



Changes in Priority Scale Between Needs vs Wants in Customer Perspective During and After the Covid-19 Pandemic Using Fuzzy AHP

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Abstract. Currently, market conditions are uncertain due to the COVID-19 phenomenon. From another perspective, this condition is testing ground on how the influence of consumer psychology can shift the priority scale from want to vs need, where in the end consumers will choose or determine the decision-making to purchase products and services. The aim of this study is to explore priority changes from a customer perspective between the two criteria of wants to need. And or consists of seven products and services such as needs; 1. Raw food, meat, and vegetables, 2. Fast food & beverages, 3. Health includes vaccination and sanitation, 4. Electricity vs wants; 5. Gas fuel, 6. Internet data, 7. Transportation includes an online type. The methodology in this research is using the AHP method. On 36 purposive “expert samples” related to the research theme, spread in West Java Region. Interesting findings, that indeed there we a change in priority consumers’ perspective from “wants” to “needs”. Another interesting finding is that before the pandemic the “wants” aspect is higher than “needs”, with transportation having the highest rating scale both before and after the pandemic. After the pandemic situation occur there was a major transition on rating scale in “Need” from a total of 19,16% up to 40, 72%, with fast food and beverage having the highest change value gap from 4,04% to 15,36% followed by health from 1,83% to 10,99%, and n contrast to that In the covid-19 situation there were major transition on a rating scale in “Wants” from total 80,84% to 59,28 %, with transportation having the highest hit on minus change value gap from 35,38% to 21,16%, following by gas fuel from 16,47% to 12,02%.

Keywords: Customer Need, Priority Scale, Fuzzy.

1 Introduction

It has been more than 2 years since the end of 2019 the Covid-19 pandemic has hit globally and in Indonesia. Apart from the polemic about the origin of the virus and the

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process of transmission, coronavirus disease 2019 (Covid-19) had an extraordinary impact on the lives of the world's people and businesses. One of the current effects is uncertain market conditions, which are exacerbated by the disruption of ICT [1], intense competition in technology and innovation directly or indirectly tends to be a natural selection process for products and services in terms of how well they are resilient. Initially, competitiveness specifically addressed a firm's ability to survive in dynamic markets and industries. However, the author perceives this as a real testing ground during pandemic conditions where the influence of consumer psychology will play a very important role in shifting wants into needs. When we talk about psychological factors that influence consumer decisions, we will refer to how the mind works related to change in motivation-based assessment on situation of environment, learning and socialization, attitudes and beliefs. A motive is an inner drive or pressure to take action to satisfy a need. Highly motivated people are highly goal-oriented individuals. Whether the goals are positive or negative, some individuals tend to have high levels of goal orientation, while others tend to have lower levels of goal orientation. People can display different levels of motivation in different aspects of their lives.

For a consumer's purchase decision to occur, the need must be raised to a sufficiently high level that it serves as a motive. At any given time, one person has various needs that do not have sufficient urgency to generate the motivation to act, while there are others who are highly motivated to act. The forces that create a sense of urgency and motivation may be internal, such as people feeling hungry, and environmental such as seeing a large advertisement, or psychological in the form of thinking about food to make you feel hungry. Motivation begins with an unmet need, as does all consumer problem solving. One of the most famous theories of individual motivation is the work of A. H. Maslow, known as the hierarchy of needs [2][3]. Maslow developed a model that describes five different levels of human needs. These needs relate to each other in a "hierarchy of needs", with basic survival-oriented needs at the lower levels of the hierarchy, building on higher emotional needs related to love, self-esteem, and self-fulfillment. Consumers will ultimately choose or determine the decision-making purchases of products and services. A research questions propose and became the aim in this research is, is there will be a change scale priority in consumers perspective when compared in pairs between the two criteria of wants vs needs? consists of seven divided products and services such as needs; 1. Raw food, meat and vegetables, 2. Fast food & beverages, 3. Health include vaccine and sanitation, 4. Electricity vs wants ; 5. Gas fuel, 6. Internet data, 7. Transportation include online type.

