



Online Groceries Segmentation of Brand, Shopping Convenience, and Adoption to Influence Consumer Purchase Intention

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ABSTRACT

The aim of this paper is to understand consumer online purchase intention of groceries. It examines how brand preference, shopping convenience, and adoption level influence purchase intention, and to identify market segmentation of online groceries in Jakarta; the three independent variables are used as segmentation basis. This is an associative-descriptive research based on a survey of 200 respondents in Jakarta. Data is analysed using linear regression and cluster analysis. The results show brand preference, shopping convenience, and consumer adoption level significantly influence purchase intention. Using these independent variables, this research categorised four groups of online shoppers in Jakarta that consist of trail blazer that can be approached by online brand community, socialiser that can be lured by utilising their purchasing data history to create personalised offering, assured achiever that can be reached through educating the market, and community traditionalist that can be approached using a pricing strategy.

Keywords: Adoption level, brand preference market, convenience, online grocery shopping, purchase intention, segmentation

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INTRODUCTION

Technology can help change people's habit and ease of conducting their daily activities. Information can now be mass accessed where users share actual and real-time information (Gunawan, Diana, Muchardie, & Sitinjak, 2016). Digital communications

in Indonesia has been on a steady increase. According to Roza (2016), Indonesians spend an average of 8 hours 12 minutes per day on the Internet, which ranks the country at the third place worldwide in terms of usage of the Internet. Therefore, Internet-based business is expected to boom. A research by eMarketer (2014) projected that sales of e-commerce would continue to increase from year to year. Indonesia is the largest contributor of sales number from ASEAN countries. idEA (2013) stated that Indonesia is the 'readiest' e-commerce market among South East Asian countries. E-commerce data transactions, revealed grocery shopping was in the top 5 list of most-frequently purchased product online (idEA, 2013). Nielsen (2015) identified a major opportunity for online groceries market. This is confirmed by a preliminary survey conducted on 102 respondents, whereby 47% of respondents purchased their groceries online, while 77% of the respondents stated their purchase intention in the future.

Ghosh (1990) found purchase intention as an effective tool to predict purchase. It is basically related to consumers' behaviour, perception, and attitude (Jaafar, Lalp, & Naba, 2013). Consumers' behavior is driven by their physiological motivation and in this case, the desire to shop (Kim & Jin, 2001). Purchase intention is more complicated and more significant for consumers nowadays than in the past. Customers are bombarded with information via reports, advertisements, articles, and direct mailings. Additionally,

there are different kinds of products, supplies, supermarkets, and shopping malls which make decision-making complex and difficult (Madahi & Sukati, 2012). In the context of e-commerce, online purchase intention can be defined as a situation when a person desires to buy a particular product or service through the website (Chen, Hsu, & Lin, 2010; Fyngenson & Pavlou, 2006; Liat & Wuan, 2014). Studies have shown a strong influence of purchase intention towards online shopping behaviour (Fyngenson & Pavlou, 2006; He, Lu, & Zhou, 2008; Lim, Osman, Orapin, 2009; Roca, Garcia, & Vega, 2009; Salahuddin, Romle, & Abdullah, 2015). Therefore, consumers' purchase intentions are one of the primary inputs that marketing managers use to forecast future sales and to determine how their future actions will impact purchasing behaviour (Morwitz, 2012).

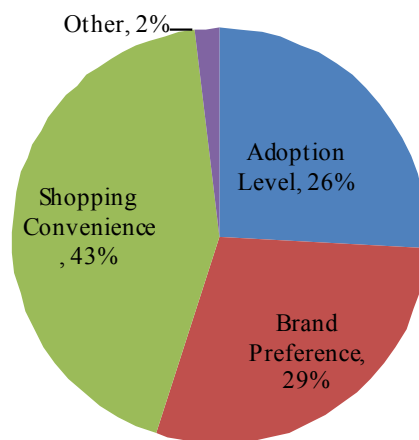


Figure 1. Factors that stimulate purchase intention of online shopping of groceries
Source: Preliminary Research (n = 102)

