“Impact of culture, brand image and price on buying decisions: Evidence from East Java, Indonesia”

AUTHORS	Sudaryanto Sudaryanto https://orcid.org/0000-0001-9281-3962 https://publons.com/researcher/AAG-9841-2021 Imam Suroso https://orcid.org/0000-0002-7300-9319 Anifatul Hanim https://orcid.org/0000-0001-9908-3624 Jaloni Pansiri Taskiya Latifatil Umama

ARTICLE INFO	Sudaryanto Sudaryanto, Imam Suroso, Anifatul Hanim, Jaloni Pansiri and Taskiya Latifatil Umama (2021). Impact of culture, brand image and price on buying decisions: Evidence from East Java, Indonesia. *Innovative Marketing* , *17*(1), 130-142. doi:10.21511/im.17(1).2021.11
DOI	http://dx.doi.org/10.21511/im.17(1).2021.11
RELEASED ON	Monday, 29 March 2021
RECEIVED ON	Sunday, 31 January 2021
ACCEPTED ON	Thursday, 25 March 2021

LICENSE	This work is licensed under a Creative Commons Attribution 4.0 International License

JOURNAL	"Innovative Marketing "
ISSN PRINT	1814-2427
ISSN ONLINE	1816-6326
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
69	1	6

© The author(s) 2025. This publication is an open access article.

BUSINESS PERSPECTIVES

LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine

www.businessperspectives.org

Sudaryanto Sudaryanto (Indonesia), **Imam Suroso** (Indonesia), **Anifatul Hanim** (Indonesia), **Jaloni Pansiri** (Botswana), **Taskiya Latifatil Umama** (Indonesia)

IMPACT OF CULTURE, BRAND IMAGE AND PRICE ON BUYING DECISIONS: EVIDENCE FROM EAST JAVA, INDONESIA

Abstract

The marketing strategy phenomenon improves significantly, narrowing from a general to a specific cultural ethnicity base and from variable to dimension analysis. This study examines the impact of culture, brand image and price on buying decisions. The study population comprised retail consumers in the sampled area of Situbondo, East Java, Indonesia. A multi-stage sampling technique was used to derive a sample of 112 respondents as a primary data source – descriptive statistics allows for the demographic characteristics of retail consumers in East Java, Indonesia. Surprisingly, the data showed that gender involvement in buyer decision-making was dominant. Most retail customers were identified as private-sector employees and indicated for higher income earners. Responses were then analyzed using multiple linear regressions to answer the research hypotheses. The results showed that Hofstede's culture dimension and the brand image and price significantly affected consumer buying decisions at retail stores in East Java, Indonesia. Regarding the strength of Islamic culture in East Java, price was the primary consideration in buying decisions. Further research, preferably using ethnographic approaches with an emphasis on qualitative research, is needed to investigate the implications of these relationships.

Keywords culture, brand image, buying decisions, retail, multi-stage sampling, East Java

JEL Classification C83, L81, M31

Received on: 31st of January, 2021
Accepted on: 25th of March, 2021
Published on: 29th of March, 2021

© Sudaryanto Sudaryanto, Imam Suroso, Anifatul Hanim, Jaloni Pansiri, Taskiya Latifatil Umama, 2021

Sudaryanto Sudaryanto, Assistant Professor, Senior Lecturer, Researcher, Faculty of Economics and Business, Universitas Jember, East Java, Indonesia. (Corresponding author)

Imam Suroso, Assistant Professor, Senior Lecturer, Faculty of Economics and Business, Universitas Jember, East Java, Indonesia.

Anifatul Hanim, Doctorate Student, Faculty of Economics and Business, Universitas Jember, East Java, Indonesia.

Jaloni Pansiri, Professor in Tourism, Lecturer, Department Tourism and Hospitality, University of Botswana, Botswana.

Taskiya Latifatil Umama, Bachelor in Economics, Faculty of Economics and Business, Universitas Jember, East Java, Indonesia.

This is an Open Access article, distributed under the terms of the Creative Commons Attribution 4.0 International license, which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

Conflict of interest statement:
Author(s) reported no conflict of interest

INTRODUCTION

Continued economic growth and high social spending will drive consumer demand for retail stores. Retail business management in Indonesia has good prospects because of its vast market potential due to its large population. The Indonesian Retailers Association claims that retail growth in the first quarter of 2018 ranged from 7% to 7.5%, significantly higher than the 5% growth in the previous year (www.cnbcindonesia.com).

Berman and Evans (2007, p. 3) mentioned that retail sales were the final level of the distribution process. There is a business activity involving the sale of goods or services to consumers. The emergence of various retail stores in Indonesia includes culture-based retailers looking for a niche market. One of the culture-based retail stores in East Java, Indonesia, was established in 1961, the Basmalah store with 257 branches across Indonesia (Sudaryanto et al., 2020). Currently, the number of followers of this ethnicity-based store is growing rapidly, such as Al-Hikmah, Al Amin, and Markaz (https://swa.co.id/swa/listed-articles/geliat-minimarket-islami).

Most of the retail stores open in a unique location in a sub-district area rather than in downtown Indonesia, and many factors,

http://dx.doi.org/10.21511/im.17(1).2021.11

either internal or external, can influence consumer purchasing decisions there. Such an internal factor is the ability to control them, influencing individual culture (Muruganantham & Bhakat, 2013; Cakanlar & Nguyen, 2019). The culture potentially influenced consumer buying decisions (Shoham et al., 2015). Culture often has a potential influence on consumer behavior and impacts all stages of consumer decision-making (Ng & Lee, 2015). Unlike corporate marketing programs, culture inclusion does not always support the purchase or consumption of the product but can instead hinder it. For example, matters relating to beliefs (religion) prevent someone from consuming a particular product prohibited by their faith.

Most of the culture-based retailers in Indonesia have adopted Islamic values and principles, and Muslim employees organize them with a strong personality in Islamic values (culture). Friendly employees (culture) will influence buying decisions (Vinish et al., 2020). There are five perspectives dimensions to measure cultural context of a community: the distance of power, avoidance of uncertainty, individualism and collectivism, masculinity and feminity, and orientation to the long or short term (Hofstede, 1983). Cakanlar and Nguyen (2019) advised for further research to use the cultural dimension of Hofstede to understand consumer behavior. On the other hand, Shoham et al. (2015) found that Asian culture strengthened in the short and long term. Cultural differences in Hofstede's five dimensions can potentially influence consumer information, responses, behavioral decisions, and judgment (Ng & Lee, 2015).

