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Variables of Food Expenditures among Workers in Surabaya, Indonesia

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ABSTRACT: *This study aims to measure the variables that influence the food expenditures of workers in Surabaya. Using the quantitative research methodology, the 100 respondents were taken incidentally as samples from unknown population. Multiple linear regression is used to measure the data from respondents. The independent variables of this study are gender, status of marriage, income and reason to consume, while the dependent variable is food expenditure. The results of this study shows that among the independent variables, only status of marriage that does not influence the food expenditure and the reason to consume is shows the negative influence to the food expenditure. Other independent variables, gender and income affect the food expenditure positively and significantly.*

KEYWORDS: *gender, status of marriage, income, reason to consume, food expenditure*

I. INTRODUCTION

The basic consumption needs of the community are food, food is a commodity that is considered important and a strategic commodity is a basic human need and it is very important for getting healthy and productive life [1]. Therefore, food plays an important role for survival and as a source of energy to carry out physical and biological activities in daily life. Demand is the desire of a consumer to buy an item at various price levels for a certain period of time [2]. The factors that affect demand are: the price of the goods themselves, the price of substitute goods, consumer income, and the number of buyers.

Changes in prices and incomes cause sensitivity to the demand for a commodity called elasticity. The degree of sensitivity or elasticity of income will indicate the status of an item between luxury goods, normal goods or inferior goods, while changes in the prices of other goods will indicate the nature of the two goods that complement each other or replace one another [3] but often the level of income affects the level of public consumption. The difference in income results in different patterns of food consumption and its expenditure, and also different percentages of the use of income used for food consumption. Middle class in Indonesia in which the workers grouped in, experienced the better income as it is considered as a pillar of income per capita which will be the indicator of prosperous economy [4] Beside the reason of basic needs, foods are consumed based on its acceptability such as feelings on its food that based on the consumers' characteristics, knowledge and perception towards the food [5] The workers in Surabaya often purchase foods on street and however, street foods will be considered by consumers based on the quality [6]. Based on this background, it is necessary to conduct research on the analysis of the variables which affect the food expenditures.

II. LITERATURE REVIEW

2.1 Food Expenditure

The demand of food will create the expenditure on this product. Demand is widely defined as a number of items desired and can be purchased by buyers. People has various motivations on their food choice and thus food, nowadays may go beyond health and physical needs issues because it touches consumers' personal goals [7]. Demand for purchasing power on food mainly depends on many variables such as taste, preference, population and income [8]. Other variables to expend food may also come from consumer habits that may come from someone's status of being single or married. Substitution and complementary goods also variables of the demand changes [9].

2.2 Demographic Variables

Some of the demographic variables which are Gender, Status of marriage and also income may influence the demand on food. People with life stages may experience some changes in the consumption habits which is affected by prices, income, tastes, age, and other demographic variables [10].

2.3 Income

Revenue according to economics is deemed as the maximum value that can be consumed by someone in a period like the original state. Broadly speaking income is defined as the amount of assets at the beginning of the period plus changes in valuation that are not caused by changes in capital and debt). Higher income is also said to be able to increase contribution to the demand for a more high-value item [11] as people's demand for goods is not only influenced by price, one's income also influences the demand size. So the increase in income will lead to an increase in demand. It can be said that income has a positive direction towards demand.

2.4 Reasons to Consume

Many reasons raised to consume foods as daily needs but it is not solely reason to consume. Price fluctuation and food quality may also be considered by the consumers. However the demand is difficult to predict, especially when the products have high product variety [12]. Other study found that individual factors also influence eating behavior such as cooking skill and food tastes [13]. Many factors may influence the adults to choose foods are beliefs and norms [14].

III. METHODOLOGY

3.1 Measurement Technique

The study used quantitative methodology approach and used 100 workers in Surabaya as the respondents. The incidental sampling is used to gather the data from the respondents, which means anyone who accidentally or incidentally meets with a researcher can be used as a sample, if it is deemed that the person who happens to be found is suitable as a source of data.

