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**THE INFLUENCE OF MOTHER'S MOTIVATION AND PREFERENCES  
TOWARD FISH CONSUMPTION BEHAVIOR OF FAMILY  
IN RURAL AND URBAN AREAS**

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**Abstract.** The aims of this study are to analyze the differences and the effects of mother's motivation and preference on the behaviour of fish consumption in families in rural and urban areas. The research design used cross-sectional study and took place in Duwet Village, Pekalongan Regency, and Kandang Panjang, Pekalongan City. The sample in this study are 100 families consisted of 50 families in rural areas and 50 families in urban areas. The results show that urban families prefer fresh sea fish, while rural families prefer pindang fish. The result of multiple linear regression analysis shows that factors affecting the fish consumption behaviour of the rural family are family size, and income, otherwise fish consumption behaviour of urban family influenced significantly by family size, income, and preference.

Keyword: consumption behaviour, motivation, preferences

**Abstrak.** Penelitian ini bertujuan untuk menganalisis perbedaan dan pengaruh motivasi dan preferensi ibu terhadap perilaku konsumsi ikan pada keluarga di perdesaan dan perkotaan. Desain penelitian yang digunakan adalah *cross sectional study* dengan pemilihan lokasi secara *purposive* di Desa Duwet, Kabupaten Pekalongan, dan Kandang Panjang, Kota Pekalongan. Contoh dalam penelitian ini adalah 100 keluarga yang terdiri atas 50 keluarga di daerah perdesaan dan 50 keluarga di daerah perkotaan. Hasil penelitian menunjukkan bahwa keluarga di perkotaan lebih menyukai ikan laut segar, sedangkan keluarga di perdesaan lebih menyukai ikan pindang. Hasil analisis regresi linier berganda menunjukkan faktor yang memengaruhi perilaku konsumsi ikan keluarga perdesaan, yaitu besar keluarga dan pendapatan per kapita, sedangkan perilaku konsumsi ikan keluarga perkotaan dipengaruhi oleh besar keluarga, pendapatan per kapita, dan preferensi.

Kata kunci: motivasi, perilaku konsumsi, preferensi

## Introduction

Indonesia is one of the largest fish producing countries in Southeast Asia. The potential of Indonesian marine fish resources is 6.8 million tons per year, but national fish consumption in 2014 reaches only 38 kg per capita per year<sup>1</sup>, while the Ministry of Marine Affairs and Fisheries advocates for fish consumption of 40.9 kg per capita per year<sup>2</sup>. Meanwhile, Malaysia has reached 70 kg and Japan 140 kg per capita per year<sup>3</sup>. This shows that fish consumption in Indonesia is still low compared to other countries.

Consumer behaviour is defined as a direct action involved in obtaining, consuming and consuming products and services (Engel et al., 1994). So consumption behaviour is part of consumer behaviour that determines decisions in consuming and spending a product, including the type of food and frequency of consumption (Sumarwan, 2011, Margareta & Purwidiani, 2014). Waysima et al., (2011) stated that fish consumption behaviour was influenced by age, education, family size, and income. In this way, family income is an essential factor to meet the needs. Research Sari and Retnaningsih (2008) showed that milk consumption behaviour was influenced by individual characteristics, family characteristics, and product characteristics (type, shape, price, and label). Also, consumer behaviour is also affected by several factors, namely motivation (Sayuti & Effendi, 2004) and preference (Mufidah, 2006; Sokib et al, 2012; Amalia et al., 2012).

