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# NEW PRODUCT DEVELOPMENT FOR A STARTUP COMPANY (WOODKA)

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Abstract. WOODKA is a startup business established on September 2013 running in watch industry. WOODKA, as a new startup, needs to develop its line of product by expanding the product design and variety. Up until now, there is no specific design guideline that can be used to develop the next product varieties of WOODKA. Therefore, this research has the objective to explore WOODKA's design strength according to customer and to find sets of important design attributes that is most preferred by costumer. The study was conducted using direct interview and mail survey which later analyzed with conjoint analysis. The direct interview was to find the most important attribute according to the provider and its previous customer input. The mail survey was later used to ask customer to give rank for the selected combinations which attributes are wood type (ARRO, KOVU, ORLA, NIEO), strap (pattern, leather, printed, plain), and watch's shape (round, oval). The conjoint analysis was used to find the utilities and importance value of those attributes. The result of this study shows that the attribute that customer consider most in buying WOODKA's product is the strap, which means that the concept of interchangeable strap WOODKA has really affect customer's choice. Another result is that the most preferred attribute's levels according to the utilities are leather strap, round-shaped watch, and ORLA wood type. Therefore, in the future development, WOODKA should try to focus more on developing those parts of its product.

Keywords: Startup business, Customer preference, Conjoint analysis, New product development, Fashion accessories

#### Introduction

Startup business is currently becoming a trend. It is a good thing as we know that government has this program to make the citizen have an intention to create their own business. Many new brands and products emerging either it is from the creative industry, technology, or food. Seeing from the trend, most of them penetrated the market with relatively high or premium price. What makes it expensive because it sells the uniqueness and the value behind its product. A startup can be that potential and become someone's main income as they want develop it more and more. One of the startup businesses which can be the example is WOODKA. WOODKA is the start-up business running in watch industry. It was first established on September 2013 by 11 students of School of Business and Management Institut Teknolgi Bandung. WOODKA has a vision to become a company that can incorporate the beauty of nature, ethnic, and art into our daily lives, by using recycled wood as a media. Its concept is using wood as the main material, WOODKA created the first ever wooden watch with interchangeable strap named LOCA. There are two different kinds of strap, the traditional pattern one and the leather one. WOODKA really intended to conserve Indonesia very own treasure, its culture, thus WOODKA put it in its interchangeable strap.

LOCA was launched on January 5th, 2014 on the Instagram. Unexpectedly, WOODKA got 1000 followers on Instagram after 5 days launching. WOODKA already sold 470 watches and 90 straps

from joining curated markets and online selling. Those accomplishments are quiet unbelievable since WOODKA had just started running the business for about 4 months. Moreover, WOODKA sold the product firstly on the Instagram with a quite high price for a new product. That is an unbelievable thing since the customer has not even see the real form or test the quality of the product.

As a startup company, WOODKA needs to develop more and more in order to keep on pace. Some developments were made in form of straps and wood type. On its strap, WOODKA already added two new variants which are thematic strap and plain strap. The thematic strap was designed by the design student from FSRD ITB and the design then printed on the canvas. Different from the thematic strap, the plain strap was made by dying technique which the color comes from indigo, one of natural resource. About the wood type, WOODKA now has four types of wood which are ebony (ARRO), rosewood (KOVU), teak (ORLA), and maple (NIEO) while previously WOODKA only has two kind of wood, rosewood and teak.

After running for almost two years, WOODKA has not still figure out whether those developments really affect much or not. Up until now, there is no specific design guideline that can be used to develop the next product varieties of WOODKA. The design guideline should have the same concept as the previous product design, and at the same time also satisfies customer's interest. The research tries to explore important design attributes of WOODKA that can be used to describe product design strength according to customer and consumer's preferences. Therefore, the design team will have valuable input to draw design guideline for future development.

