

Business Plan of “Me and Wood” Company in Producing Wood WasteProducts

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Abstract

This research aims at composing a business plan for “Me and Wood” Company in producing wood waste key chain in order to compete in merchandise market, which is reviewed from the aspects of marketing, human resources, operation, and finance. This research gives insight about business plan and business feasibility test and becomes a reference for especially business feasibility study in similar area. Business opportunity of “Me and Wood” was identified with a survey conducted to 58 respondents and observation to manufacturers of similar products. Product marketing is planned to use online media such as website, social media, and e-marketplace. Through innovative planning, the business is expected to develop and has an efficient production process. “Me and Wood” is planned to be located in Kaliwungu, Kendal, Central Java. Human resources involved have specification, job description, detailed organizational structure, and skill. From the calculation results, Payback Period for “Me and Wood” Merchandise Company can be achieved in 2 years and 2 months period, NPV equals to 343,441,899, IRR equals to 49.06% which is higher than the interest rate, and PI equals to 7.06%. If the condition matches the research estimation, then “Me and Wood” merchandise company is feasible.

Keywords: handmade, merchandise, online, waste, wood

INTRODUCTION

In daily life, wood is usually used as materials for making things humans need. Its utilization frequently cannot be replaced by other materials because of its typical characteristics. Wood is a natural material, thus it has its own advantages which cannot be found in other materials (Dumanauw, 2001).

In Central Java, wood is produced relatively abundantly and thus furniture industries can develop well. However, wastes from the furniture industries are rarely used optimally. From the research of Purwanto (2009), sawmill industries produce wastes as much as 40.48% of volume, while plywood industries produce wastes as much as 54.81% of volume.

This research aims at composing a business plan for a company named “Me and Wood” in producing merchandise made from wood waste as the basic material. It is

particularly key chains which are designed specifically and produced manually (handmade). The utilization of wood wastes has many advantages, such as adding economic value and reducing environmental pollution resulted from the useless or unused wastes. The end products are handcrafts that can be ordered exclusively according to costumers' needs (custom made). This research explores possibility of "Me and Wood" key chain to compete in the wood based merchandise market. In other words, the objective of this research is to compose a business plan for "Me and Wood" in producing wood waste key chain, which is reviewed from the aspects of marketing, human resources, operation, and finance.

LITERATURE REVIEW

The word "technopreneurship" is a combination of the word "technology" and "entrepreneurship" which can be summarized as a collaboration process between business field and technology application as basic and supporting instruments of the business itself (Zimmerer and Scarborough, 2008).

In planning a business, innovation should be made to increase the competitive power against existing competitors. Kotler (2007) states that innovation is the combination of several types of process affecting one another. According to Barker in Sitinjak and Angeline (2011), innovation means creating something new or a process of inventing something that has never existed before. Innovation is a process of introducing new products, new creating methods and establishing new customer satisfaction resources.

According to Alma (2016), business plan is a document made by an entrepreneur which contains the past and the present states, and the future prediction on the company in details. The document consists of analysis about managerial, physical conditions, employees, products, capital sources, operational, and the market position of the company.

It should be noticed that the biggest producer of wood in Indonesia is not Sumatra or Borneo, but Java, which is still very productive in producing wood (Zul, 2013). In Central Java, the volume of wood production is 2,113,252.49m³ (BPS, 2015) which creates an opportunity for wood utilizing business and more particularly its wastes. The utilization of wood wastes is an important point discussed in this research and opportunity to make it to become superior products.

Nowadays marketing has developed in accordance with technology development. Marketing activities are more extensive because of the internet. The use of the internet and its facilities to do marketing activities is known as e-marketing. As the time progresses, methods in conducting marketing activities also develop into e-marketing. Kotler and Armstrong (2003) state that e-marketing is the marketing side of e-commerce, which consists of company's attempts to communicate, to promote, and to sell goods or services via internet.

Marketing mix is a set of marketing tools used by a company to continuously achieve the marketing goals in the targeted market. Marketing mix consists of 7Ps which are Product, Price, Promotion, People, Place, Process, and Physical Evidence (Kotler and Keller, 2009).

In this research, an analysis is conducted on business necessity and feasibility. According to Husnan and Pudjiastuti (2002), there are four methods frequently used to assess investment and serve as business feasibility references. They are Net Present Value (NPV), Payback Period (PP), Profitability Index (PI), and Internal Rate of Return (IRR).

Research Framework

The flow of this research can be seen in the following figure.

