Food and Transportation Demand Analysis Based on Marital Status

by Evi Thelia Sari

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Abstract: The fulfilled needs demonstrate the welfare level. One way to know the level of community needs is through a pattern of household expenditure. The basic needs of society generally are transportation and food. The purpose of this study was to analyze the differences between single and married status in consuming foods and transportation. The method use in this study is quantitative research method. The data collected randomly from 100 respondents, based on their marital status. The married respondents are 19 while the single ones are 81. The analytical method used in this study is independent sample T-Test using SPSS V. 21.The results showed that the single and married respondents was not different with a sig. Value >0.05 which are 0.764 and 0.838 but the t-test for equality means was negative so it indicates that group of married people have more demand than group single for both products, food and transportation.

I.   Introduction

One of the common goals of countries is to improve their citizens' prosperity. Somehow, the level of welfare is seen from the affordability to fulfill the needs for food and transportation. We can see the level of welfare in society from the fulfillment of needs including the need for food and transportation. Welfare is a satisfaction gained by someone from the results of consume the received revenue, but the level of welfare itself is something relative because it depends on the satisfaction gained from the results of the consume revenue, fulfilled needs, then someone has been in the value of prosperous, because the need level is indirectly with the welfare indicator (Onte, et al.2012).

Every person will have different behavior to consume goods and services, including daily foods as the basic needs for people to survive, and how they can be satisfied physically, emotionally, and even spiritually by consuming the product. In the consumer behaviour theory explained that consumers will maximize their satisfaction and the utility. The reality consumers purchase a product and service not only because of it's actual utility, but also of it's perceived worth. Seen from individual as consumers it has come difficult to make a purchase decision because of many available options and reasons that can affect it, for examples seen from the condition of their relationship status like single or married that will affect the amount of the goods or services to be purchased. Cultural, social and psychological factors also affect consumer behaviour (Kotler and Keller, 2012).

In everyday on doing activities every people definitely use transportation. Transportation is needed to ensure the implementation of human and commodity mobility. Kirana and Bowo (2018) explained that transportation in general has a main influence on the activities of individuals, society, economic development, and sociopolitical development of a country. Insufficient means of transportation will hampered the distribution and redistribution of output and creates a side barrierto productivity growth (Kirana and Bowo, 2018). The importance of transportation is reflected in the more growing need for transportation services, mobility of people and goods across the country (Tajibu, et al,2018). The selection of personal transportation within a family choosen by the capacity of a vehicle was it suitable to all family members or not. More number of family members then the possibility to have the car increased.The number of family in a house have a relationship with the needs of movement, the more the number of family members will be more and more the use of motorcycles or cars as an alternative to land transportation (Kirana and Bowo, 2018).
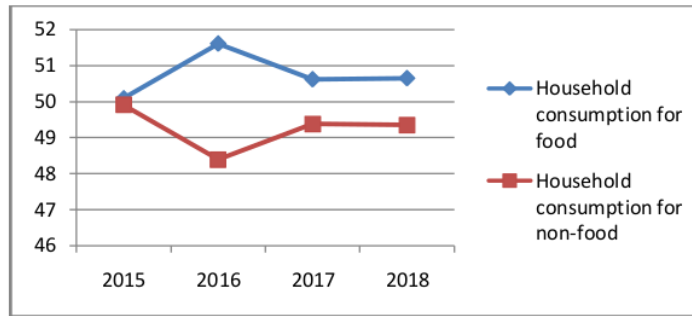
Figure 1, Monthly average expenditure per capita by group of goods (%)
Source: SUSENAS, (2009)

Based on fig.1 above, the proportion of household spending to buy food expenditure is still around 50 percent of total household expenditure. Condition in Indonesia reflects the tendency of most people still prioritize the expenses of income on the basic needs (foods) than non food. Wuryandari (2015) studied that food expenditures were still have higher proportion than other needs. Specifically, this study aims to analyze people's demand for food and transportation needs, see from their relationship status.