#### Literature Review

# **Startup Business**

The term "Startup" can be defined as the action or progress of setting something in motion. So, if some says Startup Business it means that it is a business that moves so quickly without knowing what decision will be made. Talking about moving quickly, Startup is not connected to time. A startup business can even move so fast without seeing how long that the company has been running. Making a startup business is doing something with feeling and mind because we are the one who control all of the company's activities. The company will move forward so quickly if the decision is well-decide or the company will just move slowly. The most challenging thing is that a startup business working to solve a problem where the solution is not that clear and the success is not quaranteed.

A startup business is usually designed to grow fast and formed to search for a repeatable and scalable business (Graham, 2013). As it is said before that it is not always about technology. We can take an example of a cafeteria. If we open a new chain of cafeteria and want to grow fast also creating a new distribution channel, it is a startup. If there is no plan of making another one and satisfy with the current state then it is not a startup. That is why they call it scalable because it is rapidly growing. Every single startup businesses should do a lot of research. The one who own a startup should figure out how gain revenue as many as they can stay afloat by next decade by selling a really competitive product and service. A startup can fail if it cannot discover a scalable business model before it runs out cash to support the business itself.

#### **WOODKA**

WOODKA is a startup company established on September 2013 running in watch industry. After finishing the business plan, WOODKA launched its first product on January 5<sup>th</sup> 2014. The response was really beyond expectation which at least 3000 people asking for the catalog.

WOODKA really pay attention in the product's quality and its detail. As a startup company, WOODKA wants its products seen as something fun and casual. Therefore, WOODKA add *quirky* to every single products the release. The term *quirky* includes something colorful, pop! (Suddenly can change by time), unique, and stand out from others. With all those thoughts, WOODKA created the first wooden watch with interchangeable strap which later called LOCA.

# **WOODKA's Product**

As mentioned before that WOODKA's product is called LOCA which presented with two different types of strap. WOODKA is well-known for its interchangeable straps. The two straps are made from different materials which are Indonesia's very own and finest *Tenun Ikat* and leather.



Figure 1 WOODKA's Wood Type

#### **LOCA Pattern**

Various *Tenun Ikat* with remarkable patterns from various islands in Indonesia transformed into beautiful form of a watch's strap. The pattern strap of LOCA launched every two months with one big theme. In choosing the monthly theme, WOODKA is inspired by the current trend and its own members' perspective. Aside from those two factors, WOODKA is also influenced by their customers' thoughts. Below are the examples of WOODKA's pattern straps which were already released before.



Figure 2 WOODKA September-October Strap



Figure 3 WOODKA November-March Strap



Figure 4 WOODKA April-June Strap

# **LOCA Leather**

As for the LOCA watch with leather strap, WOODKA only have two types which are the light brown and dark brown leather. Different from the pattern strap, the leather straps are chosen by WOODKA's members' idealism.



Figure 5 WOODKA Leather Strap

# **LOCA Printed**

On November 2014, WOODKA wanted to add something new for its product. Therefore, WOODKA tried to innovate on its strap variety by adding thematic printed strap. The thematic printed strap was firstly released with Halloween theme. Then, after several months WOODKA released another thematic strap for their summer collection. Those printed straps were made limited and sold very fast.



Figure 6 WOODKA Print Strap

# **LOCA Plain**

As a startup company, development is a must. Therefore, WOODKA added another unique thing to the strap which resulting a natural-dyed strap. The color itself is indigo.



Figure 7 WOODKA Plain Strap

# **Customer Preference**

Efforts have been made by few researchers to develop the models for designing the products based on customer requirements by considering multi attributes. Customers are shifting

their preferences from traditional products to customized products. Companies that are providing product customization and increased product variety received better customer satisfaction and enjoy significant competitive advantage (Ostrosi and Bi, 2010). Product configuration has been recognized as an effective means in meeting a customer's individual needs in mass customization (Zhou *et al.*, 2008). The objective of product configuration optimization is to deliver customized products at the lowest cost while maximizing customer satisfaction.

