

# Motivation and Value of Low-Cost Green Car (LCGC) Purchase Intention Across Generations

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Received: 16 August 2019 / Revised: 11 September 2019 / Accepted: 16 November 2019 /  
Published online: 31 December 2019

## ABSTRACT

The low-cost green car (LCGC) is becoming one of interesting research topics in the automobile industry along with its unique characteristics of a vehicle product, tax incentives, and industry growth. The characteristics of this green product and its economic value are ultimately shifting customer behavior. Therefore, an understanding of the purchase motivation and value perception is crucial to determine the purchase intention. Perceived value acted as a full experience that customers received as a combination of thinking and feeling dimensions which are consistent with the utilitarian and hedonic motivations. Besides, LCGC sales have also been growing recently from the first car owner until more senior customers who are predicted to have different motivations and values across generations. This study explores the LCGC car purchase intention of 240 customers in Indonesia to find relationships of buyers' motivation and perceived value to the LCGC purchase intention across generations X, Y, and Z. The result shows that hedonic motivation significantly differs particularly between generation Y versus Z, and X versus Z. However, utilitarian motivation does not significantly differ among generations. Further, perceived value also significantly differs between generations X and Y.

JEL classification: M30, M31

**Keywords:** customer motivation, hedonic, LCGC, perceived value, purchase intention, utilitarian.

## 1. INTRODUCTION

With a growing middle-class segment, the GDP of a particular country can significantly grow complemented with car ownership, including in Indonesia. The low-cost green car (LCGC) is becoming one of interesting research topics in the automobile industry along with its phenomenon, tax incentives, industry growth, as well as a shift in consumer behavior. The business nature of the automotive industry is highly rigid due to its high R&D cost and a long product life-cycle. Hence marketers need to have deep understanding of customers' purchase motivation and perceived value as considerations before launching the product.

Slightly different from a hybrid car, LCGC is known to consume little fuel and to be targeted to the lower-income customer (Suhud & Willson, 2019). Thus, besides the environmentally friendly image, LCGC is also identified as a cheap and second-class product. Therefore, some

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studies associate LCGC purchase with its product attributes, such as the price and product quality perception (Komaladewi & Indika, 2017; Suhud & Willson, 2019).

There is a clear upward trend of LCGC sales from 2014 to 2020 and LCGC is predicted to seize the market share of a multi-purpose vehicle (MPV). MPV is the most adaptive car of all and has earned the largest market share for its functionality but has been recently overshadowed by the new trend and demand for LCGC cars (IPSOS Automobile Report, 2016). Customers are now more attracted to LCGC variants. In fact, a recent survey about Toyota and Honda market shares shows Honda acquiring some of Toyota's market share after it launched an LCGC product, then Toyota stroke back and regained its lost market share by launching a new LCGC product (Nusantoro & Tjahjono, 2018). It is reflected in the automotive industry's response to adapt to the new environment by releasing new LCGC models, creating new variants and more (Banister, 2017). It also indicates a shift in the buying behavior in correlation with a shift in the generation that dominates car purchases.

Studies on LCGC purchasing and customer decision have been widely conducted in academia, particularly regarding LCGC as a green product (Olson, 2013), pricing (Komaladewi & Indika, 2017), quality and brand image (Hudrasyah, 2015; Suhud & Willson, 2019). All these factors are embedded in the product attributes that are given and uncontrollable by the customers. However, studies on individual-related factors, such as motivation among different groups of buyers, have rarely been conducted. This research aims to specifically determine the relationship of the buyer's motivation and perceived value to the LCGC purchase intention. Ultimately, this study sheds light on how these relationships vary across different generations.

## 2. LOW-COST GREEN CAR (LCGC)

There are several terms and conditions for cars that are classified as green cars. First, in Indonesia cars can be classified as green cars if they consume maximum 1 liter of fuel per 20 km. Even if the engine capacity is small, it does not mean that a car will be classified as green if it consumes more than a liter to travel that distance. The advantage of being classified as a green car is tax exemption based on Government Regulation (PP) Number 41 of 2013 (Sanjaya & Indriani, 2014).