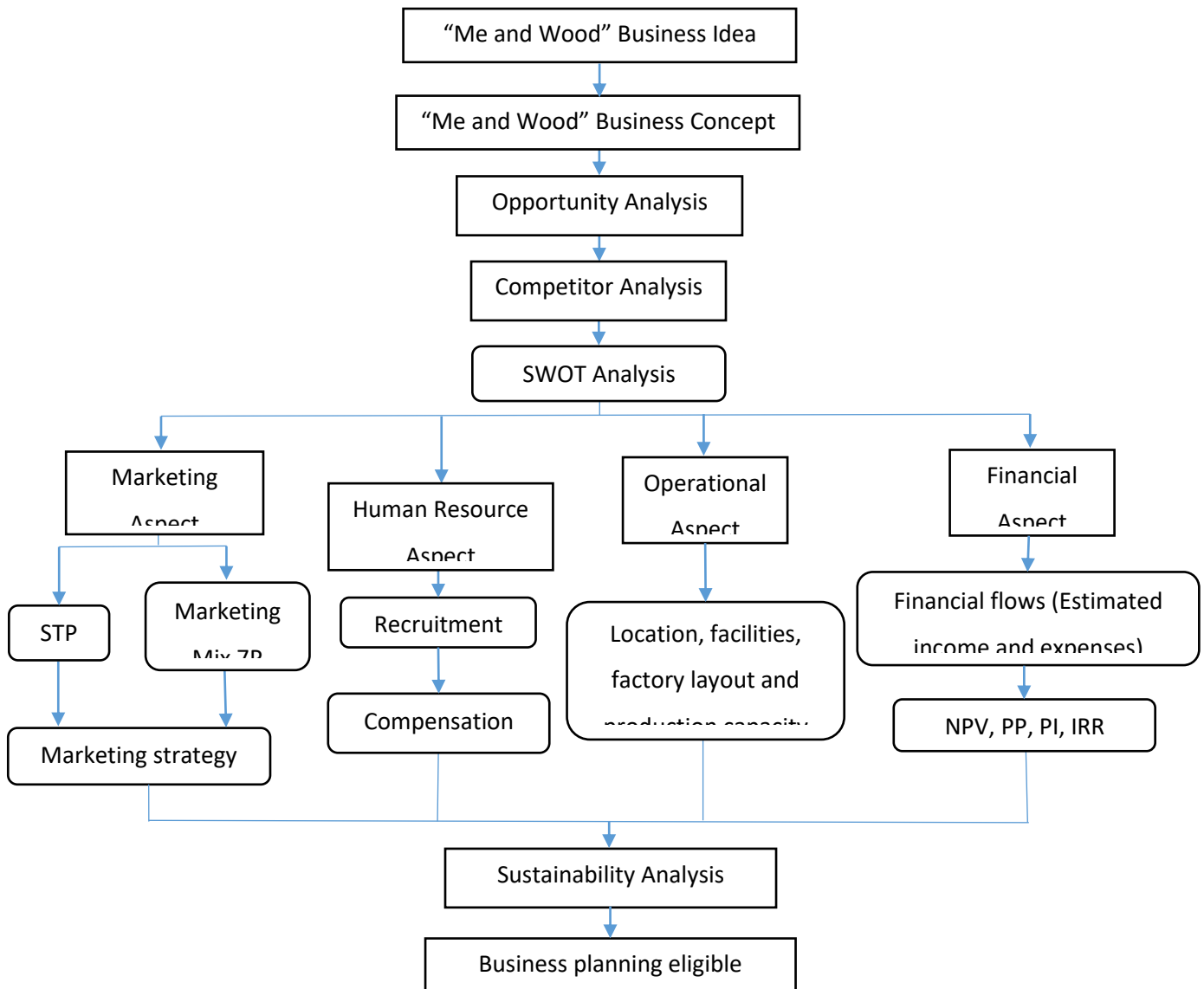


Figure 1. Research Framework

METHODS

Type of Data

There are two sources of data used in this research (Kotler and Keller, 2009) :

1. Primary data

It is the data that is collected for specific research objective. The primary data used in this research was obtained using questionnaire (field survey) and observation.

2. Secondary data

It is the data collected from various sources to support the research. The secondary data used in this research consist of documents containing information about the company's conditions.

Data Collection Method

A survey was conducted on competitors: Sanggar Peni and Souvenir Subur. They use crude wood and processed wood as the raw materials which resulted in higher cost forobtaining the materials. Moreover, they do not use online media in an optimal way. As we know, the use of online media that can be performed through social media, e-marketplace and website is an opportunity to promote the products since it can be controlled using mobile gadget from any where and at any time.

