



Analysis of Digital Supply Chain Management in the Development of Export Products for Rattan Crafts in Cirebon

Analisis Manajemen Supply Chain Digital pada Pengembangan Produk Ekspor Kerajinan Rotan di Cirebon

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ABSTRACT

This research is motivated by the fact that in Cirebon West Java, which is the largest rattan craftsman area in Indonesia, was found that there are many unresolved obstacles in the development of rattan craft products that will be exported to several countries. The obstacles include the supply chain or the availability of raw materials, the lack of capital for small and medium industry (IKM) stakeholders, and the lack of human resources management (HRM) as a form of regeneration for rattan craft craftsmen. This study used a qualitative approach where data were collected through observation, documentation, and interviews. The results of this study show that the problems faced by rattan handicraft producers are: 1) a lack of availability of raw materials caused by long shipping distances, such as from Sulawesi and Kalimantan to Cirebon; 2) a lack of capital that can be absorbed by small entrepreneurs to continue to be able to run this rattan craft business because of the lack of attention given to small entrepreneurs from both the government of Cirebon and the World Bank. 3) the lack of human resource management for rattan handicraft producers due to the lack of interest from the younger generation and the lack of a training platform for the younger generation to continue this rattan craft relay from time to time.

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ABSTRAK

Penelitian ini dilatarbelakangi oleh berbagai kendala yang dihadapi oleh para perajin rotan di Kabupaten Cirebon, Jawa Barat. Daerah ini dikenal sebagai kawasan perajin rotan terbesar di Indonesia. Fakta di lapangan menemukan produk kerajinan kriya rotan yang akan diekspor ke beberapa negara memiliki kendala-kendala yang belum terselesaikan. Kendala-kendala tersebut di antaranya supply chain atau ketersediaan bahan baku, modal bagi para stakeholder industri kecil menengah (IKM), dan kurangnya sumber daya manusia (SDM) sebagai bentuk regenerasi penrajin kriya rotan di Kabupaten Cirebon. Penelitian ini menggunakan pendekatan kualitatif dengan teknik pengumpulan data berupa observasi, dokumentasi, dan wawancara. Hasil penelitian menunjukkan kendala yang dirasakan oleh para perajin kriya rotan di Kabupaten Cirebon adalah kurangnya supply chain atau ketersediaan bahan baku untuk menghasilkan produk yang akan diekspor ke berbagai negara. Kendala yang kedua adalah keterbatasan modal yang dapat diserap oleh para pengusaha kecil

untuk dapat menjalankan roda usaha kerajinan rotan ini karena nihilnya perhatian yang diberikan kepada pengusaha kecil baik dari Pemkab Cirebon maupun Pemkab Jawa Barat. Kendala yang ketiga adalah berkurangnya generasi muda yang mewarisi kerajinan kriya rotan di Kabupaten Cirebon ini karena kurangnya minat dari generasi muda dan wadah pelatihan bagi generasi muda untuk meneruskan estafet kerajinan kriya rotan ini dari masa ke masa.

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Introduction

The process of making rattan products is almost 80 - 90 percent handmade. It started from being cut from the forest, fried using diesel fuel, dried in the sun, then combed to make it smooth and sold. After being sold, the rattan products are sent to Cirebon to be made into a product. Everything is processed by hand. This is what attracts foreigners to buy Indonesian rattan products, unlike Indonesians, who view rattan with one eye. So that the percentage of exports to foreign countries compared to sales of rattan in Indonesia reached 70:30. However, in fact, in working on this rattan handicraft, there are many obstacles, especially in terms of supply chain management.

In fact, supply chain management came about for two main reasons. First, traditional logistics management practices that pit companies against each other no longer make sense in the modern world because they don't give companies a competitive edge. Second, changes in the business environment are accelerating with increasingly fierce competition (Suchayowati, 2011).

The business environment changes rapidly due to a number of factors, such as customer needs and the rising complexity of consumer demands, which are excessive; consumers seek cheap pricing, excellent quality for all items supplied, speedy delivery, and products tailored to their preferences. To meet these consumer desires, the company tries to use its assets and capabilities to provide value that meets consumer expectations. This effort will have different cost consequences for each company such as their competitors, they must reduce all expenses without reducing the quality of their product; they also have to compromise the quality of the products. One of the tasks involves optimizing the distribution of materials from production, the material flow process, and the distribution of products to customers. Therefore, this ideal distribution is achieved by supply chain management (Suchayowati, 2011).

