

# Investigating the Moderating Effects of Gender and Generation on the Link of Quality Products Perception and Online Shopping Motivation

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**ABSTRACT**--*This study describes some findings concerning the influence of consumers' perception for quality products on the motivation of online shopping with gender and generation as moderators. This study involved a total of 521 respondents spread out over some regions of Indonesia. Collected data were processed by using the regression analysis. This study found that in the absence of moderation variables the consumers' perception of quality products (KP) had a positive and significant effect on the motivation to shop online (OS), because every consumer prefers a quality product. The subsequent analysis focusing on the effect of KP on OS adjusted for gender and generation revealed that: (1) in men group, the consumer's perception of quality products (KP) influences the motivation to shop online (OS) slightly stronger than in women; (2) in the B-Boomers' generation there was no effect of KP on the OS; (3) in the generation X, Y, Z there was a strong effect of KP on the OS. Finally, this effect was more pronounced in generation X as compared to Z and that this effect in Z was still stronger than in generation Y.*

**Keywords**-- *product quality perception, online shopping motivation, generation, gender effects.*

## I. INTRODUCTION

In the past decade online stores have grown quite rapidly worldwide. The development of business through internet media is tremendously increasing, along with an increase in internet users in the world. There are many conveniences in shopping at online stores. Worldwide, especially in the US and Europe, abundant types of products and services are offered online motivating people to preferably do online shopping, while reducing shopping activities in local shopping centers. It is well known that in online stores consumers, especially those who are very familiar with internet technology, can easily find information about products, prices, selection or availability of products, pleasure, encouragement in the heart, customer service, and extensive retail selection. Those are more or less the reasons why some consumers prefer to shop online. This phenomenon is also increasing in Asian regions. Consumers' willingness and enthusiasm for shopping at online stores is reflected in the increase in online store sales in Asian countries over the past 5 years reaching 174.43% (Table 01). This phenomenon can also be observed in Indonesia. For Indonesians living in big cities such as Jakarta, Surabaya, Medan etc., visiting and going to big shopping centers is still considered a short term family gathering and vacation event. However, online shopping intentions show increases in numbers and volume. It was estimated that approximately 11% of the total population

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currently use online shopping services (Dani Prabowo, Kompas.com). The development of the online shopping business is supported by the fact that delivery firms are improving in terms of delivery networking and efficiency. They have tremendously improved recently in terms of delivery time and security of delivery. Considering that Indonesia is a huge country composed of thousands of inhabited islands the door to door delivery system is still problematic and not well developed. Therefore, we assumed that online shopping was preferred by people who live in the big cities only, especially where the internet connection is well established.

**Table 01:** Sales Data of Online Store in Asia

Year	Sales (in billion dollar US)
2013	\$383,9
2014	\$525,2
2015	\$681,2
2016	\$855,7
2017	\$1052,9

Source: <https://id.techinasia.com>

According to the previous findings, there are several behavioral issues influencing the process of how consumers are making their decision to buy products at online stores. The decision making process of people to shop at online stores requires a certain level of caution exerted in making such transactions. One of the main factors that drive consumers to buy products online is the consumer's perception of product quality (Dai, Forsythe, & Kwon, 2014). In online-shopping behavior consumers tend to evaluate the product quality by using a holistic approach, which includes an intensive product searching process, seeking information such as detailed specifications and the availability of a product's warranty, finally followed by a careful ordering process. A high consumer buying involvement process is suggested to be relevant for such online buying behavior. In this case, utilitarian groups are more sensitive to risk, while hedonic groups emphasize the pleasure of shopping as "escapism" rather than risk. Chiu, Wang, & Huang (2014) concluded that the risks arising from online shopping are recognized as the main obstacle to online transactions, but experienced respondents will still shop if they expect greater benefits than those risks.

Besides that, through gaining more online shopping experience consumer's trust and consumer's perception of online stores will increase regarding the perceived quality of products and services. Betancourt (2017) confirmed that perception is a reality, which drives stores' reputation and image. Both consumer perception of store reputation and of product quality influence the buying decision and consumers' loyalty to given stores. Consumer's perception of a given online store is apparently influenced by both internal and external factors. Personal experience and the satisfaction level attained lead to improvement of consumers' perception of stores' products and services quality. In this case we argue that the performance of online stores will have an impact concerning products and services offered. Finally, those factors lead to shopping enthusiasm and motivation. Motivation to shop online will also increase the desire to shop again online (Pappas, Kourouthanassis, Giannakos, & Lekakos, 2017). Consumers will repeat spending on quality products and services in the same store. Product quality

perception is considered to be the reason why consumers buy a product. In a study conducted by Li, Wen, & Shi (2015) it was proven that product quality had a positive effect on the motivation to shop through an online store.

Based on these previous studies consumers' online-shopping behavior can be characterized by demographic characteristics such as gender and generation group. Women's intention to buy online is lower than men's (Nirmala & Dewi, 2011). Female groups tend to be more eager to shop around (Burton, Eccles, & Elliott, 2002). Shopping is one of the main daily tasks of a housewife, such as for buying food, clothes and other household articles (Miller, 1998). In general, women tend to enjoy shopping more than men in both non-online (traditional) and online shopping (Gupta, 2015). In the buying decision process for online shopping women tend to use a hedonic motivation, while men tend to be more utilitarian (Huang & Yang, 2010). However, the study of Otnes (2001) showed that gender role transcendence does not distinguish between gender shopping behaviors in the post-modern era of marketing. Besides for gender, online shoppers can be divided up into four generation categories (B-Boomers, X, Y, and Z). According to Dhanapal et al. (2015), generation X and Y enjoy online shopping more than the baby boomers' generation. Generation Y responds positively towards e-commerce utilization (Kim & Hahn, 2012). Apparently, generation Y is more familiar than generation X with gathering internet information such as technical information and product offers (Amos, Holmes, & Strutton, 2011). Meanwhile, the Z-generation is most familiar with technological aspects of the internet and it has been confirmed that they tend to do more often online shopping than the previous generations (Wood, 2013).