The purchase intention of customers can be associated with their adoption behavior toward the purchasing technology of grocery products. Preliminary data showed 26% of respondents agreed that technology that supports the system as well as sites/apps are an important factor to influence their online shopping. Interviews with marketing managers of online grocery stores in Jakarta revealed that the biggest challenge in influencing consumer shopping habits lies in educate consumers to switch from traditional grocery shopping at a supermarket to an online shopping system. It is easier to offer consumers who are tech-savvy or familiar with technology to adopt this new system. Nielsen (2015) stated the rank of market adoption varies, but until now the new e-commerce market was only able to tap into the tech-savvy. This finding was supported by Ahmed, Jamal, Ismail and Rezai (2013) who found rate of technology adoption attracts consumers to transact online. Srivastava, Chandra and Theng (2010) examined the level of consumer adoption, which is based on the phenomenon that consumer adoption of mobile payment solutions is low compared with traditional forms of payments. Irani, Dwivedi and Williams (2009) produced similar findings that despite broadband offering several benefits to consumers over its previous narrowband technology, many countries are still experiencing a low level of adoption.

A new product is defined by Kotler and Armstrong (2016) as goods, service, or idea that is perceived by some potential

customers as new but which is not for others. Therefore, it is incumbent on marketers to analyse how consumers learn about new products until they eventually decide to adopt. According to Kotler and Armstrong (2016), the adoption process is defined as the mental process of an individual from first learning about an innovation to final adoption. Final adoption is the customer's decision to use the product continuously for the next period. The adoption behaviour of the community shows categories of customers in response to the development of e-commerce. Consumer adoption behaviour in the context of technology products is divided into five categories: innovator, early adopters, early majority, late majority, and laggard (Moore, 2014). Straub (2017) suggested technology adoption is complex, inherently social and a developmental process; an individual construct is unique, yet malleable perceptions of technology that influence their adoption decisions.

In addition to adoption levels, based on the results of preliminary research (Figure 1), brand preference accounts for 29% of a driving force of purchase intention in the online groceries industry. Brand preference in this context is the availability of retail choice that becomes an important factor for consumers. This is supported by JakPat's research (2015) that 46% of consumers do not mind to try the site as well as new applications for there is a large selection of familiar retail brand. Meanwhile, Akdeniz (2012) stated "a strong brand positively influences consumer perceptions, drives store choice and helps to build a broad base

of loyal customers". Hence, brand selection will strengthen customer's purchase intention. Kashanizadeh and Esfidani (2014) pointed to brand preference as the level of customer support to the services offered by the company. Mohanraj and Ananth (2016) defined brand preference as subjective, conscious and behavioural tendencies which influence consumer's predisposition towards a brand. Akdeniz (2012) measured perceived value of brand preference in the context of price, quality, emotion, and social. Haider, Jan, Jan and Jan (2013) revealed that product availability is an indicator of brand preference.

The purchase intention is also influenced by shopping convenience. Results of preliminary research (Figure 1) showed shopping convenience accounted for 43% of purchase intention. This was confirmed by Nielsen's report (2015) which pointed to the growing number and popularity of alternative online shopping sites, whereby consumers will use the most appropriate format to meet their needs based on convenience, choice, and value, considering 46% of respondents in the report picked shopping convenience as the main factor in online groceries shopping. Convenience in this context means the ease to get the items needed without having to go to the supermarket, accompanied by an easy payment system. This finding is supported by Jiang, Yang and June (2013) who said "the more convenience that is perceived on searching, transaction and possession/post-purchase, the greater is the possibility for repurchasing and recommendation by

the customer". Meixian (2015) defined shopping convenience as a decrease in non-monetary prices, or specifically, a decrease in time, physical energy and mental energy spent on acquiring goods or services. Developing from their previous research, Jiang, Yang and June (2013) pointed to five indicators of shopping convenience, namely access, search, evaluation, transaction, and possession / post-purchase.

