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Business Model Analysis and Innovation of Jumputan Industry Using the Value Chain and It Balanced Scorecard Approach

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Abstract

Palembang Jumputan Fabric SMEs are an interesting industry to analyze using the E-Business chain application value and performance measurement using the concept IT Balanced Scorecard that can help Palembang jumputan fabric SMEs entrepreneurs control performance and provide feedback in developing its operational performance. The technique of analyzing the data uses a quantitative descriptive approach, which describes a data in the form of numbers obtained from enumeration and counting. To achieve competitive advantage, companies must pay more attention to three aspects, namely, Service, Quality and Price. The highest value added was received by the jumputan craftsmen, which was 19.43%, with a value of Rp. 35,737, the second added value is on the shop side, which is 7.19% with a large value of Rp. 17,211. The use of information technology at Griya Kain Tuan Kentang has not been able to contribute to the organization, support user orientation, support operational activities, and has not been able to compete in the future. The final result in measuring the performance of information technology users at Griya Kain Tuan Kentang is 60.63%.

Keywords
IT balanced scorecard; value chain; canvas business model; griya kain tuan kentang

I. Introduction

One of the efforts of a business entity to continue to grow and survive is to enter the virtual market through E-Commerce. E-Commerce is an online store that can be accessed by anyone and at any time, therefore an MSME can carry out market development to global markets and add services around the world via the internet.

Over time, one of the Palembang Jumputan Fabric SMEs is an interesting industry to analyze using the E-Business chain application value. This is because jumputan is one of the superior products in the Palembang area which is in great demand by the public and is very influential for the economy, especially the people of Palembang. In facing the level of competition, industrial trade is required to be able and ready to have high competitiveness. High competitiveness is absolutely necessary for every industry in order to remain superior. Industry competitiveness in achieving optimal international trade performance is influenced by the value chain(Nurimansyah 2011). Development is a systematic and continuous effort made to realize something that is aspired. Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired. In addition, development is also very dependent on the availability of natural resource wealth. The availability of natural resources is one of the keys to economic growth in an area. (Shah, M. et al. 2020)

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The IT Balanced Scorecard concept can help cloth SME entrepreneurs jumputan Palembang in control performance and give bait to come back in developing performance operational. Each perspective in the IT Balanced Scorecard has measures and targets that must be achieved by craftsmen in this case to carry out their main business processes, namely the business contribution perspective, operational improvement, user orientation, and future orientation.

The results of the value chain analysis and assessment of the current conditions and strategies of the jumputan fabric industry craftsmen will then be further analyzed and modeled with a business canvas perspective to test and model the pattern of implementing technological innovations, especially in the green supply chain aspect which is the main research research as a reference for research proposals (Herdiansyah et al, 2018).

II. Review of Literature

2.1 Value Chain

Figure 1. *Value Chain Value*

Chain *is*a series of activities carried out by a company to produce products or services. This concept was popularized by Michael Porter in the book *Competitive Advantage: Creating and Sustaining Superior Performance* (1985). According to this concept, company activities are divided into two major parts, namely primary *activities support activities as* shown in Figure 1.

3.2 T Balanced Scorecard

In 1997, Van Grembergen and Van Bruggen adopted the Balanced Scorecard (BSC) for use in the Information Technology Department of the organization. *The IT Balanced Scorecard* has the goal of enabling users to adapt information system planning and activities to organizational goals and needs, aligning user efforts with information system goals, providing measurements to evaluate the organizational effectiveness of information systems, encouraging and sustaining improved information system performance, and achievement. balanced outcomes among stakeholder groups (Maula & Ghozali, 2012).

