ECO - HANDLOOM WEAVER: RETAILERS PERSPECTIVE IN NEW PRODUCT DEVELOPMENT HIOU SIMALUNGUN

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Abstract: The article aims to explore new product development, particularly in the Hiou industry in Simalungun, by involving various instruments that consist of new product development strategies, development processes, organizational relationships with new product development, and the evaluation of new product performance itself. The research results show that 57.14% of respondents agree that New Product Development is aimed at meeting the demands of traders, and the Objective of New Product Development is to meet the demands of traders, with 32.14% agreeing and 40% agreeing that new product development is carried out after obtaining approval from external parties.
Keywords: Retailer Participation, New Product Development

Abstrak: Artikel bertujuan mengeksplorasi pengembangan produk baru, khususnya industri Hiou di Simalungun dengan melibatkan berbagai instrumen yang terdiri dari strategi pengembangan produk baru, proses pengembangan, hubungan organisasi dengan pengembangan produk baru, dan evaluasi kinerja produk baru itu sendiri. Hasil penelitian adalah 57,14 % responden setuju bahwa pengembangan produk baru untuk memenuhi permintaan pedagang dan tujuan pengembangan produk baru pengembangan produk baru untuk memenuhi permintaan pedagang sebanyak 32.14% setuju 40% setuju bahwa pengembangan produk baru dilakukan setelah mendapatkan persetujuan pihak luar.
Kata Kunci: Partisipasi Pedagang, Pengembangan Produk Baru

PENDAHULUAN

Indonesia, as an archipelagic country, has diverse ethnic groups and regional languages (Na'im & Syaputra, 2011). Each region in Indonesia has traditional clothing influenced by its customs, local culture, and the tools used (Tria Basuki, 2009). Ulos is one of the woven fabrics originating from the Batak tribe in North Sumatra Province (Welianto, 2021). The use of the name for traditional woven fabrics in the Batak tribe has the same meaning as the word ulos for the Toba, Mandailing, and Angkola Batak tribes, and the name hiou for the Simalungun tribe, while the Karo tribe calls it uis and the Pakpak tribe calls it oles (Ralie, 2017).

Hiou, as a local ethnic product of the Simalungun Batak culture, needs to be developed. To be competitive, a well-planned and mature process is needed. The Ansoff Matrix consists of four main strategies or approaches, including market penetration, product development, market development, and diversification (Ihalauw, 2017). The product development process becomes more specialized and dynamic and needs to change for the better. The products produced by artisans are always moving towards dynamism and aligning with external roles (L. Saragih, Ginting, Absah, & Situmorang, 2024).

The Hiou Simalungun industry is currently facing a high level of competition and significant challenges, particularly in its ability to create new products as an indicator of success in generating cash flow and influencing consumer perceptions. If not careful, the opportunity to win the competition can slip away. Innovation and design are key to winning the competition in today's creative economy era. Innovation in the development of new products and services is key to how large artisans can remain competitive, while also being balanced by a process that continuously enhances their skills and competencies on the other side (L. Saragih et al., 2023).

Research on the indicators of successful new product development in Simalungun has not been extensively conducted, especially regarding Hiou woven fabrics. Therefore, it is very beneficial and has a direct impact on Hiou artisans to learn more about the main indicators of successful new product development. The focus of this research is on the influence of trader participation applied by artisans in the development of their new products.

LITERATURE REVIEW

Retailer Participation

Retailer become an important part of making most decisions in the buyer-driven supply chain in the ready-made garment industry.Traders need to coordinate their supply relationships to meet customer needs (Andreu, Sánchez, & Mele, 2010). In other words, they act as resource integrators, stimulating internal and external collaboration and thereby building networks. Market players are resource integrators because they transform the skills and knowledge of employees and other internal and externally acquired resources into service provision (Lusch et al., 2007)

Fashion product designs seem to be created from a merchant's perspective. This may happen because the focus of clothing NPD tends to be driven by buyers like design centers, leading to an increased emphasis on studying the design process. Because all products are made by artisans at home and the design is usually done by traders, artisans have little control over NPD. The limited access to information between consumers and artisans causes consumers to interact more with (Wang, Shen, & Liu, 2017), especially during the product purchasing process. This interaction provides suggestions and feedback in product development that will be forwarded to the artisans. Therefore, collaboration in NPD between traders and craftsmen also becomes the most important (Shih, Agrafiotes, & Sinha, 2014). In this study, the participation of traders in NPD adopts research (Moedas, 2006).