3.2 Research Framework

The conceptual framework of this study is to see the effect of Gender, Status of marriage, Income, and Reason to consume to the food expenditure. This study will explain the relationship between (Fig. 1)

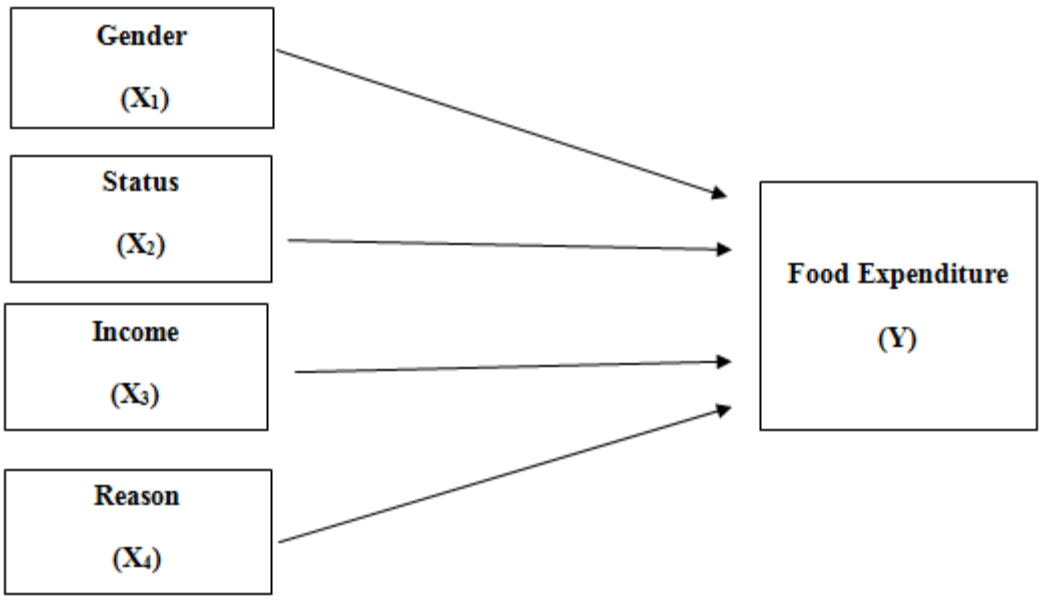

Figure 1. Conceptual Framework
Source: Authors (2020)

The hypothesis statements raised in this study are:
H1: Gender has significant effect to food expenditure
H2: Status has significant effect to food expenditure
H3: Income has significant effect to food expenditure
H4: Reason has significant effect to food expenditure
H4: There is simultaneous effect of Gender, Status, Income and Reason to consume to food expenditures.

IV. RESULTS AND DISCUSSION

Based on the data of samples, the total respondents are 100 and all the items are filled completely. However since the data is tend to be descriptive, the validity and reliability are possible to skip in this study and considered valid and reliable due to the data type.

Table 1. Gender (Status, X_1)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	46	46.0	46.0	46.0
	Female	54	54.0	54.0	100.0
	Total	100	100.0	100.0	

Source: Authors (2020)

Table 1 shows the composition of the gender among the workers which taken as samples. A male worker is 46% and the rest 56% is female. The workers taken as samples were not chosen based on the specific industries but incidentally considered as sample as long as their jobs are as workers either in private or public companies.

Table 2. Status of Marriage (Status, X_2)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	81	81.0	81.0	81.0
	Married	19	19.0	19.0	100.0
	Total	100	100.0	100.0	

Source: Authors (2020)

Table 2 shows the marriage of status among the samples. Most of them (81%) are single and the other 19% are married. However, this study excluded the length of their marriage and the details of marriage, such as: still live with partners or not, the numbers of children or dependents in the households and other issues in marriage life. The data refer to their status as written in their identity card officially issued by the governments.

Table 3. Income (Income, X_3)

IDR (Indonesian Rupiah)		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 3,000,000	10	10.0	10.0	10.0
	3,000,000 - 5,000,000	83	83.0	83.0	93.0
	> 5,000,000	7	7.0	7.0	100.0
	Total	100	100.0	100.0	

Source: Authors (2020)

Incomes of the workers are varied from less than IDR 3,000,000 to more than IDR 3,000,000. However, most of them have monthly income in range of IDR 3,000,000 to IDR 5,000,000. This range is normal in Surabaya city because the government has set the minimum wage rate and will vary, depends on their tenure periods and industrial scales.