Online product configurations have recently received much attention to enable customers to interactively specify and adapt a product according to their individual preferences (Sabin and Weigel, 1998). Using internet technology user can specify desire features and needs of the product with product developers or manufacturers. A product family configuration reasoning system have been developed to identify common platforms from a collection of similar existing products, as well as to generate product families from these common platforms (Siddique and Rosen, 2001). Product configuration design is critical in design for mass customization. Siddique and Boddu (2004) proposed an information framework of integrating customers into configuration design using a graph grammar and templates for modules.

Organizations develop products to serve the customers with different needs. Product configuration (combinations of features) plays an important role in accepting the product by the customers. Therefore, grouping of features to develop the fruitful product configuration is a key issue in product planning (Gangurde & Akarte, 2013).

#### **Product Attribute**

A product attribute is one of the characteristic that will affect customer's purchase decision. Customer is someone who has needs and wants. A need is something that should be owned and have by the customer, while want is a something is not necessary and essential, but desired. A costumer will compare the needs and desires against the attributes of products available and select the product that best matches the needs and wants of the costumer.

# **New Product Development**

The term product development can be simply defined as creating something new for people's own business and targeted it to the customers. A business needed to do this as one of the process in engaging the customer. It is because customer preference can change by time to time. Aside from customer point of view, there must be some competitors your business will face. The competitors will have a new technology and innovation. Becoming innovative means that a business should try to understand what their target market wants also by making some improvements from current product to meet customer's expectation.

Talking about customer point of view, it is really important for a business in getting thoughts from the customers. The method a company can use to sustain its business is by doing a focus group. It allows new-product developers to refine specific design functions and features for a new product with direct input from the product's targeted costumer.

Involving consumers in the early stages of product development can help companies identify the key design and functional features of a product from the consumer's perspective. However, as Poetz and Schreier (2012) demonstrate, "attracting the right people" is crucial in developing the type of detailed and insightful input needed byproduct designers. Having access to consumers and being able to generate quality information is essential to developing a viable partnership. It is also important that both parties to the partnership-consumers and product designers-understand the parameters of the collaboration. Consumers provide input on functions and features that will ensure a product's success in the marketplace, while product designers provide expertise in design and manufacturing.

Talking about design in new product development, design-oriented product development strategies will become very important for companies in gaining a competitive edge. This is because these strategies not only yield aesthetically pleasing products but they also meet the emotional needs of consumers who want to express their individuality. This allows the inner product development process, which involves planning, developing and marketing, to be firmly driven by a market point of view from outside the company. Currently, design is the most effective means of communication between company and consumer (Jang, Yoon, Lee, & Kim, 2009).

# **Conjoint Analysis**

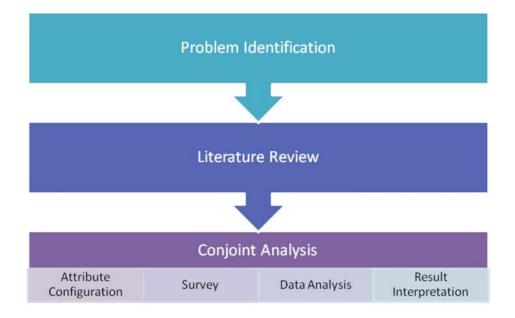
In order to complete this research, the author will use conjoint analysis as the tool to find out the favorable attribute of WOODKA's product. Conjoint analysis derived from two words which are "considered jointly". In conjoint analysis, researchers describe products or services by sets of attribute values or levels and then measure respondents' purchase interest (McCullough, 2002). If we can take an example, a customer buy a pair of shoes with leather as its material priced at \$300. That customer should "consider jointly" all of the attributes before doing the decision to purchase that shoes.