LCGC car is the short name for 'Low-Cost Green Car'. Highlighting the name 'Low-Cost' will refer to the LCGC core value as value for money. LCGC cars are made to be affordable whilst still limiting negative environmental impact, given their mass production strategy. Referring to the topic of LCGC car, value for money will be one of the core points of this research. There are also other core values in focus in this study: an LCGC car considered as a 'good' buy, and overall good value delivered by LCGC car. The researcher will define what makes an LCGC car a good buy and what makes good value of an LCGC car (Miao et al., 2014), these are two also important values of buying an LCGC car.

### 2.1. LCGC Car Purchase Intention

Being part of decision-making studies, purchase intention concentrates on human reasons for purchasing a particular brand (Shah et al., 2012). As defined by Morinez et al. (2007), an event or condition where the consumer is individually pushed to purchase a certain product is regarded as purchase intention. In predicting the buying process, purchase intention is regarded as an effective tool (Ghosh, 1990). According to Gogoi (2013), during the buying process, internal or external motivations affect customers' buying patterns and ultimately their purchasing decision. In addition, some researchers have proposed six stages before deciding to buy the product, which

are: awareness, knowledge, interest, preference, persuasion, and purchase (Kotler & Armstrong, 2010; Kawa et al., 2013).

The probability and willingness to prefer to purchase the product which has eco-friendly features are conceptualized as the purchase intention for a green product (Rashid, 2009; Chan, 2001). Numerous studies have found that consumers who have shown their concern for the environment, also defined as having an environmental value, are more inclined to purchase green products (Manaktola & Jauhari, 2007; Ali et al., 2011).

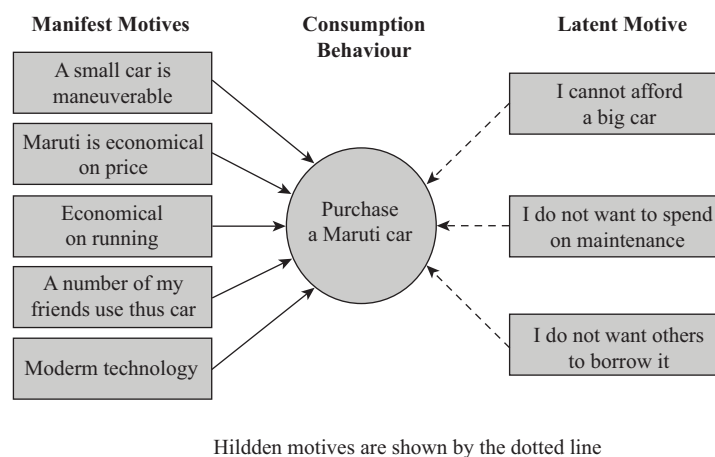
LCGC purchase intention is more complex than merely purchasing a green product. Besides its “green” value, it also holds a “low-cost” value. The low-cost value has several implications for customer decision-making and for the company in market positioning and targeting. Therefore the motivation and value perception by customers should be explored for LCGC products.

## 2.2. Relationship Between the Buyer’s Motivation (Manifest) and the Consumer’s Perceived Value

Motivation has emerged in the study of consumer behavior, especially to understand the customer’s predisposition to act. Motivation has evolved from biological needs as the result of unmet needs into more social-cognitive motivations (Pincus, 2004). Motivation develops purchasing behavior. It works subconsciously, thus making it difficult to measure. Buying behavior is also affected by a certain level of motivation. As shown in Figure 1, latent motives are usually hidden deep inside customers’ subconscious level and will be hard to notice, not to mention costly. A smart marketer will focus on noticing a manifest motive rather than latent motives for its visibility and time effectiveness.

**Figure 1**

Manifest & latent motives



Source: Olson & Peter, 1998.

In the study of green vehicle purchase, motivational constructs are widely established as drivers of the purchase intention. The study of Ozaki and Sevastyanova (2011) divides the motivational factors of purchasing a hybrid or electric car into five, which are: financial and policy advantage, environmentalism, social norms, technology attractiveness, and independence of petrol consumption. A study by Nayum et al. (2016), in turn, recognized multifaceted motivation through the socio-psychological profile to explore different car buyers. Therefore, in our study of LCGC car, we highlight the importance of different motivations among the distinct age group.

