

Design of Bag Product's Marketing Strategy by Implementing QFD Method and SWOT Analysis

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Abstract. Production of children's backpacks has experienced a decline in sales over the past three years. This is experienced by CV Semesta Agung (SA), a textile company that produces t-shirts, jeans, and children's backpacks. The decline of children's backpacks sales occurred because of the large number of competitors and it needs a solution to overcome it. This research aims to design the marketing strategy by implementing QFD method and SWOT analysis. The method used is Quality Function Deployment (QFD) stage one, which is a matrix creation of House of Quality (HOQ) and SWOT. Based on the findings of the research, there are several product attributes that should be considered in a production of children's backpack, such as attractive design/motif, the quality of materials and stitches, affordable price, and product durability. In addition, based on this research, it can be concluded that several marketing strategies can be implemented by companies, which is gained from SWOT method. The first one is WO strategy that can be done by expanding a marketing area in Bandung city, improving packaging design, providing product warranty, giving discount, and manufacturing waterproof children's backpack. The second one is ST strategy by improving quality of product and worker skills, as well as reducing production cost. The third one is WT strategy by designing more attractive bag products and creating a new product.

Keywords: marketing strategy, QFD, SWOT.

Introduction

The industry has experienced a rapid increase that encouraged businessmen to be able to compete in it. Garment industry is one of the vital industries which have a big contribution economically, both in absorbing labour and generating Bruto Domestic Product of Indonesia. Discussing the garment industry cannot be separated from discussing textile industry and product. It is because garment industry is part of the structure of textile industry and textile product in general. The textile industry structure is formed by several types of industries which establish a series from upstream to downstream. The upstream industry includes fiber, spinning and yarn industry, knitting, printing and finishing; while the downstream industry includes garment industry. The entire product of the textile industry subsector is often called the

Textile industry and Textile Products (TITP). The textile industry and garment industry is a type of industry that has a very high competition since fashion has a crucial role in the society in this era (Munadi, 2015). The textile and garment of small and medium industries in Bandung city, in 2017, reached 54% and dominated other industries (BPS, 2017).

CV. SA is a textile industry company that produces t-shirts, jeans and children's backpacks located in Bandung. From the interview with the managers and employees, as well as based on secondary data, in the last three years, the company has experienced a decline in sales, especially in children's backpack products. This is triggered by many new competitors that are producing similar products. Sales of children's backpacks have decreased continuously over the past 3 years with a total of 2,293 products. Based

Received: December 08, 2020, **Revision:** March 06, 2021, **Accepted:** June 03, 2021

Print ISSN: 0215-8175; Online ISSN: 2303-2499. DOI: <https://doi.org/10.29313/mimbar.v37i1.7011>

Accredited Sinta 2 based on the decree No.10/E/KPT/2019 until 2024. Indexed by DOAJ, Sinta, Garuda, Crossreff, Dimensions

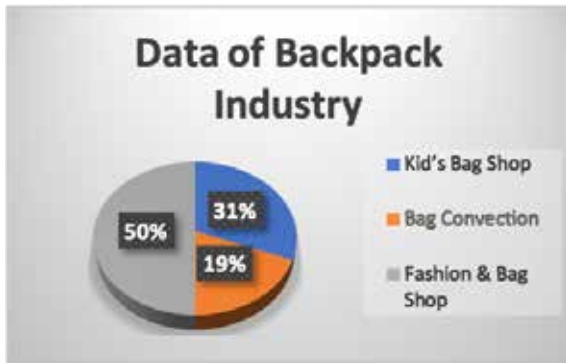


Figure 1. Competitor's Data

on this data, the average decline in sales of children's backpacks was 458 products per six months, and in the last year, the sales of children's backpacks reached 2,972. It means that the sales figure was below the sales of t-shirts that reached 3,454 t-shirts.

The decline in sales was due to several competing companies that also sell similar products. In addition, the company does not have a marketing strategy to overcome the decline of product sales which can be seen in figure 1 below.

The number of competing companies that sell similar products of children's backpacks is one of the factors that caused the decline in sales of the products. Based on the competitor's data that sell children's backpack products, fashion & bag stores are dominating the market by 50%, children's bag stores by 31%, and bag convection by 19%. The biggest decline in sales experienced by companies was found in children's backpack products, thus this study will focus on children's backpack products.