II.   Literature Review

2.1   Definition of Demand
According to Samuelson in Alimuddin et al. (2013), demand is a definite relationship between the market price of an item with a quantity that is owned by the goods provided that other things do not change. In other words, demand is the number of commodities requested is a function of or depends on the price of the commodity, consumer income, related commodity prices (complementary and substitution), and consumer tastes (Alimuddin et al.,2013).

2.2   The Law of Demand
Law of demand stated that when prices go down, the consumer will make some purchase then the number of goods that are request will be decreases, instead if the price of an item has decreases then the number of items requested will be increased. Law of demand will apply with assuming the other factors outside the price are considered constant (ceteris paribus (Febianti, 2014).

2.3   Demand Function and Curve
The demand function is a derivative of consumer behaviour that strive to achieve maximum satisfaction, by consuming goods and services that can be purchased with limited income (Febianti, 2014).The relationship of factor that can influences demand with demand can be explained through a demand curve which is illustrate price with the amount requested of consumer. Demand curve can be defined as a curve describing the nature of relationship between the price of something goods with the number of items Buyers ' request (Febianti, 2014). The assumption of ceteris paribus will occurs if there are other factors besides price considered constant, then demand function will change in the amount requested (ΔQ) as a result of changes prices (ΔP). Precisely, in the same curve there will be movement from one place / point to place / to another point, if the price of an item changes. This we call the change in the amount of requested, with the keyword there is movement from one point to another point (Febianti, 2014). For more details can be seen in the image below.
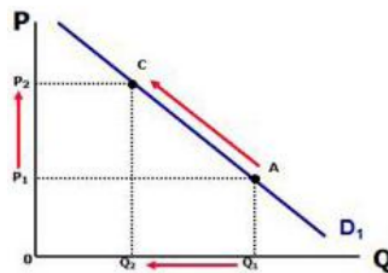

Figure 2, change in the amount requested
Source: Febianti., (2014)

Fig. 2 above shows the change the amount of requested as a result of price changes when the price increases from P1 to P2, it will cause the amount requested to drop from Q1 to Q2. So, price changes resulting in changes in the amount of goods demanded will occur along the demand curve only.

The demand curve as illustrated above shows the relationship between the price level and the quantity of goods demanded, where factors outside the price are considered constant and one factor outside the price changes, the demand is change. The effect on the demand curve will shift either left or right. So, the keyword is when changes outside the price factor will result changes in demand characterized by shifting demand curves (Febianti, 2014). More details can be seen in the fig. below
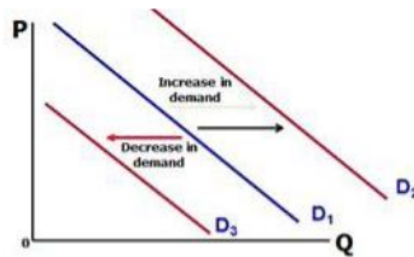

Figure 3, demand curve shift
Source: Febianti (2014)

Fig. 3 above shows if consumer income rises then demand will increase and demand curve will shift to the right (from D1 to D2). Conversely, if consumer income goes down then demand will go down so that the curve will shift to the left (from D1 to D3).

2.4 The Factors That Influencing Demand

According to Febianti (2014), factors that influence least of the items requested by consumers among others caused by:
   a)   intensity of need
   b)   Consumer tastes
   c)   Consumer income
   d)   Price of substitutions goods and complementary goods
   e)   Population
   f)   Consumer expectations of price
   g)   Advertising

Meanwhile, according to Febrianti (2014), the factors that affect the amount request is:
   a)   The price of the item itself
   b)   Prices of other related items closely with the goods
   c)   Household income and society average income
   d)   Revenue distribution pattern in society
   e)   The taste of society
   f)   Population
   g)   Prediction on situation in the future.

2.5 Relationship Status

Single can be explained from a legal and social perspective because it contains a set of values as the definition of marriage (Himawan et al, 2018). From the legal side, single can defined as the status of adults that currently not married including divorced. In social perspective, single is defined people who are not in romantic relationship. Unmarried adults in society are often referred to as single. Single is describes someone strong enough to live and enjoy life without having to depend on other people. The single also describes someone who is independent.