All of the above generations are represented among active shoppers. Most of the available studies focused on finding out the meaning of real product quality and perceived quality. Therefore, this study was undertaken with the following aims: (1) to understand consumers' perception of online shopping behavior, (2) to understand the relationship between the level of perception of product quality towards shopping intention behavior and (3) to analyze the demographic factors influencing online shopping behavior.

## II. LITERATURE REVIEW

### *Perception of Product Quality*

Perception is a process that individuals go through in order to organize and interpret their sensory impressions to give meaning to their environment (Ballard, 2010). Perception is the interpretation of complex processes occurring when people try to understand something pertaining to their own environment (Haugeland, 2012). It is "the opinion of everyone about something" (Witt, 2011). Meanwhile, quality is "the totality of features and characteristics of a product or service that bears its ability to satisfy given needs" (Suchánek, Richter, & Králová, 2015). Thus, the overall characteristics of a product or service show its ability to satisfy implied needs. This definition is a consumer-centered definition of quality. It can be stated that a seller has provided quality if the product or service has met or exceeded consumer expectations.

The perception of the quality of a product can determine the value of the product and directly influence consumer purchase intentions. Perception of product quality is the consumer's prerogative right (Agyekum et al., 2015). Therefore, if the consumer's perception of quality is negative, the product will not be liked and will not last long in the market. Conversely, if the perception of quality is positive the product will be favored by consumers and stay on the market for a long time.

Quality perception reflects the feeling of customers, who do not appear as a whole about a brand, but also depend on the individual mindset and interest. Usually, the perception of quality is based on the dimensions included in the characteristics of the product, while the brand is associated with things such as reliability and performance. Consumer perception of the overall quality of a product will determine the value of the product and directly influence the consumer's buying interest (Kotler, 2012). Based on the above definitions researchers are interested in examining consumer perceptions of quality products as a motivation to shop online.

### ***Online Shopping Motivation***

Online shopping is defined as searching for, choosing and buying goods electronically from home, without being limited by time and location (Burke, 1997). Kau (2003) concluded that 6 online shopper typologies are closely related to the shopping motivation of each typology: (1) An on-off shopper is a shopper who surfs through the internet in order to collect various information online, but who prefers to shop offline; (2) A comparison shopper is a shopper who compares product features, prices, and brands before making a buying decision; (3) A traditional shopper is a shopper visiting offline retailers; (4) A dual shopper is a shopper who seeks information on the internet by comparing brand and product features, but does not always make transactions on the internet; (5) An E-laggard is a shopper who has a lesser interest in finding information in the internet. Only 7% of e-laggards are skilled at using high-level navigation, the second lowest group after traditional shoppers; (6) An information surfer is an online shopper who is experienced and has good navigation skills (Keng Kau, Tang, & Ghose, 2003).

A study done by Ganesh, Reynolds, Luckett, & Pomirleanu (2010) showed the following results: (1) Using motivation measurements seven online shopper segments could be identified. (2) Using the importance of e-store attributes six online store segments could have identified (3) The five common types of shoppers found in traditional stores were also found in online stores; (4) There are three motivations influenced by three groups that shop online, namely interactive shoppers, risk-averse shoppers, and e-window shoppers.

Ganesh also added that a major motivation for shopping online is convenience and optimization, such as being able to shop from home, being able to shop at any time, regardless of traffic congestion and parking difficulties. Chanaka Jayawardhena, Len Tiu Wright (2007) identified five types of online shoppers: (1) active shoppers; (2) price sensitive shoppers; (3) smart buyers; (4) buyers loyal to a given brand; (5) comfort oriented buyers. For consumers experienced in shopping online product brands are not the main reason for buying a product offered. However, for consumers inexperienced with online shopping an important product brand offered is a major consideration for choosing a certain product. Brands can also encourage someone to start shopping electronically (Ward & Lee, 2000).

Shopping motivation includes: (1) shopping convenience (Burke, 1997; Reimers, Clulow, & Reimers, 2014). Even for the sake of convenience and added value consumers are willing to subscribe to paid online services (Wang, Ye, Zhang, & Nguyen, 2005). Consumers can shop for 24 hours 7 days a week. Comfort includes the length of transactions, proximity, saving traveling time and convenient layout and display; (2) shopping for pleasure especially in women who like to buy clothes, bags, shoes, accessories that are displayed attractively at shopping websites (Roy Dholakia, 1999); (3) the diversity of products offered and product brands offered (Dennis, Murphy, Marsland, Cockett, & Patel, 2002); (4) perceived service quality as consumers buy quality goods at a reasonable price level. There are even consumers who are willing to pay higher prices for superior product quality

(goods and services) (Cronin, Brady, & Hult, 2000); (Zeithaml, 1988); (5) Cheaper prices, as consumers believe buying online is cheaper for the same type and quality of product as in traditional markets. Gupta found that respondents age 35 years and older tend to shop off-line due to their reluctance to utilize new technologies. Respondents prefer to shop online when the selling price of online products is lower than in the offline market places (Gupta, 2015).

In addition to the above mentioned psychological motivations of consumers making online purchases, security and privacy risk issues are also considered as influential factors determining buying behavior. In normal online shopping, payment should be made by providing some important personal identities which includes security considerations (Belanger, Hiller, & Smith, 2002; Forsythe & Shi, 2003; Brown & Muchira, 1998). A certain group of people is reluctant to make online transactions, because they are unwilling to inform and share their debit / credit card numbers and personal data to other parties. Such information is apparently considered as highly confidential and should be kept under personal control. Due to this consideration some consumers prefer to use a traditional shopping- and payment system such as using an automatic bank transfer payment (ATM). However, Dhawan Research (2008) produced security findings that could have a positive and negative impact on the motivation of online shopping. Among others: unable to observe the quality of goods purchased (usually for new products, unbranded products, or early shoppers), reluctance of consumers of certain age to follow technological developments. As has been mentioned earlier, Gupta has reported that some types of consumers tend to update themselves with technology (Gupta, 2015).