Motivation can be interpreted as a driver of the individual to act so that the individual reasons to consume a product (Sumarwan, 2011). Motivation is described as a willingness to put a high level of effort toward the goal to be achieved, conditioned by the ability to meet individual needs. Motivated behaviour arises because of the need (Setiadi, 2010). Based on research Thong and Olsen (2008) people in Vietnam to eat fish because of motivation if eating fish can avoid the disease. Preference has a vital role in consumer choice. Consumer preference is the consumer's ability to choose a preferred product and to demand the product available for the consumer to choose from; it may change due to taste and experiential factors (Semaoen & Kiptiyah, 2011). In addition, consumer preferences can also be influenced by age, education, income, and marital status (Fregene & Olanusi, 2012). High-income families have different food preferences with low-income families (Proverawati et al., 2008). This happens because high-income families tend to buy a variety of foods so that the preference for food is high.

The behaviour of family consumption is closely related to the role of the mother who has authority for influenced family diet. Mother role as *gatekeeper*

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<sup>1</sup>Statistics.kkp.go.id. "Maritime and Fisheries Data and Statistics Information System RI". Director General of Capture Fisheries. Retrieved from <http://statistik.kkp.go.id/sidatik-dev/2.php?x=2> , on April 27, 2017.

<sup>2</sup>Databoks. "Indonesia Fish Consumption Rate is still low". Marine and Fisheries Ministry. In access from databoks.katadata.co.id, on June 1, 2017.

<sup>3</sup>Okezone.com, "Consumption of Fish RI Lost Far from Malaysia and Japan". Ministry of Marine Affairs and Fisheries. Dissected from <http://economy.okezone.com/read/2015/03/27/320/1125265/konsumsi-ikan-ri-kalah-jauh-of-malaysia-japan> , on May 30, 2017.

(filter information) and *decider* (decision maker) to process food to be consumed by the family (Waysima et al., 2011).

Past research had not been widely conducted regarding fish consumption behaviour in Indonesia, for instance a study conducted by Waysima et al., (2011) that showed fish consumption behaviour was influenced by perception and affective attitude of the mother. Therefore, the authors are interested in studying the effect of mother's motivation and preference on the behaviour of fish consumption in families in rural and urban areas.

Based on the above description, this study aims to: 1) Knowing the differences in motivation, preference, and behaviour of fish consumption between families in rural and urban areas; 2) Analyzing the influence of motivation, and preference on consumption behaviour in rural and urban families.

### Method

This study used *a cross-sectional design of study*; the research carried out within a given period. This research was conducted in the region representing City and District Pekalongan in consideration of having different population characteristics and describing the rural and urban geographic location, which will affect fish consumption. Furthermore, rural and urban areas were chosen as the study site is Duwet Village, District Bojong, Pekalongan and Village Coop Long, District of North Pekalongan, Pekalongan. The location of the study was chosen *purposively* based on the category of research located away from the beach and near to the beach. The study was conducted for one month, February to March 2017.

The population of this study are families in rural and urban areas. Sample of the study included families in Duwet and Kandang Panjang villages, each of 50 families that chosen using *purposive* method. The unit analysis of this research is a family that represents the rural and urban areas of Pekalongan, while the respondents are housewives who are assumed as decision making in consuming fish in the family. This research involves 100 housewives from village which become research location.

The type of data collected in the study is primary data. Primary data were obtained through interviews using questionnaires covered : (1) respondent and family characteristics including age, length of education, job type, family size, and income per capita; (2) Motivation was referred to Tandayu (2014). The motivation instrument contains 14 items of questions measured using a "strongly disagree" scale gave a score of 1, "disagree" given a score of 2, "agreed" given a score of 3, and "strongly agree" was scored 4 with a minimum score of 14 and a score maximum score of 56 with Cronbach's alpha value was 0.730; (3) Preference was measured by modifying the instruments of Harlin (2008) based on the most favoured ranking of the respondents; (4) Consumption behaviour was measured by modifying the instrument from Waysima (2011) based on the purchase location, type of consumed fish and the frequency of fish consumption per month.