The main purpose of this conjoint analysis is to know customer's behavior in purchasing something. Conjoint analysis can capture the dilemma of market choice: The perfect product is seldom available, but lesser alternatives are. Conjoint analysis is quiet pushy which it will uncovered purchase motivations that the customer maybe unwilling to admit and do not realize. Conjoint analysis addresses big issues with specific answers. Conjoint failures are generally the result of researchers who fail to properly design their conjoint studies or correctly interpret the output. Powerful, user-friendly software gives us opportunities to make mistakes we may not even be aware of

#### Methodology

#### Methods

These are the three big steps that should be taken in order to make this research completed.



#### **Conjoint Analysis**

To conduct this conjoint analysis the author should be careful when deciding the population of the research and the sample. It somehow will be difficult because the sample will not be representative enough. The author will later asked WOODKA about how many customers do they have. After that, the author will see the table for sample number to determine the number of respondents of this research.

# **Attribute Configuration**

In deciding the attributes and its levels, it should be realistic and related to the problem. It is better if the number of attribute and its level not really big to minimize the estimation efforts. There are three rules regarding what attributes to include in the concepts presented to the respondents (Gustafsson, 1990).

- Choose attributes that might be important to the respondent in the buying situation. These could even be attributes that have no meaning for the purpose of the survey.
- Choose attributes that are still possible to alter. This may depend on how far the product has come in the design process.
- Choose attributes that might be useful in comparisons with competitors. That is, include attributes that cover their core competence.

The use of theoretical review will also become one of the considerations in deciding the attributes and its levels. For this research, the author will use one attribute that WOODKA already had which is the type of wood. The types of wood are including Teak, Rosewood, Maple, and Ebony. In deciding the level of attributes, the author will make sure from the point of view of WOODKA itself and its customers. Author will do in-depth interview to both WOODKA's representative and customers.

#### **Data Collection**

# Survey

Choosing a survey format is really important because it affects so much on the questionnaire and the response scale it is possibly used. Among of the popular and important formats are personal interview, computer-aided interview, mail survey, and telephone survey. Since the sample number is quite high, the author will use mail survey. Just because the customer of WOODKA not only come from Jakarta and Bandung, it is not really possible if the author do a personal interview. Another reason is because to save the time and it is also not really possible to gather the data from customers outside Bandung and Jakarta if the author use personal interview. The number of respondents can be much larger.

In conducting the survey, the author will let the respondents rank the possible combinations. Rank ordering is considered easier for the respondents since indicating an order of preference is less difficult than stating a degree of preference (Green & Srinivasna, 1978). Moreover, the author can directly give the possible combinations which in form of pictorial presentation and ask the respondents to rank.

# **Data Analysis**

In doing the analysis, author will later use conjoint analysis in SPSS. The conjoint analysis has a purpose to find the utilities and importance values of the attributes that included in this research. Conjoint Analysis is a research technique used to measure the trade-offs people make in choosing between products and service providers. It is also used to predict their choices for future products and services. Conjoint analysis applies a complex form of analysis of variance to a respondent's choice task data to calculate a utility for each level of each attribute. These are basically index numbers which measure how valuable or desirable a particular feature is to the respondent. The idea is each respondent's choice tasks reveal something about the relative utility that he or she has for

each feature. Features which a respondent is reluctant to give up from one choice task to another are judged to be of higher utility to that respondent than features which are quickly given up (Kuhfeld, 2010). A respondent's "utility" is a measurement of his or her relative strength of preference for each level of each attribute of the research company. The attributes included in this research are still on finding because we should know from provider's point of view and customer's point of view first.

#### Research Result

As mentioned on the previous chapter, author should conduct an interview with WOODKA representative to know which attribute should be included. Aside from interviewing WOODKA representative, the author also gathered customer's thought about WOODKA's product by doing interviews with 14 respondents. The respondents consist of 11 people aged 21, two people aged 20, and one person aged 19. All of them are college students whom are WOODKA's previous customers.

The representative said that WOODKA is currently developing some new shapes for its watch; oval, square, and rectangle. This development plans are included along with the round shape of WOODKA's current watch. As from the customer, most of them said that WOODKA's strongest point is the interchangeable strap and WOODKA currently has four different kind of straps which are leather, pattern, printed, and plain. Those four will be included in this research.