In general, motivation and desire to buy products in online stores are mainly for the reasons of convenience. Brown, et. al. (2003) obtained empirical findings that fundamental shopping orientation did not have a significant impact on their tendency to buy products online. Other factors that influence the motives and intentions for online shopping include the type of product, previous purchase and gender (Brown, Pope, & Voges, 2003). Concluding from the results of research conducted by Kumar (2016) the factors that motivate online shopping in sequence are: (1) information search, speed and ease of access to various information regarding product guarantees, prices, availability of goods, choice of products and brands that exist; and (2) convenience: free of traffic jams, free of lines when shopping online.

Referring to the studies above it can be concluded that motivation for online shopping is influenced by perceptions of the quality of the products offered. In online shopping the perception of quality products is evaluated by prospective consumers and consumers as a whole. The factors evaluated include: web design, practicality and ease of searching for goods and transactions, security (guarantee of quality, delivery, and use of personal data) that motivates shopping online. Based on rationality the perception of quality products has a positive effect on motivation for online shopping. Perceptions of quality products have an effect on actions to find and buy quality products. All respondents in this study possessed Android phones, whenever they wanted to check the quality of the products. They could easily browse through quality product offers and were highly motivated to shop online.

Perception of product quality significantly influences consumer`s satisfaction. There is a causal model showing a relationship between shopping motivation and perceived product quality in consumers (Ha & Ayda, 2014). The more important the perception towards quality was, the higher was the consumer`s motivation level (Agyekum et al., 2015). This pattern was also applicable to the characterization of online shopping behaviour (Lee & Shin, 2014). With regards to this issue our first hypothesis was as follows:

H1 Consumers' perception of quality products have a positive effect on the motivation to shop online.

### ***Gender***

Stephanie (2005) concluded that gender influences shopping motivation in the following ways (1) Men tend to seek information and comfort, while women tend to look for the uniqueness and diversity of products offered. (2) Regarding price preferences it was found that there were no major differences between women and men. Women were looking for cheaper prices in order to increase their purchasing power for other products because of a limited budget at hand (3) Women were more loyal to certain merchants than men, because of the tendency for a more communal and social life (Noble, Griffith, & Adjei, 2006). In general men tended to shop following the "grab and go" method and immediately leave the shopping center thereafter. Women, however, tended to shop around searching for diverse items, product varieties and alternative choices. Another study found that fewer men did online shopping than women. Women enjoy shopping, both traditional shopping and the internet (Gupta, 2015). Male and female genders have a different perception of quality products influencing motivation and intention to shop online. The motivation of men for online shopping is slightly stronger than that of women as supported by research conducted by KPMG. During 2016 men spent more money on online transactions than women. The average online spending of man was US \$ 220, while the amount spent by women was US \$ 151 (KPMG, 2017). Referring to the explanation above, the second hypothesis was formulated as follows:

H2 Males modulates the influence of consumers' perception of quality products as a motivation to shop online that is stronger than females .

### ***Generations***

Traditionally, one generation is defined as the time interval between the birth of parents and their children with a span of 20-25 years. Due to the rapid development of communication technologies, career choices, studies and changing community values the traditional definition is no longer relevant. According to Howe and Straus (1991) in Dhanapal, Vashu, & Subramaniam (2015): "Generation is a group of people who share time and space in history that gives them a collective personality". In this present study we adopted a generation grouping according to Gibson et.al. (2008) and Berkup (2014) with a slight age adjustment for B-Boomers and adding generation Z. The birth of the B-Boomers happened between 1944 and 1964. Generation X was born between 1965 and 1980. Generation Y, the so called Millennials were born between 1981 to 2000, and Generation Z between 2001 and 2010.

B-Boomers are highly dedicated and have a high loyalty to their work. This is a competitive group of hard workers, the majority of which has already entered retirement age (Berkup, 2014). The consumer behavior of B-Boomers differs between younger and older age groups in Korea. While older B-Boomers allocated a large portion of their income to children's education, younger B-Boomers allocate a large portion of their expenditure to eating outside the home, household appliances, transportation and communication (Lee & Huh, 2004).

Generation X replaces B-Boomers at work. They are independent, rather cynical and like to have fun. They are not as loyal as the previous generation. They chose careers that can maintain a balance between work and other

non-work activities (Lyons, Duxbury, & Higgins, 2005). In terms of consumption behaviour Generation X shows brand loyalty. Generation X also likes the convenience of using all the easy, fast and automatic household equipments and supplies. It is believed that this behaviour will be transmitted to Generations Y and Z.

Generation Y is a mainstay in the workplace with brilliant ideas, but often experiencing boredom. Millennials personify technology, social networking and technology relatedness such as addiction. In the work place Generation Y wants attention and feedback (Jane Whitney Gibson & Edward F. Murphy, 2008). According to researchers there are similarities between the Y and Z Generations in terms of "addiction" to the use of information technology and telecommunications. Besides that, the mind is set to consuming high-tech equipment, fast and instant products and services that are categorized as quality products (Wood, 2013).

In general, the majority of the Z generation members are children of Generation X, and only a small proportion are children of B-Boomers. There are four trends that characterize Generation Z members as consumers, namely: (1) Focus on innovation, (2) Need for comfort, (3) A basic need for security, and (4) The tendency to move to "escape" (Escapism), such as movies, games-online, browsing the internet (Wood, 2013). The life of generation Y is very close to technological devices since adolescence, such as cell phones, video streaming, and other social media. This generation follows a variety of innovations, designs, technologies, and the latest diversity of products. They tend to be more "wasteful" than older families (B-Boomers and X) with various "temptations" towards the latest and quality products. This generation also feels comfortable with technological support systems including time-saving and automation products, distribution channels that emphasize speed and on-time and instant products that are easily prepared and consumed.