As a new industry, online groceries have a potential to grow in Jakarta. The marketers need to define market segmentation to reach the intended target market, especially in a heterogeneous market of Jakarta. Rempel (2009) stated that due to the different characteristics of each generation, it is important for marketers to treat customers based on their different age groups. It is because customer segments have their unique consumer behaviour and attitudes (Safiek, 2009). Therefore, it is important for marketers to divide the market into specific segments so that each segment can have a different treatment from marketers. In the end, the strategy adopted by retailers can be better targeted, leading to an increase in purchasing decisions (Gunawan, Melati, & Muchardie, 2016). Cristobal, Marimon, Daries and Montagut (2011) examined market segmentation of a virtual supermarket sector in Spain. They classified the behavior of online customer based on his or her attitudes towards the virtual supermarket design. However, in these studies, segmentation was done based on service quality of online supermarket, while the online groceries industry in Jakarta

is still at an early stage of introduction. Hence, it would be more appropriate to use the variable purchase intention as the focus of this study.

The purpose of this study is to determine the influence of brand preference, shopping convenience, and adoption level of purchase intention in online grocery shopping and additionally, to determine the market segmentation in online groceries based on brand preference, shopping convenience, and consumer adoption level.

MATERIALS AND METHODS

This is an associative-descriptive research. The associative research aims to determine the effect of brand preference, shopping convenience, and consumer adoption level variables on purchase intention, while descriptive research is used to identify online groceries market segmentation based on the independent variables. This research adopted a survey method using a simple random sampling technique to recruit the respondents.

A regression analysis was used to determine the effect of Brand Preference,

Shopping Convenience, and Consumer Adoption Level on Purchase Intention. As the three independent variables affect purchase intention, independent variables are used to identify online groceries market segmentation in Jakarta with cluster analysis method. Variables in this research are shown in Table 1.

Table 1
Operationalisation of research variables

Variable	Dimension
Brand preference (X1)	<i>Perceived value</i>
	<i>Product availability</i>
	<i>Preference</i>
Shopping convenience (X2)	<i>Access convenience</i>
	<i>Search convenience</i>
	<i>Evaluation convenience</i>
	<i>Transaction convenience</i>
	<i>Possession / Post-purchase Convenience</i>
Adoption level (X3)	<i>Innovators</i>
	<i>Early adopters</i>
	<i>Early majority</i>
	<i>Late majority</i>
Purchase intention (Y)	<i>Likely</i>
	<i>Probable</i>
	<i>Definitely</i>

RESULTS AND DISCUSSIONS

Table 2
Output coefficients

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.616	.530		1.162	.248
X1_Brand preference	.325	.129	.231	2.522	.013
X2_Convenience	.299	.112	.250	2.667	.009
X3_Adoption level	.258	.109	.226	2.356	.021

The Influence of Brand Preference on Purchase Intention

Based on Table 2, brand preference influenced purchase intention. Kashanizadeh and Esfidani (2014) defined brand preference as the level of consumer support for products offered by a company. In this study, brand preference is a variable that determines whether consumer's preferences of a particular retail brand influences the desire to for online grocery shopping. This study found brand preference influences purchase intention. This is in line with Akdeniz (2012) who stated that brand preference has a positive influence on purchase intention.

The Influence of Shopping Convenience on Purchase Intention

Table 2 shows shopping convenience influences purchase intention. Shopping

convenience is defined as an ease of shopping (Meixian, 2015). The current research showed shopping convenience has a positive influence on purchase intention, which is in line with Jiang, Yang and Jun (2013).

The Influence of Adoption Level on Purchase Intention

Table 2 shows the adoption level influences purchase intention. Moore's theory (2014) revealed the consumer market can be divided into five sections based on adoption level namely customer's acceptance of a new technological innovation. This research found adoption level influences purchase intention. This is in line with Ahmed et al. (2013) who stated that the rate of technology adoption attracts consumers to transact online.