In addition to culture, brand image is another variable that can also influence purchasing decisions (Sudaryanto, 2015; Sudaryanto et al., 2020). Batra and Homer (2004) observe that positioning a brand image in the consumer's mind becomes the most affordable strategy for gaining a competitive advantage to influence buying decision-making. Schiffman and Kanuk (1997) argue that brand image is the long-lasting perception and experience formulation consistent with relativity. Therefore, retail stores in Indonesia strive to showcase excellence and illustrate their benefits by their brand image, such as a motto of "A Good Shopping Place (Basmalah); all salesgirl wearing hijab (Al-Hikmah), and many others."

Buying decisions are influenced not only by brand image but also by the price of the product. The prices of products must be in line with the target market. It is easier to measure a specific target market's purchasing power and decide the most affordable price strategy. Those retail stores in East Java have relatively lower prices than other retail stores due to their implementation of the sharia system (swa.co.id; sidogiri.net). Quiet and affordable product prices influence customer purchasing decisions. Accordingly, pricing-related findings usually constitute the most challenging and sensitive set of decisions that each company has to make, especially if it considers that the price is a critical factor in most buying (Hustić & Gregurec, 2015). Every consumer creates various alternatives to finding, buying, and using multiple products and brands at any given period, which is related to purchasing a product that meets their needs. A consumer buying decision is a stage created by consumers from the product recognition stage to post-purchase evaluation (Engel et al., 1995; Onigbinde & Odunlami, 2015). Purchasing decisions is influenced by consumers' beliefs, attitudes, values, and various social environment factors.

Based on the information above, this study investigates the following research questions: a. Does culture significantly affect purchasing decisions at a retail store in Indonesia? b. Does brand image substantially affect purchasing decisions at a retail store in Indonesia? and c. Does the price significantly affect purchasing decisions at a retail store in Indonesia? Consequently, this study's objectives are: (a). To test the impact of culture on buying decisions; (b). To test the effect of brand image on purchasing decisions; (c). To test the effects of prices on buying decisions.

1. LITERATURE REVIEW AND HYPOTHESES

1.1. Culture

Culture is a habit that one generation passes down to the next generation in a community. Culture is an external factor influencing purchasing decisions (Foscht et al., 2008; Chegini et al., 2016). Lee et al. (2007) observed that culture, behavioral learning configuration, and a member of a particular society transmit and share the result of component elements of behavior. Thus, the composition of culture includes instruments such as language, religion, and values. Perception does influence consumer choices and evaluation triggered by those instruments (Foscht et al., 2008; Sudaryanto et al., 2020; Chegini et al., 2016; Hofstede, 1983; Nasse et al., 2019; Sedikides & Gebauer, 2021; White et al., 2021). These values, language, and religion are indeed transmitted to society members through symbols.

Authors rarely examine consumer behavior in Indonesia using the specific Hofstede dimension of culture. An analysis of the culture of the local economy is essential for a company before launching or advertising a product (Hofstede, 1983; Foscht et al., 2008; Sudaryanto et al., 2020; Vinish et al., 2020; Sundararaj & Rejeesh, 2021; Johnson, 2021).

Two sides of the ruler explain how the cultural dimension moves from left to right:

1. Individualism/collectivism; a dimension of culture that determines whether they are part of a group or an individual.

2. Certainty versus uncertainty avoidance; cultural dimensions that measure the conformity of individuals to fate and individual confidence in uncertainty avoidance.

3. Masculinity/femininity; a cultural dimension that measures whether individuals emphasize achievement, competition, and ambition than individuals. In contrast, in feminine societies, individuals are simple, humble, and nurturing.

4. Short versus long power distance; dimensions that measure social disparities in organizations. Individuals in a society characterized by a higher power distance level tend to follow a formal ethical law and are reluctant to disagree with their superiors or leaders. On the other hand, individuals in societies whose power distance is lower do not feel constrained by differences in status, power, or perceived position.

5. Short-term versus long-term orientation; Individuals in a long-term orientation culture develop virtues with a future reward orientation in the form of perseverance and savings. However, those who follow short-term exposure think about what they can consume at that time.

1.2. Brand image

It is common sense for a customer to restore the memory of a brand image before buying or purchasing a product or service. Therefore, it is crucial to identify the term brand image and how it potentially influences the decision to buy.

According to Batra and Homer (2004), Serrao and Botelho (2008), Shamma and Hassan (2011), Bukhari (2011), Kotler and Keller (2012), Lee (2014), Onigbinde and Odunlami (2015), Kotler and Armstrong (2018), Sudaryanto et al. (2019), Nilasari and Saudi (2019), Ahmady and Kaluarachchi (2020), Bafna and Saini (2021), Cai et al. (2021), and Chen et al. (2021), consumers' perceptions and beliefs reflect the associations of storing memory. Therefore, brand insight has potentially become an image and a symbol for the product.

Park et al. (1986), Liu (2020), Barbosa et al. (2021), Cai et al. (2021), Israfilova et al. (2021), and Karadagli et al. (2021) defined some indicators of the brand image: 1) image function, where the product solves the consumer's problem when looking for a product; 2) image symbolic, where brands provide consumer satisfaction and increasing self-esteem (desires), status in a social environment, recognition of themselves and many others; and 3) the experience of imagery is the time when brands provide consumers with a pleasant experience.

1.3. Price

Price is an important thing that customers consider before buying a product. Kotler and Keller

http://dx.doi.org/10.21511/im.17(1).2021.11

(2012), Kotler and Armstrong (2018) defined price as the amount of money needed to obtain the combination of products and services. Prices help consumers determine their purchasing decisions compared to the product's expected value (Hendalianpour, 2020; Ryu, 2020; Zielke, 2006; Sudaryanto et al., 2019). Consequently, a company must consider product prices to encourage consumers to buy their product ambitiously. It is natural for consumers to expect a high-quality product at an affordable price.

Price then becomes the most critical factor in buying decisions. According to Zielke (2006), Hustić and Gregurec (2015), Wang et al. (2021), Liu (2020), Ahmed (2020), Ryu (2020), Chan et al. (2011), Calvo-Porral and Lévy-Mangin (2015), Belton (2017), Nilasari and Saudi (2019), Bukhari (2011), Rusdiyanto et al. (2020), Yang et al. (2020), and Zhao et al. (2021), price indicators are as follows: 1) price level is the valuation of benefits and comparison with similar products regarding the price without considering its quality; 2) price conformity to the product's quality is when the company's price is equal to the expected rate of the products aimed by consumers; and 3) price competitiveness is the price difference between companies' prices compared to similar product offered by other companies.