The development of communication technology now enables the current generations to penetrate global, cultural and socio-economic boundaries. They can easily access various informations, movies, online games and real time events. Through online games and social media, a group of people across countries in the same generation can discuss, exchange opinions, play, and / or just chat. This has an impact on the formation of perceptions and behavior in shopping for each generation. Every generation has different product needs according to their life cycle (Williams, Page, Petrosky, & Hernandez, 2010). There are significant differences between character traits, values, lifestyle and post-modernism tendencies. Moreover, there are also significant differences between the B-Boomer, X, Y, and post-modern generations that influence consumption behavior of each generation (Chien-Hsiung Lin, 2011). Consumer tastes and preferences varying from time to time is one of the factors that influence online shopping. In general, the younger generation also does e-shopping more frequently from online sites because they are more experienced and able to use excellent internet technology as compared to the previous generations (Gupta, 2015).

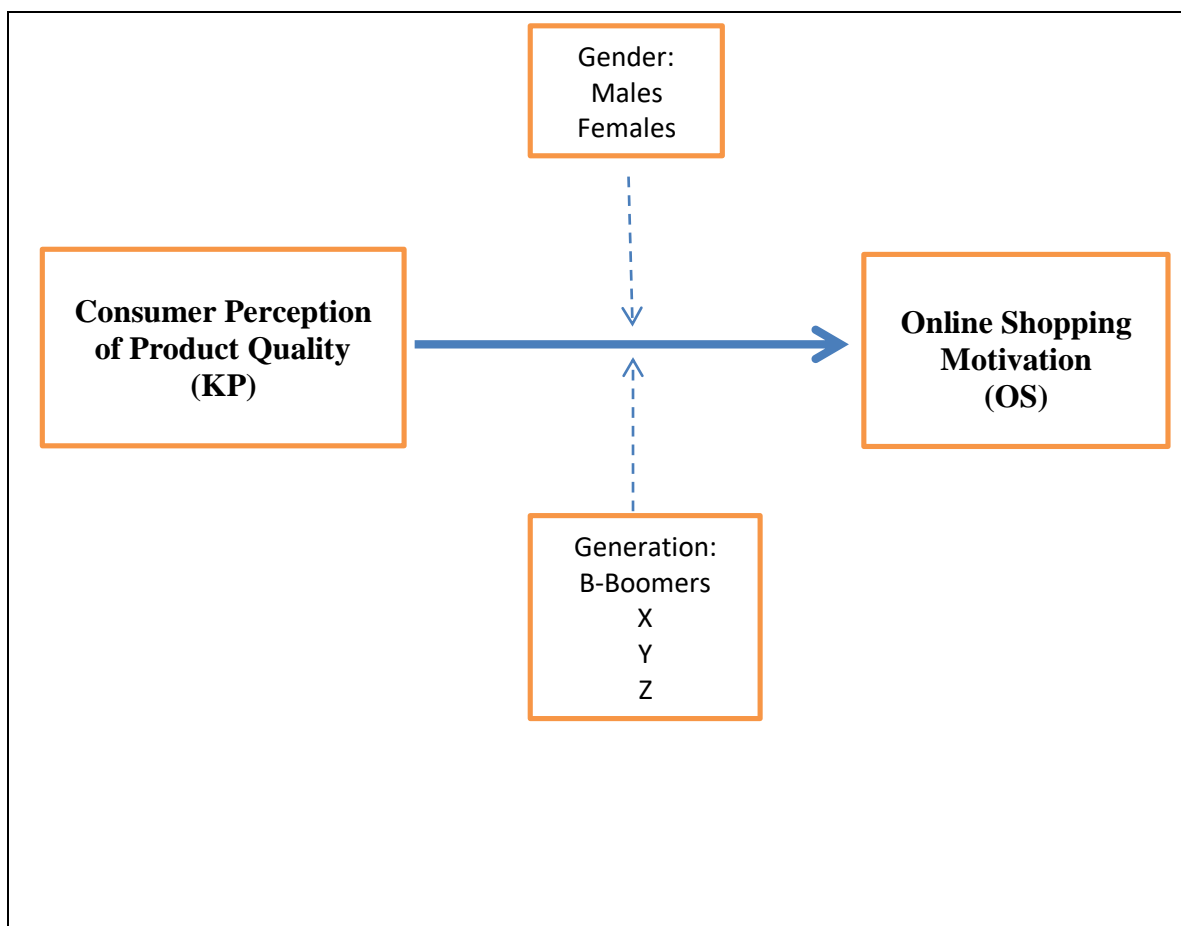
Based on the results of previous studies researchers concluded that all generations basically have the same shopping behavior, but have the needs and perceptions of products (goods and services) that differ according to the life cycle and age group of each generation. It is hypothesized that the X generation, who mastered technology has the motivation to shop online similar to generations Y and Z. Each successive generation will have still greater motivation to shop online, because this is supported by excellent technological mastery. The older generation tends to put more emphasis on quality in shopping than the younger generation. Accordingly, the third hypothesis is formulated below:

H3 Being member of a certain generation modulates indirectly the influence of perceptions of quality products and the motivation to shop online, which is the older generation having perceptions of quality on online shopping motivation much more than the younger.

### III. RESEARCH METHODOLOGY

#### *Data Sources and Samples*

This study was performed using primary data. The data were obtained through the distribution of online questionnaires to respondents. Respondents were asked to fill out the Google document questionnaire that was shared through social media networks and personally (WhatsApp). Figure 1 describes the research model. A total of 618 respondents were recruited, but only 521 respondents with complete answers were enrolled in the study (Table 02). Figure 01 shows the framework of our study.



**Figure 01:** Research Model

**Table 02:** The result of valid questionnaires collected from the respondents.

Table 02.