The data processed and analyzed using *Microsoft Excel* and *Statistical Product and Service Solution* (SPSS). The total score of each variable was

transformed into an index score. After getting the index of each variable, then the index is grouped into three categories. *Cut-off* for motivation was low (< 33.33), moderate (33.34-66.67), and high (> 66.67). Data analysis used descriptive analysis to identify a characteristic of respondent and family which include age, education, occupation, family size, and income per capita. Different tests were performed using *independent sample t-test* to analyze the differences in motivation, preference, and consumption behaviour of fish. Multiple linear regression tests performed to analyze the influence of characteristic of respondents, motivation, and preference toward fish consumption behaviour.

## Result

### Characteristics of Respondents

The average age of mothers in rural areas (41.68 years) were four years younger than mothers in urban areas (45.56 years). The average of mothers education in rural areas did not complete junior high school, while the education of mothers in urban achieved high school. This shows that there was a significant difference between mother education in rural and urban areas. Similarly, father's age in rural families (44.59 years) were four years younger than the urban father's age (48.72 years).

Father education had a significant difference between rural and urban area. Families size in rural and urban areas were not significantly different, the average family members in both areas were four (Table 2). The income per capita of households in urban areas were higher with an average of Rp 1.265.712.00 per month compared to rural area that only Rp 493.844.44 per month. Both income grup was significantly difference.

Table 1 Mean and t-test for family characteristics by region

Variables	Rural	Urban	<i>p-value</i>
Mother age (year)	41.68	45.56	0.043 *
Mother education (years)	7.08	12.10	0.000 **
Father age (year)	44.59	48.72	0.032 *
Father education (year)	7.76	13.42	0.000 **
Family size (people)	4.48	4.22	0.369
Income (Rp/capita/month)	493844.44	1265712	0.000 **

Note: \*) significant at p-value <0.05; \*\*) significant at p-value <0.01

### Motivation to Eat Fish

Table 2 shows that the mothers motivation to eat fish based on the dimensions of motivation, namely benefits, price, availability, and nutrition. The result shows a significant differences between the dimensions of nutrition motivation between rural and urban areas. Almost all mothers in urban areas were motivated to consume fish based on high availability and nutrition dimensions. The dimensions of benefits, prices, and availability did not significantly different in both areas. Similar to mother motivation in the rural and urban area. The mean of

maternal motivation index in the urban area (67.91) was higher than in rural area (64.19).

Table 2 Mothers motivation and t-test by dimensions and region

Dimensions of Motivation	Rural		Urban		p-value
	n	%	n	%	
Benefits					
Low (<33.33)	0	0.0	0	0.0	
Moderate (33.34-66.67)	15	30.0	20	40.0	0.163
High (> 66.67)	35	70.0	30	60.0	
Price					
Low (<33.33)	11	22.0	5	10.0	
Moderate (33.34-66.67)	35	70.0	43	86.0	0.388
High (> 66.67)	4	8.0	2	4.0	
Availability					
Low (<33.33)	0	0.0	0	0.0	
Moderate (33.34-66.67)	16	32.0	5	10.0	0.277
High (> 66.67)	34	68.0	45	90.0	
Nutrition					
Low (<33.33)	0	0.0	0	0.0	
Moderate (33.34-66.67)	17	34.0	3	6.0	0.020*
High (> 66.67)	33	66.0	47	94.0	
Total Motivation					
Low (<33.33)	0	0.0	0	0.0	
Moderate (33.34-66.67)	39	78.0	34	68.0	0.007**
High (> 66.67)	11	22.0	16	32.0	

Note: \*) significant at p-value <0.05; \*\*) significant at p-value <0.01

### Fish Consumption Preference

The most popular type of fish consumed by families in urban areas is fresh sea fish (62%). In rural areas, however, families choose pindang (34%) and grilled fish (28%). Mothers in urban area stated that fresh sea fish tastes better, fresh, and tasty. Furthermore, for fresh fish, the preferences in both regions has the same percentage, which is equal to 16%. The least preferred type of fish, namely salted fish (4%).