1.4. Buying decisions

Pre-purchase situation initiates the consumer's decision to buy, which consists of alternatives collected by the consumer and finalized by post-purchase evaluation (Onigbinde & Odunlami, 2015; Benton et al., 2020; Bozzi et al., 2021; Gidlöf et al., 2021; Naeem, 2021; Ozkara & Bagozzi, 2021; Richard et al., 2021; Sundararaj & Rejeesh, 2021; Zhang et al., 2020). To understand the process of consumer buying decisions, the marketer should understand the extent to which consumers buy the products and the products' utility in consumers' perceptions.

According to Engell et al. (1995), Kotler and Armstrong (2018), Ahmed (2020), Ahmed et al. (2020), Cicatiello (2020), Fahfouh et al. (2020), Hendalianpour (2020), Neumann and Mehlkop (2020), Ryu (2020), and Wang et al. (2020), there are five consumer decision-making processes in the purchase, namely:

1. Need for recognition; in the initial decision-making phase, consumers recognize their needs as a reason to buy a product. The customer is aware of the difference between real needs and desires for the product. The trigger of consumer needs comes from external and internal stimulation influenced by users of similar products.

2. Search for information; this is the stage at which consumers are encouraged to seek additional information about the goods and services or brands to be purchased. Consumers can only increase attention or actively seek information.

3. Alternative evaluation refers to using available data to weigh the value of alternatives and nominating products to be listed.

4. Purchase decisions: consumers organize and choose one nominated product that meets their needs and wants to buy.

5. Post-purchase behavior : this is the final stage of the purchase decision that refers to the experience after purchasing a product. The phase is an evaluation process of the benefit after consuming the product. Attention should be paid to the pros and cons of whether the customer was satisfied or dissatisfied with the product being used.

Sudaryanto et al. (2019), based on a previous study of Basmalah retail stores, investigate three purchasing decision indicators:

1. Involvement – a situation where consumers decide to make a purchase because they are familiar with a product.

2. Interests – when a consumer chooses to buy due to the stores having the uniqueness of Islamic culture and taste of the product.

3. References – when consumers buy a product because of others' recommendations.

This research aims to identify the influence of Hofstede's cultural dimension, concurrently with brand image and price, on buying decisions in Indonesia's retail customers.

Based on these arguments, the following hypotheses are advanced:

Ha1: Culture has a significant impact on a buying decision.
Ha2: Brand image has a significant impact on a buying decision.
Ha3: Price has a significant impact on a buying decision.

2. METHOD

The type of research is a quantitative explanatory research work underpinned by positivist philosophy. The study examines the relationship between predictors toward a predicted variable (Malhotra & Birks., 2007; Zhao, 2020). Descriptive statistical analysis provides the demographic characteristics of respondents. The unit of analysis for this study is the customers of the Basmalah store in East Java, Indonesia.

The population of the study was the consumers of the retail store in East Java, Indonesia. The study adopted a multi-stage sampling method as an alternative probability sampling technique, which is applicable when the population abundance and each selected sample's trait have a high spatial structure (Kuno, 1976). In probability sampling, where there is a cluster of the population at each stage, a representative sample was chosen randomly to provide equal chances for the population (Prabowo et al., 2020; Rusdiyanto et al., 2020; Syafii et al., 2020). The inevitable population in the last stage has to be known.

The stores were available in the East Java Province, so the first stage involved choosing one region out of 36 (Ind. Kabupaten and Kota); the Situbondo region is the sample. At the second stage, one store was randomly selected out of five Basmalah stores available in the region; the Basmalah Tenggir store customer was randomly selected as the unit of analysis. The third stage involved a sample of 112 respondents randomly selected from a total population of 209,625 young to older adult populations in the Situbondo region.

Johansson (2012) and Webb (2012), Hair et al. (2014) stated that the size of the sample depended on the number of observations. The sample size is the number of observations – a minimum of 5 to 10. The number of observations in this study was 14, so the sample size needed for this study was 112 respondents, calculated as follows: 14 x 8 = 112.

Primary data collection was conducted using a questionnaire distributed among Basmalah consumers aged 17 and over, in particular in the Situbondo region in East Java. Copies of the questionnaire were given directly to potential respondents at the store in one selected Basmalah shop. The survey instrument consisted of statements seeking responses using a five-point Likert scale ranging from one (strongly disagree) to seven (strongly agree) (Jogulu & Pansiri, 2011; Pansiri & Mmereki, 2010). These were closed questions concerning the perception of the indicator of Hofstede's culture, brand image, and price, using indicators from marketing theory.

Descriptive statistics on the respondent's demographic profiles were presented in a qualitative analysis followed by hypothesis testing using multiple-linear regression. Responses from questionnaires were analyzed using multivariate analysis of multiple linear regressions. This statistical analysis was used to identify the causa relationship between three independent variables (*X*1, culture; *X*2, brand image; *X*3, price) in relation to dependent variables (*Y*, buying decision) and to test hypotheses. Table 1 shows the variables and indicators of three predictors and one predicted variable.

Table 1. Definition of operational variables and their indicators

	Variables	Indicators
	Predictors	
	Culture	
1.	Purchasing a product or services in the store to cover family needs (Hofstede, 1983; Cakanlar & Nguyen, 2019)	Individualism/ collectivism
2.	Buying a product or services due to a well-known store (Hofstede, 1983; Cakanlar & Nguyen, 2019)	Certainty versus uncertainty avoidance
3.	Confidently buying a product in the store (Hofstede, 1983; Cakanlar & Nguyen, 2019)	Masculinity/ femininity
4.	Purchasing a product in the store with the reference of Sidogiri Boarding Hose as the owner (Hofstede, 1983; Cakanlar & Nguyen, 2019)	Short versus long power distance
5.	Shopping in the store for monthly purposes (Hofstede, 1983; Shoham et al.,2010; Cakanlar & Nguyen, 2019)	Long-term and short-term orientation

http://dx.doi.org/10.21511/im.17(1).2021.11

Table 1 (cont.). Definition of operational variables and their indicators

	Variables	Indicators
	Predictors	
	Brand image	
1.	The store helps customers to cover their needs (Batra & Homer, 2004; Chegini et al., 2016; Bukari, 2011; Mhllongo & Mason 2020)	Functional imagery
2.	The store helps customers to increase their social status (Park et al. 1986; Shamma & Hassan, 2011; Vinish et al., 2020)	Symbolic imagery
3.	The brand of the store provides consumers with a pleasant experience (Onigbinde & Odunlami, 2015; Fosch et al., 2020)	Experience imagery
	Price	
1.	Customer evaluation of the price and its benefits compared to a similar product (Zielke 2006; Nilasari, et.al., 2019; Ryu, 2020)	Price level
2.	Customer consideration of price to the quality of the products obtained by consumers (Barbosa et al., 2021)	Price conformity with product quality
3.	When purchasing a product in the store, the customer looks for lower prices offered with other similar products(Chan et al., 2011)	Price competitiveness
	Predicted variable	
	Buying decision	
1.	Consumers' purchase involvement when buying a product in the store (Engel et.al.,1995; Sudaryanto et al., 2019)	Involvement
2.	The consumer decides to purchase due to the uniqueness and taste of the product (Nasse et al., 2019; Sudaryanto et al., 2019)	Interests
3.	Consumers purchase a product due to other's recommendations (Nasse et al., 2019; Sudaryanto et al., 2019)	Recommendations from others