With those provider and customer inputs the attributes are now complete.

Table 1 WOODKA's Product Attributes and Attribute Levels (Final Version)

Attribute	Level		
Attribute	Number	Description	
Wood Type	1	Ebony	
	2	Rosewood	
	3	Teak	
	4	Maple	
Watch's Shape (Provider Input)	1	Round	
	2	Oval	
	3	Square	
	4	Rectangle	
Strap (Customer Input)	1	Leather	
	2	Pattern	
	3	Printed	
	4	Plain	

Those attributes and its levels on Table 1 can be combined and resulting 64 profiles. The 64 profiles indeed confused the respondents. So in order to make it simpler, author tested the 64 profiles to 30 representatives which are WOODKA's previous customers and ask them to pick their top 16. With that method, author finally gets the top 16 profiles which can ease the respondents in doing ranking of those profiles.

The top 16 profiles can be seen on the Table 2 below

Table 2 Top 16 Profiles Selected by 30 Representatives

No	Wood Type	Watch's Shape	Strap	Status
1	ARRO	Round	Leather	Design
2	ARRO	Round	Pattern	Design
3	ARRO	Round	Plain	Design
4	ORLA	Round	Leather	Design
5	ORLA	Round	Pattern	Design
6	ORLA	Round	Plain	Design
7	ORLA	Oval	Pattern	Design
8	ORLA	Oval	Plain	Design
9	KOVU	Round	Leather	Design
10	KOVU	Round	Pattern	Design
11	KOVU	Round	Plain	Design
12	KOVU	Oval	Leather	Design
13	NIEO	Round	Leather	Design
14	NIEO	Round	Pattern	Design
15	NIEO	Round	Plain	Design
16	NIEO	Round	Printed	Design

#### Survey Result

According to WOODKA's sales record, there are total of 498 customers since they started selling the watches on October 2014. Those 498 customers are the population of this research. The sales record can be seen on **APPENDIX**. As seen from the required sample size table, author used 5% margin of error with the confidence level of 95% which means that there are at least **196** samples from the total population of **498** customers.

# **Demographic Characteristic**

Based on the research, most of WOODKA's customers are aged between 19 and 21. The result also shows that WOODKA's customers are all in the Y-Generation. The customers are both female and male who have domicile mostly in Jakarta and Bandung. They, who bought WOODKA's products, are mostly college students. The customers mostly have monthly income and monthly expenditure between 1.000.000-3.000.000. Lastly, the reason why they bought WOODKA's products is mostly because it is for their personal needs.

#### Data Result

In conjoint analysis, there are two important things that should be analyzed which are utilities and importance value. Utilities table will explain about respondent's perception's sensitivity and the importance value will explain about the most considered attribute in buying certain product. Following those two important things, the significance table should be seen in order to make sure that the preference is really significant or not.

# Utilities for WOODKA Watch's Attribute and its Level

Utilities table is the main result of all. Utilities indicate the perceived value of the feature and how sensitive consumer perceptions and preferences are to changes in product attributes. The (+) utilities score mark the attribute preferred by the customer while the (-) utilities score mark the less preferred attributes from WOODKA's product.

It can be seen from the Table 3 below that the most preferable wood type, strap, and watch's shape.

Table 3 Utilities Table

		Utility Estimate	Std. Error
	ARRO	360	.163
WOOD TYPE	KOVU	340	.148
	ORLA	.583	.148
	NIEO	.118	.163
	LEATHER	2.446	.155
STRAP	PATTERN	.655	.152
SIKAF	PRINTED	-2.195	.282
	PLAIN	906	.152
WATCH'S	ROUND	.820	.117
SHAPE	OVAL	820	.117
(Constant)		7.380	.134

# Importance Value for WOODKA Watch's Attribute

Importance value in conjoint analysis has a purpose to show the attribute that customer consider most in buying WOODKA's product. From the table 4 below, we can clearly see that the most important value or attribute the customers consider first while buying WOODKA's product is the strap. The interview results from the customers are also true that strap is the most attractive factor from WOODKA. This shows what WOODKA wants to bring to its customer is right about the concept of interchangeable strap.