Based on the background of the problems, the aims of the research is to determine the product attributes that consumers want, the priority of product attributes, and the right marketing strategy for the company.

To find out the product attributes that consumers want, the priority of product attributes, and the right marketing strategies for the company, quality is one of the attributes that cannot be separated and must be considered in fulfilling the needs and expectations of consumers. Each product must have certain advantages to be able to compete in the market (Rucitra, 2020). By paying attention to the desires of consumers, a product development strategy can be developed. The desire of consumers

will be filtered using the method of *Quality Function Deployment* (QFD) stage, 1 namely a matrix of *House of Quality* (HOQ), where QFD is a method that is used in the planning and product development process that specifically identifies consumer desires and needs. Through the QFD method, a company can find out the product attributes that consumers expect to satisfy. Quality Function Deployment (QFD) is a method of planning and developing a product/service in a structured manner that allows the development team to clearly define the needs and expectations as well as evaluate the ability of a product or service systematically to meet the needs and expectations (Rangkuti, 2013). Quality Function Deployment is a planning tool that is used to meet consumer expectations for the product. QFD is a method that has a positive impact on companies and is a tool and technique that is used freely to study the specific data collected from consumers (Gaszpersz, 2003). Producing products that meet consumer expectations need quality improvements that can be done through control of production process. The application of control process in an industry aims to determine the suitability of the process carried out by the company with predetermined standards. (E. P. Nurlaili, 2012).

The main planning tool in the Quality Function Deployment matrix is the House of Quality (HOQ). HOQ translates the voice of the consumer into the technical requirements of how the organization can meet those requirements. This is in accordance with the statement of Besterfield (2012). QFD's main tool is the matrix that is achieved through the use of interdepartmental or functional teams by prioritizing customer needs. It is called the voice of customers. The QFD process starts from the voice of the customer and then continues to four main activities, namely Product Planning, which is translating customer needs into technical requirements; Product Design, which translating technical requirements into component characteristics; Process Planning Identify to process steps and parameters and translate them into process characteristics; and Process Planning Control. Product development is the stage of analyzing market perceptions and opportunities, production, sales and delivery of products that are considered to have more value than previous products (Ulrich & Eppinger, 2001). Meanwhile, product development

needs an identification model that can be prepared using the concept of Quality Function Deployment (QFD) (Prabowo & Zoelangga, 2019). The use of QFD will result in effectiveness and efficiency by creating an information exchange platform and providing a framework for stakeholders to optimize decision making (Dehe, B., & Bamford, D. 2017). Andronikidis et al. (2009) and Murali, Pugazhendhi, and Muralidharan (2016) discuss the benefits of implementing QFD. They explain that QFD supports the reduction of new product development costs, reduces rework and design changes, and reduces the risk of failure (Koo, 2007). If it is viewed from internal and external aspects, the use of QFD method can be integrated with other methods in order to formulate strategic business unit policies. One of the best integration methods for QFD is the use of SWOT analysis. SWOT analysis is the identification of various internal and external factors of the company to formulate strategies by maximizing strengths and opportunities and minimizing weaknesses and company threats. The analysis of internal factors regarding the strengths and weaknesses of the company is obtained from the HOQ results, while the analysis of the external factors of opportunities and threats is obtained through brainstorming with the company. The method commonly used in conducting business environment analysis is SWOT analysis. SWOT analysis can identify external factors in the form of opportunities and threats to business continuity, and internal factors in the form of strengths and weaknesses that exist in the company.

Based on SWOT analysis, the main indicators can be found to formulate a strategy formulation. The formulation of a company strategy is basically done to get a formulation in which there is a balance between the strengths and the weaknesses of the company so that it is able to optimize opportunities and anticipate threats arise from business competitors (Subhan., 2017).

SWOT analysis is a systematic procedure to identify certain critical success factors applied by the company, such as the strengths and weaknesses as internal factors, and opportunities and threats as external factors (Blocher, Stout, & Cokins, 2011). According to Wanti, Taufiqurrahman & Rahayu (2014), SWOT analysis is a very important strategic planning tool to support a planning that compare the company's internal strengths and weaknesses with

external opportunities and threats. In determining the target market, companies need to pay attention to the scale/number of segments determined and the existing competitive position in the targeted segment, so that there will be intense competition and business units need to focus on customers (Wijaya & Sirine, 2016).

