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ANALYSIS OF SUPPLY CHAIN MANAGEMENT ACTIVITIES (CASE STUDY ON ZASKIA FURNITURE BUSINESS IN PALU CITY)

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Abstract

This research aims to identify and analyze the supply chain flow at Zaskia Furniture located on Jl. R.E Martadinata, Layana Indah Village, North Palu District, Palu City. The paradigm employed in this research is the constructivism paradigm, utilizing a qualitative descriptive approach. The study involved a total of 9 informants, and data collection was carried out by directly conducting interviews with them in the field. The data analysis method utilized in this research is the NVivo 12 Plus software. The results of this study indicate that the supply chain at Zaskia Furniture is interconnected with the upstream, internal, and downstream supply chain pathways. The upstream supply chain is associated with the procurement of raw materials originating from Tibo Village, West Coast. The types of wood used include bayur, cempaka, and inje. The internal supply chain is related to the production process, revealing that the production stage at Zaskia Furniture is executed by 4 employees responsible for various production processes. The downstream supply chain is associated with distributing the final products to consumers, accomplished through two channels: direct distribution to end consumers and indirect distribution through retailers. The supply chain management at Zaskia Furniture is functioning well, but it is not yet optimal, indicating the need for some evaluations.

Keywords— Supply Chain Management, Upstream Supply Chain, Internal Supply Chain, Downstream Supply Chain

Abstrak

Penelitian ini bertujuan untuk mengidentifikasi dan menganalisis aliran rantai pasok pada Mebel Zaskia yang berlokasi di Jl. R.E Martadinata, Kelurahan Layana Indah, Kecamatan Palu Utara, Kota Palu. Paradigma dalam penelitian ini adalah paradigma konstruktivisme dan menggunakan pendekatan deskriptif kualitatif. Penelitian ini dilakukan dengan jumlah informan sebanyak 9 orang. Pengumpulan data dilakukan dengan terjun langsung ke lapangan melakukan wawancara kepada informan. Metode analisis data yang digunakan yaitu software NVivo 12 Plus. Hasil dari penelitian ini menunjukkan rantai pasok di Mebel Zaskia tidak lepas dari jalur upstream supply chain, internal supply chain, dan downstream supply chain. Hasil penelitian ini menunjukkan upstream supply chain berkaitan dengan pengadaan bahan baku yang berasal dari Desa Tibo, Pantai Barat. Jenis kayu yang digunakan ialah jenis kayu bayur, cempaka, ataupun inje. Internal supply chain berkaitan dengan proses produksi dan ditemukan bahwa pada tahap produksi Mebel Zaskia, dilaksanakan oleh 4 orang karyawan yang bertanggung jawab menjalankan berbagai proses produksi. Downstream supply chain berkaitan dengan aktivitas mendistribusikan produk akhir kepada konsumen, yang dilakukan dengan 2 jalur yaitu distribusi langsung kepada konsumen akhir dan distribusi tidak langsung melalui retailer. Aliran manajemen rantai pasok Mebel Zaskia sudah berjalan dengan baik namun belum optimal sehingga perlu dilakukan beberapa evaluasi.

Kata kunci— Manajemen Rantai Pasok, Upstream Supply Chain, Internal Supply Chain, Downstream Supply Chain

I. INTRODUCTION

The development of the furniture industry in Central Sulawesi has a significant economic impact and contributes to regional economic growth and creates jobs for local people. This is also supported by the

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abundance of wood raw materials that grow and develop in this region such as meranti wood, teak wood, kruing wood, and so on. The need for products from the furniture industry continues to increase because this industrial sector provides interior design and artistic value that can provide comfort so that it can support various activities (Supit et al., 2015). Handicraft culture and traditional skills also contribute to the development of this furniture industry.

Zaskia Furniture is one of the companies in Central Sulawesi, especially Palu City, which is engaged in the furniture industry which produces furniture products such as chairs, tables, cabinets and others. According to Sholahuddin (2014) furniture is an object / equipment that has functions and benefits for sitting, sleeping, storing goods either easily moved or fixed. In this furniture product, there is also intense competition between companies engaged in the same field. Furniture products consist of various types, models, colors, sizes, and quality.

The following is the production data of chairs, tables, and cabinets at Zaskia Furniture in Palu City.