Table 4 Importance Values

STRAP	52.720
WOOD TYPE	34.067
WATCH'S SHAPE	13.213

As stated on the literature review, WOODKA itself known for its interchangeable straps. At first, WOODKA only have two kinds of straps which are pattern and leather. Then, on November 2014 WOODKA started producing bi-monthly thematic strap. As for the plain strap, WOODKA tried to follow the current trend by using indigo natural-dyed on a canvas strap. Those innovative steps WOODKA took actually well-suited with the result of importance value (seen on table 4). The result of importance value said that strap (52.720%) is the most important attribute coming from WOODKA product. Even though strap is the one that customers considered first, WOODKA has to remember that the most preferred ones are only their original straps which are leather and pattern. So, WOODKA has to focus on developing on those straps.

# Conclusion

This research use conjoint analysis in which there are two important things that should be analyzed, utilities and importance value. Utilities table will explain about respondent's perception's sensitivity and the importance value will explain about the most considered attribute in buying certain product. The utilities table resulted that the most preferable wood type is ORLA, the most preferable strap is leather strap, and the most preferable watch's shape is round. Seen from the result mentioned before, customers still prefer the rounded watch rather than other WOODKA's development plans on its watch's shape. As for the most important value, which customers consider the most, is the strap. The interview results from the customers are also true that strap is the most attractive factor from WOODKA. This shows what WOODKA wants to bring to its customer is right about the concept of interchangeable strap.

In summary, the most preferred watch combination that consists of ORLA wood type, leather strap, and round-shaped watch, can be made in which those attribute levels should be kept by WOODKA for its future development. Another thing is that WOODKA should focus on the concept of interchangeable itself since strap is the attribute that customers consider the most.

#### Recommendation

Seen from the result mentioned before, there are some recommendations for WOODKA that can be done in order to improve in the future.

- 1. The demography questionnaire result shows that most of WOODKA customers are come from Jakarta and Bandung. Therefore, WOODKA should focus selling their products in those cities by putting the watch at concept stores or retail stores to make the products easier to be reached by the customers. Also WOODKA should make sure that the quality control is well-managed because the customers are mostly bought the product for the personal need. So, the customer satisfaction can be reached by then.
- 2. The result shows that the most preferred combination consist of ORLA wood type, leather strap, and round-shaped watch. Since those attribute levels are preferred by the customers, WOODKA should focus on perfecting the craftsmanship and quality of their existing product line instead of developing new ones. Those combinations can be WOODKA's main promotional image and it can re-strengthen WOODKA's positioning in the eyes of their customers since they actually preferred WOODKA's existing products.
- 3. WOODKA is famous for its concept of wooden watch with interchangeable strap. It turns out that the most important attribute which customers consider the most in buying WOODKA's products is the strap. Therefore, WOODKA should try to promote and strengthen more about its main attraction point, the strap, which can result a really strong brand image.

# Further Research Recommendation

Some improvements can be done by WOODKA for the future research.

- 1. If WOODKA wants to try expanding its market to other cities, they surely need to gain more information about their target market first.
- 2. As this research can figure out what actually WOODKA's strong point is, the further research can be done by using this method again to find out more detailed of WOODKA already selected attribute combinations. If WOODKA wants to add some varieties to its products, make sure that they need to seek information from their customers too.
- 3. This year's fall and winter will display an umbrella of accord that weaves earthy neutrals with a range of bold color statements and patterns to reflect a landscape of hope, fun, fantasy and all things natural. The forecasted color trend mentioned before can be one of WOODKA guidance in order to develop on its strap color.

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