According to David (2009), the Strength-Weakness-Opportunity-Threat (SWOT) matrix is an important matching tool in helping managers to develop four types of strategies, namely SO strategy, WO strategy, ST strategy, and WT strategy. In addition, the Internal Strategic Factors Analysis Summary (IFAS) matrix is compiled to summarize and evaluate the strengths and weaknesses. Meanwhile, the External Strategic Factors Analysis Summary (EFAS) matrix is used to summarize and evaluate economic, social and cultural, demographic, political or governmental, legal, natural, technological, and competitive information (David, 2016). The two IFAS and EFAS matrices will produce an Internal External matrix to find out the position of the corporate-level business strategy in more detail (Javandira & Gama, 2018).

Research Methodology

This research uses descriptive quantitative research which is conducted to raise various facts, situations and current phenomena and are presented with data. The research design used is a survey design in the form of questionnaires aimed to collecting samples from a predetermined population

The research methodology is designed to determine the flow of the research process to be carried out and describe the stages of the research to solve the problem. The following is a series of procedures and steps in conducting research that aims to obtain a systematically structured stage. (1) Research Preparation stage. This stage includes the identification of the problem that is making direct observations to find a general description of the problems. The formulation of the problem consists of questions that become a reference for making research objectives, setting goals of the research as well as literature studies which are related to references about the formulation of business strategies such as EFE Matrix, IFE Matrix, TOWS/SWOT Matrix, Quality Function Deployment (QFD) and other

Table 1.
Dimension of Product Quality

No	Statement	Dimension
1	Affordable bag price	Brand Name
2	Attractive bag color	Fit and Finish
3	Interesting bag picture	<i>Fit and</i>
4	Attractive Packaging Design	<i>Finish</i>
5	Hanging accessories	
6	Waterproof	<i>Feature</i>
7	Multiple pockets	
8	Bag capacity	<i>Performance</i>
9	Light bag	
10	Material quality	
11	Zipper quality	<i>Reliability</i>
12	The quality of sling	
13	Stitch quality	
14	Durable	<i>Durability</i>
15	Warranty	
16	Small bag bonus	<i>Serviceability</i>

Source: Data is processed from research, 2020

things that can make the research perfect. (2) The Data Collection stage. At this stage, the design of the questionnaire was carried out. This stage began with the making of an open questionnaire, a closed questionnaire and conducting a pretest, as well as distributing the actual questionnaire and conducting interviews with related parties. The distribution of open questionnaires aims to obtain the desires and needs of consumers for the products offered. The number of questionnaires distributed was 30. After the open questionnaires were processed, the next process was classifying the quality dimensions for the closed questionnaires.

The distribution of closed questionnaires is divided into two. The first is the distribution of the closed pretest questionnaire and the second is distribution of the actual closed questionnaire. The distribution of closed questionnaires used a research measurement tool Likert scale to measure attitudes, opinions, and perceptions of a person or group of people about social phenomena.

Closed questionnaires were distributed to respondents to obtain information about customer desire and an assessment of bag

products. Prior to the distribution of actual questionnaires, the number of samples was determined first to decide the number of questionnaires that had to be distributed. The determination of the number of samples in this study was carried out based on the Slovin formula with a population of 191.634 respondents, with an error rate of 10% as follows:

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{191634}{1 + 191634 \times (0.1)^2}$$

$$n = 99.94 \approx 100$$

Explanation:

n = sample size

N = population size

e = percentage of concession

(3) Data Testing stage. After the closed questionnaire is distributed, data testing is carried out which consist of validity and reliability test. The validity test is conducted to determine whether the questionnaire to be distributed has the accuracy to be able to proceed to the next stage. The validity test was carried out using SPSS software. The complete validity test results are shown below.

Table 2. Validation Test

No	Statement	Table r	Count r	Result
1	Affordable bag price	0.306	0.494	Valid
2	Attractive bag color	0.306	0.321	Valid
3	Interesting bag picture	0.306	0.353	Valid
4	Attractive Packaging Design	0.306	0.394	Valid
5	Hanging accessories	0.306	0.359	Valid
6	Waterproof	0.306	0.528	Valid
7	Multiple pockets	0.306	0.353	Valid
8	Bag capacity	0.306	0.523	Valid
9	Light bag	0.306	0.355	Valid
10	Material quality	0.306	0.441	Valid

11	Zipper quality	0.306	0.586	Valid
12	The quality of sling	0.306	0.515	Valid
13	Stitch quality	0.306	0.609	Valid
14	Durable	0.306	0.587	Valid
15	Warranty	0.306	0.584	Valid
16	Small bag bonus	0.306	0.594	Valid

Source: Data is processed from research, 2020

The validity test shows that the 16 questions asked to respondents are valid.