Consumer motivation generally can be measured by two factors, which are hedonic and utilitarian motives (Shah, et al., 2011; Herabadi, Verplanken, & Knippenberg, 2009). The fundamental difference between the two is that a utilitarian motive is task-related and cognitively

driven to one's mind and logic, whilst a hedonic motive has a greater focus on emotive opinions and responses, multisensory, fanciful and exciting aspects of a product as well as appreciation of the experience rather than simply task completion (Overby & Lee, 2006; Nili, Delavari, Tavassoli, & Barati, 2013). In short, utilitarian motives focus more on the task and functionality whilst hedonic ones rely more on the experience and emotions.

The term "value" used in this study refers to a judgment of preference by consumers (Gan et al., 2005). According to Cronin et al. (2000), perceived value is the customer's overall assessment of the utility of a product based on perceptions of what is received and what is given. Sweeney and Soutar (2001) define customer value as a customer-perceived preference for and evaluation of product attributes, attribute performance and consequences in terms of the customer's goals and purposes. Value is always determined by the consumer, depending on the customer context, such as terms, timing and testaments. Value is a perception, a view, or understanding made up of measurable components (Sweeney, 1992). Perceived value is a comprehensive form of customer evaluation (Rust & Oliver, 1994). Value perception may also differ according to the usage situation (Anckar & D'Incau, 2002), and could be the function of the overall quality and price of the firm's products and services compared to the competition (Mokhtar et al., 2005).

In our study, we defined perceived value as Miao et al. (2014) did. It consists of economical value in terms of cost-benefit calculations, low-price value, simplicity (of the features), and environmental value. These values are the most relevant for the customer perceived value ensuing particularly from a green vehicle and are predicted to be the most relevant in light of the previous study on the motivational factors of green car purchase.

This study will also uncover the effect of buyers' motivations on perceived value. The buyer's motivation acts as an antecedent of perceived value (Prebensen et al., 2012). Hence, logically, there will be a relationship between the buyer's motivation (hedonic and utilitarian) and the consumer's perceived value. A high utilitarian value will reduce an individual's need to seek alternatives, but when perceived value is low, customers will switch to other products/services (Yuskel & Ozsoy, 2015). This further proves that utilitarian value has a negative correlation with perceived value. Besides, perceived value is also seen to be comprised by utilitarian and hedonic values, which may imply that perceived value and utilitarian and hedonic values have a positive correlation (Mathews, Ambroise, & Brignier, 2011). These facts further corroborate the author's hypotheses:

*H1a: Hedonic motivation is positively correlated with the consumer's perceived value.*

*H1b: Utilitarian motivation is positively correlated with the consumer's perceived value.*

### **2.3. Relationship Between Consumer Perceived Value and Purchase Intention**

Perceived value identified as hedonic and utilitarian is noted to have a significant positive correlation with purchase intention (Gan & Wang, 2017), with the utilitarian one having the highest positive correlation of all. In another analysis, customers' perceived value also has a significant positive contribution towards purchase intention (Wu & Chang, 2016). Another study in China also revealed that perceived value is a significant predictor of purchase intention (Hu, 2019). All the evidence above further supports and corroborates the author's hypothesis. Lastly, research on LCGC driver's purchase intention revealed that perceived value also plays a significant role in contributing positively towards purchase intention (Dewi, Putra, & Wahyudi, 2018).