USER ORIENTATION	BUSINESS CONTRIBUTION
How do users view the IT department? ***Mission*** *To be the preferred supplier of information systems.* ***Objectives*** *•Preferred supplier of applications* *•Preffered supplier of operations vs proposer of best solution, from whatever source* *•Partnership withusers* *•User satisfaction*	*How does management view the IT department?* ***Mission*** *To obtain a reasonable business contribution from IT investments.* ***Objectives*** *•Control of IT expenses* *•Business value of IT projects* *•Provision of new business capabilities*
OPERATIONAL EXCELLENCE	**FUTUREORIENTATION**
How effective and efficient are the IT processes? ***Mission*** *To deliver effective and efficient IT applications and services.* ***Objectives*** *•Efficient and effective developments* *•Efficient and effective operations*	*How well is IT positioned to meet future needs?* ***Missions*** *To develop opportunities to answer future challenges.* ***Objectives*** *•Training and education of IT staff* *•Expertise of IT staff* *•Research into emerging technologies* *•Age of application portfolio*

Figure 2. *The perspective of the T Balanced Scorecard*

IT Balanced Scorecard is a performance management methodology for the application of information technology which was developed from the *balanced scorecard*. *The IT Balanced Scorecard* can describe and project providing a framework for describing the company's information technology implementation strategy in terms of operations. *The IT Balanced Scorecard* consists of 4 (four) perspectives, as shown in Figure 2.

3.3 Business Model Canvas

The Business Model *Canvas* is a business model describing the rationale for how organizations create, deliver, and capture value (Osterwalder & Pigneur 2012). The business model can be described with nine basic building blocks which are often referred to as the business model *canvas*. The nine building blocks cover the four main areas of a business, namely customers, offerings, infrastructure, and financial viability. The following are nine business model canvas blocks as shown in Figure 3

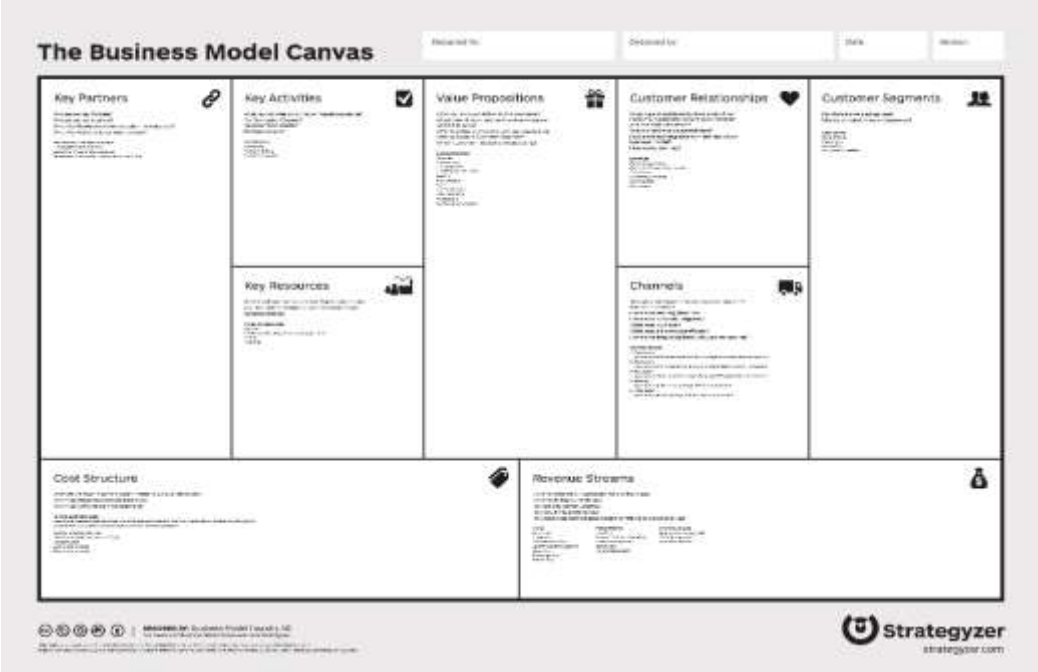

Figure 3*. Nine Business Model Blocks, Osterwalder, Pigneur al 2012*

The Model Canvas can explain the relationship of the nine business model elements that are visually described, so that innovations made in the company's business model will be easier to understand and understandable.

III. Research Method

This research was conducted in the industrial area of Griya Kain Tuan Kentang Jl. Aiptu A. Wahab, Tuan Potato, Kec. Jakabaring, Palembang City, South Sumatra This research was conducted at PT XYZ Unit XYZAcademy.