The data collection methods in this research consist of open-question questionnaires distributed to 58 respondents, observation to several companies considered as competitors, and documentations on competitors' activities.

Data Analysis Technique

This research used quantitative and qualitative descriptive methods. Qualitative descriptive method was to provide an outlook on marketing, human resources, and operational aspects. Quantitative descriptive was to provide an outlook on financial figures to assess business feasibility and profit on cost of goods sold to assess operational aspects of the business.

RESULTS AND DISCUSSION

“Me and Wood” is a business intended to produce key chain using non-economical value wood waste. The product is handcrafted so that each of it has its own uniqueness. In term of product concept, it was designed that the product can be ordered exclusively in a limited number, even in only single piece. Therefore, a careful planning was needed to execute the concept.

Opportunity Analysis

Opportunity analysis was conducted by distributing questionnaires to 58 respondents. The questionnaires were distributed online via Google Form, thus they could be accessed by many people unlimited by place and time. Online questionnaire simplified the job of the researchers and the respondents because they could be accessed real time.

From the distributed questionnaires, it is resulted that the respondents aged 25-30 years old are the majority with 50%. It is then followed by the respondents aged 21-25 years old with 38%. Therefore, it can be stated that “Me and Wood” has an opportunity to market to consumers aged 21-30 years old (table 1).

Table 1. Respondents Based on Age

Age (yrs old)	Frequency	Percent
21-25	22	38
25-30	29	50
30-35	5	9
35-40	2	3
Total	58	100

On table 2, it can be seen that the monthly income of the majority of the respondents is more than IDR 4,000,000 (41%), followed by those with monthly income of IDR 2,000,000 – 4,000,000 with 29%. Thus, it can serve as an opportunity prediction for “Me and

Wood” to set the target to those with income of IDR 2,000,000 – 4,000,000 or even for those with monthly income more than IDR 4,000,000.

Table 2. Respondents Based on Income

Monthly Income (Rp)	Frequency	Percent
Under IDR 1,000,000	6	10
IDR 1,000,000 - 2,000,000	11	19
IDR 2,000,000 - 4,000,000	17	29
More than IDR 4,000,000	24	41
Total	58	100

From the table 3, it is seen that the percentage of respondents interested in handmade key chain product made of wood waste is 95%, while the percentage of those who are not interested is 5%. From this data, it is learned that handmade key chain product made of wood waste by “Me and Wood” has a good opportunity to enter the merchandise market.

Table 3. Respondents Based on Their Interest on Handmade Key Chain Product Made of Wood Waste

Information	Frequency	Percent
Interested	55	95
Not interested	3	5
Total	58	100

Competitor Analysis

The research subjects used for reference were production house of Sanggar Peni located on Bantul, Yogyakarta and Souvenir Subur located on Secang. The two manufacturers produce wood-based merchandise. Survey and interview were conducted on the two manufacturers about their business.

1. Strengths

- a) Both Sanggar Peni and Souvenir Subur have experienced labors, leading to faster production process.

- b) Sanggar Peni and Souvenir Subur have already had permanent suppliers for raw materials, thus they do not need to search for supplier anymore.
- c) Sanggar Peni and Souvenir Subur spend lower cost for labors because they are located in rural areas.
- d) Sanggar Peni and Souvenir Subur have low cost production process, leading to cheaper product price.
- e) Sanggar Peni and Souvenir Subur are quite well known because they have been long existed.

2. Weaknesses

The weaknesses of the competitors are:

- a) The manufacturing of Souvenir Subur is less detailed because it focuses more on quantity rather than product esthetic. The products of Sanggar Peni have less variation because the pattern is wooden batik with only few choices of design.
- b) Since Sanggar Peni is located in Kreet Village, Bantul and Souvenir Subur is located in Pucang Village, Magelang Regency, their product distribution does not directly go to the customers but go through distributors.

3. Opportunities

Opportunities owned by "Me and Wood" are:

- a) Wood-based merchandise still has many enthusiasts.
- b) Issue about products utilizing wastes will increase appreciation from potential customers who care about environmental issue. This is one thing that Sanggar Peni and Souvenir Subur do not have.
- c) The variety of wood-based products can still be explored.

4. Threats

The threats that must be addressed by competitors are:

- a) Product supply with more varieties.
- b) Manufacturers with more dynamic products and able to keep up with current development.
- c) Manufacturers with more effective marketing method.

Marketing Mix 7Ps

1. Product

“Me and Wood” decides to produce three kinds of products, which are regular, premium, and custom to divide the market according to customers' needs and capabilities.