Table 3 Mothers preference on type of fish based on region

Types of fish	Rural		Urban	
	n	%	n	%
Fresh Sea Fish	9	18.0	31	62.0
Fresh Fish	8	16.0	8	16.0
Salted fish	2	4.0	2	4.0
Pindang Fish	17	34.0	3	6.0
Grilled fish	14	28.0	6	12.0
Total	50	100.0	50	100.0

Types of fish cuisine processing found in rural and urban areas, namely fried, grilled, roasted, curry, and pipes. Fried fish is the most preferred processed fish (67.0%) by all respondents in both regions. On the other hand, the least preferred fish processing (2.0%) in both areas is grilled fish. Processing fish by grilling less favoured by mothers in both regions, as the process was longer and difficult.

## Behavior Consuming Fish

Respondents in urban area mostly buy fresh fish for consumption, namely tuna (22.0%). Conversely, in rural areas, respondents tend to choose processed fish, namely grilled fish (24.0%) and pindang (30.0%). Mothers in rural areas preferred the processed fish because it can be stored longer, cheap, tasty, and available in many stalls to buy. Just as urban respondents choose fresh fish because it is fresh, it more tasty and delicious, and high protein content.

Table 4 shows that almost half of urban respondents were classified as often (48.0%) consumption. At least families eat fish once a month. The average family in rural and urban areas consume fish 12 times per month. Frequency is consumed in both regions.

Table 4 Category of consumption frequency and t-test based on region

Category of frequency of consumption (times per month)	Rural		Urban	
	n	%	n	%
Rare (0-4)	13	26.0	4	8.0
Sometimes (5-8)	6	12.0	13	26.0
Often (9-15)	17	34.0	24	48.0
Very often (> 15)	14	28.0	9	18.0
Total	50	100.0	50	100.0
Mean (times)	11.56		12.54	
Min-Max (times)	1-30		2-30	
p-value			0.479	

Note: \*) significant at p-value <0.05; \*\*) significant at p-value <0.01

## The Influence of Mother Characteristics, Motivation, and Preference toward Fish Consumption Frequency in Rural and Urban Areas

### Rural Area

Regression test result in Table 5 shows that *Adjusted R Square value* of 0.262 which means the frequency of consumption of fish per month of the family in rural was influenced by independent variables as 26.2 percent, while other 73.8 percent influenced by other variables which not studied. Factors that positively and significantly affected the frequency of rural family fish consumption was family size and income. Family size affected significantly and positively (beta = 0.179) on the frequency of consumption of fish, means the greater the family member size, the frequent of fish consumption of family by 0.179 times. Income per capita has the significant positive affect (beta = 0.005) toward the frequency of fish consumption. This means that the increasing of ten thousand rupiah per capita income will increase the frequency of fish consumption by 0.005 times.

Table 5 Regression coefficients

Variables	Rural		Urban	
	B	Sig.	B	Sig.
Constants	2.930	0.049	7.345	0.097
Mother education (year)	-0.043	0.359	-0.035	0.447
Mother job (0 = not working, 1 = work)	0.039	0.312	0.038	0.320
Family size (people)	0.179	0.027 *	0.127	0.033 *

Income (Rp0000 /cap/month)	0.005	0.005 **	0.005	0.002 **
Motivation (index)	0.026	0.196	0.020	0.119
Preferences (0 = dislikes; 1 = likes)	0.440	0.089	0.446	0.029 *
R 2		0.413		0.438
Adjusted R 2		0.262		0.294
Sig		0.010 *		0.005 **

Description: \* significant at  $p\text{-value}<0.05$ ; \*\* significant at  $p\text{-value}<0.01$