*H2: The consumer's perceived value is positively correlated with purchase intention.*

## 2.4. Relationship Between the Buyer's Motivation (Manifest) and Purchase Intention

The buyer's motivation connoted as utilitarian and hedonic motivation has been proved to be a significant contributor towards purchase intention (Chen, Chang, & Chen, 2019; Yu & Lee, 2019). Specifically, research in India focusing on the automobile industry revealed hedonic and utilitarian motivation to have a strong relationship with car purchase intention (Krithika & Rajini, 2017). Moreover, a hedonic act is an important predictor of purchase intention. Previous research, especially that concentrated on the relationship of hedonic and utilitarian motivation with purchase intention, led to the author's next hypotheses:

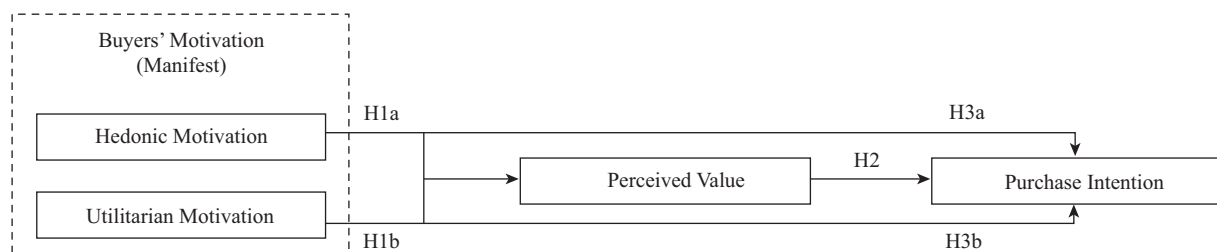
*H3a: Hedonic motivation is positively correlated with purchase intention.*

*H3b: Utilitarian motivation is positively correlated with purchase intention.*

To simplify the relationships and hypotheses proposed, the research framework is drawn as follows:

**Figure 2**

Research framework



## 2.5. Generations X, Y, Z and Their Buying Motivation and Perceived Value

Everyone talks about lifestyles, habits, preferences, and ways to involve these generations. There are 3 generations defined today in the modern world.

### *Generation X*

Generation X was born between 1962 and 1980 (Pendergast, 2010). Most remember being at school without computers and then later, the introduction of computers in junior high school or senior high school. Unlike the previous generations, they are more interested in philosophy than settling into long-term careers and families. The social networks and individual relations in generation X are dynamic and rapidly changing. Gen X is often called the MTV Generation, experiencing the emergence of music videos, new wave music, electronics, etc., and is referred to as “digital immigrants”.

### *Generation Y or Millennial*

Generation Y was born between 1980 and 1994 (Pendergast, 2010). Known as sophisticated, tech savvy, immune to the most traditional marketing and sales, they have seen it all and have been exposed to everything since childhood. Millennials value products for their necessity to their lives and are skeptical about advertising (Lodes & Buff, 2009). While older generations lament the ever-increasing usage of technology by the Millennials, this technology is just a tool used by Millennials to satisfy their desire to be part of a community (Beirne & Howe, 2008). With unlimited access to information, they tend to be firm, with strong views. Generation Y is less loyal

to brands. The speed of the internet makes them flexible, leads to rapid changes in their lifestyle and determines how it is communicated. They are often called “digital natives”.

### **Generation Z**

Generation Z was born after 1995 and they have never known the world without computers and cellphones. Their age is now from preschoolers to teenagers and they are digital integrators, have integrated technology into their lives, and have used it since the youngest age. They are smart consumers, they know what they want and do not stick to brands. They are globally focused, visually involved, changing education, socially defined. Below is a summary that explains each generation’s (X, Y, and Z) characteristics and the workings of each generation (Brizgis, 2017).

Generation Y is argued to have a strong inclination towards hedonic motivation as compared to utilitarian motivation (Illah et al., 2014). Another study also supported the statement. Generation Y or Millennial is more inclined to exhibit hedonic behavior as opposed to utilitarian behavior (Salim et al., 2019). Another research in the UK revealed differences between generation X and Y as regards the key values that drive luxury item purchase (Foulkes, 2019). Hence, it is suggested that marketers differ approaches when they market products to these segments. The statements by previous researchers further support the author’s hypothesis:

*H4: There are different manifest motivations and perceived values among generations X, Y and Z.*

**Table 1**

An overview of the characteristics of generations X, Y, Z

	Generation X	Generation Y	Generation Z
Born Between	1965–1980	1981–1995	1996–2017
Current Age	37–52	22–36	21 and younger
Values	Entrepreneurship, information, access	Diversity, structure, technology	Connectivity, self-direction, innovation
Preferences	Talk in short sound bites, be direct and truthful, communicate the ‘why’, get feedback often, keep them in the loop	Use action words, challenge them, promote two-way feedback, have fun, do not take yourself too seriously	Be open to cross-from communications, promote independence and creativity, provide clear direction and accountability

Source: Brizgis, 2017.