New Product Development (NPD)

NPD is not only relevant for large-scale companies but also for SMEs (Iqbal & Suzianti, 2021), but NPD in SMEs may differ from large companies (Huang, Soutar, & Brown, 2004). New products encompass original products, enhanced products, modified products, and new brands developed through the organization's research and development efforts (De Brentani, 2001). Petrick and Echols (2004) state that new products are those that are truly innovative, satisfying unmet needs; replacements that are significantly different from existing products in terms of form, function, and benefits provided; new imitative products for the organization but not new for consumers. On the other hand, new products consist of two dimensions: organizational novelty and market novelty. The dimensions of new products include cost reduction, improvement of existing products, repositioned products, addition to existing product lines, new product lines that allow established companies to enter the market, and new products for the world that create new markets.

The new product development process can be defined as a series of activities that involve the conversion of product ideas, market opportunities, and technical assumptions into products that can be made available for sale (Pienaar, Van der Lingen, & Preis, 2019). Various stages in New Product Development (NPD) have been identified in different studies, but these three NPD stages are suitable for SMEs (Ernst, Hoyer, & Rübsaamen, 2010; Leithold, Woschke, Haase, & Kratzer, 2016).

METHODOLOGY

Population and Sample

The type of research used in this study is the quantitative method. The population in this study consists of hiou craftsmen in Simalungun Regency. The sample used in the research is as many as. The number of samples obtained from this research is 28 craftsmen in the Rambung Merah village area, Simalungun district. The distribution of the questionnaire was carried out with parties directly involved in the new product development process. Data collection was carried out using primary and secondary data. Primary data is data obtained by the author through observation and direct interviews. Next, a survey was conducted by distributing questionnaires using a Likert scale (M. G. Saragih, Saragih, Purba, & Panjaitan, 2021). The data analysis technique used is simple linear regression. Hypothesis testing was conducted using the t-test.The method in this study is accidental sampling (Sugiyono, 2019). The sample criteria used are based on the following characteristics: 1. Craftsmen, 2. residing in Simalungun Regency, 3. willing to be respondents in the research.

RESULTS

Simalungun Regency is located between 020 36' – 030 18' North Latitude and between 980 32' – 990 35' East Longitude, covering an area of 4,372.5 km² at an altitude of 0 – 1,400 meters above sea level. Simalungun Regency consists of 32 districts, with the largest district being Hatonduhan and the smallest being Haranggaol Horison, with an average travel distance to the regency capital of 30 km, where the farthest distances are Silou Kahean at 127 km and Ujung Padang at 113 km (Simalungun, 2021). The hiou craftsmen are generally located in the Siantar district, specifically in the village of Rambung Merah. In the Simalungun language, it is called hiou. The varieties of hiou from Simalungun Regency include hiou Hati Rongga, hiou Tapak Satur, hiou Ragi Sapot, hiou Suri-Suri, hiou Bulang-Bulang, hiou Ragi Idup, hiou Ragi Bintang Maratur, hiou Sitoluntuho, hiou Ragi Panei, hiou Ipput Ni Hirik, hiou Mangiring, hiou Tappunei, hiou Simangkat-Angkat (Nainggolan, 2020).

The characteristics of the respondents include gender, age, monthly income, last education, marital status, duration of being a weaver, and monthly turnover. Generally, the artisans are women, making up 96.4% of the total, while the remaining 3.6% are men, with only one male respondent. This indicates that women are more likely to engage in weaving activities, while men tend to go to the fields. In addition, women manage household chores while weaving hiou at home. Artisans are present at all age levels, with data showing that 25% are aged 17-23 years. This shows that the activity of weaving hiou is a choice of work at home when they can no longer afford to work outside the home, such as in the fields or other activities Table 1.