Influence of Brand Preference, Shopping Convenience, and Adoption Level on Purchase Intention

Table 3
Output Anova

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.012	3	3.304	9.853	.000 ^b
	Residual	29.266	96	.305		
	Total	38.278	99			

Table 4
Output model summary

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.585 ^a	.735	.211	.55215

From tables 3 and 4, the independent variables of brand preference (X1), shopping convenience (X2), and adoption level (X3) influence account for 73.5% of online

purchase intentions groceries in Jakarta while the rest are influenced by other factors.

These three independent variables can be used as the basis for segmentation of online groceries market.

Online Groceries Market Segmentation based on Brand Preference, Shopping Convenience and Adoption Level

Table 5
Output Anova cluster

	ANOVA				F	Sig.
	Cluster		Error			
	Mean Square	df	Mean Square	df		
Perceived_Value	1.058	3	.273	96	3.881	.011
Product_Availability	1.911	3	.272	96	7.022	.000
Preference	1.525	3	.344	96	4.445	.006
Access_Convenience	4.225	3	.296	96	14.289	.000
Search_Convenience	8.098	3	.232	96	34.888	.000
Evaluation_Convenience	5.933	3	.287	96	20.704	.000
Transaction_Convenience	10.514	3	.350	96	30.061	.000
Possession_Convenience	4.786	3	.316	96	15.158	.000
Innovators	8.654	3	.487	96	17.764	.000
Early_Adopter	7.529	3	.275	96	27.366	.000
Early_Majority	8.160	3	.341	96	23.962	.000
Late_Majority	2.871	3	.367	96	7.831	.000

Based on Table 5, it can be concluded that the entire dimension of the three independent variables can be used as the

basis for segmentation. The results revealed a significant difference of attributes average score between the four clusters.

Table 6
Output final cluster centres

	Final Cluster Centers			
	Cluster			
	1	2	3	4
Perceived_Value	2.48	3.02	3.03	3.08
Product_Availability	2.92	3.60	3.60	3.75
Preference	2.52	2.95	3.25	3.06
Access_Convenience	2.63	3.46	3.36	2.73
Search_Convenience	2.54	3.72	3.49	2.67
Evaluation_Convenience	2.72	3.26	3.69	2.70
Transaction_Convenience	2.33	3.73	3.64	2.66
Possession_Convenience	3.04	3.61	3.40	2.70
Innovators	3.36	2.17	2.03	2.75
Early_Adopter	2.39	2.39	3.01	3.53
Early_Majority	2.87	4.16	3.02	3.49
Late_Majority	2.73	3.54	3.75	3.48

From Table 6, the distribution of segment characteristics of online grocery shopping in Jakarta can be summarised in Table 7.

Table 7
Online groceries market segmentation in Jakarta

Trail Blazer (Cluster 1)	Socialiser (Cluster 4)	Assured Achiever (Cluster 2)	Community Traditionalist (Cluster 3)
Innovator	Early adopter	Early majority	Late majority
	Perceived value	Access convenience	Preference
	Product availability	Transaction Convenience	Evaluation
		Possession / Post purchase convenience	
		Search convenience	
22 people	52 people	64 people	62 people

Based on Moore's theory (2014), the consumer market is divided into five groups based on their characteristics in accepting an innovation: innovators, early adopters, early majority, late majority, and laggard. However, the laggard is closed to technology acceptance and reject innovation. Therefore, only four groups are examined.

Trail Blazer

The trail blazer shares a common characteristic with the innovator in terms of adoption levels. The main characteristic of this group is those who want to be the first to try innovative or technological products. This group also does not hesitate to offer criticisms or suggestions for the company. With high level of awareness of technology, they just want the truth to ensure all company promises are fulfilled when making a transaction. In dealing with new things, they want to be served by field experts. So, they need someone from the company who is friendly and interactive. In order to fulfil these desires, they are not afraid to take risks. This group represents 11% of the market.

