Consumers Purchase Intention towards Solar Panel as Renewable Energy Source in Malaysia

Lim Kim Yew¹, Tan Owee Kowang²*, MengXi Yang³, Loh Chee Jong⁴

¹Associate Professor, Faculty of Business and Communications, INTI International University, Nilai, Malaysia.
²Associate Professor, Faculty of Management, University Teknologi Malaysia, Johor Bahru, Johor, Malaysia. Email: oktan@utm.my
³Lecturer, International Education College, Hebei Finance University, Hebei, China.
⁴MBA Graduate, Faculty of Business and Communications, INTI International University, Nilai, Malaysia.

Abstracts: Numerous studies have been undertaken, both globally and locally, to investigate influencing factors and consumer buying behaviour relationships. However, research on consumer purchase intention towards solar panel as renewable energy product in Malaysia is still lacking, and this research aims to fill the research gap. The objectives of this study to examine the factors influencing comprising of product price, product quality and advertising towards consumers' purchase intention of solar panel in Malaysia. The data for this study were collected from 348 respondents via an online questionnaire, and hypotheses analysis was conducted using multiple regression analysis to investigate the influencing factors and consumers' purchase intention for solar panel as renewable energy product in Malaysia. Results shown that product price, product quality and advertising have significant influence on consumers' purchase intention towards solar panel in Malaysia as important source for energy conservation and generation.

Keywords: Solar Panel as Renewable Energy Product, Consumers Purchase Intention, Product Price, Product Quality and Advertising.

1. INTRODUCTION

There was various global perspectives in consumer buying behaviour that influences the consumer decision making of purchasing. Therefore, it is needed for more understanding in the perspective of consumer buying behaviour in Malaysia. As previously mentioned, there number of factors can influence consumer shopping behaviour. The following are Malaysians' buying behaviour for products other than renewable energy product. According to Chhabra (2018), the rising economic position and education levels, Malaysia is experiencing a shift in consumer behaviour. Malaysians choose to be looking for sales promotions and product comparing to buying high-value products (Attreya, 2018). During a product purchasing session, consumers are eager about finding low-cost goods (Arul, 2018). Due to the number of debts in Malaysian household increasing this will be the potential issue for consumer during this uncertain economic situation (Hanaysha, 2018). However Malaysian consumer still considering to choosing e-commerce as their method of purchasing their product as it considers ease for comparing pricing and transparency (Wai and Osman, 2017).

According to Peng, Moghavvemi, and Teng (2019), empathy and certainty are two of the most important characteristics to improve consumer satisfaction and commitment to banking products and services. According to Hanaysha (2018), Due to the multi-races nature of ASEAN society, this means that Malaysian consumers prefer a sense of order, so users in the Malaysian banking industry consider reliability less important. When the first choice for Muslim customers are Islamic banks and their products compared to traditional banks, customers assume that all banking transactions are carried in accordance with Islamic law, hence trust and image have a significant influence on consumers (Shahrinaz, Kasuma, Naim, et. al., 2017). According to Shafee, Suhaimi, Hashim, et. al. (2017), in order to prevent customers from turning to other alternatives, the quality of service and compliance with the conditions set by consumers must always be guaranteed to establish a positive view of the Islamic financial system. Naim, Hamid and Wahab (2019) stated that, consumers' behaviour has the biggest influence on their experience with Islamic banking services.
Statistic from Statista.com (2019), shows survey how consumer behaviour due to climate change in Malaysia as of 2019 as 59 percent of Malaysian they have change their in-recycling habits and 46 percent responded that habits change in their food buying habits. However, renewable energy power generation have been seeing fast growth rate globally according to the International Energy Agency by 45% since 1999 to 2020 which major contributed by China and Vietnam as major installer (Statista.com, 2020).