3. RESULTS

The questionnaire passed instrument testing, such as validity and reliability measurement. The validity instrument was tested using correlation product-moment; with a p-value < α 0.05, all the questionnaire instruments were valid. The process was also a reliability instrument test with the result; all variables were reliable with Cronbach's alpha (α) > 0.05. These test results mean that the questionnaire instrument can be used in other times and places at a similar situation and produces valid data (Hair et al., 2014; Pansiri & Mmereki, 2010).

SPSS software was used to enumerate the data for multivariate statistical analysis. Before that, the data were tested on their normality using skewness and kurtosis. Rule of thumb, the value of those two statistical parameters should be no more than +/–1.96 for the hypotheses testing with $\alpha = 0.05$ (Hair et al., 2014). In this study, all variables pass the normality test with the value of skewness–1.063 ($X1$), –1.178 ($X2$), and –1.052 ($X3$). While the Kurtosis test results are as follows –0.192 (culture), 0.22 (brand image), and (0.787 (price)

To ensure that the data meet particular classical assumption requirements, the normality of model, multicollinearity, and heteroscedasticity were used. Figure 1 presents the normality of the model, Table 2 presents the multicollinearity test result, and Table 3 presents the heteroscedasticity test result.

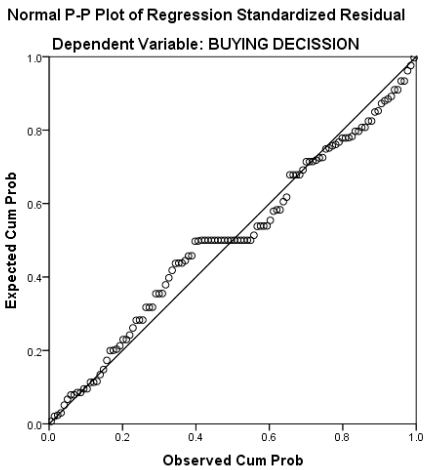

Figure 1. Model normality

Table 2. Multi-collinearity test result

Variable	Tolerance	VIF	Notes
Culture (X_1)	0.171	5.893	There is no multicolleniarity
Brand Image (X_2)	0.173	5.783	There is no multicolleniarity
Price (X_3)	0.212	4.716	There is no multicolleniarity

Table 3. Heteroscedasticity test result

Variable	Sig	Notes
Culture (X_1)	0.409	There is no heteroscedasticity
Brand image (X_2)	0.443	There is no heteroscedasticity
Price (X_3)	0.469	There is no heteroscedasticity

3.1. Descriptive data

This study found some demographic characteristics of the respondents. Out of 112 respondents participated in the study, 30.4% were men, and 69.6% were women. The majority of the respondents' ages were 18 to 40 years old, as many as 59.8%. Many as 29.5% were between 40 and 60, while respondents older than 40 were 10.7%.

As many as 25.9% of the respondents were housewives, while 16.1% were students of high schools and universities; 18.8% were government employees, 12.5% worked as private employees, and 26.8% were private businesses. This focus of concern is in line with class income, the majority of the respondents' income, 50.9%, was IDR 2.5 million and above, and the rest was below IDR 2.5 million.

Data collected from the questionnaire's perceptual response was then analyzed using SPSS software to produce statistical analysis. A summary of the results is presented in Table 4.

Table 4. Multiple linear regression summary

Source: Primary data (processed).

Variable	Regression coefficient	df	*p*-value
Culture (X_1)	.265	3	.022*
Brand image (X_2)	.281		.015*
Price (X_3)	.364		.001**
Constant	– 4,147		
R = .870			F (df =3) = 112.602
R^2 = .758			P value = 0.00
Adjusted R^2 = .751			

Table 4 presents the summary of multiple linear regressions with R's value (coefficient of battle coefficient) of 0.870. This value reflects that a direct relationship between culture ($X1$), brand image ($X2$), and price ($X3$) towards buying decisions (Y) was 87%. At the same time, the Adjusted R^2 (Adj R^2) represents the strength of the predictors – culture ($X1$), brand image ($X2$), and price ($X3$) – on predicting the buying decisions (Y) with the power of 75.8%, while the remaining 24.2% depended onthe research model. On this basis, the regression equation is as follows:

$$\begin{aligned} &Buying\ decisions = -4.147 + \\ &+0.265\ culture + \\ &+0.281\ brand\ image + \\ &+0.364\, price + \varepsilon. \end{aligned} \tag{1}$$

The beta value is –4.147, which means that when there is no value of the variables of culture, brand image, and price; the buying decision would be –4.147. Besides, the variable coefficient of culture is positive at 0.265, which means that any increase of one unit in the culture variable will result in a 0.265 increase in the buying decision. Concurrently, the positive variable coefficient of the brand image was 0.281, which means that any increase of one unit in the brand's image would increase the chance of the buying decision as much as 0.281. The variable coefficient of the price was positive 0.364, which means that any increase of one unit in price would increase the chance of the buying decision as much as 0.364.

When independent variables are tested simultaneously with the statistical analysis results, the value of F Test is 112.602, which is greater than the F table (df1 = 3; df2 = 108) with a value of 26.89 and a p-value of 0.000 < 0.05. It can be interpreted that Hofstede's cultural dimension, brand image, and price simultaneously influenced the buying decision of retail customers in East Java, Indonesia.

4. DISCUSSION

According to the research findings, retail buying decisions in Indonesia have some unique characteristics. Descriptive statistics of the typical respondent involved in the buying process are typically women under 40. This finding means that

http://dx.doi.org/10.21511/im.17(1).2021.11

gender plays a vital role in shopping at the retail stores in Indonesia, which is exciting and needs attention. It was also found that the recommendations of these customers were segmented by employees who worked in the private sector with an income of more than IDR 2.5 million.