### **3. METHODS**

This study used a quantitative approach, a closed-ended survey for data collection. The questionnaire was divided into 4 parts. The first part was the customer profile containing the demographics of respondents including gender, age, monthly income, and occupation. Besides, respondents were asked about the current transportation that they used and whether they owned an LCGC car. The second part covered motivation including measuring consumer behavior related to the buyer’s motivation. The third part encompassed perceived value including measuring the consumer’s thoughts about the LCGC car and the last part was purchase intention including measuring consumers’ intent to buy an LCGC car.

The respondents for this research were both female and male, aged above 17 years, living in Jakarta (as one of the largest LCGC sales locations in Indonesia), who either already had an LCGC car, intended to buy an LCGC car, and planned to buy an LCGC car in the last 3 years.

In total, we collected 240 respondents with similar proportions for generations X, Y, and Z. The detailed characteristics of the respondents are depicted in Table 2.

**Table 2**  
Participants' profile

Age		Gender	
17–24	71 (29.6%)	Male	154 (64.2%)
25–38	80 (33.3%)	Female	86 (35.8%)
Above 39	89 (37.1%)	Current daily mode of transport	
Monthly Income		Motorbike	145 (60.4%)
Below Rp.2.800.000	80 (33.3%)	Car	80 (33.3%)
Rp.2.800.000–Rp.5.000.000	110 (45.8%)	Online Transportation	112 (46.7%)
Above Rp 5.000.000	50 (20.8%)	Public Transportation	42 (17.5%)

We did the validity test using Pearson correlations and the reliability test using Cronbach's alpha (as shown in Table 3). All items are considered as valid and reliable. We also checked normality using the Kolmogorov-Smirnov test and the significant value is less than .05. This indicates that our data is not normal. We therefore used a non-parametric test, which is Spearman's rank correlation to test hypotheses 1 and 2. The interpretation of the strength of the relationships follows Mukaka (2012) by examining the correlation coefficient ranging .00–.30 (negligible correlation); .30–.50 (low correlation); .50–.70 (moderate correlation); until above .70 (high correlation). For the third hypothesis, we used the Kruskal-Wallis test to test the differences of the buyer's motivation and perceived value across generations X, Y, and Z.

**Table 3**  
Operational variables

Variables	Sub-Variable	Code	Questions	Cronbach's Alpha
Buyer's Motivation (Manifest) (Shin Kim, 2006)	Hedonic Motivation	H1	For me, buying an LCGC car is an adventure	.796
		H2	I have the pleasure of being able to buy an LCGC car	
		H3	I enjoy the time when searching for information about LCGC cars	
		H4	I bought an LCGC car to keep up with the current automotive trend	
	Utilitarian Motivation	U1	It is important for me to buy the LCGC car that I am looking for	.688
		U2	I feel successful if I get an LCGC car that I have wanted for a long time	
		U3	I don't like spending time entering various car dealerships to get the best prices	
		U4	I want to get a lot of information about LCGC without wasting a lot of time	

Variables	Sub-Variable	Code	Questions	Cronbach's Alpha
Perceived Value (Miao et al., 2014)	Economical	PV1	In my opinion, the Low-Cost Green Car is economical	.787
	Simple Features (Compact)	PV2	In my opinion, LCGC (Low-Cost Green Car) car features is simple (compact)	
	Environmental Benefit	PV3	In my opinion, LCGC (Low-Cost Green Car) car is environmentally friendly	
Purchase Intention (Degirmenci and Breitner, 2017)	Mean to buy an LCGC car	PI1	If I have the chance, I intend to buy an LCGC car	.859
	Plan to buy an LCGC car	PI2	I estimate that I will buy an LCGC car	
	Intend to buy an LCGC car in 3 years	PI3	I might buy an LCGC car in the near future	