2. Price

The product prices of “Me and Wood” are divided into three according to the kinds of product: regular key chain at IDR 8,000, premium at IDR 15,000, and custom at IDR 35,000. The significant price difference is caused by material selection and difficulty level of the production process.

3. Place

The location selected by “Me and Wood” is at Kaliwungu Street, Kendal Regency. This location is near to the access to toll road and is on the route of Northern Coast.

4. Promotions

The promotions made by “Me and Wood” use website to display products overview, social media such as Instagram, Facebook, and Twitter, and e-marketplace media such as Bukalapak and Tokopedia.

5. People

From the beginning of the business, “Me and Wood” employs three manpowers, which are the owner who is also be the manager, carpenter, and designer. Compensation for the owner or manager is IDR 2,100,000 per month, which is higher than the Kendal

Minimum Wage on 2019 which is IDR 2,084,393. Meanwhile, the carpenter gets IDR 1,000 for every regular product crafted, IDR 1,500 for every premium and custom product because of the same process. Whereas the designer or sketcher gets IDR 1,000 for every regular product designed, IDR 2,000 for every premium product, and IDR 5,000 for every custom product (because of the higher level of difficulty).

6. Process

The production process of “Me and Wood” starts with processing raw materials, then designing and drawing character on key chain using poster paint media, drawing pen and coloring pencil for the gradation. “Me and Wood” product gives finishing by spraying varnish to preserve the color and the quality of the wood.

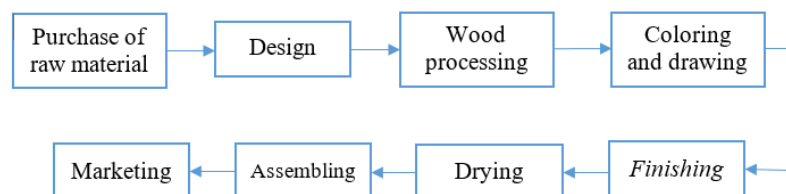


Figure 2. The scheme of the production process

7. Physical Evidence

Physical evidence owned by “Me and Wood” is a production house in a form of rented residential house paid per year. The location is planned to be sited in Green Avara Residence number 15, Kaliwungu, Kendal, Central Java. The house consists of a garage, computer and design room, storage, production room, kitchen, bathroom, and a yard for drying.

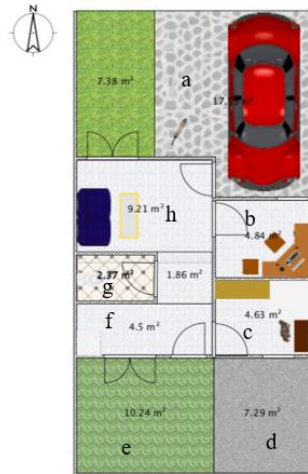


Figure 3. “Me and Wood” Production House Plan

Information:

- a. Garage
- b. Computer room
- c. Warehouse
- d. Production room
- e. Yard of drying
- f. Kitchen
- g. Bathroom
- h. Living room

Financial Aspect

Table 4 shows business feasibility analysis of “Me and Wood” company. The business feasibility is reviewed from received income compared to total costs, which consist of production cost and operational cost.

Table 4. Business Feasibility Analysis

Year	Income	other income	Total Revenue	cost		Total cost	Net Cash Flow
				human resource costs	operating costs		
2019	74.950.000	0	74.950.000	43.825.000	15.575.000	59.400.000	15.550.000
2020	97.435.000	0	97.435.000	48.207.500	16.353.750	64.561.250	32.873.750
2021	126.665.500	0	126.665.500	53.028.250	17.171.438	70.199.688	56.465.813
2022	164.665.150	0	164.665.150	58.331.075	18.030.009	76.361.084	88.304.066
2023	214.064.695	0	214.064.695	64.164.183	18.931.510	83.095.692	130.969.003
2024	278.284.104	0	278.284.104	70.580.601	19.878.085	90.458.686	187.825.417
2025	361.769.335	0	361.769.335	77.638.661	20.871.990	98.510.650	263.258.684
2026	470.300.135	0	470.300.135	85.402.527	21.915.589	107.318.116	362.982.019
2027	611.390.175	0	611.390.175	93.942.780	23.011.369	116.954.148	494.436.027
2028	794.807.228	0	794.807.228	103.337.058	24.161.937	127.498.995	667.308.233