Married is defined as the union of two people become one, male and female officially registered in law and religion. Marriage has characteristics of intimate and sexual relations as well as religious and social politics (Shah and Sultan, 2019), and therefore this status provides several social, religious and legal benefits (Shah and Sultan, 2019). Married for adults has offers the benefits of increased income and the rights and responsibilities include providing a source of needs for their family
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2.6 Consumer Behaviour

The American Marketing Association defines consumer behaviour from interactions of an awareness, influence and environment that occurs (Nofri and Hafifah, 2018). Consumer behavior refers to the selection, purchase and consumption of goods and services for the satisfaction of their wants. There are different processes involved in the consumer behavior. Many factors that influence consumer decision. Initially the consumer tries to find what goods or services would like to consume, then choose only those promises greater utility. After selecting, the consumer makes an estimation of the available money that can spend. Lastly, the consumer analyzes the prevailing prices and takes the decision about the good or services should consume. Meanwhile, there are various other factors influencing the purchases of consumers such as social, cultural, economic, personal and psychological.

III.   Methodology

This study uses quantitative research method and the data were collected randomly from 100 respondents, regardless their marital status. The 100 questionnaire feedbacks were valid and reliable as the data are nominal. The consumption for food and transportation data are measured from the total food and transportation expenditures in observation period in first week of November 2019. However, the number of married respondents are 19 while the single ones are 81. All the data is processed using SPSS V. 21 to process the independent sample T-Test in order to know the differences between single and married status in consuming foods and transportation.

The alternative hypothesis raised in this study are:

H1:There are differences in food demand between single and married people

H2: There are differences in transportation demand between single and married people

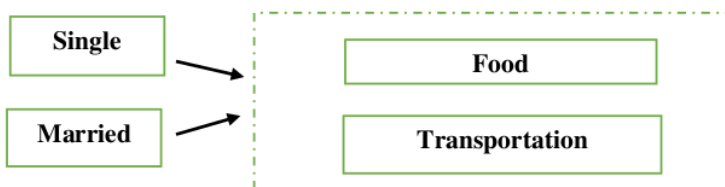**The research framework is as figure 4 below:**

Figure 4. Research framework

Source: Authors (2020)

IV. Result and Discussion

From this study obtained some data to be used as research material in this paper. The data obtained are data about the respondents who have single and married status and total food and transportation that consume.

Table 1. consume of food and transportation based on relationship status

Status	N	Total Food	Total Transportation
Single	81	IDR175,988	IDR 82,185
Married	19	IDR245,105	IDR227,263

Source: Authors (2020)

According to the data above it can be seen that the respondent are single 81 with a total food IDR 175,988 and total transportation IDR 82,185 while people who are married are 19 in total food IDR 245,105 and total transportation IDR 227,263.

The range of the total food expenditure in a week were set as below:

Range 1: less than (<) IDR 200,000

Range 2: IDR 200,000 to 400,000

Range 3: more than (>) IDR 400,000

The range of the total transportation expenditure in a week were set as below:

Range 1: less than (<) IDR 100,000
Range 2: IDR 100,000 to 200,000
Range 3: more than (>) IDR 200,000

The range between food and transportation expenditure is different because averagely, either single or married respondents spend more for food.

Table 2. Frequencies of expenditures

Total Food		
Range	Status	
	Single	Married
less than (<) IDR 200,000	60	5
IDR 200,000 to 400,000	18	13
more than (>) IDR 400,000	3	1
Total Transportation		
Range	Status	
	Single	Married
less than (<) IDR 100,000	63	4
IDR 100,000 to 200,000	13	11
more than (>) IDR 200,000	5	4

Source: Authors (2020)

Table 2 shows the frequency of expenditure in married respondent and single which different range in consume food and transportation.

Table 3. Group statistics

	STATUS	N	Mean	Std. Deviation	Std. Error Mean
TRANSPORTATION	SINGLE	81	1.28	.575	.064
	MARRIED	19	2.00	.667	.153
FOOD	SINGLE	81	1.30	.535	.059
	MARRIED	19	1.79	.535	.123

Source: Authors (2020)

Table 3 shows that for married respondents have higher mean values of food and transportation expenditures in a week than the single ones. However, the hypothesis should be answered by using the independent sample T-Test as shown in Table 4.