Table 3. Reliability Test Result

Reliability Statistics	
Cronbach's	
Alpha	N of Items
0.760	16

The results of the SPSS calculation for the questionnaire reliability test show that the questionnaire is consistent. This can be seen in the alpha Cronbach's value obtained which is 0.760. It means the consistency of the questionnaire is high. (4) Data Processing stage using the QFD and SWOT methods. (5)

The Study and Analysis Stage. After the data is processed and the results are obtained, the next stage is reviewing and analyzing the research results

Results and Discussion

The following is the performance of the product attributes obtained from the results of the research questionnaire that has passed the validity and reliability tests. The results of data processing from questionnaires are taken to perform QFD Phase 1 data processing (House of Quality):

There are three aspects of the performance of product attributes: customer expectations, company products and competitor products. The performance of customer expectations is the level of customer expectations for a product. Meanwhile, the performance of the company's and competitors' products is the level of customer assessment of the company's products and competitors' products.

The performance of those product attributes is used to calculate the ratio of improvements. Repair ratio describes how big or small the company must improve product performance to match consumer expectations. After getting the repair ratio, the next step is to determine the weight of

Table 4. Performance of Product Attributes

No	Product Attribute	Performance of Product Attributes		
		Costumer Expectations	CV. Semesta Agung's Product	Competitor's Product
1	Affordable bag price	4.83	4.57	4.24
2	Attractive bag color	4.89	4.13	4.31
3	Interesting bag picture	4.75	3.98	4.17
4	Attractive packaging design	4.49	3.69	4.29
5	Hanging accesories	4.04	2.4	3.49
6	Waterproof	4.76	3.15	3.24
7	Multiple pockets	4.52	3.34	3.52
8	Bag capacity	4.69	3.89	3.73
9	Light bag	3.74	4.17	4.05
10	Material quality	4.78	4.34	4.31
11	Zipper quality	4.58	4.29	4.14
12	The quality of sling	4.26	4.23	3.97
13	Stitch quality	4.74	4.46	3.89
14	Durable	4.71	3.87	3.67
15	Warranty	4.12	2.12	2.32
16	Small bag bonus	3.95	2.38	3.8

Source: data is processed from research, 2020

each product attribute.

Determining the weight of HOQ is the final stage. By looking at the weight of HOQ compare to product attributes, we know the

priority of product attributes that consumers want for a children's backpack.

Table 5. Weight Recapitulation

No	Product Attribute	Score	Normalization Score
1	Affordable bag price	8.2	8.6%
2	Attractive bag color	7.3	7.6%
3	Interesting bag picture	9.4	9.9%
4	Attractive packaging design	5.2	5.5%
5	Hanging accessories	2.5	2.6%
6	Waterproof	7.6	8.0%
7	Multiple pockets	5.7	6.1%
8	Bag capacity	6.2	6.5%
9	Light bag	0.7	0.8%
10	Material quality	8.6	9.1%
11	Zipper quality	5.6	5.9%
12	The quality of sling	5.7	6.0%
13	Stitch quality	8.4	8.9%
14	Durable	7.8	8.2%
15	Warranty	4.5	4.8%
16	Small bag bonus	1.5	1.6%
Total		95	100%