2 Literature Review

In our effort to find previous related research, we used the Publish or perish (POP) along with Vos Viewer software to mapping several studies related to the theme were already carried out by various researcher, Using the keyword "change in customer behaviors " from 2011 until 2022 with the total 985 metadata, and using the keyword "pandemic covid-19" we get 117, and selected to focus related to change consumption and buying decision at covid condition we found 8 research related in this topic is

already come out since 2020. As described in the Table 1., with two major research contexts related to the buying decision in covid-19 and a consumptive behavior change in covid-19. But from this 8 research there were no study that explore more about the shifting priority from customer perspective before and after covid -19.

Table 1. Context Element of Change Buying Decision in Covid 19:

Context Elements	Facets of Context Elements	References
<i>Buying Decision in COVID-19</i>	Costs and convenience, Physiological and buying decisions during the PSBB and COVID-19.	M. R. Hutauruk (2020) [4]
	Positive significant influence, e Commerce purchasing decisions inflencevy individual, environmental, and psychological differences at Covid 19	Y Sari, Y Helena (2021) [5]
	Change in consumer purchasing habits at Covid-19 pandemic in communal life.	F. Pentury (2021) [6]
	Factors that influenced consumer preferences in online shopping stores and offline stores during the Covid-19 pandemic	Nizma C, Siregar D (2021) [7]
Consumptive Behavior Change in COVID-19	Relationship between conformity, celebrity support, consumptive behavior in online consumer.	U. Effendi et al (2022) [8]
	Causative factors that influence consumer behavior in purchasing decisions during the COVID-19	Salsabila, et al (2021) [9]
	Change in consumer purchasing habits at COVID-19pandemic in communal life.	F. Pentury (2021) [6]
	Consumptive behavior change in COVID-19	T. Maryati T (2020) [10]

From the several previous recent studies in Table 1, the author sees that the topic of deepening the investigation of product priorities Needs vs Wants from the consumer aspect in the Covid-19 condition has not been carried out, which is also an opportunity for the author.

3 Method

The methodology used in this study is using AHP Method invented by Thomas L. Saaty, this method bolster show will depict a multi-factor or multi-criteria complex issues into a chain of command agreeing [11], pecking order is characterized as a multi-level structure for representing of a complex problem in a where the primary level is the objective, followed by the figure level criterion, sub-criteria, and so on down to the final level of choices. And judged by the 1-9 rating scale [12]. In this research we

design using four stages, consist of: 1) Data variable, a secondary data related to what kind products or services that meet the Needs Vs Wants criteria; 2) Design stages of analysis, consist of AHP Models, create a pairwise comparison model concept in AHP, design a google form questionnaire with a data link to AHP model; 3) Data Analysis process, consist of verification of data inputs, sorted the bias data, analysis using AHP, validation on the result with acceptable consistency ratio $\leq 0,1$; 4) Conclusions of the analysis result and findings.

4 Result And Discussion

4.1 Data variable alternative

The variable in this research consists of seven item products or services:

Cluster NEEDS; 1. Raw food, meat and vegetables, 2. Fast food & beverages, 3. Health include vaccine and sanitation

Cluster WANTS; 4. Electricity vs wants, 5. Gas fuel, 6. Internet data, 7. Transportation include online type

4.2 AHP Model

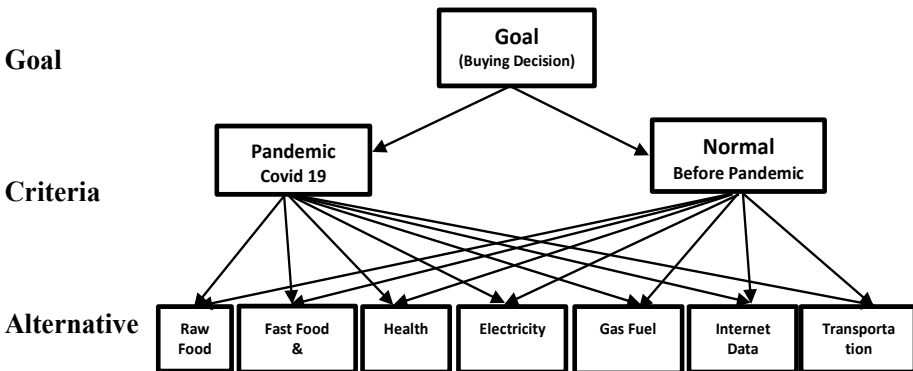


Fig. 1. Research Design of AHP Model

To answer the aim of this research, the Analytic Hierarchy Process (AHP) model will be utilized as describe on Fig. 1. This AHP model allows for the comparison and prioritization of different criteria and alternatives in a decision-making process. In this research, there will be two criteria conditions, one representing the decision-making process before the pandemic and the other representing the decision-making process after the pandemic. Additionally, there will be seven alternative choices that will be evaluated within each criteria condition. To collect data for the AHP model, a pairwise questionnaire will be used. The questionnaire will consist of a scale ranging from 1 to 9, where respondents will compare each alternative against each criterion and assign a