### Urban Area

Table 5 shows the value of *Adjusted R Square* was 0.294 which means the frequency of fish consumption per month of urban families was influenced by all independent variables by 29.4 percent, while the remain 70.6 percent was influenced by other variables that were not examined. The results of multiple linear regression tests showed several factors that had a significant positive affect on the frequency of fish consumption per month of urban families, that is family size, income and preference. Family size influenced significant and positive (beta = 0.127), which means the greater the family size, the frequent the frequency of fish consumption by 0.127 times. Income per capita had a significant positive affect (beta = 0.005) toward the frequency of fish consumption. This means that the increasing of ten thousand rupiah income per capita will increase the frequency of fish consumption by 0.005 times. Preference had a significant positive affect (beta = 0.446) on the frequency of fish consumption, which means mothers who like fish had a fish consumption frequency of 0.446 times higher than that of mothers who did not like fish.

### Discussion

Consumption behaviour that analyzed using multiple linear regression test in this research was frequency of consumption (times) for fish per month. Regression test results showed that the factors that affect fish consumption in rural families are family size and income that had a significant positive affect on the frequency of fish consumption. This finding was in line with Can et al. (2015) research that individual income affected fish consumption in Turkey. Fish are including normal goods because every time income increases then the demand for fish will be increased.

Based on the regression test results, the family size, income and preferences affect the fish consumption of urban families. This was also reinforced by the results of Adam (2007) research that a person's income has a positive effect on the behaviour of fish consumption. The higher the income, the higher the level of demand for fish consumption. Preference had a significant positive affect on fish consumption behaviour. This means that the higher the level of mothers preferences toward fish will improve the behaviour of fish consumption in the family. This was reinforced by Setiadi (2010) which stated that the higher the level of a person's preference to a product, the greater the opportunity to buy and consume the product. According to Pramudito (2014), preference also affected the amount of food purchased and consumed by the family.

Different test results show that fish consumption behaviour in rural and urban areas was not significantly different. It can be seen from the average of fish consumption frequency per month in both areas that consume fish as much as 12

times a month. Family habit to consume fish was quite high, most of the respondents in urban areas stated that their habits in eating fish because they realised that the nutrient content of fish are higher than the food that comes from other animal food sources, such as chicken and beef.

Independent t-test for motivation results in rural and urban areas shows that there were significant differences between regions. It can be said that the motivation of eating fish in urban area was higher than in rural area. Mothers were motivated to eat fish because they know the high nutrient content and the benefits to reduce the risk to expose to chronic diseases, and help improve the intelligence of children. This findings were reinforced by Pieniak et al. (2008) that the motivation of Europeans to eat fish for diet and maintain health because the protein content of fish is very good for health. Motivation in this research did not affect fish consumption behaviour. Based on these statements it can be concluded that the motivation of fish consumption was the reason for someone to consume fish because of the needs and benefits felt in eating fish.

The results show that a significant differences in mothers preference toward fish types in rural and urban areas. Preference is a like or dislikes choice done by a person to the consumed product (goods or services). Preference toward food will shape eating habits (Kotler, 2008). This happens because the mothers in urban preferred fresh sea and freshwater fish compared to processed fish such as fish boiled and grilled. It can be seen on the first and second order that occupied by fresh sea fish and freshwater fish. Next followed by third for grilled fish, fourth order for pindang fish, and fifth order for salted fish as a less preferred choice. On the contrary, the mother in rural area preferred the pindang fish and the grilled fish which become the first and second order, the third order for fresh seafood, the fourth order for fresh fish, and the last order for salted fish.

The results of this study are reinforced by Jimoh et al. (2013) which stated that preference differences in fresh and processed fish in Nigeria were influenced by education, employment, taste, price, income, and availability of fish. Family members who are most fond of fish, namely mother and child, because the mother's preferences affect the consumption of food for children. Previous research by Amalia et al. (2012) stated that children's eating habits are influenced by mother's preference because children are accustomed to the menu of food served by the mother. The most favourite way of processing the mother in the two areas, namely fried fish. Mother assume that frying is an easy way to cook fish.

