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Research paper

Determinants of Local Food Consumption Among Shoppers in Traditional Markets

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Abstract

This study applies the conceptual framework of sustainable food consumption to investigate the determinant factors of local food consumption in Indonesia. The roles of personal characteristics, such as personal values, information, and knowledge, as well as of behavioral control, were also included in the model. Factor analysis and multiple regression were used to identify the predictors of local food consumption and to develop constructs to identify the determinant factors that affected local food consumption behaviour. The empirical research was based on a survey using a structured questionnaire given to 300 respondents who shop at traditional markets in urban and rural areas. Using factor analysis, 60.351% of the variance to purchase local food at traditional markets was explained by 12 emerging factors. Behavioral control, affective attitude, and personal norms influence behavioral intention among shoppers in traditional markets while behavioral control and personal norms are significant dimensions for attitude. The findings suggest that the factors can be used to increase local food consumption among shoppers in traditional markets.

Keywords: *attitude, determinant, factor, intention, local food, traditional market.*

1. Introduction

Local food has been promoted in the last few decades by the Indonesian government to (1) diversify food consumption and (2) decrease the dependence of rice as the main staple [1]. This promotion was strengthened by President Regulation Number 22 in 2009 with respect to the acceleration of food diversification by the consumption of more local food. According to [2], the strategic planning for 2015 to 2019, particularly in the food and agricultural sector, was focused on food safety and diversification programs with respect to encouraging more consumption of local rice substitutes.

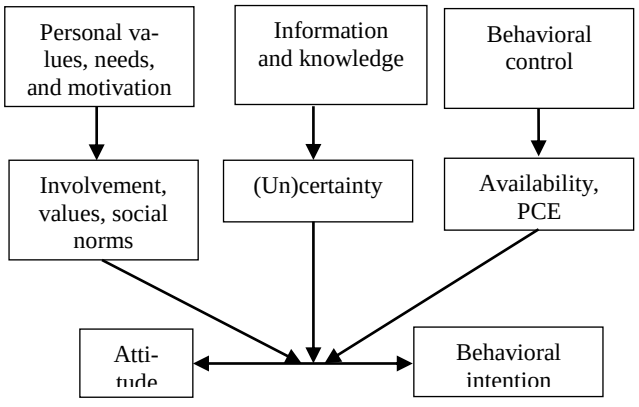
Consumers' views on local food production vary greatly according to researchers. In the United States, "local" production refers to a national definition [3] while [4] state that the most acceptable meaning of local is in a 50-mile radius where the products are grown and sold. In Canada, local food can be defined as food produced and sold within a region or neighboring region [5]. In Indonesia, local food can be referred to as food produced and sold within an area ranging from a regency to a province [6].

Although no data are available with respect to local food supply chains, [7] reported that 56% of sale value share had been contributed by traditional markets, followed by minimarkets (23%) and supermarkets/hypermarkets (22%). According to Nielsen's 2010 survey of shopping trends, local food products most frequently purchased from traditional markets were fresh vegetables, meat, and fish [7].

Awareness of issues related to local food has been at the national level since 1960. Although local food is an important issue in Indonesia, only a few studies have explored determinants influencing decision-making in local food consumption. Most previous studies in Indonesia have focused on consumer motivation and perceptions [6, 8, 9], local food preferences [10], and the health aspects of local food. Therefore, the objective of this study is to obtain a deeper insight into consumer attitudes and behavioral intentions toward the consumption of local food purchased from traditional markets.

2. Sustainable Food Consumption

We use the conceptual framework of sustainable food consumption developed by Vermeir and Verbeke [11]. This model considers values, involvement, social norms, certainty (information and knowledge), availability, and Perceived Consumer Effectiveness (PCE), as shown in Fig. 1. Products that contribute to one or a combination of economic, social, and environmental aspects may affect sustainable food consumption [11]. There are some food systems that believed to be sustainable such as organic food, local food, and fair trade.



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Fig. 1: Conceptual model of consumer attitudes and behaviors toward sustainable food consumption [11, p. 172].

Values
Rokeach (1973, p. 5)[12] defined values as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence." Values play an important role in consumer decision–making. Thus, values motivate the actions and behaviors of consumers.

Involvement
Involvement refers to "perceived personal relevance of a stimulus or situation" [13, p. 449]. Many researchers agree that involvement is related to the motivation to process information for decision-making in food consumption.

Social norms
Social norms denote the informal agreements in a society that influence personal norms and behaviors [12].