#### 4. RESULTS AND DISCUSSION

The overall result of this study revealed several interesting findings. *First*, utilitarian and hedonic motivations have positive correlations with perceived value. However, the values are negligible with  $r = .274$  and  $r = .261$  respectively. This indicates negligible or near no correlation between manifest motives and perceived value. It is contrasted with Mathews, Ambroise, and Brignier (2011) but can be explained by Woodruff (1997), namely that perceived value is a trade-off between what is considered benefit and cost. Hence, there may be many more contributing variables that form perceived value other than hedonic and utilitarian manifest motivation. Hence, H1a and H1b are rejected.

*Second*, perceived value has a positive significant correlation with purchase intention ( $r = .350$ ,  $p < .005$ ), consistently with previous research (Gan & Wang, 2017). Further, utilitarian motivation has a low correlation ( $r = .336$ ,  $p < .005$ ) with purchase intention, while hedonic motivation has negligible correlations ( $r = .282$ ,  $p < .005$ ) respectively. This finding is contrasted with previous studies by Chen, Chang, and Chen (2019) and Yu and Lee (2019). Looking at the unique nature of a vehicle product being a sign of affluence, buyers' attitude towards vehicle purchase might be different than in the case of everyday products. Further, even though it has a price tag above 100 million rupiahs, LCGC cannot be considered as luxurious as other premium car products due to poor brand image and quality perceptions (Suhud & Willson, 2019). Thus, hedonic motivations might not play such an important role as in the case of other car products. On the other hand, utilitarian motivation might still play some role since it covers the basic function of a vehicle, even though not much due to limited features of the LCGC. Thus, H2 is accepted, H3a is rejected, and H3b is accepted.



**Table 4**

Results of the Kruskal-Wallis test: Differences of variables among generations

Variables	Age Group (Generation)	Mean Rank	Chi-Square (Asymp. Sig.)
Hedonic Motivation	X	125.00	9.529 $p = .009^{**}$
	Y	102.20	
	Z	94.95	
Utilitarian Motivation	X	114.53	1.741 $p = .419$ (n.s.)
	Y	102.16	
	Z	103.24	
Perceived Value	X	110.78	6.645 $p = .036^{*}$
	Y	119.16	
	Z	94.19	

At last, the most interesting finding by the author is that there is a difference of means for generations X, Y and Z in terms of perceived value and hedonic motivation as posited in hypothesis 4. There is no significant difference in utilitarian motivation among the three generations ( $p = .419$ ). This might imply that the generations hold the same utilitarian value. An interesting pattern occurs in hedonic motivation. However, there is a significant difference in distribution and means for perceived value and hedonic manifest motivation among generations X, Y, and Z ( $p = .036$  and  $p = .009$ , respectively). The results of the Kruskal-Wallis test can be seen in Table 4.

**Table 5**

Results of post-hoc Mann-Whitney U test

Variables	Age Group Comparison	Mean Rank	Asymp. Sig. (2-tailed)
Hedonic Motivation	X and Y	75.75 ; 71.06	.504 (n.s.)
	Y and Z	70.31 ; 56.95	.040*
	X and Z	88.69 ; 66.89	.002**
Perceived Value	X and Y	83.28 ; 65.74	.011*
	Y and Z	61.87 ; 66.38	.475 (n.s.)
	X and Z	82.91 ; 71.45	.103 (n.s.)

The Mann-Whitney test is used to elaborate the Kruskal-Wallis test to see more specifically which generations differ, as shown in Table 5. It turns out that a significant difference in perceived value occurs between generations X and Y ( $p = .011$ ). A significant difference also occurs in hedonic motivation between generations Y and Z and X and Z ( $p = .040$  and  $p = .002$ , respectively). Our analysis shows that generation Z has the highest average hedonic value of all generations. Generation Y has the second highest average value, and generation X has the lowest. This might imply that with the advancement of generations, generations to come will be more driven by hedonic motivation.