In Malaysia, there still limited studies conducted on solar panel as renewable energy product. Previous study by few researchers for this contextual mainly focus on their countries such as Pakistan by Ali, Poulova, Akbar, et. al. (2020) for the adoption of Solar Photovoltaic Technology and Ali, Ullah, Akbar, et. al. (2019) for the consumer intention to purchase Energy-saving household products. There were studies conducted on the consumer perceptions towards renewable energy among adults in Kuala Lumpur by Yong, Wong, Hoh, et. al. (2017) while Sestino (2018) had reviewing the consumers’ perception on renewable energy market and Karunaratna, Naotunna and Sachitra (2017) have studies on the influencing factor towards green product purchasing behaviour of young, educated consumer in Sri Lanka. Kumar, Hundal and Kaur, 2019 has conducted study for the influencing factor for consumer buying behaviour of solar water pumping system. The objectives of this study to examine the factors influencing comprising of product price, product quality and advertising towards consumers’ purchase intention of solar panel in Malaysia

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Marketers must focus on the factors influencing consumer buying behaviour and take the appropriate steps to ensure that these factors do not have a serious influence on their overall revenue (Chaudhary, 2018). There is additional research that has identified the primary reasons that direct consumer buying behaviours, which include income expectations, cost-effectiveness, innovation and creativity, and, finally, cultural and personal influences (Yap and Rashad, 2021). According to research on Indian organic products, subjective norm significantly influences the purchasing behaviour of organic product from consumers (Yadav and Pathak, 2017).

According to Rehman et. al. (2018), perceived quality and the desire for distinctiveness influence British consumers’ decision to buy a global brand and perceived quality does have a negative influence on Pakistani customers’ consumers to purchase global brands, although perceived quality and a need for individual daily have a positive influence. This study adds to the body of knowledge on consumer behaviour by examining the buying behaviour of European and Asian customers when it comes to global brands (Auf et. al., 2018). The majority of consumer behaviour research in Asian countries has been undertaken in growing market economies such as China and India, as well as developed countries such as the United Kingdom and the United States, representing a single country perspective (Rehman et. al., 2018).

For the buying behavior of Malaysian college students who use smartphones to improve their social status, all consumers have brand awareness and perceive the relationship between brand quality and customer satisfaction, which directly influences market growth (Zandi, Aslam, Nasir, et. al., 2018). Due to the extreme recent increase of the furniture business over the last two decades, furniture makers have always found that a low-cost strategy is beneficial to the makers (Azizi, Dehghan, Ziaie, et. al., 2017). Malaysian consumers’ perceptions of certain types of materials, the introduction of Goods and Services Tax (GST), and the introduction of electronic invoices have increased the price difference between organized and unorganized plywood companies (Mittal, 2019). Another study discovered that when purchasing wooden living room furniture, consumers always prioritise quality, design, and price in order of preference (Namsawat and Rugwongwan, 2018).

According to Zhang and Dong (2020), research finding that there are three factors mainly influencing the consumer in buying green product that individual factors, product attributes and marketing strategy, and social factor will be the most relevant contributed to the influencing individual factor in buying behaviour. From the research conducted by Kamran and Siddiqui (2019), showing that the consumer emotional has a positive influence on their buying behaviour in home appliance brands.
2.1 The relationship between product price and purchase intention

Product price is one of the important factors that influence the consumers’ purchase intention in the case of instant noodle products in Hungarian market (Nagy, 2018). Another study observed Asian Chinese consumer will be more concern on product price compared to American in the e-commerce platform as it was proven during double number phenomenon that will providing price reduction that influence the purchase intention of consumer (Xiao, Gao, Yu, et. al., 2019).

Reduce in product price may help to influence the consumers’ purchase intention in energy-saving product and will encourage the consumer to purchase the products and in the researches in Malaysia found that lower price will also enable positive attitude of consumer in purchasing energy saving products (Ali et. al.,2019). Product price will be more important compared to CSR as consumers prefer the product price, brand image and current trend as the main influencing factor of purchasing (Sharma, Poulouse, Mohanta, et. al.,2018).