No.	Statements	Respondents
1.	Questionnaires received	618
2.	Questionnaires meeting all criteria	521



3.	Percentage of questionnaires, which could be analyzed	84,30%
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Respondents were asked to answer some questions mentioned in the questionnaire. Responses are presented by using Likert's scale with 1 to 5 scores from strongly disagree to strongly agree. Respondents were asked to provide us with some socioeconomic and demographic data such as gender, income level and generation groups.

Concerning data analysis this study used three stages of testing with SPSS 22, including: (1) validity test; (2) reliability test; (3) testing the hypothesis analysis. Validity test is done to show the ability of the question in the questionnaire to reveal something that will be measured by the questionnaire. The validity test was carried out using factor analysis. The item questionnaire statement was considered valid if it reached a factor loading of more than 0.5 (Hair, Black and Babin, 2010).

The second test employed was the reliability test. This test is used to measure the stability and consistency of results. If the respondent's answers were consistent the data were considered to be reliable. The commonly used Cronbach's alpha value was greater than 0.6 (Hair, Black and Babin, 2010). The greater the value of Cronbach's alpha the more reliable is the research instrument. Table 04 shows the results of validity and reliability tests in this study.

To test our three hypotheses a two stage approach was used: (1) testing the significance of the influence of consumers' perception for quality products on the motivation of online shopping using regression analysis; (2) examining gender and generation modulation variables, which included to test (a) whether gender differences significantly modulated the influence of consumers' perception of quality products and the motivation of online shopping and (b) whether belonging to a certain generation (B-Boomers, Generations X, Y, and Z) modulated the influence of consumers' perception of quality products and their effects on online shopping motivation using subregional regression analysis.

#### IV. RESULTS OF THE STUDY

Demographic data of respondents used in this study were classified by gender, generation, and income distribution. The detailed profile of respondents can be seen in Table 03:

**Table 03: Respondents' Profile**

	Demographic Data	Total	Percentage
Gender	Males	255	48,95%
	Females	266	51,05%
Generation	B-Boomers' Generation	36	6,90%
	X Generation	92	17,60%
	Y Generation	195	37,28%
	Z Generation	326	62,72%
Income (monthly)	< 100 USD	121	23,30%
	101 – 500 USD	162	31,20%
	501 – 1.000 USD	95	18,20%

	1.001 – 2.000 USD	70	13,40%
	> 2.000 USD	73	13,90%

Table 04. presents the validity and reliability tests using the Cronbach alpha score and factor loading. As we can see all the factor loadings showed that all of them are valid. The Cronbach alpha indicates that both of the variables are reliable.

**Table 04:** The Results of Validity and Reliability Tests

No.	Variable	Code	Factor Loading	Cronbach's alpha
1.	Online Shopping Motivation (OS)	OS1	0,824	0,803
		OS2	0,817	
		OS3	0,646	
		OS4	0,835	
		OS5	0,777	
2.	Consumers' Perception of Quality Product (KP)	KP1	0,859	0,709
		KP2	0,900	
		KP3	0,792	

Table 05 presents results of the regression analysis. This analysis shows that the perception of product quality significantly influences the motivation for online shopping. The modulation factors were gender and type of generation. It showed that p-values of gender variables were less than 0.05 indicating that gender plays no significant role in the motivation for online shopping. From the subgroup regression test conducted the generation that modulates the strongest does not modulate the influence of consumer's perception of quality products on the motivation of online shopping. In a descending row lined up according to beta values are: generation X, generation Z, generation Y, and B-Boomers. This shows that the B-Boomers's generation is not modulating, because the p-value is insignificant at 0.703.

**Table 05:** The Results of Regression and Sub Group

	Beta	P- value
OS as Dependent Variable		
KP, without Moderating Variable	0,245	<0,0000
KP, Moderated by Gender		
• Male (N = 255)	0,272	<0,000
• Female (N = 266)	0,203	<0,001
KP, Moderated by Generation		
• B-Boomers (N = 36)	0,056	<0,703
• X (N = 92)	0,293	<0,014
• Y (N = 195)	0,203	<0,009
• Z (N = 326)	0,283	<0,000

In this study the first hypothesis was supported stating that consumers' perception of quality products has a positive effect on motivation to shop online. The regression test performed produces a beta value = 0.245 with a value of  $p < 0,000$ . The second hypothesis, which states that gender modulates the influence of consumer's perception of quality products on motivation for online shopping was also supported by the results. Demand on Product's quality can be predicted increasing, which is in line with the fact that shows improving of Indonesian living quality and standards especially in the big cities. The Indonesian is nowadays offered with abundant products variety and choices. Subgroup regression tests produced males beta value of 0.272, which was higher than the females beta of 0.203. We conclude men modulate the influence of consumer's perception of quality products on motivation for online shopping slightly stronger than women. This result is in line with the above mentioned supported studies.

The third hypothesis stated that the respective generation will modulate the influence of perception of quality products on motivation to shop online. The subgroup regression test produced a beta value of 0.056 with an insignificant p value of 0.703 for the B-Boomer generation. B-boomer does not moderate the influence of consumer perception of quality products on the motivation of online shopping. The beta value for generation X was 0, 293 with a significant p-value of  $<0.014$ , for generation Y it was 0.203 with a highly significant p value of  $< 0.009$  and for generation Z it was 0.283 with a highly significant p-value of  $<0,000$ . As a conclusion from the subgroup regression test conducted it can be stated that there is a certain order in the sequence of generations modulating the influence of consumer's perception of quality products on the motivation of online shopping. A row with decreasing beta values was as follows: generation X, generation Z, generation Y, and B-Boomers. This clearly demonstrated that the B-Boomers generation is not modulating (insignificant p value of  $< 0.703$ ) the influence of consumer's perception of quality products on the motivation of online shopping. Generation X is the most modulating one when compared to Y and Z (beta X = 0.293, beta Y = 0.203, beta Z = 0.283).