From the findings, we can imply that hedonic motivation shows a significant difference, particularly between generations Y and Z, and X and Z. Perceived value also reveals a significant difference among generations, particularly between generations X and Y. Hypothetically, those aged 17–24 tend to be driven by hedonic motivation for buying an LCGC car because of their life stage. These people would most likely be high school to college students with occasional first jobbers who might still be financially dependent. With financially dependent status, they would

psychologically be less concerned with utilitarian value (Zhou, Arnold, Pereira, & Yu, 2010). However, for the 25–38 age range might be dominated by early-career strugglers who are setting their place in the world. Hence, they will be more concerned about money (Ballard et al., 2013). For this life stage, utilitarian value is logical to be put forward for LCGC car purchase. As for the age range above 38 years, they are in a later life stage with a more stable career and a much broader option when purchasing a vehicle. Further, gen X has developed higher trust with car dealers, which might affect their decision-making when considering more reasonable factors (Parment, 2013). Hence, there would be one more variable other than utilitarian or hedonic motivation that will drive them to purchase. However, further research is needed to reveal one deeper level of each age range's purchase driver. The summary of hypotheses testing is presented in Table 6.

**Table 6**

Summary of hypothesis testing

	Hypotheses	Results
H1a	Hedonic motivation is positively correlated with the consumer's perceived value	Rejected
H1b	Utilitarian motivation is positively correlated with the consumer's perceived value	Rejected
H2	The consumer's perceived value is positively correlated with purchase intention	Accepted
H3a	Hedonic motivation is positively correlated with purchase intention	Rejected
H3b	Utilitarian shopping is positively correlated with purchase intention	Accepted
H4	There are different manifest motivations and perceived values among generations X, Y and Z	Accepted

## 5. CONCLUSIONS AND RECOMMENDATIONS

Based on our study findings on LCGC purchase in Indonesia, the buyer's latent motivation (hedonic and utilitarian motivation) is not highly correlated with perceived value. Further, the comparison between generations X, Y, Z shows that there is no difference for utilitarian manifest motivation, but significant differences exist in hedonic motivation between generations Y and Z and X and Z.

### 5.1. Recommendations for Automotive Companies

In Jakarta, LCGC car purchase intention is not generally correlated with hedonic motivation, yet it has a low correlation with utilitarian motivation. Hence, product features with utilitarian values like the ABS system, low fuel consumption rate, safety airbags will be more likely to be accepted by the overall market. Also, generally generations X, Y, and Z show no significant difference in the utilitarian motive distribution. Hence, utilitarian value seems to be generally accepted by all the generations and possibly by generations to come. Highlighting utilitarian value in an LCGC product feature and creation is a safe bet generally.

Further, even though hedonic motivation has a negligible correlation with purchase intention of the general market, the average mean seems to continually increase with each generation. Hedonic motivation becomes an important value for generations to come. Hence, in the future, marketers might want to develop product features with a hedonic value like speakers with a high brand value like the Harman Kardon audio set, technology with higher perceived coolness such as a display system, and new technology adaptation like cruise control, smart entry, Tiptronic transmission, and others. We recommend the automotive industry to create a precise product segmentation and to undertake a marketing effort for different age groups with a different message on its promotion content.

## 5.2. Further Research Recommendations

For further research, we propose several recommendations to overcome our study limitations. The three variables are factors from the individual level of analysis. The three variables are also triggered by internal motives. Currently, there are several external marketing factors that impact purchase intention and have not as yet been researched in marketing and advertising studies regarding customer behavior. Further research can include external stimuli, such as different promotion efforts, marketing content, and other external stimuli provided by a car maker or car dealer, in the model to obtain a complete picture of customers' drivers towards purchase intention. Also, future research analyzing other internal factors such as perceived risk related to the product life cycle of LCGC will be beneficial to measure customer tolerance and trade-off in customer decision-making. Further, due to the natural limitation of this study settings, the current results only capture the current life stage of the customer, which might change once the customer grows up and enters different life stages.

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