For the hypotheses testing purposes, three independent variables such as culture, brand image, and price were used to predict causality with the dependent variable of a buying decision. The first analysis did not accept the H01 that there is no significant influence of culture on the buying decision. This finding means that the proposed alternative to the hypothesis *Ha1: Culture has a significant effect on buying decisions,* must be accepted. Accordingly, Hofstede's (1983) instrument culture applies to retail stores in East Java, Indonesia, and strongly influences buying decisions. This research finding supports Vinish et al. (2020).

Sundararaj and Rejeesh (2021) and Johnson (2021) underlined the importance of cultural influence on buying decisions. This statement is consistent with Indonesian culture, in which people are more collectivists than individualistic; therefore, information or friend recommendation would be essential. The culture applies to avoiding uncertainty. The finding also identifies Indonesian culture as feminine rather than masculine in shopping; this means that customers do not like achievement, competition, and ambition to share shopping experience. People in Indonesia are likely to have a long power distance; they are not well aware of the buying decision makers.

A customer also has a long-term orientation when deciding to buy a product or service. In addition to the cultural influence, the second hypothesis test did not accept $H_0$2. Conversely, this means that the proposed alternative hypothesis *Ha2: Brand image has a significant impact on buying decision,* has to be accepted. This finding means that brand image strongly influences buying decisions in the retail store. This study supports the findings of Ognibinde and Odunlami (2015), Batra and Homer (2004), and Sudaryanto et al. (2019). The brand image can bring out empathy or emotional response from potential retail store customers in Indonesia. Restoring image experience is a sensitive aspect of brand imagery by the brand endorser and symbolically represents its goodwill. A false personal image of an endorser would potentially lessen the brand image of retail store's product or services in Indonesia.

The last hypothesis test was not to accept H03 and noted no significant influence on buying decision price. This finding means that the proposed alternative hypothesis *Ha3: Price has a significant influence on buying decisions,* should be accepted. Price sensitivity would stimulate the decision to buy a product from the retail store in Indonesia. This finding supports the studies by Zelkie (2015) and Ryu (2020). The price elasticity will be more than 1, which means that any increase in price will decrease the product or services' demand by more than one scale. The rationale is that women with more rigid funding are more prevalent among retail customers in Indonesia.

CONCLUSION

Hofstede's (1983) cultural dimension is still present in numerous research publications and applies to any nation. In the study, the cultural dimension was applied concurrently with brand image and price towards buying decisions in East Java, Indonesia, which is culturally strong Islamic faith. An important finding from the study was that the consumer's buying decision of the retail stores in East Java, Indonesia was dominated by educated and professional women. Gender was a central point in configuring the decision maker.

The study also indicates that Hofstede's cultural dimension still exists in retail business consumer behavior in East Java, Indonesia. The urgency of this finding implies that culture plays a significant role in retail stores in the country with strong cultural values. This phenomenon is necessary to improve the innovativeness of customer retention management.

Brand image and price have been found to positively influence buying decisions. Therefore, a better brand image by a store in East Java, Indonesia, will improve consumer purchasing decisions. Similarly, the better the retail store's price, the more it will positively influence consumer purchasing decisions. This phenomenon was related to the gender issue.

The survey was conducted in the era leading up to the COVID-19 pandemic, therefore, the recommendation to future research is to conduct similar research in both pandemic and post-pandemic eras. A deeper similar study of cultural approaches in qualitative approaches is also proposed.

AUTHOR CONTRIBUTIONS

Conceptualization: Sudaryanto Sudaryanto, Imam Suroso, Taskiya Latifatil Umama.
Data curation: Sudaryanto Sudaryanto, Anifatul Hanim, Jaloni Pansiri, Taskiya Latifatil Umama.
Formal analysis: Sudaryanto Sudaryanto, Imam Suroso.
Funding acquisition: Sudaryanto Sudaryanto, Imam Suroso, Anifatul Hanim, Jaloni Pansiri.
Investigation: Sudaryanto Sudaryanto, Anifatul Hanim, Taskiya Latifatil Umama.
Methodology: Sudaryanto Sudaryanto, Imam Suroso, Jaloni Pansiri.
Project administration: Anifatul Hanim.
Resources: Imam Suroso.
Software: Sudaryanto Sudaryanto, Jaloni Pansiri, Taskiya Latifatil Umama.
Supervision: Imam Suroso, Anifatul Hanim.
Writing – original draft: Sudaryanto Sudaryanto, Imam Suroso, Taskiya Latifatil Umama.
Writing – review & editing: Sudaryanto Sudaryanto, Jaloni Pansiri.

ACKNOWLEDGMENT

We would like to thank the Research Centre (LP2M) of University of Jember, East Java, Indonesia, for their support and funding. We also want to thank Rusdiyanto, a Ph.D. student from the Faculty of Economics and Business, Universitas Airlangga, Surabaya, Indonesia, for his helpful discussions and contributions.

REFERENCES

1. Ahmady, Y., & Kaluarachchi, Y. (2021). The influence of lighting settings on museum's brand image and human satisfaction in exhibition halls using virtual reality. *Advances in Intelligent Systems and Computing, 1253 AISC,* 103-108. https://doi.org/10.1007/978-3-030-55307-4_16
2. Ahmed, B. (2020). Understanding the impact of investor sentiment on the price formation process: A review of the conduct of American stock markets. *Journal of Economic Asymmetries, 22.* https://doi.org/10.1016/j.jeca.2020.e00172
3. Ahmed, J., Tefera, T., & Kassie, G. T. (2020). Consumers' preference and willingness to pay for enriched snack product traits in Shashamane and Hawassa cities, Ethiopia. *Agricultural and Food Economics, 8*(1). https://doi.org/10.1186/s40100-020-00157-1
4. Bafna, P. B., & Saini, J. R. (2021). On readability metrics of goal statements of universities and brand-promoting lexicons for industries. *Advances in Intelligent Systems and Computing, 1174,* 63-72. https://doi.org/10.1007/978-981-15-5616-6_5
5. Barbosa, A. A. L., de Moura, J. A., & de Medeiros, D. D. (2021). Positioning of design elements on the packaging of frozen convenience food and consumers' levels of attention: An experiment using pizza boxes. *Food Quality and Preference, 87*. https://doi.org/10.1016/j.foodqual.2020.104044
6. Batra, R., & Homer, P. M. (2004). The situational impact of brand image beliefs. *Journal of Consumer Psychology, 14*(3), 318-330. https://doi.org/10.1207/s15327663jcp1403_12
7. Belton, P. (2017). Competitive Strategy: Techniques for Analyzing Industries and Competitors. In *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. https://doi.org/10.4324/9781912281060
8. Berman, B. R., & Evans, J. R. (2007). *Retail management: A strategic approach* (10th ed.). Person Prentice Hall.