## V. DISCUSSION

B-Boomers generation is not modulating the influence of consumer's perception of quality products on the motivation of online shopping, because this generation is generally less technologically literate than the following ones (Gupta, 2015). Therefore, it is unfamiliar with the use of e-commerce. However, based on a survey conducted by KPMG in 50 countries, B-Boomers are now beginning to understand and appreciate technology. They slowly start shopping online because of its convenience. In B-Boomers expenditure per person per online transaction in 2016 was US \$ 203, followed by Generation X (US \$ 190) and Generation Y (US \$ 173) (KPMG, 2017). B-Boomers are economically well established, thus having a higher average expenditure potential per transaction than the following generations. It appears that those B-Boomers included as respondents in this study are not technology - responsive.

Generation X is the most modulating one when compared to Y and Z. In terms of age most respondents in the X Generation are close to those of Generation Y. They are skilled and have proximity to technology, are well established economically, and are more consumptive and interested in shopping as compared to the Y and Z generations. This is in line with the report released by KPMG showing that generation X is the most active online buyer to conduct online transactions, with an average of 19 transactions per person in 2016, followed by B-

Boomers and the Y generation with 15 transactions per person per year. It is suspected that the economic stability of generation X also affects motivation and interest in online shopping. The following is the average income of the respondents involved in the study.

**Table 06:** Monthly Income of Each Generation

Income	Generation X (n)	Generation Y (n)	Generation Z (n)
< 100 USD	-	22	148
100 – 500 USD	38	96	82
500 – 1,000 USD	26	31	5
1,000 – 2,000 USD	-	-	-
> 2,000 USD	28	10	3
Income average	\$923,91 US	\$506,93 US	\$158, 19 US
Note: The average income for each generation was obtained by the weighted average method.			

Supposedly, Y generation members are not yet well established economically. The age of Y generation members varied between 23-37 years. They are working independently, but they are not at the top of their career, yet. The lack of firm economic establishment causes the Y generation members to reduce the influence of consumers' desire for quality products on online shopping motivations as compared to B-Boomers and Generation Z.

The majority of Generation Z members do not work yet. Although they don't dispose of any significant buying power, their motivation to do online shopping is quite high. Most likely they are used to get financial support from parents belonging to the B-Boomers or X generation with adequate financial capabilities. Generation Z can be considered as important potential consumers for online store in the near future.

## VI. CONCLUSION AND PRACTICAL IMPLICATION

The results of this research show that consumers' perceptions of quality products have a positive effect on motivation to shop online. Consumer perceptions of quality products include: products functioning according to specifications, diversity of product choices offered, and product availability. Men group showed more interest on product quality than women. Highly income society, who have a good buying power tended to have a high motivation to shop online. In this group a product quality concerned is very high. Online stores need to understand consumer perceptions of quality products in online shopping that are integrated from upstream to downstream, covering five types: (1) system quality; (2) information quality; (3) service quality; (4) product quality; (5) delivery service (Ahn, Ryu, & Han, 2004). Types 1, 2, 3, and 5 are intangible. Future research will reveal further details of the five types of product quality (goods and services) in an integrated manner. In the future, there will be more demand on the product quality in Indonesia.

Consumer satisfaction with online shopping will increase motivation and perception of repurchase. The ease of finding various information about quality in online stores promotes online product recommendations (OPR) and consumer reviews (CR), (Benlian, Montreal, & Hess, 2012). Both provide benefits and promotional media for

online stores that increase trust and motivation to shop online. Referring to the KPMG report, online stores need to be proactive and explore B-Boomers' market opportunities by increasing their trust in vendors (online stores) and shopping convenience. They begin to understand and appreciate technology. They are huge potential online consumers in the near future. It is predictable that B-Boomers in Indonesia will follow the wave of technology-savvy Boomers and be motivated to shop online in the future.

For consumers who have higher income levels, the trust and credibility of online stores is the main motivation for shopping online. Shopping satisfaction is a major consideration (Lightner, 2003; Broekhuizen, 2006). For business practice the B-Boomers generation, the X generation and middle class Y generation members provide market opportunities that should be more explored. The impacts of the level of income on the behaviour of consumers from B-Boomers, generation X, and generation Z in Indonesia should be investigated more extensively.

## REFERENCES

1. Ahn, T., Ryu, S., & Han, I. (2004). The Impact of the Online and Offline Features on the User Acceptance of Internet Shopping Malls. *Electronic Commerce Research and Applications*, 3(4), 405–420. <https://doi.org/10.1016/j.elerap.2004.05.001>
2. Agyekum, C. K., Haifeng, H., Agyeiwaa, A., Agyekum, C. K., Haifeng, H., & Agyeiwaa, A. (2015). Consumer Perception of Product Quality. *Microeconomics and Macroeconomics*, 3(2), 25–29. <https://doi.org/10.5923/j.m2economics.20150302.01>
3. Amos, C., Holmes, G., & Strutton, D. (n.d.). *International Journal of Advertising: The Review Of Marketing Communications Exploring The Relationship Between Celebrity Endorser Effects And Advertising Effectiveness*, (February 2015), 37–41. <https://doi.org/10.1080/02650487.2008.11073052>
4. Bauer, H. H., Falk, T., & Hammerschmidt, M. (2006). eTransQual: A Transaction Process-Based Approach for Capturing Service Quality in Online Shopping. *Journal of Business Research*, 59(7), 866–875. <https://doi.org/10.1016/j.jbusres.2006.01.021>
5. Belanger, F., Hiller, J. S., & Smith, W. J. (2002). Trustworthiness in Electronic Commerce: The Role of Privacy, Security, and Site Attributes. *Journal of Strategic Information Systems*, 11(July 2016), 245–270. [https://doi.org/10.1016/S0963-8687\(02\)00018-5](https://doi.org/10.1016/S0963-8687(02)00018-5)
6. Benlian, A., Montréal, H. E. C., & Hess, T. (2012). Differential Effects of Provider Recommendation and Consumer Reviews in E-Commerce Transaction: An Experimental Study. *Journal of Management Information Systems*, 29(1), 1–47.
7. Berkup, S. B. (2014). Working with Generations X and Y in Generation Z Period: Management of Different Generations in Business Life. *Mediterranean Journal of Social Sciences*, 5(19), 218–229. <https://doi.org/10.5901/mjss.2014.v5n19p218>
8. Betancourt, J. R. (2017). Perception is Reality , and Reality Drives Perception : No Time to Celebrate Yet. *Society of General Internal Medicine*, 33(3), 241–242. <https://doi.org/10.1007/s11606-017-4263-z>
9. Broekhuizen, T. (2006). *Understanding Channel Purchase Intentions: Measuring Online and Offline Shopping Value Perceptions*. Labyrinth Publications Pottenbakkerstraat 15 – 17 2984 AX Ridderkerk The Netherlands.
10. Brown, M., & Muchira, R. (1998). Investigating the Relationship Between Internet Privacy Concerns and Online Purchase Behavior. *Journal of Electronic Commerce Research*, 5(1), 62-70.