A level of mothers preference in urban areas toward fish were higher than that in rural area, so that there was a significant difference in the level of preference of mothers in both regions. Although many mothers in rural area who do not like fish, they still present a menu of fish in family food for their husband and childred who like fish. According to Sumarwan (2011), in the purchase decision of the family, usually the childred and husband act as influencers who will be asked his opinion about the purchase of a product and can influence the purchasing decision of family. In general, the mother acts as a decision food that will be consumed by the family.

The type of fish preferred by the mothers was the fresh sea fish, and usually the fish consumed by the family namely, swordfish and crayfish especially for families in urban areas. This was reinforced by Suparman's research (2003) that

fresh marine fish products such as tuna, snapper, bloated, pomfret and tuna are the choice for mothers consumed in Bogor City area. In contrast, mothers in rural areas tend to choose processed fish, such as grilled fish and pindang fish. The reason for mothers to choose processed fish because it is durable, tasty, cheap, and always available in the stalls that mothers usually visit to buy food.

Family characteristics such as education and employment status did not affect the frequency of fish consumption in both regions. This is in line with Adam (2007) study which said that mother education had no significant affect on fish consumption behaviour in rural and urban families. Motivation in both regions also did not affect fish consumption behaviour, but in the correlation test, the motivation had a significant relationship with consumption behaviour. This could happen because the motivation of the two regions was classified so that no visible effect on fish consumption. This is following research Tandayu (2014) that the motivation associated with food consumption behaviour.

The limitation of this study was not explore the amount of fish that consumed by the family. Also, the researchers did not ask individual roles (mother) in the family for food.

## **Conclusion and Recommendation**

### **Conclusion**

Mothers motivation in rural and urban was significantly different. The average of mother motivation index in urban area was higher than rural area. Preference of mothers in both regions was significantly different. Mother in urban area preferred fresh fish, whereas in rural areas preferred processed fish such as fish grilled and boiled. Consumption behaviour in both regions showed no significant different, but the consumption of fish in urban area was higher than in rural area. The results of multiple regression tests found that factors affecting the consumption of rural family, namely family size and income, while fish consumption of family in urban area was influenced by family size, income, and preferences.

### **Recommendation**

The housewife should better understand the benefits and nutrient content in fish, so that be more motivated the consumption. The mother should be more creative to serve fish menu so that children are interested and like eating fish. Training is needed to be conducted to make processed food from fish raw materials so that the food served for the family is more secure regarding hygiene and nutrition. Suggestions for further research is to add other variables that has not been studied, that can be measured the factors that most affect the consumption of fish.