Table 1. The profile of respondents

		Percent
Gender	Female	96.4
	Male	3.6
Age	above 50 years	21.4
	Between 17 - 23 years	25.0
	Between 24- 30 years	17.9
	Between 31-40 years	14.3
	Between 41- 50 years	21.4
Education	Elementary School	10.7
	Senior High School	89.3
Number of years of business operation	< 1 years	32.1
	> 10 years	28.6
	1 - 5 years	17.9
	6 - 10 years	21.4
Omzet per Month (Idr)	< 10 Millions	92.9
	10 - 50 Millions	7.1

Sources: data process, 2024

The education level of the craftsmen is generally high school/equivalent, at 89.3%. The craftsmen have generally been engaged in weaving activities for less than 1 year, at 32.1%. The second largest group has been weaving for more than 10 years, at 28.61%. The data above shows that the craftsmen are young and consider weaving activities to be a job for women.

Generally, the sales turnover of the craftsmen's hiou is below Rp. 10,000,000,- or 243 craftsmen or 92.9%. If the produced hiou is sold to local traders for around Rp. 1,000,000 per piece of hiou per week. From the beginning of the thread process to becoming hiou, it takes about 1 month of work. The selling price of hiou can reach around Rp.5,000,000 at the craftsman.

By calculating the respondents' answers based on the percentage of respondents for each variable, both importance and satisfaction, the number of respondents with scale items for each variable, both satisfaction and expectation, on a scale of 4 and 5 Table 2. Here are the results of the top two boxes index calculation.

Table 2. Top Two Boxes Index

No	Two Top Box	Frequency	Percent
1	the developed product is a custom order from the retailer	16	57.14%

2	the developed product is a custom order from the	5	17.86%
3	the developed product is a market-oriented product.	3	10.71%
4	the developed product is a product in accordance with customary rules	2	7.14%
5	the developed product is a product that follows the style of other craftsmen	1	3.57%
6	the developed product is very new compared to the previous product	1	3.57%
	Total	28	100

Sources: data process, 2024

First, the strategy for developing new products for artisans. Of all respondents, the top-two-boxes 57.14% agreed that the developed product is a custom order from traders. About 17.86% of artisans consider the developed product to be a modified motif product. This indicates that in order to compete in a highly competitive market, artisans are required to provide differentiation in their products that meet the market needs, in this case, the traders.

From the process of making new products in the workshop, 76% support using a different process, while 24% do not show their approval. In terms of tools or methods for making the new products, 100% are more supportive of using the new machine, specifically using a handloom instead of a machine. (ATBM). This proves that not all products produced and providing differentiation require a different process and machine from before.

From the factor of new skills needed to create products, 76% support that product development requires new motif design skills to produce different products, and to be accepted in the market, especially through collaboration with traders. The product development strategy employed by artisans, with more than 84% of artisan respondents striving to follow a first-to-market strategy by developing products that were completely absent in the market previously. This strategy requires a significant budget and marketing efforts to create innovative products. If viewed from a derivative-based product development strategy, artisans in Simalungun tend to seek opportunities by trying to develop products that are not yet on the market but by collaborating with traders. That strategy is implemented with the aim of saving costs and maintaining the existing network by increasingly using the same components while still providing differentiation.

From the ability to innovate and create products that are classified as breakthrough/radical, artisans in Simalungun still have much to learn. Research results show that only 12% of artisans support the idea that they produce products classified as radical for the market, while 88% do not support this. This indicates that the innovation process is not progressing very quickly and still requires the right form and strategy. That reality requires Hiou artisans in Simalungun to play a greater role by trying something new rather than sticking to what already exists. Clark and Fujimoto (1991) state that effective product development is not simply achieved by increasing R&D costs, relying on radical technology, or introducing new tools and techniques, but rather it is a pattern of comprehensive consistency of the total development system, including organizational structure, technical skills, problem-solving processes, culture, and strategy. That consistency works not only in the broad architecture of the system but also in the detailed levels of work.