http://dx.doi.org/10.21511/im.17(1).2021.11

9. Benton, W. C., Prahinski, C., & Fan, Y. (2020). The influence of supplier development programs on supplier performance. *International Journal of Production Economics, 230*. https://doi.org/10.1016/j.ijpe.2020.107793

10. Bozzi, C., Neves, M., & Mont'Alvão, C. (2021). An exploratory approach towards fashion e-tail. *Advances in Intelligent Systems and Computing, 1253 AISC,* 49-55. https://doi.org/10.1007/978-3-030-55307-4_8

11. Bukhari, S. S. (2011). Green marketing and its impact on consumer behavior. *European Journal of Business and Management, 3*(4), 375-384. https://doi.org/10.1007/978-1-349-13877-7_20

12. Calvo-Porral, C., & J.-P.Lévy-Mangin. (2015). Smooth operators? Drivers of customer satisfaction and switching behavior in virtual and traditional mobile services. *Revista Española de Investigación de Marketing ESIC, 19,* 124-138. https://doi.org/10.1016/j.reimke.2015.03.001

13. Cai, H., Wei, X., Wu, F., Gu, Y., & Zhang, N. (2021). Express delivery services customer satisfaction based on PLS_SEM. *Advances in Intelligent Systems and Computing, 1233 AISC,* 112-116. https://doi.org/10.1007/978-3-030-51431-0_17

14. Cai, H., Wei, X., Gu, Y., & Wu, F. (2021). Customer satisfaction evaluation of airline based on PLS_SEM. *Advances in Intelligent Systems and Computing, 1234 AISC,* 667-671. https://doi.org/10.1007/978-3-030-51556-0_99

15. Chan, C. C. H., Cheng, C. B., & Hsien, W. C. (2011). Pricing and promotion strategies of an online shop based on customer segmentation and multiple objective decision making. *Expert Systems with Applications, 38*(12), 14585-14591. https://doi.org/10.1016/j.eswa.2011.05.024

16. Cakanlar, A., & Nguyen, T. (2019). The influence of culture on impulse buying. *Journal of Consumer Marketing*. https://doi.org/ 10.1108/JCM-03-2017-2139

17. Chegini, F., Molan, S. B., & Kashanifar, S. S. (2016). An examination of the impact of cultural values on brand preferences in Tehran's fashion market. *Procedia Economics and Finance, 36*(16), 189-200. https://doi.org/10.1016/s2212-5671(16)30030-2

18. Chen, M., Chen, J., & Zheng, H. (2021). A study on the impact of apparel industry product image on customer purchase intention. *Advances in Intelligent Systems and Computing, 1191 AISC,* 301-314. https://doi.org/10.1007/978-3-030-49889-4_25

19. Cicatiello, C. (2020). Alternative food shoppers and the "quantity dilemma": a study on the determinants of their purchases at alternative markets. *Agricultural and Food Economics, 8*(1). https://doi.org/10.1186/s40100-020-00160-6

20. Engell, J. F., Blackwell, R. D., & Miniard, P. W. (1995). *Consumer behavior* (8th ed.). Dryden Press.

21. Fahfouh, A., Riffi, J., Adnane Mahraz, M., Yahyaouy, A., & Tairi, H. (2020). PV-DAE: A hybrid model for deceptive opinion spam based on neural network architectures. *Expert Systems with Applications, 157*. https://doi.org/10.1016/j.eswa.2020.113517

22. Foscht, T., Maloles, C., Bernhard, I. I. I., Dirk, S., Indrajit, M., Foscht, T., & Iii, C. M. (2008). *The impact of culture on brand perceptions: a six-nation study*. https://doi.org/10.1108/10610420810875052

23. Gidlöf, K., Ares, G., Aschemann-Witzel, J., & Otterbring, T. (2021). Give us today our daily bread: The effect of hunger on consumers' visual attention towards bread and the role of time orientation. *Food Quality and Preference, 88*. https://doi.org/10.1016/j.foodqual.2020.104079

24. Hair, J. F., William, C. B., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis* (7th ed.). Pearson Education Limited.

25. Hendalianpour, A. (2020). Optimal lot-size and price of perishable goods: A novel game-theoretic model using double interval grey numbers. *Computers and Industrial Engineering, 149*. https://doi.org/10.1016/j.cie.2020.106780

26. Hofstede, G. (1983). National cultures in four dimensions: A research-based theory of cultural differences among nations. *International Studies of Management & Organization, 13*(1-2), 46-74. https://doi.org/10.1080/00208825.1983.11656358

27. Hustić, I., & Gregurec, I. (2015). *The influence of price on customer' s purchase decision.* Retrieved from http://archive.ceciis.foi.hr/app/public/conferences/1/ceciis2015/papers/754.pdf

28. Israfilova, E., Arslan, A., Yildirim, N., & Kaya, T. (2021). Influencer identification system design using machine learning techniques. *Advances in Intelligent Systems and Computing, 1197 AISC,* 1092-1099. https://doi.org/10.1007/978-3-030-51156-2_127

29. Jogulu, U. D., & Pansiri, J. (2011). Mixed methods: A research design for management doctoral dissertations. *Management Research Review, 34*(6), 687-701. https://doi.org/10.1108/01409171111136211

30. Johansson, J. K. (2012). Global marketing: Research on foreign entry, local marketing, global management. In *Handbook of Marketing*. https://doi.org/10.4135/9781848608283.n19

31. Johnson, K. A. (2021). God... Karma, Jinn, spirits, and other metaphysical forces. *Current Opinion in Psychology, 40,* 10-14. https://doi.org/10.1016/j.copsyc.2020.08.001

32. Karadagli, F., Theofanidis, F., & Eren, B. (2021). Consumers' evaluation of flushable products with respect to post-disposal effects in wastewater infrastructures. *Journal of Cleaner Production, 278*. https://doi.org/10.1016/j.jclepro.2020.123680

33. Kotler, P., & Armstrong, G. (2018). *Principles of marketing* (17th ed.). Pearson Education Limited.

34. Kotler, P., & Keller, K. L. (2012). *Marketing management* (14th ed.). Prentice Hall.

35. Kuno, E. (1976). Multi-stage sampling for population estimation. *Res Popul Ecol, 18,* 39-56. Retrieved from https://link.springer.com/article/10.1007%2FBF02754081

36. Lee, C. J. (2014). Effects of sport mega-events on city brand awareness and image: Using the 2009 world games in Kaohsiung as an example. *Quality and Quantity, 48*(3), 1243-1256. https://doi.org/10.1007/s11135-013-9832-6

37. Liu, C. H. (2020). Integration of different perspectives of culinary brand equity. *Journal of Hospitality and Tourism Management, 45,* 152-161. https://doi.org/10.1016/j.jhtm.2020.08.007

38. Malhotra, N. K., & Birks, D. F. (2007). *Marketing research: An applied approach* (3rd European ed.) (pp. 835). Pearson Education.