According to Nagy (2018), if the product price getting lower it will significantly increase their sales volume for instant noodle products. This also observed in online shopping context, if one of the retailer reduce price by giving promotion then it will improve the consumers’ perception towards the retailer and higher profile compared to the higher product price (Xiao et. al., 2019).

Therefore, product price will play important roles and it is encouraging the manufacturers of energy-saving household products to lowering their product pricing and also government should play a role to reduce the taxes and duties for renewable energy products (Ali et. al.,2019). In this study, product price will have the relationship as influencing factor to the purchase intention of solar panel as renewable energy products in Malaysia.

2.2 The relationship between product quality and purchase intention

According to Rai and Gupta (2019), product quality will be always assessed by consumers when there is alternative product for compared and quality is intangible as it cannot be assessed physically. Item that having low price but with low quality will influence the brand image as it will give negative impression for purchase intention by the consumer Hanaysha (2018). The judgement of the product quality may come from the outlook appearance of product instead of the physical product quality that influence the consumers’ purchase intention (Xiao et. al., 2019).

Consumer will be more preference for product price, quality, brand and trend comparing to CSR (Sharma et. al.,2018). Research by Nagy (2018) found that the quality perception of instant noodle will be judge based on the packaging of the noodle to relate it with the advertisement. Product quality will be weight based on few important dimensions such as reliability, performance, and brand image which the marketer and manufacturer to compared with their competitor (Rai and Gupta, 2019).

Consumers’ purchase intention will be influence to the quality of product that benefit to the environment when it comes to psychological benefits and environmental concern (Sestino, 2018). Product quality has been widely put into consideration for determinant of consumers’ purchase intention as when the product improved it will have higher chance for the consumer to have intention for the purchases (Rai and Gupta, 2019). Therefore, the product quality will have the influences for the consumers’ purchase intention in this study for solar panel as renewable energy products in Malaysia.

2.3 The relationship between advertising and purchase intention

The power of advertising is to persuade potential customers to change their minds and hearts, often at any cost (Tahir et. al., 2019). Culture has a strong influence on consumer buying behaviour since consumers have varying demands and preferences depending on their lifestyle, which are influenced by advertising and also produces requirements (Manandhar, 2020). Marketers can utilise a variety of approaches in their advertising to achieve brand objectives, including tactics, and beyond these tactics, embracing emotions in advertising has always been seen as an effective tool for building and maintaining strong brand equity (Kamran and Siddiqui, 2019). To optimise the
efficiency of their marketing programme, global firms hire various social media specialists and consultants to get better recommendations on the contents and features of their adverts before promoting them on social media (Hanayahsa, 2018). Although social media advertising is a sort of online advertising, consumers’ perception and experiences with social media advertisements may change (Alalwan, 2018). Social media also play a role by response based on the consumer behaviours such as re-sharing, liking, posting, and commenting in specific advertisements (Tahir et. al., 2019). Media advertising involve many approaches including micro-blogging, social blogging, social bookmarking, rating, weblogs and photos (Hanayahsa, 2018). Furthermore, social media advertisements have a significant influence on consumers’ behaviors to products, but they may choose to ignore social media marketing if they pose a significant privacy threat (Alalwan, 2018).

Consumer demand for different items is determined by their preferences, interests, and the influence from third parties, as well as the effectiveness of advertising that change the consumer behaviour toward the brand and product (Tahir et. al., 2019). Because consumers are looking for product quality and costs, advertisements are a source of encouragement that motivates people to purchase a specific product and also develops trust and buying behaviour through product evaluation and brand recognition through advertisements (Manandhar, 2020).

Based on the above literature review, the following hypotheses are developed.

H1: The product price has significant influence on consumers’ purchase intention towards solar panel in Malaysia.

H2: The product quality has significant influence on consumers’ purchase intention towards solar panel in Malaysia.

H3: The advertising has significant influence on consumers’ purchase intention towards solar panel in Malaysia.