On the other hand, Cirebon's rattan industry can't grow as much as it could because HRM isn't as good as it could be. This means that small businesses in the rattan sector lose out to large factories with better HRM, making small businesses less competitive. Yet, there is still very little attention given by the government because it sees that there are no obstacles in terms of enrichment of raw materials, manufacturing processes, or export processes abroad because this aspect of human resources is not the domain of the government, but it is the domain or policy of stakeholders and factories. The government considers that it is the factory that should hold training for the regeneration of rattan craftsmen, especially considering that the district government does not only concentrate on taking care of one thing but also has many other things to take care of, especially with the small budget for a district government class. Even though the contribution of rattan exports is very large, there should be feedback from the government to expand the number of rattan craftsmen in Cirebon, so that there is a take and give, both from the craftsmen and from the government.

This dynamic competitive atmosphere has produced a new setting each time; its employees must therefore be well-prepared. Numerous techniques are developed and implemented to enhance the quality of organizational management, since this will facilitate the organization's capacity to accomplish this dynamic transition (Sundiman, 2017). Therefore, every business must recognize the problems and possibilities of its human resources, and excellent human resources will support all problem-solving-related activities that influence organizational resources.

Also, the effects of globalization and the fast development of information technology are causing changes to happen quickly in many operational areas of the company. It makes companies need new strategies in dealing with everything to survive. The emphasis on the importance of human resource quality is one of the responses to address the changes. Efforts are required to improve and develop human resources (Chen, 2009).

To face the new competitive era, which is different from the old one, the human resources manager needs to know the goal of the strategy change and know what it is (Lorente, 2008). Knowledge is the most important thing, and it's what most determines the quality of human resources. Because of this, getting and using knowledge well is important for improving the performance of an organization. As a plan for confronting global competitiveness, a strategy that integrates the management of knowledge within the framework of human resource development is required (Wijayanti, 2017).

Therefore, from the above introduction, we can see that the main problems of this research are the supply chain management of craft production to be exported to many countries around the world and the management of human resources to continue the cycle of small industries in the field of rattan handicrafts in Cirebon.

Literature Review

Supply Chain

As a network of organizations, a "supply chain" collaborates to produce products and distribute them to the end customers. These businesses include suppliers, manufacturers, distributors, shops, and retailers, as well as supporting businesses like logistics service providers. In this supply chain, the movement of commodities from upstream to downstream, along with two other factors, must be overseen. It involves the movements of raw materials from suppliers to manufacturers, distributors, retailers, and finally end-users, as well as the flow of money and other resources from downstream to upstream and the flow of information from upstream to downstream and vice versa.

A supply chain includes, among others, a major component, i.e., procurement. The internal supply chain includes production control, manufacturing, and inventory management. Distribution, storage, shipping, and after-sales support comprise the downstream supply chain (Rainer T. 2003). There are three flows in the supply chain: a) commodities, such as the manufacture of raw materials; supply flows across the supply chain, including reverse logistics; c) information linked to requests, deliveries, orders, returns, timetables, and changes to one of the data; and d) financial flow (Rainer K., 2011).

There are four main types of supply chains: a) integrated make-to-stock, which tracks consumer demand at the same time (in real time) so that the production process can make an efficient inventory of goods; b) decentralized make-to-order; and c) decentralized make-to-order. Integration of this type is usually possible if a company has a good information system. b) Continuous replenishment is when a company works with suppliers or middlemen to make sure that inventory is always restocked. c) Build-to-order is when a company can make products directly when customers ask for them or place orders. d) Channel assembly is a quick change to the build-to-order model. During the flow of production through distribution channels, product parts are combined and put together (Efrain, 2008).

Supply Chain Management

"Supply chain management" refers to the management and control of the supply chain. A simple supply chain model has four elements, including suppliers, producers, warehouses or distribution hubs, and product receivers. Where the supply chain is a physical network, supply chain management is a strategy, tool, or management approach for businesses that are engaged in providing raw materials, producing things, or delivering commodities to end customers. The management of the supply chain handles both internal and external challenges pertaining to partner relationships.

The advantages of supply chain management include delighting your consumers, earning more money, reducing expenses, making better use of your assets, and expanding your firm (Jebarus, 2001). In general, the objective of supply chain management is to convert raw resources into completed goods and then distribute those goods to end consumers. This advantage focuses the manufacturing and operational processes inside the organization, using all available resources in a regulated transformation process to add value to the goods made in accordance with the enterprise's rules and for a particular customer. Second, supply chain management serves as a market intermediary, ensuring that what is given by the supply chain corresponds to what the client or end user want.