Source: Data is processed from research, 2020

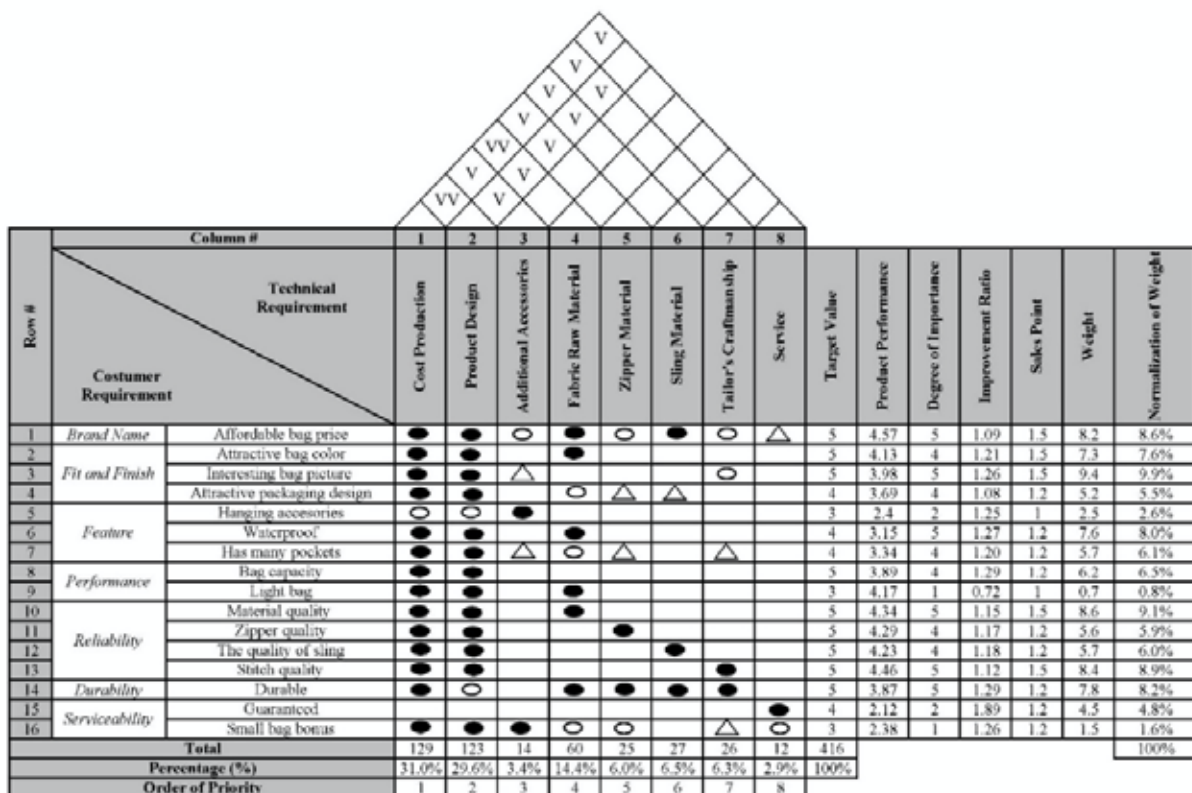


Figure 2. House Of Quality Matrix

Figure 2 explains the determination of the relationship between consumer needs and technical characteristics and shows the level of strength of the relationship between product attributes (consumer needs) and technical characteristics. An assessment of the level of strength between the two can be done using numbers or symbols, namely 9 (for very strong relationship or ●), 3 (strong relationship or ○), and 1 (weak relationship or △). Based on the weight of consumer needs, there are attributes that gain the highest weight and become priorities that must be considered by the company, which are attractive bag motifs/images, quality of materials, quality of stitches, affordable, and durable bag prices. Meanwhile, based on the technical characteristics, the order of the percentage (%) from the highest to the

lowest is production cost of 31.0%, product design of 29.6%, fabric raw materials of 14.4%, raw materials of sling by 6.5%, tailor expertise by 6.3%, zipper raw materials by 6.0%, additional accessories by 3.4%, and services by 2.9%.

Determination of Internal Factors

The company's internal factors are obtained from the comparison of the company's product performance and competitors as well as considering the weight of product attributes in the House of Quality matrix.

After determining the internal factors, the calculation of the internal factor evaluation (EFE) can be seen in table 7.

Table 6. Attribute Work Comparison

No	Product Attribute	Score	CV. Semesta Agung's Product Performance	Competitor's Product Performance
1	Affordable bag price	8.6%	4.57	4.24
2	Attractive bag color	7.6%	4.13	4.31
3	Interesting bag picture	9.9%	3.98	4.17
4	Attractive packaging design	5.5%	3.69	4.29
5	Hanging accesories	2.6%	2.4	3.49
6	Waterproof	8.0%	3.15	3.24
7	Multiple pockets	6.1%	3.34	3.52
8	Bag capacity	6.5%	3.89	3.73
9	Light bag	0.8%	4.17	4.05
10	Material quality	9.1%	4.34	4.31
11	Zipper quality	5.9%	4.29	4.14
12	The quality of sling	6.0%	4.23	3.97
13	Stitch quality	8.9%	4.46	3.89
14	Durable	8.2%	3.87	3.67
15	Warranty	4.8%	2.12	2.32
16	Small bag bonus	1.6%	2.38	3.8