39. Naeem, M. (2021). Do social media platforms develop consumer panic buying during the fear of covid-19 pandemic. *Journal of Retailing and Consumer Services, 58*. https://doi.org/10.1016/j.jretconser.2020.102226

40. Nasse, T. B., Ouédraogo, A., & Sall, F. D. (2019). Religiosity and consumer behavior in developing countries: An exploratory study on Muslims in the context of Burkina Faso. *African Journal of Business Management, 13*(4), 116-127. Retrieved from https://academicjournals.org/journal/AJBM/article-abstract/B16088460093

41. Neumann, R., & Mehlkop, G. (2020). Framing electricity plan choices to enhance green energy usage: A choice experiment with panel data from Germany. *Energy Research and Social Science, 70*. https://doi.org/10.1016/j.erss.2020.101741

42. Ng, S., & Lee, A.Y. (Eds) (2015). Handbook of Culture and Consumer Behavior, Oxford University Press, Oxford.

43. Nilasari, I., & Saudi, M. H. M. (2019). Do product features and brand image influence consumers' decision to purchase the Suzuki Ignis in Bandung Indonesia? *International Journal of Innovation, Creativity and Change, 6*(6), 256-267. Retrieved from https://www.semanticscholar.org/paper/Do-Product-Features-and-Brand-Image-Influence-to-in-Nilasaria-Saudib/badf3c28c4d7f907075734fb3eb19ebeaa3a7e28

44. Onigbinde, O. I., & Odunlami, S. A. (2015). The influence of brand image and promotional mix on consumer buying decision-a study of beverage consumers in Lagos State, Nigeria. *British Journal of Marketing Studies, 3*(4), 97-109. Retrieved from http://www.eajournals.org/wp-content/uploads/The-Influence-of-Brand-Image-and-Promotional-Mix-on-Consumer-Buying-Decision-A-Study-of-Beverage-Consumers-in-Lagos-State-Nigeria.pdf

45. Ozkara, B. Y., & Bagozzi, R. (2021). The use of event related potentials brain methods in the study of conscious and unconscious consumer decision making processes. *Journal of Retailing and Consumer Services, 58*. https://doi.org/10.1016/j.jretconser.2020.102202

46. Pansiri, J., & Mmereki, R. N. (2010). Using the servqual model to evaluate the impact of public service reforms in the provision of primary health care in Botswana. *Journal of African Business, 11*(2), 219-234. https://doi.org/10.1080/15228916.2010.509005

47. Park, C.W., Jaworski, B. J., & Maclnnis, D. J. (1986). Strategic brand image-concept management. *Journal of marketing, 50*(4), 135-145. https://doi.org/10.1177%2F002224298605000401

48. Prabowo, B., Rochmatulaili, E., Rusdiyanto, & Sulistyowati, E. (2020). Corporate governance and its impact in company's stock price: case study [Gobernabilidad corporativa y su impacto en el precio de las acciones de las empresas: Estudio de caso]. *Utopia y Praxis Latinoamericana, 25*(Extra10), 187-196. https://doi.org/10.5281/zenodo.4155459

49. Richard, Heryadi, Y., Lukas, & Trisetyarso, A. (2021). Leverage from blockchain in commodity exchange: Asset-backed token with ethereum blockchain network and smart contract. *Smart Innovation, Systems and Technologies, 182,* 301-309. https://doi.org/10.1007/978-981-15-5224-3_29

50. Rusdiyanto, Hidayat, W., Tjaraka, H., Septiarini, D. F., Fayanni, Y., Utari, W., Waras, Indrawati, M., Susanto, H., Tjahjo, J. D. W., Zainal, M., & Imanawati, Z. (2020). The effect of earning per share, debt to equity ratio and return on assets on stock prices: Case study Indonesian. *Academy of Entrepreneurship Journal, 26*(2), 1-10. Retrieved from https://www.abacademies.org/articles/the-effect-of-earning-per-share-debt-to-equity-ratio-and-return-on-assets-on-stock-prices-case-study-indonesian-9163.html

51. Ryu, S. (2020). Online luxury goods with price discount or onsite luxury goods with luxury services: Role of situation-specific thinking styles and socio-demographics. *Journal of Retailing and Consumer Services, 57*. https://doi.org/10.1016/j.jretconser.2020.102253

52. Sedikides, C., & Gebauer, J. E. (2021). Do religious people self-enhance? *Current Opinion in Psychology, 40,* 29-33. https://doi.org/10.1016/j.copsyc.2020.08.002

53. Serrao, P., & Botelho, D. (2008). Effect of brand extension on brand image: A study in the Brazilian context. *Latin American Advances in Consumer Research, 2*. Retrieved from https://www.acrwebsite.org/volumes/14070/la/v2_pdf/LA-02

54. Shamma, H. M., & Hassan, S. S. (2011). Impact of CSR perception on brand image, brand attitude and buying willingness: A study of a global cafe. *International Journal of Marketing Studies, 6*(6). https://doi.org/10.5539/ijms.v6n6p43

55. Shoham, A., Gavish, Y., & Segev, S. (2015). A cross-cultural analysis of

http://dx.doi.org/10.21511/im.17(1).2021.11

Impulsive and compulsive buying behaviors among Israeli and US consumers; the influence of personal traits and cultural values. *Journal of International Consumer Marketing, 27*(3), 187-206. https://doi.org/10.1080/08961530.2014.1000507

56. Sudaryanto, S., Subagio, N. A., Awaliyah, I. N., Wulandari, D., & Hanim, A. (2019). Influence of brand image, price and promotion on consumer's buying decision of fast moving consumer's goods with culture as a moderating variable in basmallah retail store in Indonesia. *International Journal of Scientific and Technology Research, 8*(3). Retrieved from http://www.ijstr.org/final-print/mar2019/Influence-Of-Brand-Image-Price-And-Promotion-On-Consumers-Buying-Decision-Of-Fast-Moving-Consumers-Goods-With-Culture-As-A-Moderating-Variable-In-Basmallah-Retail-Store-In-Indonesia.pdf