Information and knowledge
Information is an important factor influencing consumer decision-making. The ease of reliable information being available may increase the certainty of consumers about products, resulting in the increase of behavioral intentions.

Behavioral control (BC)
Behavioral control can be defined as the ease or difficulty of obtaining or consuming a particular product [11]. Although consumers are highly motivated to purchase and consume local food, this may be difficult due to the unavailability of local food at particular times of the year or local food shops and markets' being at distant locations.

Perceived Consumer Effectiveness (PCE)
PCE can be defined as "the extent to which the consumer believes that his personal efforts can contribute to the solution of the problems" [11, p. 175].

3. Methodology

3.1. Data collection procedure

Survey data were collected from April to June 2017 using a structured questionnaire. The five-point Likert scale ranging from 1–5 (strongly disagree–strongly agree) was used. The questionnaire consists of five topics: (1) motivation and values, (2) involvement, (3) social and personal norms, (4) information and knowledge, and (5) behavioral control (questionnaires are available upon request). Respondents were also asked questions regarding socio-demographic information, such as family size and per week household food expenditure. Respondents were interviewed using stratified purposive sampling. The strata were spatial locations, such as urban and rural areas in Central Java province. Yogyakarta City was selected to represent the urban area and the Banyumas regency was chosen for the rural area. A total of 300 respondents were approached and interviewed at the main traditional markets, such as Ajibarang, Sokaraja, and Pasar Wage, in Banyumas Regency and Prawirotaman Market in Yogyakarta. The interviews were conducted by six students of Universitas Jenderal Soedirman who were trained interviewers. Before an interview, the interviewers explained the objectives of the study and the confidentiality of any data acquired, as well as assured the respondents that there were no right or wrong answers. To avoid bias, the interviewer did not influence the respondents. According to [15], the number of respondents should be as much as 5–10 times the direct measures; therefore, we collected data from 300 respondents.

3.2. Data analysis

Factor analysis was applied to the relationships among the variables and to the grouping of similar variables so the number of observed variables that construct latent variables could be estimated. SPSS 21 was used to analyze the data. To check the reliability of the constructs and the internal consistency, we considered the value of Cronbach's alpha. Latent variables with Cronbach's alpha of less than 0.7 were deleted [15]. After confirming convergent validity, principal component analysis was applied to the grouped items.
The next step was a multiple regression to determine which latent variables had significant relationships among the dependent and independent variables. A set of independent variables can describe the proportion of the variance of dependent variables at a certain significance level.

4. Results and Discussion

4.1. Socio-demographics of consumers

Most of the respondents who shop at traditional markets are Javanese women (93%) who are married (78%) and have completed high school (51%). Most are housewives or private sector employees with a family income of less than 4 million IDR. About two-thirds of the respondents spent 100,000 to 400,000 IDR on local food per week for their families, whereas approximately half of spent less than 200,000 IDR (Table 1).

Table 1. Characteristics of consumers purchase local food in traditional markets

Personal characteristics		Family characteristics	
Characteristic	Percentage	Characteristic	Percentage
Gender		Family income (million IDR)	
Female	93	<2	46
Male	7	2-<4	40
		4-<6	9
		>6	5
Age (years old)		Family size	
≤30	26	Family size	
31-40	24	≤2	12
41-50	23	3-4	38
51-60	20	5-6	30
61-70	8	≥7	3
Education		Local food expenditure/week (000 IDR)	
Primary school	34	≤100	22
High school	51	101-≤200	38
College/ university	15	201-≤300	24
		301-≤400	10
		400-≤500	2
		≥500	4
Occupation		Food expenditure/week (000 IDR)	
Housewife	35	< 100	4
Civil servant	3	100-<200	21
Employees	8	200-<300	29
Entrepreneur	46	300-<400	27
Student	3	400-<500	4
Other	4	500-<600	8
		≥600	8
Marital status			
Married	78		
Single	14		
Widow	8		
Ethnic groups			
Javanese	92		
Other	7		

4.2. Explanatory factor analysis

Twelve latent variables remained after factor analysis. We selected those variables that had a loading factor >0.5 and Cronbach's

alpha >0.7 [15]. These twelve factors and their abbreviations are (1) behavioral intention and habit (I & H), (2) motivation (M), (3) evaluative attitude (EA), (4) behavioral control (BC), (5) social norm (SN), (6) information and knowledge (I & P), (7) personal norm (PN), (8) information in the market (Inf in M), (9) affective attitude (AA), (10) availability in the market (A in M), (11) involvement 1 (Inv 1), and (12) involvement 2 (Inv. 2). The next step in multiple regression is to examine the relationship between the dependent and observed variables. In this study, the dependent variables include behavioral intention, affective attitude, and evaluative attitude. A Sig. value of less than 0.05 indicates the significance of an independent variable's influence on a dependent variable [14]. A summary of the multiple regression, including the t-value and its significance, is given in Table 2. The model of the attitude–behavioral gap of local food is depicted in Fig. 2.