Source: Data is processed from research, 2020

Table 7. Internal Factors

No	Key Internal Factors Strength	Score	Rating	Total
1	The price of CV SA product is known to be affordable	0.071	3	0.213
2	Bag Products of CV SA have a large enough capacity	0.058	3	0.174
3	Bag products of CV SA have good quality fabrics	0.06	3	0.18
4	Bag product of CV SA have good quality zippers	0.051	2	0.102
5	Bag product of CV SA have good quality sling	0.065	3	0.195
6	Bag product of CV SA have good quality stitch	0.069	3	0.207
7	Bag product of CV SA is known as a durable product	0.071	3	0.213

8	Bag product of CV SA is quite light	0.053	3	0.159
Total Score of Strength		0.498	23	1.443
Weakness				
9	The color of CV SA bag is less attractive	0.067	3	0.201
10	The image/motif of CV SA bag is less attractive	0.066	3	0.198
11	Bag packaging design is less attractive	0.065	3	0.195
12	Bag products of CV SA do not have additional accessories	0.043	2	0.086
13	Bag products of CV SA are not waterproof	0.069	3	0.207
14	Bag products of CV SA do not have many/multiple pockets	0.067	3	0.201
15	Bag products of CV SA do not have a warranty	0.057	3	0.171
16	No small bag bonus (as a gift)	0.069	3	0.207
Total Score of Weakness		0.503	23	1.466
Total of Internal Factors		1.001	46	2.909

Source: data is processed from research, 2020

Internal Factor Evaluation (IFE) Matrix is an internal factor that will influence the development of the company's business which consists of existing strengths and weaknesses. The total weight calculation from the internal matrix is 1.00 with a rating value of 46 and the total weight multiplied by the rating is 2,905.

Determination of External Factors

Determination of external factors is conducted to find out the threats and opportunities for the company. External factors are obtained by conducting brainstorming (interviews) with the company. External factors can be seen in table 8.

Table 8. Matrix of EFE

No	Key External Factors Opportunities	Score	Rating	Total
1	The number of children in Bandung city continues to increase	0.0808	3	0.242
2	Bandung city has a large market for children's products	0.0888	4	0.355
3	Many tourists come to Bandung city since it is a shopping tourist destination	0.0784	3	0.235
4	Having a good business relationship with suppliers	0.0528	2	0.106
5	Bag product of CV SA have good quality sling	0.0648	3	0.194
6	Competitors become a benchmark for improving product quality	0.0864	4	0.346
7	Development of technology that eases the transaction	0.08	3	0.24
Total Score of Opportunities		0.532	22	1.718
Threats				
8	The price of material which continues to increase	0.0808	3	0.2424
9	Competition with other competitor that sell similar products	0.0872	4	0.3488
10	Competitor sell the similar products with lower price	0.088	4	0.352
11	Complaints about the products through word of mouth	0.0816	3	0.2448
12	Bargaining power of consumers is quite high	0.0784	3	0.2352
13	Development of technology leads to rampant counterfeiting and product fraud	0.052	2	0.104
Total Score of Threats		0.468	19	1.527
Total Internal		1	41	3.246

Source: data is processed from research, 2020

Conclusion

Based on the results of research and discussion, the following conclusions can be drawn. There are several priority product attributes that consumers pay attention to in children's backpacks, namely attractive bag motifs/images, quality of materials, quality of stitches, affordable prices, and durable products. Marketing strategies that can be carried out by companies that are formulated using the SWOT matrix are as follows: SO strategy by expanding the marketing area in Bandung city and selling products online; WO strategy by improving the design of product packaging, providing product warranty, giving a discount, and creating waterproof children's backpack; ST strategy by improving product quality and workers' skills, and reducing production costs in order to sell cheaper products; WT's strategy by designing a more attractive children's backpack product design and creating new types of products other than backpacks.

Acknowledgment

The Researchers would like to thank Lembaga Penelitian dan Pengabdian kepada Masyarakat (LPPM) Universitas Islam Bandung for funding this research through Penelitian Dosen Utama (PDU) scheme in the 2019 - 2020 academic year.

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