The development of new products is closely tied to the leadership patterns present in Pengajin and the culture that has developed within it. Strong leadership can provide a clear vision, mission, and direction in new product development. The research results show that in new product development, 100% is always directed by artisans to their employees. For new product development proposals, 70% of respondents always receive them from external parties and 30% from the ideas of owners and employees. From this research, it shows that it is still rare for new product development directions to start with a bottom-up pattern, but proposals from external parties, in this case not only consumers but also other parties involved, hold a significant portion. In the current era of the creative economy, sources of ideas come from various layers. The involvement of all parties in the development of new products must be a concern for all sections within Pengajin, whether through a top-down, bottom-up, peer-to-peer, inside-out, or outside-in approach.

From the perspective of the artisans in developing new products, 19% is for meeting traders' demands, 32.14% for reducing production costs by 21.43%, to improve quality, diversifying products by 17.86%, following trends by 14.29%, improving quality by 7.14%, extending product life cycles, and creating new markets by 3.57% each Table 3.

Table 3. Objective of New Product Development

No	Product Development Goals	Frequency	Percent
1	Meeting Retailer Demand	9	32.14%
2	Reducing Production Costs	6	21.43%
3	Diversifying Products	5	17.86%
4	Following Trends	4	14.29%
5	Improving Quality	2	7.14%
6	Extending Product Life Cycle	1	3.57%
7	Creating New Markets	1	3.57%
	Total	28	100 %

Sources: data process, 2024

From the table 5, it can be concluded that the requirements to pass the multicollinearity test have been met by all existing independent variables. That is, the tolerance value is greater than 0.1 and the VIF is less than 10. Therefore, it is concluded that all the independent variables used in this study are not correlated with each other.

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.676[a]	.457	.437	.30610

a. Predictors: (Constant), RP
Sources: data process, 2024

The R square value indicates the coefficient of determination or the role of variance (independent variable in relation to the dependent variable). An R Square value of 0.676 indicates that only 67.6% of the new product development variable can be explained by the trader participation factor variable Table 4.

Table 5. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.540	.645		2.389	.024		
	RP	.646	.138	.676	4.681	.000	1.000	1.000

a. Dependent Variable: NPD
Sources: data process, 2024

Regression equation $Y = 1.540 + 0.646\ X_1$

The results of the regression analysis show that the t-value for trader participation is 4.681 with a t-significance value of 0.000, which means it is significant, and the regression coefficient is 0.646. This means that Trader Participation has a positive and significant influence on the development of new products Table 5.

CONCLUSION

The research results show that the focus of new product development in the Hiou Simalungun industry is on meeting the needs of traders as a key factor. To produce products with clear differentiation, rich in technology, it requires a large research and development budget as well as commitment and consistency, accompanied by the creation of a conducive, innovative, and collaborative organizational environment.

Collaboration and cross-functional teamwork are also vital components of effective NPD. The transition from traditional departmental structures to integrated teams facilitates better communication and resource sharing, which are crucial for accelerating the development process and improving product quality. The use of structured methodologies, such as Quality Function Deployment (QFD), can enhance the integration of various departments and ensure that all aspects of product development align with customer expectations and organizational goals (Hung, 2021)(Hung, 2021). Additionally, the

management of diverse teams in a knowledge economy requires a shift from experience-based management to a more creative and collaborative approach

Idea generation is another critical function of NPD, as it lays the foundation for innovation. Companies must challenge existing industry norms and foster a culture of creativity to develop groundbreaking products that can transform markets (Mandal, 2020). Techniques such as brainstorming and competitor analysis can facilitate the generation of innovative ideas, which are essential for maintaining a competitive edge in rapidly evolving industries (Mandal, 2020) Moreover, the ability to manage and prioritize these ideas effectively can significantly influence the success of new product initiatives

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