Table 4. Reason to consume (Reason, X_4)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Price of the food	28	28.0	28.0	28.0
	Needs	11	11.0	11.0	39.0
	Quality of the food	61	61.0	61.0	100.0
	Total	100	100.0	100.0	

Source: Authors (2020)

Although foods are basic needs of the human beings, this study tries to limit the word "food expenditure". Culturally, workers in Surabaya will buy cooked-food and bring it home if they do not have enough time to cook by themselves, but if they have time to prepare for their foods before going to work, it will save more money, for instance. Food expenditure used here is the payment that workers give for foods either when they buy the cooked-food or prepare for cooking by themselves. Some companies might provide their

lunches in the office so they can save more money. However the issue of provided lunch is excluded from this study.

Table 5. Monthly Food Expenditure (Food expenditure, Y)

IDR (Indonesian Rupiah)		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 800,000	65	65.0	65.0	65.0
	800,000-1,600,000	31	31.0	31.0	96.0
	> 1,600,000	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

Source: Authors (2020)

Table 5 shows the monthly food expenditure of the workers. They buy foods either for themselves or family and other dependents. Most workers as samples pay for food less than < IDR 600,000 per month and only 4 of 100 respondents expend more than IDR 1,600,000.

Table 5. Model Summary

		Model
		1
R		.503[a]
R Square		.253
Adjusted R Square		.222
Std. Error of the Estimate		.500
Change Statistics	R Square Change	.253
	F Change	8.050
	df1	4
	df2	95
	Sig. F Change	.000
Durbin-Watson		1.831

a. Predictors: (Constant), Gender, Status, Income, Reason
b. Dependent Variable: Food expenditure

Source: Authors (2020)

The "Summary model" table provides information about the coefficient of determination, that shows the contribution or contribution of the influence of 'gender', 'status', 'income' and 'reason' variables simultaneously (together) to the food expenditure variable. The value of the R^2 is 0.222 which is quite low to contribute. About 22% of the food expenditures among the workers will be likely influenced by these studied variables, and the other 78% might be caused by other variables excluded from this study, such as: family size, food type, consumer behavior and even the macro cultures in which the workers belonged to.

Table 6. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.047	4	2.012	8.050	.000[b]
	Residual	23.743	95	.250		
	Total	31.790	99			

a. Dependent Variable: Food expenditure
b. Predictors: (Constant), Gender, Status, Income, Reason

Source: Authors (2020)

The "ANOVA" table provides information about whether there are simultaneous (together) effects of gender, income and status variables on food expenditure variables. As the Sig. value is < 0.05, the simultaneous effect is significant, means that all independent variables when they come together, they will affect the food expenditures.

Table 7. Coefficients

		Model				
		1				
		(Constant)	Gender (X_1)	Status (X_2)	Income (X_3)	Reason (X_4)
Unstandardized Coefficients	B	.083	.452	.076	.468	-.116
	Std. Error	.310	.129	.103	.123	.058
Standardized Coefficients	Beta		.315	.067	.341	-.182
T		.266	3.499	.739	3.795	-1.998
Sig.		.790	.001	.462	.000	.049
95.0% Confidence Interval for B	Lower Bound	-.533	.196	-.128	.223	-.231
	Upper Bound	.698	.709	.281	.713	-.001
Correlations	Zero-order		.343	.105	.352	-.098
	Partial		.338	.076	.363	-.201
	Part		.310	.066	.337	-.177
Co linearity Statistics	Tolerance		.971	.948	.972	.949
	VIF		1.030	1.055	1.029	1.054

a. Dependent Variable: Food expenditure
b. All requested variables entered.