Table 2. Summary model of dependent variables, as well as t-value and its significance

Behavioral intention	**Beta**	**t-value**	**Sig.**	**Model Summaries**
M	0.96	1.671	0.096	R^2 = 0,370
EA	0.40	0.619	0.536	R^2 adjusted = 0,345
BC	0.292	4.524	0.000	
SN	-0.086	-1.432	0.000	
I&K	-.098	-1.291	0.198	
PN	0.173	2.850	0.005	
Inf in M	0.09	0.131	0.896	
AA	0.178	2.808	0.05	
A in M	0.060	1.126	0.261	
Inv. 1	-0.07	-0.133	0.895	
Evaluative Attitude (EA)	Beta	t-value	Sig	Model Summaries
M	0.200	3.777	0.000	R^2 = 0,432
BC	0.177	2.977	0.003	R^2 adjusted = 0,412
SN	-0.040	-0.700	0.485	
I & K	0.052	0.731	0.466	
PN	0.247	4.498	0.000	
Inf in M	-0.038	-0.555	0.579	
A in M	0.001	0.023	0.981	
Inv. 1	0.056	1.134	0.258	
Affective Attitude (AA)	Beta	t-value	Sig	Model Summaries
M	0.093	1.743	0.082	R^2 = 0.425
BC	0.194	3.230	0.001	R^2 adjusted = 0.405
SN	0.002	0.043	0.965	
I & K	0.069	0.954	0.341	
PN	0.235	3.903	0.000	
Inf in M	0.042	0.611	0.542	
A in M	0.007	0.148	0.883	
Inv. 1	0.061	1.229	0.220	

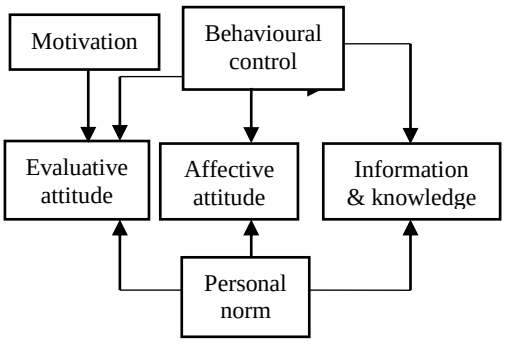


Fig. 2. Model of local food consumer attitude–behavioral intention gap of local food in traditional markets.

Figure 2 shows the interdependency of the variables for shoppers at traditional markets. Intention and habit are influenced by BC, AA, and PN. Behavioral control and personal norms affected the affective and evaluative attitudes while motivation forms the evaluative attitude.

4.3. Discussion

Evaluative attitude refers to the feeling of benefit and loss due to a specific act while affective attitude is related to the trust about positive or negative feelings because of an act [16, p. 69). Affective attitude also affects the consumer's behavioral intention. This result is similar to those of previous studies that found attitude to be the important determinant for behavioral intentions with regard to the consumption of local food [11].

Behavioral control (BC) is an important determinant of attitude and behavioral intention for the consumer who purchases local food at traditional markets. This latent variable comprises six subvariables. The BC of purchasing local food means that the respondents are able to access local food easily because of the short distances to the traditional markets. Local food is also available in various package sizes, so the consumers are able to choose easily. The respondents could buy as much food as they would need. Local food is also easy to process; therefore, consumers can save time in preparation and processing. This result is also similar to that of [11], who stated that the low perceived availability of a sustainable product results in a low intention to buy the product. In this case, high perceived behavioral control would explain the high intention to purchase local food.

Consumers believed that by purchasing local food local food they can sustain local plants, support local farmers and the local economy as well as to support sustainable agriculture. Protecting the environment is also a consideration when purchasing local food. This PCE influence behavioral attention and consumer attitude. These results are also relevant to studies reported by [9, 17] that reported support to the sustainable environment and local economy are the one reason for consumers to purchase sustainable food. PCE was also reported as a positive impact on attitude toward buying sustainable dairy products.