Socialisers

Perceived value and product availability are important for this group. Socialisers share similar characteristics with early adopters in terms of their adoption level. This segment consists of those who receive innovation more quickly than most people because they always use personal intuition and opinion in making decisions. Thus, a person in this segment is an opinion leader. It is important for this group to consider the value of a product. Availability of goods is also a factor that encourages them to make a purchase. Opinions or references from Socialiser about a particular product are sought by the Assured Achiever. Socialiser group accounts for 26% of the market.

Assured Achiever

Assured achiever is concerned with convenience related to access, transaction, possession/post purchase, and search. Moreover, the assured achiever has similar characteristics with the early majority segment in terms of adoption level. The main characteristics of this group are those who are always looking for references from others to ensure the success of the product on others before they try the product. The ease of use is an important factor for assured achiever to try an innovation or a new product. The convenience sought by this group are ease in accessing the products anywhere and anytime, ease in finding the goods, ease of payment method, and ease of refunds. This is the largest group that represents 32% of the market and has potential.

Community Traditionalist

This segment values preference and evaluation. Community traditionalists have similar characteristics with the late majority segment on adoption levels. Both ease and taste related to the brand are very important for these people. This group is represented by people who buy a product that has been purchased and known by others. This usually happens because they are comfortable and satisfied with what they have, so trying something new is not a very important for them. This is why they need the assurance that the product information available is clear and complete, as well as

texts or images related to the actual product. Community traditionalist represents 31% of the market share.

CONCLUSION

Several conclusions may be drawn from this research. First, there is a significant influence of brand preference, shopping convenience, and adoption level of purchase intention, either individually or simultaneously. Hence, the three independent variables deserve to be the basis of online groceries market segmentation in Jakarta. Second, the establishment of market segments in the online groceries in Jakarta is divided into four groups, namely trail blazer that has similar characteristics with the innovator in the technology adoption life cycle model; socialiser which has a similar characteristics with early adopters, also perceived value and product availability become a major factor in encouraging purchase intention; assured achiever that has common characteristics with the early majority and the main factors for driving purchase intention, namely convenience in terms of access, transaction, possession/post-purchase, and search; community traditionalist which have similar characteristics with the late majority, and their main factors that drive purchase intention are convenience related to preference and evaluation convenience.

Trail Blazer is a group which has very close relationship with technology, so it is not necessary to put a lot of effort to reach this group. However, the challenge of this group is to make sure they come back to buy again because they tend to try many

alternatives and will choose whichever meets their needs. That requires an effort to build an ongoing relationship with this group. Keeping in mind they are very interested in technology, relationships can be built by creating a gathering event or workshop about technology. Also, online communities can be turned into a forum to share their experiences regarding technology and online grocery shopping.

Socialiser is the easiest group to reach but it difficult to satisfy their needs. This is because they are active in looking and trying new things that make them quickly change products. Moreover, this group is not sensitive to price, so the selling price is less suited to the Socialiser. The effort to continue to build relationships with them is by reminding them availability of products they usually buy. This can be done by studying their purchase history to ensure repurchase.

For assured achiever, the ease of use of the application or website is the most important factor and hence, educating them offline is important. This can be done by going directly to the retailers to educate consumers how to purchase groceries online. Marketing events can be done to assure that the product purchased is appropriate.

Community Traditionalist is very sensitive to price. They only use products that are already on the mature position in the product cycle. In attracting this group, a pricing approach is advisable. But it can only be done after the majority of the segments has already adopted online grocery shopping.

This research suggests that further research can be done by using the same variables on other product types or service industry to identify market segmentation, especially in the context of technology adoption. Also, further research can explore more antecedents of purchase intention because of the dynamic environment that causes fast-shifting consumer behaviour.

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