Table 4. Independent sample test results

		TRANSPORTATION		FOOD	
		Equal variances assumed	Equal variances not assumed	Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	.042		.091	
	Sig.	.838		.764	
t-test for Equality of Means	t	-4.737	-4.320	-3.617	-3.615
	df	98	24.666	98	27.085
	Sig. (2-tailed)	.000	.000	.000	.001

Mean Difference	-.716	-.716	-.493	-.493
Std. Error Difference	.151	.166	.136	.136
	-1.016	-1.058	-.764	-.773
95% Confidence Interval of the Difference	-.416	-.374	-.223	-.213

Source: Authors (2020)

Table 4 shows the Levene's test either food and transportation has sig. value > 0.05, which are 0.764 and 0.838. . Levene's test is used to test if the variances between two groups (single and married) is the same or not. Thus, Equal Variances Assumed will be used by Food and Transportation. It means that the variance of both groups (single and married) is not different. However, the detail difference is still shown by the t-test for equality of means, which shows the negative signs that indicate the mean values of group 2 (married) is higher than group 1 (single) for both products, food and transportation.

Based on the results of the analysis showed that group of married have signifcant affect of the demand for both products. That groups of married had higher demand than the groups single. It means that married people have more purchase on goods and services. In this research are food and transportation. As expected Ramya and Ali (2016) on their study found that in the Indian contest family members have major influence to the buyer behaviour there factors which affect are the tastes, likes, dislikes, life styles, etc. The head of the family may alone or together with his wife decides the purchase. The family influence the buying behaviour of a member depends on the individual personality, characteristics, attitudes and evaluation criteria andthe influence on the making decision process involved in the purchase of goods and services. Khaniwale (2015) indicated the family as the social factors along with the reference groups, consumers' roles and status to make a buying decision. Most of Indonesian people will show high preferences in rice (Amalina, et al., 2017) as basic consumption need, thus the larger the size of the family, the more the expenditure of the food consumption will be. Although there are other factors influencing consumptions, such as preference, income, price of the goods, and even future price expectation, but married people who have larger size of family will still have to consume the foods and transportation to improve their life. The married people will need more foods and transportation costs to feed children and send them to school by either public transportation or private ones.

Population is defined as something that can not be separated in development as both, subject and object (Kirana and Bowo, 2018). The increasing number of residents resulted in increased economic activity over with the increase of economic factors. To support of public daily activities or trade activities need transportation. For example if in one family has a large number of members, to facilitate travel and go to work then the family bought a car as a necessity was accompanied of the increased of transportation demand. As normal good, food and transportation which rule as daily needs will be consumed based on the utility as well. The consumers will maximize the utility whatever the products they consume. Utility in traditional point of view is linked to the budget constraint (Mohanty, 2014) but foods and transportation are considered important to consumers' life and they only have to manage and fulfil their needs. So, the demand curve for the foods and transportation will tend to keep its downward sloping as the theory of economics said. Once, it comes to the elasticity issue, foods and transportations in Indonesia are less elastic.

V.   Conclusion

Based on the results of the study on the analysisof food and transportation demand based on marital statusexplained above, from levene's test there is not differences in single and married people. But the t-test for equality means values show the differences from the negative signs indicates that group of married have more demand on food and transportation than group single. It means that different status has effect on demand for food and transportation.The more number of consumers, the needs of transportation and food needs to support the daily activities will increase.

VI. Suggestion

Government should improve facilities and public transportation infrastructure so that people prefer public transportation than private transportation so that congestion is reduced. So the automotive market keep stable but on the other does not add problems in areas that are already solid cars and establish a policy on limiting the maximum number of car ownership in a family based on the number of family members to control the quantity of car. Government as the policy holder and price controller must always pay attention to the price and supply of food, given that food is a basic need for the society. The availability of food on the market must always be kept in mind, given the increasing number of people requiring higher availability of food that can be consume by most of people and families in Indonesia because most of Indonesian are moslem, so the halal foods and the safe transportation to women should be provided more because their consumption is not only about to satisfy their needs but also their responsibility to their life (Elvira, 2015) with or without family bond.

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