Personal norms influence evaluative attitude, as well as behavioral intention. Personal norms emerge from social situations in which family and moral duties influence social norms [16]. Consumers are willing to provide their families with nutritious, diverse, and good local food. Personal norms regarding the selection of food are influenced by the community, friends, teachers, merchant, governments, and families.

Motivation has a significant influence on evaluative attitude. In this study, the consumer's motivation to preserve and sustain the environment, as well as support the local economy, is the important determinant for the purchase of local food at traditional markets. This result is congruent with those of previous studies of consumers' interest in buying locally in support of the local economy and farmers [9], as well as promote environmental sustainability [18].

Interestingly, factors such as social norms, information, knowledge, availability in markets, and involvement, are not significant in this study, although these factors have been reported by some scholars as an important consideration in the purchase of food.

5. Conclusion

Behavioral intentions of shoppers toward local food in traditional markets are influenced by behavioral control, affective attitude, and personal norms. In addition, behavioral control and personal norms influence consumer attitude. These results can be used for

consideration when formulating food policies and marketing strategies with respect to local food.

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References

[1]. Department of Indonesia's Agriculture (2010), General guidance: Accelerating Indonesia's local food movement, Department of Indonesia's Agriculture, Jakarta.
[2]. Ministry of Economic Coordinator (2015), Arah Kebijakan dan Strategi Pemerintah Presiden Jokowi, Ministry of Economic Coordinator, Jakarta.
[3]. Dunne JB, Chambers KJ, Giombolini KJ & Schlegel SA (2011), What does 'local' mean in the grocery store? Multiplicity in food retailers' perspectives on sourcing and marketing local foods. *Renewable Agriculture and Food Systems* 26(1), 46-59.
[4]. Onozaka Y, Nurse G & McFadden DT (2010), Local food consumers: How motivations and perceptions translate to buying behavior, *Choices: Agricultural & Applied Economics Association* 25(1), 1-6.
[5]. Smithers J, Lamarche J & Joseph AE (2008), Unpacking the terms of engagement with local food at the Farmers' Market: Insights from Ontario, *Journal of Rural Studies* 24(3), 337-350.
[6]. Arsil P, Li E & Bruwer, J (2014a), Perspectives on consumer perceptions of local foods: A view from Indonesia *Journal of International Food & Agribusiness Marketing*, 26(2), 107-124.
[7]. Rangkuti FY & Wright T (2013), Indonesia Retail Report Update, USDA Foreign Agricultural Service, Jakarta.
[8]. Arsil P, Li E, Bruwer J & Lyons G (2014b), Exploring consumer motivations towards buying local fresh food products: A means-end chain approach *British Food Journal*, 116(10), 1533-1549.
[9]. Arsil P, Li E & Bruwer J (2016), Using means-end chain analysis to reveal consumers' motivation for buying local foods: An exploratory study *Gajah Mada International Journal of Business*, 18(3), 285-300.
[10] Arsil P, Brindal M, Sularso KE & Mulyani A (in-press), Determinants of consumers' preferences for local food: A comparison study from urban and rural areas in Indonesia *Journal of Business & Retail Management Research*, 13(2).
[11]. Vermeir I & Verbeke W (2006), Sustainable Food Consumption: Exploring the Consumer "Attitude – Behavioral Intention" Gap *Journal of Agricultural and Environmental Ethics*, 19(2), 169-194.
[12]. Rokeach M (1973), The Nature of Human Values, The Free Press, New York.
[13]. Poiesz TBC & de Bont CPM (1995), Do We Need Involvement to Understand Consumer Behavior? In NA - Advances in Consumer Research eds. Frank R Kardes and Mita Sujan, 448-452. UT: Association for Consumer Research, Provo.
[14]. Allen PJ & Bennett K (2010), PASW statistics by SPSS: A practical guide version 18.0, Cengage Learning, South Melbourne.
[15]. Hair Jr JF, Black WC, Babin BJ & Anderson RE (2009), Multivariate Data Analysis, 7th Edition, Upper Saddle River, Prentice Hall.
[16]. Verbeke W & Vackier I (2005), Individual determinants of fish consumption: Application of the theory of planned behavior *Appetite*, 44(1), 67-82.
[17]. Ghvanidze S, Velikova N, Dodd TH & Oldewage-Theron W (2016), Consumers' environmental and ethical consciousness and the use of the related food products information: The role of perceived consumer effectiveness *Appetite*, 107, 311-322.
[18]. Feldmann C & Hamm U (2015), Consumers' perceptions and preferences for local food: A review, *Food Quality and Preference*, 40,152-164