Table 1. Zaskia Furniture Production Data in 6 Months

Period (2023)	Chair (unit)	Table (unit)	Cabinet (unit)
January	42	31	30
February	44	32	28
March	40	30	32
April	39	32	25
May	42	31	28
June	40	32	30
Amount	247	188	173

Source: Zaskia Furniture (2023)

From the production data above, it can be observed that Zaskia Furniture is able to produce around 10 units of chairs, 8 units of tables, and 5 to 10 cabinets every week. To produce furniture, at least 4 cubic meters of wood per week is required as the main raw material. Various types of wood are used according to the desired quality standard, including variations from bayur tree wood (*Pterospermum javanicum*) to palapi wood (*Heritiera simplicifolia*) which is known for its excellent quality. The source of this wood is located in Tibo Village, Sindue Sub-district, Donggala Regency, Palu City with a price range of Rp. 1,350,000.00 to Rp. 3,000,000.00 per cubic. In the implementation of wood raw material procurement, obstacles often arise such as limited supply of raw materials and potential delays in delivery triggered by weather factors. This condition can have a negative impact on the smoothness of the production process, given the need for a drying stage or drying wood for about 10 days before the production process can begin. Zaskia Furniture strives to achieve a balance between operational efficiency, customer satisfaction, and competitive advantage in the furniture market. Optimal distribution in this case can be achieved by applying the concept of supply chain management. (Widyarto, 2012).

Supply chain is one part of operational management science. Widisatriani et al., (2015) explains that supply chain management is an approach that is implemented to bring together suppliers, entrepreneurs, warehouses, and distributors, retailers and retailers efficiently so that products can be produced and distributed with the right amount, the right location and the right time to minimize costs and can meet customer desires. Dwicahya & Probawati (2012) in his writing explained that supply chain management is essentially the coordination of supply chains starting from the production process, management, distribution, marketing to end consumers (both offices and households).

A good supply chain system will have an impact on the sustainability of the production process and customer satisfaction. The supply chain system will run smoothly if there is adequate availability of raw materials. In accordance with the research results (Talumewo et al., 2014) which in the results of his research states that supply chain management has an impact on raw material inventory, where a good supply chain that is

smooth, meets quality, and is timely will have an impact on the supply of raw materials needed for the short, medium and long term. Based on the background that the researchers described, the researchers wanted to conduct research with the title Analysis of Supply Chain Management Activities (Case Study on Zaskia Furniture Business in Palu City).

II. LITERATURE REVIEW

According to Nursani and Rachman (2022, 11) there are three types of components or segments in the supply chain, namely: upstream supply chain, internal supply chain, and downstream supply chain which will be explained as follows.

A. Upstream Supply Chain

Upstream supply chain is the upstream part of the supply chain which includes the activities of a corporate organization or institution with supplier partners who can be factories, sole agents, distributors, intermediaries, retailers, and service providers. The main activities of the upstream supply chain are the planning process, as well as the search for suppliers and procurement of goods or services.

B. Internal Supply Chain

This internal supply chain includes the entire process of receiving goods into warehouses or services provided by supplier partners in order to be used for internal supply chain processes, whether the process of use, production, or inventory allocation plans within the internal supply chain itself. The main concerns of this internal supply chain component are production management, inventory storage and control, and quality control management.

C. Downstream Supply Chain

The downstream supply chain includes all activities that involve the transportation and distribution process from the allocation of supplies or goods available in the internal supply chain process to the final recipients. End recipients can be manufacturers, sole agents, distributors, middlemen, retailers, and service providers. Attention is drawn to the processes of transportation, distribution, handover, and after-sales service.

III. RESEARCH METHODOLOGY

This research approach is included in a qualitative approach, namely research that describes, describes, explains, and interprets the state of the object under study based on facts that occur in the field. (Sugiyono, 2012). In this study, researchers used a qualitative approach with the aim of obtaining information, explaining and interpreting supply chain management at Zaskia Furniture in Palu City obtained from in-depth interviews with research informants consisting of suppliers, Zaskia Furniture business owners, 3 employees, 2 retailers and 2 consumers. This research is located in Palu City, precisely at Zaskia Furniture which is located on Jl. RE Martadinata, Layana Indah, Palu City. Data collection methods used by researchers in collecting data in this study, namely observation, interviews, documentation. This research will be analyzed using the NVivo 12 plus software tool.

IV. RESULT / FINDING

Zaskia Furniture is a manufacturing sector that focuses on the production and manufacture of various types of household and commercial furniture. Based on the research objectives that researchers have mentioned above, namely to find out and analyze supply chain management activities at Zaskia Furniture in Palu City. The data that researchers get in this study will be analyzed using the NVivo 12 plus software tool. Researchers analyzed the supply chain management of Zaskia Furniture starting from the process of procuring raw materials, processing raw materials, the process of distributing or selling products to the end consumer. Supply chain activities will show the processes or activities that occur at Zaskia Furniture in Palu City. The parts of the supply chain activity consist of: Upstream Supply Chain, Internal Supply Chain, and Downstream Supply Chain.