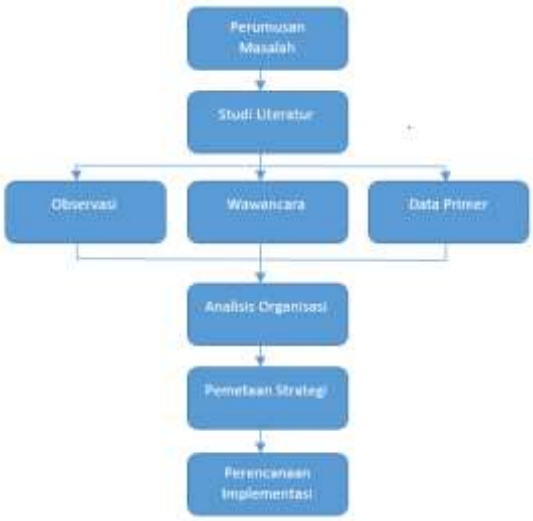

Figure 4. *Stages of Research*

The process of formulating research problems through a study of phenomena and problems that occur in the jumputan cloth craftsman of Tuan Kentang Palembang. At this stage the researcher focuses on topics related to business model analysis and innovation

The literature study is carried out by researchers, which focuses on reviewing research results and theoretical literature related to business models and small craft industry innovations, especially on aspects of application and study of value chain method implementation and IT Balanced Scorecard.

The researcher carried out the primary data collection process using observation, interviews, and distributing questionnaires regarding the situation in the research object. Through questionnaires, researchers can collect data and examine it using quantitative descriptive techniques.

The researcher conducted a study and strategy mapping using the value chain and the IT Balanced Scorecard approach. Then the researchers developed an implementation model by designing analysis, mapping strategies, and planning implementation.

IV. Result and Discussion

4.1 Overview of Research Objects/Subjects

The distribution of questionnaires was carried out for 2 weeks in the period from 5 July 2022 to 19 July 2022 at Griya Kain Tuan Kentang which is the center of the jumputan

handicraft industry in the city of Palembang, South Sumatra. Respondents who returned the questionnaire were 13 people from a total of 20 questionnaires distributed.

4.2 Respondent Profile

a. Respondents by Gender

The number of respondents was as many as 13 people consisting of men and women. The characteristics of respondents n this study based on gender are presented in table 2 below:

Table 1. Respondents by Gender

No	Gender	Frequency
1	Man	4
2	Woman	9
	Amount	13

Source: Lord Potato's Cloth House

4.3 Discussion

This is research uses 2 approaches. The first approach is business model analysis using the value chain and followed by performance measurement using the *T Balanced Scorecard approach.*

a. Value Chain

According to Pearce & Robinson, 2009 in (Wisdaningrum, 2013), the first step in value chain analysis is to break down the operations of a company into specific business activities or processes, by grouping the activities on these processes into categories of primary or support activities. When the value chain is documented, managers need to identify the activities that are critical to buyer satisfaction and market success. These activities are activities that need special attention in internal analysis. The following is an analysis table of the main activities and supporting activities in the value chain of the jumputan industry at Griya Kain Tuan Kentang.

Table 1. Value Chain

	Infrastructure	
	1. road access There is no 2. delivery of goods.	
	Human Resource Management The	
	1. local government has paid attention to business people, especially craftsmen 2. . The average number of workers involved has long experience. 3. The number of workers involved varies, depending on how many orders.	Margins
	Technology Development	

	1. Some craftsmen have used technology as a media for product promotion. 2. The use of information technology as a sales platform has not been maximized. 3. The recording of stock of goods, profits, etc. is still using the manual system					
	Purchases					
	1. uncoordinated Sales and 2. activities have not been maximized because they do not apply the principle of a *win-win solution*					
	Logistics Inbound Logistics	Operations	Outbound	arketing and Sales	rvices	
	1. Purchasing raw fabrics from 3 suppliers. a. Brilliant b. shop, eagle mas c. shop, bella shop 2. . Raw material purchases are made every 2 months, while coloring is only done once a month.	1. In the process of making jumputan cloth there are 6 stages. 2. The process of making and ordering is done depending on the deadline and the requested motive.	1. There is no special storage warehouse. 2. The amount of labor production varies due to several factors that affect the weather.	1. Using Social *media* to promote products. 2. The craftsman has several resellers and wholesalers and the	craftsman shop sells goods to various stores with an easy system, the tempo system (giro) or cash and transfer.	