Payback Period

Outlays	56.629.000
Proceeds Th 1	15.550.000
	41.079.000
Proceeds Th 2	32.873.750
	8.205.250
Proceeds Th 3	56.465.813
	-48.260.563
Proceeds Th 4	88.304.066
	-136.564.628
Proceeds Th 5	130.969.003
	-267.533.631
Proceeds Th 6	187.825.417
	-455.359.048

$$Payback\ Period = 2\ years + \frac{8.205.250}{56.465.813} \times 12 = 2\ years + 1,744\ months$$

the payback period is 2 years and 2 months

Table 5. Net Present Value Calculation

Years	Cash Inflow	NSFB 5,5%	Present Value Cash Inflow
		outlays	56.629.000
1	15.550.000	0,948	14.739.336
2	32.873.750	0,898	29.535.500
3	56.465.813	0,852	48.087.057
4	88.304.066	0,807	71.280.520
5	130.969.003	0,765	100.208.883
6	187.825.417	0,725	136.219.601
	Total PV Cash Inflow		400.070.899
	Outlays		56.629.000
	Net Present Value		343.441.899

*NSFB value is considered as a Mandiri bank deposit in 2019 (Kontan, 2019)

NPV have a positive value means the project can be accepted

$$\text{PROFITABILITY INDEX} = \frac{400.070.899}{56.629.000}$$

$$= 7,06477061 \text{ more than 1 is profitable}$$

Profitability Index higher than one means accepting investment proposal $7 > 1$

Table 6. IRR Calculation

Years	Cash Inflow	outlays		56.629.000	
		NSFB 65%	Present Value Cash Inflow	NSFB 66%	Present Value Cash Inflow
1	15.550.000	0,606	9.424.242	0,602	9.367.470
2	32.873.750	0,367	12.074.839	0,363	11.929.798
3	56.465.813	0,223	12.569.956	0,219	12.344.154
4	88.304.066	0,135	11.913.652	0,132	11.629.160
5	130.969.003	0,082	10.708.997	0,079	10.390.300
Total PV Cash Inflow			56.691.687	55.660.881	
Outlays			56.629.000	56.629.000	
Net Present Value			62.687	-968.119	

INTERPOLATION

Interest rate difference	PV Total difference	PV Total difference in Outlays
65%	56.691.687	56.691.687
66%	55.660.881	56.629.000
1%	1.030.806	62.687
IRR =	49,06081346	%

IRR more at the required interest then the project is accepted

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

According to the analysis and discussion, the results of “Me and Wood” Company Business Plan in utilizing wood waste can be summarized as followed:

1. Marketing Aspect

“Me and Wood” plans to produce unique handmade key chains. The main raw material is second-hand wood pallet or no economical value wastes produced from processed furniture. The products are made into three types: regular, premium, and custom key chain. The merchandises are marketed via online media, i.e. Website to display the product overview, social media such as Instagram, Facebook, and Twitter, and e-marketplace media for transaction such as Bukalapak and Tokopedia. Online media help “Me and Wood” to reach customers and to introduce the products widely to domestic and global consumers.

2. Human Resources Aspect

“Me and Wood” plans to have manpowers in effective and efficient number for the recent condition. The production is considered capable to be handled by three manpowers, which are the owner and manager, carpenter, and designer. The owner-manager receives monthly salary, while the carpenter and designer receive payment according to the number of products produced. Human resources involved have specification, job description, detailed organizational structure, and skill.

3. Operational Aspect

“Me and Wood” production house is planned to be located at Green Avara Residence number 15, Kaliwungu, Kendal, Central Java. This location is selected because it is located not far from Northern Coast route between Semarang and Kendal, easy to access, and in the area of Kendal Regency in which the human resources cost is lower than that of Semarang City. Rented production house is considered more affordable than investing in property for production and store.

4. Financial Aspect

Business plan of “Me and Wood” merchandise provides an outlook on cash flow and investment feasibility analysis by using Payback Period (PP), Net Present Value (NPV), Internal Rate of Return (IRR), and Profitability Index (PI). From calculation results, Payback Period for “Me and Wood” Merchandise Company can be achieved in 2 years and 2 months period, NPV equals to 343,441,899, IRR equals to 49.06% which is higher than the interest rate, and PI equals to 7.06% which is higher than one. Based on the calculated results, “Me and Wood” merchandise company is feasible if the condition matches the research estimation.

Recommendations

1. This research can still be explored further, especially from the product aspect. “Me and Wood” merchandise business has potential for wood-based product development.
2. This research can serve as a reference or insight for entrepreneurs who have just started their business or those who have long involved in wood-based merchandise business.

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