57. Sudaryanto, S. (2015). Brand leverage strategy throughout sport championship and amusement: The case of Banyuwangi festival 2013. *Procedia – Social and Behavioral Sciences, 211,* 1171-1178. https://doi.org/10.1016/j.sbspro.2015.11.156

58. Sudaryanto, S., Hanim, A., & Utari, W. (2020). Behaviour on repurchase intention in a Moslem ethnic store in Indonesia. In *International Journal of Innovation, Creativity and Change.* Retrieved from https://www.ijicc.net/images/vol_13/Iss_12/131257_Sudaryanto_2020_E_R.pdf

59. Sundararaj, V., & Rejeesh, M. R. (2021). A detailed behavioral analysis on consumer and customer changing behavior with respect to social networking sites. *Journal of Retailing and Consumer Services, 58*. https://doi.org/10.1016/j.jretconser.2020.102190

60. Syafii, M., Ulum, B., Rusdiyanto, Suparman, P., Rahayu, D. I., & Syasindy, N. B. (2020). The effect of financial performance on the company's share price: A case study Indonesian. *European Journal of Molecular and Clinical Medicine, 7*(8), 1055-1071. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098454552&partnerID=40&md5=10d4ddcf32dd4bf918ba3622c11e86dd

61. Vinish, P., Pinto, Prakash, Hawaldar, Iqbal Thonse, Pinto, Slima. (2021). Impulse buying behavior among female shoppers: Exploring the effects of selected store environment elements. *Innovative Marketing, 16*(2), 54-70. http://dx.doi.org/10.21511/im.16(2).2020.05

62. Wang, L., Morabito, M., Payne, C. T., & Robinson, G. (2020). Identifying institutional barriers and policy implications for sustainable energy technology adoption among large organizations in California. *Energy Policy, 146*. https://doi.org/10.1016/j.enpol.2020.111768

63. Wang, T., Wu, P., Ge, Q., & Ning, Z. (2021). Ticket prices and revenue levels of tourist attractions in China: Spatial differentiation between prefectural units. *Tourism Management, 83*. https://doi.org/10.1016/j.tourman.2020.104214

64. White, C. J., Baimel, A., & Norenzayan, A. (2021). How cultural learning and cognitive biases shape religious beliefs. *Current Opinion in Psychology, 40,* 34-39. https://doi.org/10.1016/j.copsyc.2020.07.033

65. Yang, Y., Zhang, H., & Chen, X. (2020). Coronavirus pandemic and tourism: Dynamic stochastic general equilibrium modeling of infectious disease outbreak. *Annals of Tourism Research, February,* 102913. https://doi.org/10.1016/j.annals.2020.102913

66. Zhang, L. L., Gang, D. U., Jun, W. U., & Yujie, M. A. (2020). Joint production planning, pricing and retailer selection with emission control based on Stackelberg game and nested genetic algorithm. *Expert Systems with Applications, 161*. https://doi.org/10.1016/j.eswa.2020.113733

67. Zhao, W. (2020). Preface. In *ACM International Conference Proceeding Series*. https://doi.org/10.4337/9781784715960.00004

68. Zhao, Z., Jiang, J., & Wang, F. (2021). An economic analysis of twenty light olefin production pathways. *Journal of Energy Chemistry, 56,* 193-202. https://doi.org/10.1016/j.jechem.2020.04.021

69. Zielke, S. (2006). Measurement of retailers' price images with a multiple-item scale. *The International Review of Retail Distribution and Consumer Research, 16*(3), 297-316. https://doi.org/10.1080/09593960600696990

APPENDIX A

Table A1. Validity and reliability test result

Variable	Items	r_{table}	$r_{statistic}$	Sig (*p*-value)	Result	Cronbach's Alpha	Result
Culture (X_1)	$X_{1.1}$	0.184	0.899	0.000	Valid		
	$X_{1.2}$	0.184	0.861	0.000	Valid		
	$X_{1.3}$	0.184	0.865	0.000	Valid		
	$X_{1.4}$	0. 184	0.900	0.000	Valid	0.930	Reliable
	$X_{1.5}$	0. 184	0.866	0.000	Valid		
Brand image (X_2)	$X_{2.1}$	0. 184	0.811	0.000	Valid		
	$X_{2.2}$	0. 184	0.867	0.000	Valid		
	$X_{2.3}$	0. 184	0.823	0.000	Valid	0.781	Reliable
Price (X_3)	$X_{3.1}$	0. 184	0.829	0.000	Valid		
	$X_{3.2}$	0. 184	0.887	0.000	Valid		
	$X_{3.3}$	0. 184	0.881	0.000	Valid	0.833	Reliable
Buying decision (*Y*)	Y_1	0. 184	0.873	0.000	Valid		
	Y_2	0. 184	0.925	0.000	Valid		
	Y_3	0. 184	0.862	0.000	Valid	0.864	Reliable

APPENDIX B

Table B1. Multiple linear regression result

Variables entered/removed[a]			
Model	**Variables entered**	**Variables removed**	**Method**
1	Zscore(X3R), Zscore(X2R), Zscore(X1R)[b]		Enter

Note: a. Dependent Vvariable: Zscore(YR). b. All requested variables entered.

Model summary				
Model	**R**	***R* square**	**Adjusted *R* square**	**Std. error of the estimate**
1	.870[a]	.758	.751	.49898641

Note: a. Predictors: (Constant), Zscore(X3R), Zscore(X2R), Zscore(X1R).

ANOVA[a]						
Model		**Sum of squares**	**df**	**Mean square**	**F**	**Sig.**
1	Regression	84.109	3	28.036	112.602	.000[b]
	Residual	26.891	108	.249		
	Total	111.000	111			

Note: a. Dependent variable: Zscore(YR). b. Predictors: (Constant), Zscore(X3R), Zscore(X2R), Zscore(X1R).

Coefficients[a]						
Model		**Unstandardized coefficients**		**Standardized coefficients**	**t**	**Sig.**
B		**Std. Error**	**Beta**			
1	(Constant)	–4.147E-15	.047		.000	1.000
	Zscore(X1R)	.265	.114	.265	2.318	.022
	Zscore(X2R)	.281	.114	.281	2.470	.015
	Zscore(X3R)	.364	.103	.364	3.535	.001

Note: a. Dependent variable: Zscore(YR).

http://dx.doi.org/10.21511/im.17(1).2021.11