11. Brown, M., Pope, N., & Voges, K. (2003). Buying or Browsing? *European Journal of Marketing*, 37(11/12), 1666–1684. <https://doi.org/10.1108/03090560310495401>
12. Burke, R. R. (1997). Do You See What I See? The Future of Virtual Shopping. *Journal of the Academy of Marketing Science*, 25(4), 352–360. <https://doi.org/10.1177/0092070397254007>
13. Burton, H. W., Eccles, S., & Elliott, R. (2002). The Effect of Gender on Addictive Consumption: Reflections on Men, Shopping and Consumption Meaning. *Gender and Consumer Behavior*, 6(1), 239–256. <https://doi.org/10.1086/429607>
14. Chanaka Jayawardhena, Len Tiu Wright, and C. D. (2007). Consumers Online: Intentions, Orientations, and Segmentation. *International Journal of Retail & Distribution Management*, 35(6).
15. Chien-Hsiung Lin. (2011). Personality, Value, Life Style and Postmodernism Consumer Behavior: A Comparison Among Three Generations. *International Journal of Organizational Innovation*, 3, 203–230.
16. Chiu, C. M., Wang, E. T. G., Fang, Y. H., & Huang, H. Y. (2014). Understanding Customers' Repeat Purchase Intentions In B2C E-Commerce: The Roles of Utilitarian Value, Hedonic Value and Perceived Risk. *Information Systems Journal*, 24(1), 85–114. <https://doi.org/10.1111/j.1365-2575.2012.00407.x>
17. Cronin, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing The Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments. *Journal of Retailing*, 76(2), 193–218. [https://doi.org/10.1016/S0022-4359\(00\)00028-2](https://doi.org/10.1016/S0022-4359(00)00028-2)
18. Dai, B., Forsythe, S., & Kwon, W. S. (2014). The Impact Of Online Shopping Experience On Risk Perceptions And Online Purchase Intentions : Does Product Category Matter ? *Journal of Electronic Commerce Research*, 15(1), 13–24.
19. Dennis, C., Murphy, J., Marsland, D., Cockett, T., & Patel, T. (2002). Measuring Brand Image : Shopping Centre Case Studies Measuring Brand Image : Shopping Centre Case Studies. *International Review of Retail, Distribution and Consumer Research*, 12(4), 353–373. <https://doi.org/10.1080/09593960210151153>
20. Dhanapal, S., Vashu, D., & Subramaniam, T. (2015). Perceptions on the Challenges of Online Purchasing: A Study From “Baby Boomers”, Generation “X” And Generation “Y” Point of Views. *Contaduria Y Administracion*, 60(S1), 107–132. <https://doi.org/10.1016/j.cya.2015.08.003>
21. Dhawan, A. (2008). Motivation Factors for OnLine Buying : Security.
22. Forsythe, S. M., & Shi, B. (2003). Consumer Patronage and Risk Perceptions in Internet Shopping. *Journal of Business Research*, 56(11), 867–875. [https://doi.org/10.1016/S0148-2963\(01\)00273-9](https://doi.org/10.1016/S0148-2963(01)00273-9)
23. Ganesh, J., Reynolds, K. E., Luckett, M., & Pomirleanu, N. (2010). Online Shopper Motivations, and e-Store Attributes: An Examination of Online Patronage Behavior and Shopper Typologies. *Journal of Retailing*, 86(1), 106–115. <https://doi.org/10.1016/j.jretai.2010.01.003>
24. Garvin, D. a. (1984). What Does “Product Quality” Really Mean? *Sloan Management Review*. <https://doi.org/10.1183/09031936.00106609>
25. Gupta, P. (2015). Comparative Study of Online and Offline Shopping: A Case Study of Rourkela In Odisha. *E-Service Journal*, 3(3), 1–54. Retrieved from [http://ethesis.nitrkl.ac.in/6738/1/Comparative\\_\\_Gupta\\_2015.pdf](http://ethesis.nitrkl.ac.in/6738/1/Comparative__Gupta_2015.pdf)
26. Hair; Black; Babin; (2010). *Multivariate Analysis*.

