been able to 100% improve supply chain collaboration to improve business performance. Batik SMEs are still many constraints on the cost of raw materials that are uncertain even though we have collaborated with other producers and distributors. A total of 40 Batik SMEs were able to implement supply chain collaboration.

The support of a competitive advantage strategy is named using the best price with quality, trust, and innovation regarding the types, motifs, and raw materials of batik that serve customers. Optimal business performance at Batik SMEs in Kulon Progo is capable of the best results in the hope that customers will always feel satisfied with the products produced.

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