b. Analysis Value Added Analysis

Calculation of added value to jumputan craftsmen is seen based on the components that make up the cost of raw materials and operational costs. The value of the jumputan craftsmen's input is the cost until the jumputan fabric is sold to consumers. This condition aims to compare the added value obtained by each chain actor with the same product, namely jumputan fabric. Table 2 shows the input value of jumputan craftsmen is Rp. 9.263 Meanwhile, the value added for jumputan cloth is Rp. 35,737 or about 385.80%. Below is the result of calculating the added value in the value chain as follows.

Analysis of the added value in the jumputan industry uses several assumptions:

1. The production of jumputan fabrics in 30 days reaches 1500 pieces of cloth or 50 pieces/1 day. Depends on the motive request.
2. The amount of output that is calculated is the number of fabrics produced in a day.

Table 2. Calculation of Value Added

Calculation of Value Added		
Component Value Added	Value	%
Equipment Costs	482	0.52%
Operational Costs	8,781	94.78%
Input Value 9,263	385.80	100
Output Value	45,000	485.80%
Added Value	35,737	%

c. Value Chain Analysis Fabric Craftsmen Jumputan

In the jumputan fabric supply chain system to become a finished product, there are at least two parties involved. Craftsmen and Shops. The price of jumputan cloth at the craftsman level is Rp. 180,000. While at the store level is Rp. 200,000. In detail the activities forming the value chain can be seen in Table 3 as follows:

Table 3. Formation of Value Chain

Jenis Kegiatan	Pengrajin	Toko
	Rp/Baju	Rp/Baju
Produksi	482	1.446
Operasi	8.781	26.343
Total Biaya	9.263	27.789
Harga Jual	180.000	200.000
Margin	35.737	17.211
R/C	19,43	7,19

d. Analysis of the Business Model (Business Model Canvas)

Griya cloth Tuan Potato is a trading business unit engaged in the Jumputan Fabric processing industry in Palembang City, Sumatra South. In this research, the product to be analyzed is jumputan fabric. Previously, Griya Kain Tuan Kentang did not have the right business model and was still using the traditional system. The elements of the canvas business model are as follows:

1. Customer Segment

The target consumers intended by the company are not specifically based on certain criteria. But the jumputan cloth customer segment is Palembang, South Sumatra and tourists who visit these two areas.

2. Value Propositions
   Value Propositions is the value offered by the craftsmen or the Griya Kain Tuan Kentang to consumers. The values offered are:
   a. Brand: at this time the brand provided by the company is right, namely, jumputan fabric so that it is easy for consumers to remember and becomes a characteristic of fabric products in the city of Palembang.
   b. Diversification of raw materials: using good raw materials and guaranteed quality.
3. Channels
   Currently, Griya Kain Tuan Kentang only has two channels, namely social media, Instagram and TikTok. As well as third-party applications such as Shopee and Tokopedia.
4. Customer Relationships
   At Griya Kain Tuan Kentang, the customer relationships used are personal assistance or service during sales by employees of Griya Kain Tuan Kentang. This can be seen in the gallery, the products that customers want are taken by employees. And if consumers buy products directly from the craftsmen, the craftsmen provide cheaper prices compared to Griya Kain Tuan Kentang.
5. Revenue Streams
   Revenue Streams of income streams that enter Grey's income are through the sale of jumputan fabrics. Sales through outlets are the main source of income for Griya Kain Tuan Potato.
6. Key Resources
   The main resource currently available at Griya Kain Tuan Kentang is the Tuan Kentang area, which is the only active and largest industry in South Sumatra, especially Palembang City. Then the majority of the population of the Tuan Kentang area are Craftsmen, as well as the creative packaging designs they have.
7. Key Activities
   The main activities at Griya Kain Tuan Kentang currently are production, marketing and participating in events that raise the Jumputan Fabric brand.
8. Key Partnership
   The main partner of Griya Kain Tuan Kentang is a resident of the Tuan Kentang area whose majority of work is craftsman. Other key partnerships are the Government, MSME Community, Distributors and souvenir retailers.
9. Cost Structure
   The costs incurred for this business are production costs (including human resources) and operational costs. Production costs are costs used to produce products, while operational costs include costs of promotion, marketing, and maintenance of production machines. Value and cost driven business models, and economies of scale.