value based on their preferences. The use of a Google Form will facilitate the distribution and collection of responses. To ensure that respondents understand the research and how to complete the questionnaire, an explanation of the research and a visual guide will be provided within the Google Form. The visual guide will assist respondents in understanding how to evaluate and compare the alternatives based on the criteria. The dissemination of the Google Form will be carried out through online applications and social media platforms. Selected respondents who are residents of a specific area will be targeted to ensure the data collected is relevant to the research objectives. By collecting responses from the selected respondents, the AHP model will be applied to analyze and prioritize the alternatives based on the criteria conditions before and after the pandemic. This will provide insights into how the decision-making process may have changed due to the pandemic and help identify any shifts in customer preferences. Overall, this research aims to utilize the AHP model and a pairwise questionnaire to understand the decision-making process from a customer perspective before and after the pandemic, with the goal of capturing changes in preferences and priorities.

4.3 Overview profile of expert respondent

In the application of the AHP method, the priority is the quality of information from the respondents, and does not depend on the quantity [11][13]. Therefore, the AHP assessment requires experts as respondent data in making alternative selection decisions. The experts here are individuals who are considered competent and really master and understand and influence policy making or really know the information needed. The number of respondents in the AHP method does not have a specific formulation, but there is only a limit of at least two respondents [11]. The sample of this study is part of the total population of residents in the area around Cileungsi-Bogor with 36 people expert respondent.

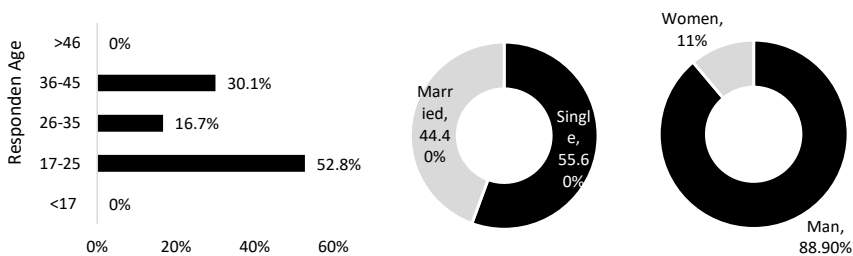


Fig. 2. Overview of expert respondent in this research majority is a man 88,9%, with single 55,6% and age majority is range from 17-25 years old.

Based on the gathered data from the 36 expert respondents as described in figure 2 above, it can be observed that there is a majority within certain age and demographic groups. Among the respondents, 52.8% fall within the age range of 17 to 25 years, indicating a significant proportion of younger individuals Generation z participating in the study. Furthermore, 30.1% of the respondents are millennial generation between the

Table 3. Overview of AHP Result comparison

Aspects	No	Item (Alternative)	Normal Condition	Covid-19 Condition	Change Value
NEEDS	1	Raw Food	13.28%	14.37%	1.09%
	2	Fast Food & Beverages	19.16%	40.72%	11.31%
	3	Health (Include vaccine & sanitation)	1.83%	10.99%	9.16%
WANTS	4	Electricity	11.49%	11.37%	-0.12%
	5	Gas Fuel	16.47%	12.02%	-4.44%
	6	Internet Data	80.84%	59.28%	-2.77%
	7	Transportation (Include online)	35.38%	21.16%	-14.23%
		TOTAL	100.00%	100.00%	

Further analysis in average rate scale result on both conditions we find in Table 3:

1. Transportation has the highest rating scale in both normal and COVID-19 conditions. This indicates that transportation is considered a significant factor in decision-making for customers, regardless of the pandemic situation.
2. In normal conditions, the majority of respondents prioritize "Wants" over "Needs." Further analysis is required to gain a deeper understanding of the underlying reasons behind this preference.
3. In the COVID-19 situation, there is a significant transition in the rating scale for "Needs." The percentage of importance given to "Needs" increases from 19.16% to 40.72%. This shift suggests that customers place higher emphasis on essential items and services during the pandemic.
4. In the COVID-19 situation, there is also a notable transition in the rating scale for "Wants." The percentage of importance given to "Wants" decreases from 80.84% to 59.28%. This change indicates that customers are prioritizing their essential needs over non-essential wants in the face of the pandemic.
5. Based on the above data analysis and results, the main finding is that there has been a shift in the scale of priority from "Wants" to "Needs" in the consumers' perspective. This change suggests that the pandemic has influenced customers to prioritize essential items and services over discretionary purchases.
6. Further analysis reveals specific changes in the rating scale for different categories before and after the pandemic. These changes can be categorized into positive values, indicating an increase or higher preference, and negative values, indicating a decrease in demand or preference. Here are the categories with the highest positive and negative changes:
 - *Positive value changes:* Fast food and beverages: This category shows the highest positive change in rating scale with 11.31%. It suggests an increased preference or demand for fast food and beverages after the pandemic compared to the pre-pandemic period. Health: The health category shows a positive change of 9.16%, indicating an increased importance placed on health-related products or services. Raw food: This category has a positive change of 1.09%, suggesting a slightly higher preference for raw food items.

- *Negative value changes*: Transportation: The transportation category exhibits the highest negative change with a value of -14.23%. This indicates a decreased demand or preference for transportation services after the pandemic. Gas fuel: Gas fuel shows a negative change of -4.44%, suggesting a decreased preference or demand for gas fuel-related products. Internet data: The internet data category has a negative change of -2.77%, indicating a decreased importance placed on internet data services. Electricity: The electricity category shows a minimal negative change of -0.12%, suggesting a slight decrease in preference for electricity-related products or services.

5 Conclusion

From the result and findings above, we conclude that before the pandemic the “wants” aspect is higher than “needs”, and transportation is having the highest rating scale in both before and after the pandemic. A very particular finding after the COVID-19 situation occurred was a major transition on the rating scale in “Need” from a total of 19.16% up to 40.72%, with fast food and beverages having the highest change value gap of 11.31% (from 4.04% to 15.36%), followed by health at 9.16% (from 1.83% to 10.99%), and in contrast to that in the COVID-19 situation there was a major transition on the rating scale in “Wants” from a total of 80.84% to 59.28%, with transportation having the highest hit on minus change value gap of -14.23% (from 35.38% to 21.16%), followed by gas fuel at -4.04% (from 16.47% to 12.02%). From the data analysis and result above we concluded the main findings, that indeed there were changes in scale priority in consumers' perspective from Wants to Needs. Further analysis reveals specific changes in the rating scale for different categories before and after the pandemic. These changes can be categorized into positive values, indicating an increase or higher preference, and negative values, indicating a decrease in demand or preference. The categories with the highest positive and negative changes include: (1) *Positive value changes*: Fast food and beverages: This category shows the highest positive change in rating scale with 11.31%. It suggests an increased preference or demand for fast food and beverages after the pandemic compared to the pre-pandemic period. Health: The health category shows a positive change of 9.16%, indicating an increased importance placed on health-related products or services. Raw food: This category has a positive change of 1.09%, suggesting a slightly higher preference for raw food items; (2) *Negative value changes*: Transportation: The transportation category exhibits the highest negative change with a value of -14.23%. This indicates a decreased demand or preference for transportation services after the pandemic. Gas fuel: Gas fuel shows a negative change of -4.44%, suggesting a decreased preference or demand for gas fuel-related products. Internet data: The internet data category has a negative change of -2.77%, indicating a decreased importance placed on internet data services. Electricity: The electricity category shows a minimal negative change of -0.12%, suggesting a slight decrease in preference for electricity-related products or services. These changes in the rating scale provide insights into the shifts in consumer preferences and priorities before and after the pandemic. The increased demand for fast food and beverages, health-related products, and raw food indicates a change in consumer behavior influenced by the pandemic. On the other hand,

the decreased demand for transportation, gas fuel, internet data, and electricity suggest a shift in priorities towards essential needs and a reduction in non-essential services.

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