27. Ha, N. T., & Ayda, G. (2014). Factors that influence consumer purchasing decisions of Private Label Food Products A case study of ICA Basic. *Malardalens Hogskola Eskilstuna Vasteras*. <https://doi.org/10.12740/PP/26071>
28. Huang, J. H., & Yang, Y. C. (2010). Gender Differences in Adolescents' Online Shopping Motivations. *African Journal of Business Management*, 4(6), 849–857 <https://id.technasia.com>
29. Jane Whitney Gibson, R. A., & Edward F. Murphy, J. (2008). Generational Differences in The Workplace: Personal Values, Behaviors, and Popular Beliefs Jane. *Research and Training Center on Community Living*, 4(3), 1–8. <https://doi.org/Retrieved> from <http://search.proquest.com.library.capella.edu/docview/195561673?accountid=27965>
30. Keng Kau, A., Tang, Y. E., & Ghose, S. (2003). Typology of Online Shoppers. *Journal of Consumer Marketing*, 20(2), 139–156. <https://doi.org/10.1108/07363760310464604>
31. Kim, J., & Hahn, K. H. Y. (2012). Effects of Personal Traits on Generation Y Consumers' Attitudes Toward the Use of Mobile Devices for Communication and Commerce. *An Interdisciplinary Journal on Humans in ICT Environments*, 8(2), 133–156.
32. KPMG, T. (2017). The Truth about Online Consumers. 3 [https://en.onpage.org/wiki/Cohort\\_Analysis](https://en.onpage.org/wiki/Cohort_Analysis). <https://doi.org/10.1038/scientificamericanmind0509-54>
33. Kumar, A. (2016). Beyond Buying To Shoppers: Motivation Towards Online Shopping. *BVIMSR's Journal of Management Research*, 8(1), 31–37.
34. Lee, Y. G., & Huh, E. (2004). Consumption and Saving Behavior of Older and Younger Baby Boomers in Korea. *Journal of Family and Economic Issues*, 25(4 SPEC.ISS.), 507–526. <https://doi.org/10.1007/s10834-004-5493-x>
35. Lee, E. J., & Shin, S. Y. (2014). When Do Consumers Buy Online Product Reviews? Effects of Review Quality, Product Type, and Reviewer's Photo. *Computers in Human Behavior*. <https://doi.org/10.1016/j.chb.2013.10.050>
36. Li, B., Wen, D., & Shi, X. (2015). Research on Product Quality Control in Chinese Online Shopping: Based on the Uncertainty Mitigating Factors of Product Quality. *Total Quality Management and Business Excellence*, 26(5–6), 602–618. <https://doi.org/10.1080/14783363.2013.865917>
37. Lightner, N. J. (2003). What Users Want in E-Commerce Design: Effects of Age, Education and Income. *Ergonomics*, 46(1–3), 153–168. <https://doi.org/10.1080/00140130303530>
38. Lyons, S., Duxbury, L., & Higgins, C. (2005). Are Gender Differences in Basic Human Values A Generational Phenomenon? *Sex Roles*, 53(9–10), 763–778. <https://doi.org/10.1007/s11199-005-7740-4>
39. Miller, D. (1998), *A Theory of Shopping*. Cambridge: Polity Press
40. Nirmala, R. P., & Dewi, I. J. (2011). The Effects of Shopping Orientations, Consumer Innovativeness, Purchase Experience, and Gender on Intention to Shop for Fashion Products Online. *Gadjah Mada International Journal of Business*, 13(1), 65–83.
41. Noble, S. M., Griffith, D. A., & Adjei, M. T. (2006). Drivers of Local Merchant Loyalty: Understanding The Influence of Gender and Shopping Motives. *Journal of Retailing*, 82(3), 177–188. <https://doi.org/10.1016/j.jretai.2006.05.002>
42. Otnes, C., & Ann, M. (2001). Perceptions and Realities of Male Shopping.Pdf, 77, 111–137.
43. Pappas, I. O., Kourouthanassis, P. E., Giannakos, M. N., & Lekakos, G. (2017). The Interplay of Online Shopping Motivations and Experiential Factors on Personalized E-Commerce: A Complexity Theory

- Approach. *Telematics and Informatics*, 34(5), 730–742. <https://doi.org/10.1016/j.tele.2016.08.021>
44. Prabowo, Dani. <https://properti.kompas.com/read/2018/04/05/>
  45. Reimers, V., Clulow, V., & Reimers, V. (2014). Shopping and Convenience : A Model for Retail Centres, (July). Conference Proceeding 1058-1062.
  46. Roy Dholakia, R. (1999). Going Shopping: Key Determinants of Shopping Behaviors and Motivations. *International Journal of Retail & Distribution Management*, 27(4), 154–165. <https://doi.org/10.1108/09590559910268499>
  47. Schiffman, L., & Kanuk, L. L. (2007). *Consumer Behavior*. New Jersey.
  48. Wang, C. L., Ye, L. R., Zhang, Y., & Nguyen, D.-D. (2005). Subscription to Fee-Based Online Services: What Makes Consumer Pay for Online Content? *Journal of Electronic Commerce Research*, 6(4), 304–311. <https://doi.org/10.1017/CBO9781107415324.004>
  49. Ward, M. R., & Lee, M. J. (2000). Internet shopping , consumer search and product branding. *Journal of Product & Brand Management*, 9(1), 6–18.
  50. Williams, K. C., Page, R. A., Petrosky, A. R., & Hernandez, E. H. (2010). Multi-Generational Marketing : Descriptions , Characteristics , Lifestyles , and Attitudes. *Journal of Applied Business and Economics*, 11(2), 2003.
  51. Wolfinger, M., & Gilly, M. (2000). Consumer Motivations for Online Shopping. *AMCIS 2000 Proceedings*, 1362–1366.
  52. Wood, S. (2013). Generation Z as Consumers: Trends and Innovation. NC State University, 1–3. Retrieved from <https://iei.ncsu.edu/wp-content/uploads/2013/01/GenZConsumers.pdf>
  53. Yoo, B., & Donthu, N. (2001). Developing a Scale to Measure The Perceived Quality of An Internet Shopping Site (SITEQUAL). *Quarterly Journal of Electronic Commerce*, 2, 31–47. [https://doi.org/10.1007/978-3-319-11885-7\\_129](https://doi.org/10.1007/978-3-319-11885-7_129)
  54. Zeithaml, V. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, 52(3), 22. <https://doi.org/10.2307/1251446>