4.4 Analysis and Discussion

a. Evaluation of Changes and Action Plans

Evaluation carried out on the value chain discussed above is as described in the data collection and processing chapter and is explained as follows:

1. Waiter
   The factor is, Griya Kain Tuan Kentang only sells products and does not pay attention to added value to the Craftsman. What has to be changed is that Griya Kain Tuan

Kentang can use the Gallery as a value-added service to consumers. Provide training that adds to the improvement of human resources.

2. The quality
   factors are, Griya Kain Tuan Kentang has not implemented Quality Control, HR for employees is not maximized, the technology system is still not optimal. What has to be changed is: Companies must implement Quality Control in order to maintain the quality of the products produced. Then provide opportunities for employees to attend training. The Lord's Fabric House and Craftsmen can also take part in training using automatic machines to increase product quantity.
3. Price
   was, Prices at the Craftsman, Shop, and Potato Lord's Cloth level had quite a wide margin. Then the price policy that has not been standardized so that the price of jumputan cloth is not expected to rise during the Eid season. What has to be changed is that Griya Kain Tuan Kentang conducts an audit for craftsmen in order to provide added value to craftsmen. It is better for the government to standardize prices that become a reference for chain actors so as to create a conducive trading climate and win-win solution.
4. Technology The
   factor is that the technology used has not met all the needs of Griya Tuan

Then proceed with measuring the performance of the use of information technology at Griya Kain Tuan Kentang. The system that works only displays the profile and some information of Mr. Potato's Cloth House such as location and contact. The sales process uses third-party applications such as *shoppee* and tokopedia, while promoting their products through *social media* such as *instagram* and *tiktok.*

b. T Balanced Scorecard

Framework *T Balanced Scorecard* to measure the performance of the use of information technology at Griya Kain Tuan Kentang starts from studying the vision, mission, and strategic plan of Griya Kain Tuan Kentang. Below are the results of performance measurement using the T Balanced Scorecard.

Table 4. Performance Measurement Results

Strategic Objectives Strategic	Measures	Targets (%)	Actual (%)	Achievements (%)	Weights Objectives (%)	Outcomes Objectives (%)	Perspective Results (%)
Increase the effectiveness and efficiency of employee productivity.	Existing applications simply improve business processes	70%	47%	%			

	Using existing applications speeds up employee work and reduces error rates	70%	67%	95.71%	70%	54.76 %	54.76%
	Efficient use of funds and application development	65%	38%	58.46%			
	The application used is a power in managing data	60%	55%	91.66%			
Organizational Contribution Perspective (25%) = 13.69%							
Improving user competence and satisfaction	The application used is very concerned about the interests of users	65%	50%	76.92%	70%	42.10 %	42.10%
	The applications used are reliable in finding information	70%	56%	8%			
	Work relations can be connected well through available applications	70%	55%	78.57%			
	With the existing system can facilitate the interaction of each section	70%	55%	78.57%			
User Orientation Perspective (25%) = 10.52%							
Improve system quality development for the better	Griya Kain Tuan Potato should use more adequate applications	95%	93%	97.89%			

	process h Immediate flow in process	95%	73%	76.84%	95%	55.33 %	55.33
	Information technology is not yet fully available	60%	86%	1.43%			
Operational Improvement Perspective (25%) = 13.83%							
Improve the skills of *T* using the latest technology	Need for staff development t	95 %	90%	94.73%	95%	90.39 %	90.39%
	Griya Kain Tuan Kentang must actively conduct research and development	95%	90%	94.73% Informatio n			
	system renewal needs to be done	100%	96%	96%			
Future Orientation Perspective (25%) = 22.59%							
value *Balanced Scorecard T* 60.63%							