1. Upstream Supply Chain

Upstream supply chain activities are planning and procurement of raw materials. This research focuses on the procurement of raw materials, namely wood. After conducting the research, it was found that the upstream supply chain activity path in the Zaskia Furniture process is as follows:



Source: Data reprocessed (2023)

Fig. 1. Upstream Supply Chain

A. Supplier

A supplier is a company or individual that provides the resources needed by companies and competitors to produce certain goods and services. Researchers conducted interviews related to suppliers of wood raw materials at Zaskia Furniture and obtained information that the cooperation carried out by suppliers with Zaskia Furniture had been established since 2019 and the wood raw materials sent to Zaskia Furniture came from the forest at the foot of the mountain in Tibo Village, West Coast.

Whereas in the wood ordering system in furniture production in this study through WhatsApp and later the process of delivering wood to suppliers using vehicles provided by the sawmill business while for delivery from suppliers to furniture using transportation services.

B. Raw Materials

The main raw material used in making furniture is wood. The quality, durability, and beauty of the furniture are greatly influenced by the type of wood chosen. Therefore, wood is the main raw material in the production process of furniture making. Based on the informant's statement, information was obtained that the wood raw materials used came from tibo village, west coast. The process of determining this supplier is seen from the quality and price of wood.

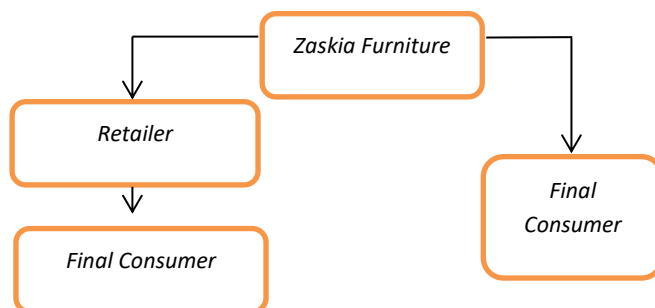
Furthermore, in this study, the raw materials obtained by suppliers came from sawmills. Sawmill is a form of activity in the industrial sector by converting raw wood from forest products into semi-finished wood. The collectors buy in large quantities and will resell to the furniture industry in Palu City. The collectors in this study act as suppliers or wood suppliers. Subsequently, information was obtained that there are various types of wood processed, but the type of wood most often ordered by the furniture is bayur wood. This type of wood itself is sold at a price of Rp. 800,000 to Rp. 1,000,000 more per cubic.

2. Internal Supply Chain

Internal supply chain activities are production activities whose main concerns are production processes, storage and quality control. The production process refers to a series of steps and activities that occur within a company to convert raw materials into products. In this study, internal supply chain activities related to production, namely raw material requirements, production processes, and product distribution to retailers.

Based on the informant's statement, information was obtained that every week, Zaskia Furniture is able to consistently produce an average of 5 cabinets, 8 tables, and 15 chairs. This achievement reflects the company's ability to run the production process efficiently and productively to meet varied market demands.

3. Downstream Supply Chain



Source: Data reprocessed (2023)

Fig. 2. Downstream Supply Chain

Downstream supply chain activities are activities related to the transportation and distribution of manufactured goods to end consumers. In this study, downstream supply chain activities start from retailers and reach end consumers.

A. Product Distribution

Distributing products to retailers is one of the important stages in the supply chain or product distribution. This process involves delivering products from manufacturers or distributors to retail stores where end consumers can purchase the goods. The researcher continued the interview regarding product distribution, obtained information that Zaskia furniture currently has two retailers, namely Aisyah Furniture and Berkat Furniture. Aisyah Furniture is located in Layana Indah while Berkat Furniture is located in Tondo, East Palu. The furniture products delivered to these two retailers are tables, cabinets, chairs and nightstands.

B. Retailer

Retailers are the next informants who provide information on the distribution of furniture products to end consumers. Retailers have an important role in providing a wide selection of furniture and providing an adequate shopping experience to consumers.

Based on the informant's statement, it was found that the ordering process in this retailer's shop begins with the first step, namely the retailer purchasing the product directly from Zaskia Furniture to obtain the desired item. Thus, the order flow begins with the actions of consumers who make purchases directly to the retailer, namely Zaskia Furniture, thus creating an initial relationship between consumers and furniture product providers. Furthermore, it is known that the inventory system used by retailers is a stock system. Procurement of goods or products will be carried out again when the available products have been sold.