Source From: SPSS 21 Multiple Linier Regression Analysis

The "Variables Entered / Removed" output table above can provide information about the research variables and the methods used in the regression analysis. The independent variables used in this analysis are 'gender', 'status', 'income' and 'reason' variables while the dependent variable is the 'food expenditure'. Regression analysis using the Enter method. There are no variables removed so that in the Variables removed column there are no numbers or are empty. The "Coefficients" table provides information about the regression equation and whether or not the influence of gender, income and status variables on a partial basis (individually) for the food expenditure variable. The regression model of the research is:

$$Y= 0.083+ 0.452X_1+ 0.076X_2+ 0.468X3-0.116X_4+e$$

The model shows that without all independent variable, Y variable value is 0.083. Thus, regardless the gender, the status of marriage, income and reason to consume, the food expenditure will still exist. However, based on the SPSS output shown in Table 7, variable of Status (X_2) is not significant to affect the food expenditure. Apparently, most of the respondents consume foods due to the preparation time and entertainment [15], as workers in Surabaya need to go to work in early morning and deserve the relax weekend to entertain themselves with good foods. Variable Gender (X_1), Income (X_3), and Reason (X_4) are significant to the food expenditure. Variable Reason (X_4) is negatively significant to the food expenditure. It means that when the reason is increasing 1 point, the food expenditure will decrease 0.116. This variable consists of three indicators, price, needs and food quality. Among the respondents, only 11% of 100 respondents has reason to consume food as "needs". The rest of it consume food with the reason of price and food quality. They may reduce or increase the food expenditures when they consider the price, need and food quality, if the price is higher than before, the consumers will decrease their expenditure on food. The needs of food increase, it might cause the reduction of food expenditure especially for some food variants. They may substitute to other cheaper food products to fulfill their needs. The quality of food is about how the consumers' perception on price. When the food quality is higher, they think of higher price, thus they might reduce their expenditures on specific food and substitute to others but still consider the safety.

However, the composition of respondents may act as control variables which are not used for this study, such as gender and status of marriage. Most respondents are single thus less expenditures for food is shown in this study results but this variable is not significant to influence the food expenditures. Gender has significant effect of the food expenditures as normally the male workers spend more portion of food than female ones. It is different than the study who found that no significant effect of gender on the fast food consumption because the workers studied here have different behavior in consuming foods than the other demographic groups, such as students [16]. Although most of respondents are single, in this study the food expenditure has nothing to do with the status or marriage. It may occur as the single worker has their own ability, preferences

and obligation to themselves on food consumption decision. They may not have obligation to cook and provide food for their households and dependents, but they may spend more food for their socializing activities with their mates.

As the reason to consume has significant effect to the food expenditure, the composition of the respondents, again, may cause this results. Other study found that social status, including age, gender, and attitude to food affect the food choice [17]. Reason to consume has significant but negative effect to food expenditure. This variable consists of three elements, price, needs, and quality. However, since most of the respondents are having average income per month and it means the same or higher than minimum wage rate decided by government, so the respondents tend to consider the price, if the cost for food products is getting higher, they will reduce such product and substitute with other food kinds. The respondents may have favorite food kinds that usually consumed, once its price rises, the respondents tend to reduce their consumption of such food. The interesting one is why the quality of product which is as part of the elements supports the negative relationship with the food expenditure. This reasonable, because the workers in Surabaya search for the price first as well. The quality they deserve is not food from notable restaurant with premium prices but most of workers will find the standard quality such as cleanness, portion size, taste and service of the food sellers so when the quality of food products are getting higher, the workers think of higher price will be charged for the food. Thus, the workers try to find others with lower quality but still affordable and safe to consume because quality of food is perceived as the safety, healthiness and cleanness of it [6] and perhaps access to food and dietary factors [18].

V. CONCLUSION AND SUGGESTION

Based on the data measured using Multiple linear regression, simultaneously, all independent variables influence the dependent variables. It means that 'gender', 'status', 'income' and 'reason' give effect to food expenditures among the workers in Surabaya, Indonesia. Partially, the 'Gender', 'Income' and 'Reason' to consume give the significant effect but only 'status' of marriage of the respondents that is not significant to influence the food expenditures. This study then suggests the food sellers to grab their consumers among the workers by providing food with good quality and push their promotion to the workers based on their needs according to marriage status, because family size may give positive effect to food expenditures.