After measuring the performance through the four perspectives on the *T Balanced Scorecard*, it is possible to evaluate the results of the average achievement obtained by each perspective. Organizational Contribution Perspective has a value of 54.76, namely at level D or *bad*, this can occur due to the lack of effective use of funds and application development to improve business processes at Griya Kain Tuan Kentang so that the use of information technology has not reduced the error rate of employees. The User Orientation Perspective has a value of 42.10% indicating that the achievement at E or *very bad* is because the use of technology at Griya Kain Tuan Kentang has not been reliable in finding information and has not made it easier for interactions in each section. The operational improvement perspective is at level D or *bad* with a yield of 55.33%. This can happen because Griya Kain Tuan Kentang has not carried out the novation process or changes in the use of technology for the sales process, only using third parties and *social media* to promote products. Furthermore, the Future Orientation Perspective has a result of 90.39%, namely at level A or *very good.* This can happen because *T* is very supportive of the application development process and the development of *staff at* Griya Kain Tuan Kentang. In addition to local products that are known to many people, the use of technology must be *maximal* to support business processes at Griya Kain Tuan Kentang.

Utilization of information technology at Griya Kain Tuan Kentang has not been able to contribute to the organization, support user orientation, support operational activities, and has not been able to compete in the future. This can be assessed from the acquisition of measurements from each perspective, namely organizational contribution of 54.76 with measurement results of 13.69%, user orientation of 42.10% with measurement results of 23.81%, operational excellence of 55.33% with measurement results of 13.83% and future orientation of 90.39% with measurement results of 22.59%. The final result in measuring the performance of information technology users at Griya Kain Tuan Kentang is 60.63% and this value is at level D or *bad*.

V. Conclusion

Based on the results of the discussion that has been carried out, it can be concluded as follows:

The highest value added is received by jumpuran craftsmen, which is 19.43% with a value of Rp. 35,737, the second added value is on the shop side, which is 7.19% with a large value of Rp. 17,211 To achieve competitive advantage, companies must pay more attention to three aspects, namely, Service, Quality and Price.

Based on the analysis of the business model canvas, the business model of the jumputan fabric industry can be clearly identified. Griya Kain Tuan Kentang still uses traditional business concepts and still lacks attention to the value that partners, employees and consumers get. As a suggestion, it can be seen that although the resulting product is a jumputan fabric product, in business concept it can add value such as social activities to help and add value to partners (jumputan craftsmen) such as cultural education for consumers. The advantage of this concept is that it can increase consumer confidence in the jumputan fabric industry at Griya Kain Tuan Kentang and can be a strategy to invite consumers to participate in social activities at once.

Based on the value chain analysis and the canvas business model in terms of service, craftsmen can take advantage of Griya Kain Tuan as a value-added service to consumers, provide regular counseling for craftsmen to be more familiar with innovation and their production results will increase. In terms of quality, a strategy is needed, in the operational stage of making jumputan cloth there must be quality control so that the products produced are of higher quality, then provide training to craftsmen and wage workers to improve the quality of their human resources, utilize more modern technology so that existing business processes easier and better quality. As well as reducing manual activities such as recording stock of goods and sales reports. In terms of price, Griya Kain Tuan Kentang must conduct an audit to make the craftsmen get certainty about the price of the results and make good use of technology.

Based on performance measurement using the T Balanced Scorecard The target of measurement results from each perspective is 25% which is obtained from 100%: 4 perspectives. The highest perspective is future orientation, which is 22.59%, the second is operational excellence, 13.83%, the third is organizational contribution, 13.69%, and the lowest is user orientation, which is 10.52%. From the four perspectives, the user orientation perspective obtains the lowest measurement results due to the ineffective use and development of the information technology used. The use of third parties such as Shoppee and Tokopedia as well as Company Profile alone is not enough to meet future needs, it needs to be supported by competent human resources so that they are able to plan well in dealing with changes that occur continuously.

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