V. DISCUSSION

1. Upstream Supply Chain

Zaskia Furniture has a partnership with a regular supplier located in Tibo Village, West Coast. In the raw material procurement stage, the wood supplier cooperates with a wood sawmill business, which is a business that specializes in managing raw wood into semi-finished wood. This wood transformation process is a critical step taken by the sawmill business to ensure that the wood produced meets the desired quality standards.

The semi-finished timber that has been processed by the sawmill is then transported and delivered to Zaskia Furniture's timber supplier. Interestingly, this supplier does not adopt a systematic raw material procurement plan. Instead, the supplier tends to make purchases directly to the sawmill business in significant quantities. This is done without any prior procurement plan, and when the raw material stock is running low, the supplier simply makes purchases without the need for detailed planning. As such, this dynamic reflects flexibility in the approach to raw material procurement by Zaskia Furniture suppliers, albeit with a tendency to make purchases that are more reactive than proactive.

Wood deliveries from suppliers to Zaskia Furniture are scheduled to be made between Saturday and Monday, adjusted to the availability of existing wood stock. The raw material distribution process relies on four-wheeled pick-up vehicles provided by the supplier to ensure smooth delivery. This delivery system reflects a joint effort between Zaskia Furniture and the supplier to maintain the availability of raw materials needed in their furniture production process.

2. Internal Supply Chain

Zaskia Furniture also sets additional measures to improve the quality of its products. After the procurement of raw materials, the initial stage involves drying the wood for approximately 10 days. This step ensures that the wood used in production has an optimal level of dryness and stability before proceeding to the next stage. Furthermore, the wood that has undergone the drying process will go through a series of production stages to be transformed into high-quality furniture products. In one week, Zaskia Furniture is able to produce an average of 5 cabinets, 8 tables, and 15 chairs. The production process is carried out by a team of 4 employees, each of whom has specific tasks and responsibilities in perfecting each stage of production. After undergoing the production phase, the furniture products that have been made are not only sold at Zaskia Furniture itself, but also distributed to several retailer partners, such as Aisyah Furniture and Berkat Furniture. Thus, Zaskia

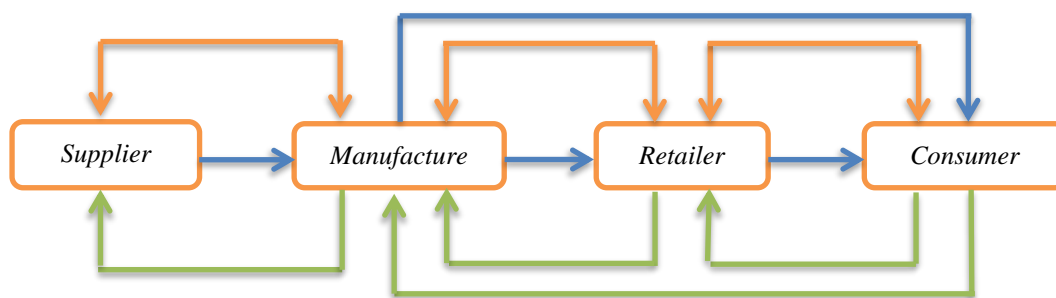
Furniture ensures that the results of their hard work can be enjoyed by various customers through their various distribution channels.

3. Downstream Supply Chain

Activities in Zaskia Furniture's downstream supply chain include a number of distribution strategies designed to ensure their products reach consumers in an optimized manner. Zaskia Furniture adopts two main distribution channels, the first is direct distribution where products are sold directly to end consumers. Meanwhile, the second distribution channel is indirect distribution, where Zaskia Furniture's products are marketed through retailers who then sell the products directly to end consumers.

In implementing direct distribution, Zaskia Furniture provides consumers with a direct shopping experience, allowing them to interact directly with the products and benefit from the services provided by Zaskia Furniture. On the other hand, indirect distribution involves two major retailers, namely Berkas Furniture and Aisyah Furniture. Through this collaboration, Zaskia Furniture is able to expand their market reach and ensure that its products can be found in various locations through these retailer partners. Thus, the organization of these two distribution channels not only increases the affordability of Zaskia Furniture's products in the market, but also provides flexibility to consumers in choosing the way that suits their preferences to acquire furniture products. Thus, this distribution strategy helps Zaskia Furniture to achieve success in the market by utilizing the diversity of distribution channels available.

Based on the description that has been presented above, information is obtained that there are three flows in the supply chain of Zaskia Furniture in Palu City. These flows are supported by previous research conducted by (Marliyana et al., 2023) There are three flows in the supply chain network of Maize Agribusiness in Sigi Regency, including product flow, money flow and information flow. The following are the three flows:



Source: Data reprocessed (2023)

Fig. 3. Activity Flow at Zaskia Furniture in Palu City

Caption:
→ : Product Flow
↔ : Information Flow
↔ : Money Flow

A. Product Flow

The flow of products or goods describes the initial stages in the supply chain, starting from upstream to downstream, which involves the journey from the supplier until it reaches the hands of the end consumer. In the first stage, suppliers play a major role by supplying essential raw materials, such as wood, which will later be processed into furniture in the production process.