However, since this study has some limitation, thus it is suggested that further study will include the control variables (such as genders, income, and family size) to better explanation. The other variables which are not included in this study, such as cultures, workers' behavior, quality of the foods and some other kinds of variables may be added to the experiments.

REFERENCES

[1]. O.W. Olowa, and O.A. Olowa, Food demand forecast for Nigeria (2016-2028). Scientia Agriculture, 15(1), 2016, 340-343.

[2]. S. Sukirno, Mikroekonomi Teori: Pengantar: Edisi Ketiga (Jakarta: PT Raja Grafindo Persada, 2013).

[3]. N.A. Lubis, Elasticity analysis of consumer income against demand against Beef in Medan City. Retrieved from https://repositori.usu.ac.id/handle/123456789/8986, 2016.

[4]. I. Maipita, and S.T. Wahyudi, Income distribution and inequality in Indonesia: Study on middle class household. Jurnal Ekonomi Pembangunan, 18(1), 2017, 131-141.

[5]. J.W. Maina, Analysis of the factors that determine food acceptability. The Pharma Innovation Journal 7(5), 2018, 253-257.

[6]. R.S. Morano A. Barrichello, R.R. Jacomossi and J.R.D. Rivera, Street food: factors influencing perception of product quality. RAUSP Management Journal (53)4, 2018, 535-554

[7]. F. Cordeiro, E. Cherry, and J. Fogarty, Rethinking the mobile food journal: Exploring opportunities for lightweight photo-based capture. Understanding health through online behavior, CHI, 2015, Crossings, Seoul Korea.

[8]. P. Vukadinovic, A. Damnjanovic, and J.K. Randic, The analysis of indifference and the price elasticity of demand between different categories of agricultural product. Economics of Agriculture 2, 2017, 671-685.

[9]. M.D. Rusdi, & M. Suparta, Analisa Faktor-faktor yang mempengaruhi permintaan daging sapi di kota Surabaya (Analysis of factors that influence cow meat demand in Surabaya city. Journal of Economics & Business, 1(2), 2016, 283-300.

[10]. G.W. Gustavsen, and K. Rickertsen, Consumer cohorts and the demand for meat and dairy products. Proceedings in System Dynamics and Innovation in Food Networks, 2018, 169-181. DOI: http://dx.doi.org/10.18461/pfsd.2018.1812

[11]. F. Faharuddin, A. Mulyana, M. Yamin, and Y. Yunita, Nutrient elasticities of food consumption: the case of Indonesia. Journal of Agribusiness in Developing and Emerging Economies, 7(3), 2017, 198-217.
[12]. C. Basnet and S. Seuring, Demand-oriented supply chain strategies-A review of the literature. Operations and Supply Chain Management, 9(2), 2016, 73 – 89.
[13]. A. Kabir, S. Miah, and A. Islam, Factors influencing eating behavior and dietary intake among resident students in a public university in Bangladesh: A qualitative study, PLoS ONE, (13), 2018, 1-17.
[14]. J.A. Oti, Factors influencing food choices: perception of public and private junior high school adolescent students in Asiakwa in the Eastern region of Ghana. Journal of Food Nutrition and Dietetics, (2)1, 2018, 1-10.
[15]. S. Saghaian, and H. Mohammadi, Factors affecting frequency of fast food consumption, Journal of Food Distribution Research, (49)1, 2018, 22-29.
[16]. G. Kusgandari, Factors that affect fast food consumption behavior of students in SMA Negeri "x" Surabaya Indonesia,. Journal of Public Health and Clinical Sciences,5(5), 2018, 95-108.
[17]. E. Bartkiene, V. Steibliene, V. Adomaitiene, G. Juodeikiene, D. Cernauskas, V. Lele, D. Klupsaite, D. Zadeike, L. Jarutiene, and R.P.F. Guine, Factors affecting consumer food preferences: Food taste and depression-based evoked emotional expressions with the use of face reading technology, BioMed Research International. 2019, 1-10.
[18]. C.B. Shanks, S. Haack, D. Tarabochia, K. Bates and L. Christenson, Factors influencing food choices among older adults in the rural Western USA. J Community Health, 2016

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