## References

- Adam, L., (2007). Analisis ekonomi perubahan pola konsumsi ikan di Indonesia (master's thesis). Institut Pertanian Bogor, Bogor, Indonesia.
- Amalia, L., Endro, O. P., Damanik, M. R. (2012). Preferensi dan Frekuensi Konsumsi Makanan Jajanan pada Anak Sekolah Dasar di Kecamatan Cijeruk Kabupaten Bogor. *Jurnal Gizi dan Pangan*, 7(2), 119-126.
- Can, M., Gunlu, A., Can, H., (2015). Fish Consumption Preferences and Factors Influencing it. *E-Journal Food Science and Technology Campinas*.35(2), 339-346.
- Engel, J.F., Blackwell, R.D., Miniard, P.W., (1994). *Perilaku Konsumen Jilid 1*. (Edisi 6). Jakarta, Indonesia: Binarupa Aksara.
- Fregene, T., Olanusi, A., (2012). Consumer preference and consumption pattern of marine fish species in Ibadan Metropolis Oyo State Nigeria. *Journal of Agricultural Science and Technology*. 2, 835-840.
- Jimoh W. A., Popoola, M. A., Ibrahim, G. A., Ayeloja, A. A., Ayanwale, A. O., Akinosho, G. A., (2013). Evaluation of consumer's preferences for fresh and frozen fish products in Ibadan Metropolis Nigeria. *Journal of Agricultural Economics*, 9(1), 13-20.
- Margaret, D., Purwidiani, N., (2014). Kajian tentang pola konsumsi makanan utama masyarakat Desa Gunung Sereng Kecamatan Kwanyar Kabupaten Bangkalan Madura. *E-Journal Boga*, 3(3), 86-95.
- Mufidah, N. (2006). Pola konsumsi masyarakat perkotaan: Studi Deskriptif pemanfaatan *foodcourt* oleh keluarga. *Jurnal Biokultur*, 1(2), 157-178.
- Pieniak, Z., Verbeke, W., Cueto, F. P., Bruno, K., Henauw, S. D., (2008). Fish consumption and its motives in households with versus without self-reported medical history of CVD: A consumer survey from five European countries. Research Article. *Journal BMC Public Health*, 8, 306.
- Proverawati, A., Prawirohartono, E. P., Kuntjoro, T., (2008). Jenis kelamin anak, pendidikan ibu, dan motivasi dari guru serta hubungannya dengan preferensi makanan sekolah pada anak prasekolah di TK. Universitas Muhammadiyah Purwokerto. *Jurnal Gizi Klinik Indonesia*, 5(2), 78-83.
- Pramudito, B. (2014). Pengaruh citra, preferensi, dan sikap terhadap perilaku pembelian buah lokal (skripsi). Institut Pertanian Bogor, Bogo, Indonesia.
- Sari, M. N., Retnaningsih. (2008). Perilaku konsumsi susu pada wanita hamil. *Jurnal Ilmu Keluarga dan Konsumen*, 1(1), 87-96.
- Sayuti, K., Effendi. (2004). Pola konsumsi pangan sumber protein mahasiswa Fakultas Pertanian Universitas Andalas. *Jurnal Stigma*, 11(2), 237-243.
- Schiffman, L. G., Kanuk, L. L. (2010). *Consumer Behavior* (Ed ke-10). New Jersey: Prentice Hall.
- Setiadi, N. J. (2010). *Perilaku Konsumen: Perspektif Kontemporer pada Motif, Tujuan, dan Keinginan Konsumen*. Jakarta, Indonesia: Kencana.
- Semaon, I., Kiptiyah, S. M. (2011). *Mikroekonomi: Preferensi, Utiliti, dan Pilihan Konsumen*. Malang, Indonesia: UB Press.
- Sumarwan, U. (2011). *Perilaku Konsumen: Teori dan Penerapannya dalam Pemasaran* (Ed ke-2). Bogor, Indonesia:Ghalia Indonesia.

- Sumarwan, U., Johan, I. R., Anindita, D. (2011). Sikap, preferensi, dan niat beli terhadap produk makanan ringan pada anak usia sekolah. *Jurnal Ilmu Keluarga dan Konsumen*, 4(1), 98-105.
- Suparman, L. H. (2003). Analisis preferensi dan faktor-faktor yang membentuk preferensi konsumen terhadap produk ikan laut segar (skripsi). Institut Pertanian Bogor, Bogor, Indonesia.
- Sokib, N., Palupi, N. S., Suharjo, B. (2012). Strategi peningkatan konsumsi ikan di Kota Depok, Jawa Barat. *Jurnal Institut Pertanian Bogor*, 7(2), 166-171.
- Tandayu, F. (2014). Pengaruh motivasi, pengetahuan serta tindakan olahraga terhadap tindakan konsumsi pangan pelaku *fitnes* usia dewasa (skripsi). Institut Pertanian Bogor, Bogor, Indonesia.
- Waysima, Sumarwan, U., Khomsan, A., Zakaria, F. R. (2011). Persepsi dan sikap afektif memengaruhi perilaku ibu menyediakan ikan laut dalam menu keluarga. *Jurnal Ilmu Keluarga dan Konsumen*, 4(1),74-81.