In the context of distribution, there are two main methods applied: (1) Direct distribution to end consumers, (2) Indirect distribution through retailers. Zaskia Furniture, as part of this process, chooses these two approaches to optimize the distribution of their products. The products produced by Zaskia Furniture, which involve various types of furniture, are directed to their two retailers, namely Berkas Furniture and Aisyah Furniture.

The cooperation with these two retailers allows Zaskia Furniture to reach a wider market segment and provide consumers with distribution options that suit their preferences. Thus, Zaskia Furniture's product flow involves a number of complex stages, from the procurement of raw materials to the final distribution to consumers through two different distribution channels.

B. Money Flow

The money flow analysis in this research framework covers two main aspects, namely product prices and payment systems, which shape the economic dynamics from downstream to upstream. The initial stage of money flow starts from Zaskia Furniture to the supplier, where payment is made in exchange for wood raw materials. The price paid by Zaskia Furniture to the supplier ranges from Rp. 900,000 to more than Rp. 1,000,000, depending on the type and quality of wood ordered for the furniture production process.

Meanwhile, the next stage in the money flow involves transactions between consumers, Zaskia Furniture, and retailers. Consumers, whether they shop directly at Zaskia Furniture or through retailers, contribute to the money flow by paying for the products they choose. Likewise, retailers who have partnerships with Zaskia Furniture play a role in conveying payments from consumers to Zaskia Furniture.

C. Information Flow

Information flow, as the third element in the supply chain dynamics, covers two interrelated directions, namely from upstream to downstream and from downstream to upstream. The flow of information from upstream to downstream includes a series of communication between suppliers and Zaskia Furniture, this communication covers aspects such as the availability of raw materials, types of wood available, and information related to quality requirements.

Furthermore, the flow of information involves Zaskia Furniture who acts as a conveyor of information related to the various products they offer to retailers and end consumers. This process involves a detailed explanation of the products, specifications, and advantages possessed by each furniture produced by Zaskia Furniture. Simultaneously, the flow of information from downstream to upstream includes interactions between consumers, retailers, and Zaskia Furniture. Retailers act as intermediaries by conveying information about preferences and types of products that are most in demand by consumers to Zaskia Furniture. On the other hand, information also flows from the manufacturer (Zaskia Furniture) to the supplier related to the amount of raw materials ordered and the desired time for distribution of raw materials. Thus, the complexity of this information flow becomes an important pillar in forming a coordinated and mutually supportive relationship in the supply chain of Zaskia Furniture.

VI. CONCLUSION AND RECOMMENDATION

A. Conclusion

Based on the results of the research and discussion that has been carried out regarding the analysis of supply chain activities at Zaskia Furniture in Palu City, it can be concluded that the supply chain activities at Zaskia Furniture include three activities described as follows:

The distribution process of this wood to Zaskia Furniture is carried out through the use of four-wheeled pick-up vehicles that have been provided by suppliers or suppliers as part of the services provided. This whole process underlines the importance of cooperation with suppliers, as well as efficient logistics strategies, in ensuring the supply of quality and timely raw materials to support Zaskia Furniture's furniture production.

Based on the research results related to the internal supply chain, it was found that at the production stage of Zaskia Furniture, it is carried out by four employees or craftsmen responsible for carrying out various processes. These four team members, with specialized expertise and skills, consistently manage to produce an average of 5 cabinets, 8 tables, and 15 chairs every week.

Zaskia Furniture expands their market reach, giving consumers the flexibility to choose the purchasing option that best suits their preferences and convenience. As such, this diversified distribution strategy demonstrates Zaskia Furniture's earnestness in providing maximum product accessibility to consumers

B. Recommendation

This research is only limited to evaluating the flow of supply chain activities at Zaskia Furniture. Therefore, it is expected that future researchers can measure the performance of manufacturing supply chains using quantitative methods, such as the SCOR (Supply Chain Operation Reference) model or other models. This aims to gain a deeper understanding of the value, effectiveness, and efficiency of the supply chain.

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The preferred spelling of the word "acknowledgment" in America is without an "e" after the "g." Avoid the stilted expression "one of us (R. B. G.) thanks ...". Instead, try "R. B. G. thanks...". Put sponsor acknowledgments in the unnumbered footnote on the first page.

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