The most fundamental rule of supply chain management is to create improved outcomes for all chain and system participants. Adapting your logistics network to diverse customer needs; strategic management of supply chain resources to reduce operating costs of materials and services; developing technology strategies across the supply chain to support decision-making; and adapting logistics networks to diverse customer needs (Render, 2001). The scope of supply chain management encompasses several functions, including product creation, procurement, planning and control, manufacturing, and distribution.

Digital Supply Chain Management

The readiness criteria of an organization's digital supply chain should be established first, since they will influence the organization's ability to effectively execute it. Organizations must be aware of the prerequisites for the preparedness of their digital supply chain's essential components. Sony and Naik (2019) concurred that a comprehensive assessment of the transition to Industry 4.0 must address crucial variables, including organizational preparedness (Sony & Naik, 2019). The digital supply chain is one area in which readiness considerations and the adoption of important elements are evaluated. Kakhi & Greya (2019) observed a dearth of digital supply chain research addressing supply chain management and information system concerns. In supply chain technology and technology transfer studies, supply chain digitization and key drivers are grouped together, and of all the published papers mentioned, they rank among the top. It does not have precedence. Consequently, a literature study or landscape survey of conceptualizations and theoretical advancements that may be presented in a qualitative case should be done (Kakhi & Greya, 2019).

The supply network gives network visibility across the full value chain and may be used to improve the precision of supply chain planning and sales operations. To do this, a link between digital technology and supply chain operations must be developed. The deployment of digital business models begins with supply chain management modifications. When an organization goes through a digital transformation, it needs to know that the benefits need to be maximized and that the risk of loss needs to be reduced (Queiroz, 2019).

Three important new developments are related with supply Chain 4.0: big data, cloud computing, and 3D printing (Makris, 2018). Various industrial sectors have varying degrees of flexibility to each new development. For instance, the chemical sector has the lowest SC conversion potential. Food and drink evolve gradually. High technology is the field of digitalization with the quickest growth rate. It is difficult for pharmaceutical corporations to develop transformative strategies. Retailers are digitizing their marketing efforts, but supply chains have not yet done so. (Bienhaus & Haddud, 2018).

Human Resources Development

Consisting of career management, retention, and professional skills sections, human resource management (HRM) is essential to businesses. Continuous training tailored to the requirements of employees, therefor, plays an essential role in the firm. To determine that a firm provides training, it is necessary to collect pertinent information. Ultimately, management must guarantee that employee competence and

creativity are developed effectively via training programs (Putra, 2016). Effective resource management boosts the effectiveness of an organization's operations. Human resources are one of an organization's most valuable assets, thus competent human resource management is crucial. Personality-based human elements provide distinct settings and management tactics for each business (Kaufman, 2001).

HRM should be tightly associated with the activities of producing, storing, transmitting, and using company-wide knowledge. Effective HRM increases productivity across a company (Putra, 2016); although knowledge is personal, businesses may utilize it to help people develop (Toyama, 2003). Olsen (2015) states that to improve your organization's processes, everyone should be made a learner. Thereby, companies must serve as learning institutions; it is deemed the most effective way to enhance the quality of the companies' employees. (Niu, 2014). Education has a significant role in producing competent and competitive human resources in this context (Sundiman, 2014).

In order to compete in a knowledge-based market, businesses must continuously refine their concepts and strategies. Every firm should do an analysis of relevant aspects to discover alterations that may produce business opportunities and dangers (Rist, 2016). Most companies have therefore a regular training schedule to help their people get better (Silalahi, 2016). This means that knowledge management can speed up learning to help people get better. It can therefore make a business more competitive and better able to respond to changes in the market. It can also help develop human resources by making the process of sharing knowledge more organized (Figueiredo, 2016).

In practice, HRM focuses on three key concepts: first, HRM governance inside the organization; second, data and strategies; and third, HRM career management. The desire of a corporation's workers to remain with the organization called retention. In addition to quality, the quantity of personnel in a firm is crucial. Thirdly, the HR approach focuses on employee training and continuing education inside the organization to enhance employee performance and quality (Figueiredo, 2016).

Several factors significantly influence how career management is conducted. These include the information-based culture of the company's location as well as attitudes and work practices geared toward enhancing staff skills and knowledge (Othman, 2009). Employee retention refers to the many policies and practices that result in workers remaining in the workplace for a longer period of time. In addition to enhancing the credentials, competence, and knowledge of workers, vocational training develops a professional work culture inside knowledge-based organizations. Next, the corporation must develop a comfortable working atmosphere for its staff. The organization then develops ways to foster and sustain cohesiveness, cooperation, and collaboration among all personnel (Riveros, 2011).

Method

This study uses a qualitative approach and qualitative descriptive methodology. The techniques to collect the data include observation, documentation, and interviewing. Visits and interviews were undertaken with rattan producers in Cirebon as part of the document data collection process; they were then separated into two categories: primary and secondary data. Primary data consists of information received from the producers themselves, the Cirebon administration, and Kemenkraf Cirebon. After all the techniques of collecting data were conducted, we processed the data gained from observation, documentation, and interviewing, we then did data triangulation to recheck the data that we had processed to avoid misinterpretation from the readers.

Result and Discussion

Here the data about IKM in Cirebon that gained from the conducted observation, we resumed in table below:

Table I Number of Rattan IKM in Cirebon

Desa Megu Gede	17
Desa Karangsari	350
Desa Tegalwangi	298
Desa Kertasari	101
Desa Setu Kulon	74
Total	840

Source: Kemenkraf Cirebon

There are nearly 2000 craftsmen in Cirebon, including large and small businesses (IKM) and around 115 factories that often export their rattan products overseas. The difference between IKM and large factories in producing rattan is in terms of premium raw materials, which will affect the quality, workmanship, and selling price. Also, rattan that will be sent to Europe must be safe for the environment, etc.

But specifically, in the table above described the data that gained from Kemenkraf Cirebon. It's shown that in Cirebon regency there are many villages and has a lot of IKM. The least amount of IKM is Desa Megu Gede which is 17 IKM while the biggest amount of IKM is Desa Karangsari which has 350 villages. IKM in 6 villages its divided from the producers of rattan, fast food, laundry, car, and motorcycle repair shops, sells livestock products, snacks, fashion and so on. From 840 IKM that has spread in those villages, the most is rattan's producers. That's why Cirebon still very well known for the best quality rattan production in Indonesia and can be exported to many big countries around the world.

Supply Chain

In the supply chain, it is hard for rattan handicraft makers in Cirebon to get raw materials because it takes a long time to ship from upstream to downstream. There are many obstacles, but fortunately, rattan craftsmen are still running because local Indonesian people prefer products such as Olympics or even Ikea. In contrast to people from abroad who prefer rattan products that are handmade, woven, and tied using the hands of their own craftsmen, they even value Indonesian art more than the Indonesian people, so that many large rattan producers in Cirebon are exporting rattan production to other countries, although it is not as busy as it used to be.

Business Capital Enrichment

Small scale makers of rattan crafts also find it hard to build up their capital, especially for small IKM. Because of this, they hope that the materials will be bought in smaller quantities, not just in bulk. Even though they have a corporation with bank, unfortunately it didn't give them as much as they hoped. If it's compared to the big factories, they already have a strong capital base, a lot of shares, and a systematic selling system. In facts now, there's no contribution from the government to help small producers in Cirebon. Cirebon's Department of Industry and Trade has tried to talk to the government about this problem. It has suggested that BUMD help the IKM in Cirebon, but the government sent the problem back to be solved by cooperatives, which didn't work.

Human Resource Management

Another issue is the human resource management (HRM). HRM is lacking because few individuals desire to make this rattan product. Based on this information, the government of Cirebon attempted to establish a specialized vocational school to equip this producer to improve HRM, and then a new generation of producers would emerge. When producers are inundated with orders yet have few human resources

available, this is one of the most worrying aspects. It is beginning to occur and has even reached the point where large factories are competing for weavers, as not everyone can weave. Therefore, young rattan artisans in Cirebon are quite uncommon, despite their ability to innovate. RADEC is also present (Rattan Design Community), the objective of establishing this RADEC is to ensure that rattan artisans continue to create, even though this community is not optimal due to a lack of active members. In addition, the regeneration of rattan producers is inadequate. This lack of enthusiasm from the younger generation is the reason why they prefer to work outside the city, such as in micro markets, rather than assisting their parents in maintaining the rattan art. This may be due to these rattan artisans' comparatively low pay.

Conclusion

Based on the results of the studies conducted, the following conclusions can be drawn: 1) lack of availability of raw materials due to long shipping distances, such as from Sulawesi and Kalimantan to Cirebon; 2) lack of capital that can be absorbed by small entrepreneurs to continue to be able to run this rattan craft business due to the lack of attention given to small entrepreneurs by both the Government of Cirebon, and 3) the lack of human resource management for rattan handicraft producers due to the lack of attention given to small entrepreneurs.

The conclusions of this study are different from previous studies because the findings of this study cover various aspects, supply chain, human resource management and business capital enrichment. Also, this research is rarely carried out at IKM Rattan in Cirebon, then this conclusion of the research it can be proven that the creative economy in Indonesia has great potential in marketing its products to various major countries around the world but still a few of people know that handicraft products in Indonesia can compete on the international markets.

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