Figure 1 Conceptual Framework

3. RESEARCH METHODS

3.1 Measurement

Questionnaire design to collect the information from the respondents only once as this study is cross-sectional. In order to meet the research objectives, the questionnaire will be design based on the literature reports on similar studies as this research. The questionnaire will consist of 3 sections. Section A will be questionnaire covered the demographic profile as it important for measurable characteristics although the research data will not be analyzed. There is strong evidence in the literature to shows that consumer demographics profiles such as age, gender and income has a relation with consumer buying behavior (Madan and Yadav, 2018). Section B will be the dependent variable for purchase intention. Independent variable will be in Section C which covered product price, product quality and advertising. The questionnaire will be designed to meet the objective of the research study, simplify and ensure the data collection effectiveness. Data collection carried out by distributing the questionnaire through Email, Whatapps and other e- communications to respondents based on the sample size. There will be no identity will be identified from the respondents.
### Table 1 Questionnaire Design Table

<table>
<thead>
<tr>
<th>Section</th>
<th>Variable</th>
<th>Item(s)</th>
<th>Source</th>
<th>Adopted/Adapted</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Demographic Profile</td>
<td>3</td>
<td>There is strong evidence in the literature to shows that consumer demographics profiles such as age, gender and income has a relation with consumer buying behaviour (Madan and Yadav, 2018). The questionnaire will be including the demographic profile as it important for measurable characteristics although the research data will not be analysed.</td>
<td>-</td>
</tr>
<tr>
<td>B (Dependent Variable)</td>
<td>Purchase Intention</td>
<td>5</td>
<td>Benhardy et. al. (2020); Sestino, (2018); Martins et.al., (2019).</td>
<td>Adapted</td>
</tr>
<tr>
<td>C (Independent Variables)</td>
<td>Product Price</td>
<td>4</td>
<td>Auf et. al. (2018); Dulal and Islam (2018); Manandhar (2020).</td>
<td>Adapted</td>
</tr>
<tr>
<td>C (Independent Variables)</td>
<td>Product Quality</td>
<td>4</td>
<td>Hanaysha (2018); Idrees et. al. (2020); Victor et. al. (2018).</td>
<td>Adapted</td>
</tr>
<tr>
<td>C (Independent Variables)</td>
<td>Advertising</td>
<td>4</td>
<td>Hanaysha (2018); Kamran and Siddiqui (2019); Tahir et. al. (2019).</td>
<td>Adapted</td>
</tr>
</tbody>
</table>

### 3.2 Data collection

Data collection in this research will be collect based on self-administered questionnaires, however this may have it advantages and disadvantages. The benefit of self-administered is the questionnaire can be distributed to wide number of respondents via online and the collected can be systematically examined however the setback of self-administrated is there will be misinterpret the question in the questionnaire where the respondent unable to clarify with the researcher which may lead to unreliable information (Bougie and Sekaran, 2019). The questionnaire add up by 10% to a total 422 sets to ensure the SPSS result will not skewed during the research.

### 4. DATA ANALYSIS RESULTS

Bartlett‘s Test of Sphericity results shows that both dependent and independent variables statistically significant as both results p<0.05. This shows that both dependent and independent variables meet KMO and Bartlett‘s Test requirement and supporting the sampling is adequate. Factor loading used to validate the correlation between variables interact (Sekaran and Bougie, 2019). According to Hair et.al. (2018), value for factor loading need to be above the cut-off point of 0.5 to retain the variable for further analysis or else may require removing from further analysis. The factor loading for dependent variable range 0.683 to 0.805. All the factor loading for independent variables range 0.535 to 0.715 but PC3 (0.434) and AD3 (0.346) show factor loading below the cut-off point of 0.5. Since the factor loading fail to meeting minimum 0.5, PC3 and AD3 will be removed from the analysis and re-performing the factor analysis.

### Table 2 Factor Loading (Dependent Variables)

<table>
<thead>
<tr>
<th>PI1</th>
<th>I have intention to purchase solar panel because it is environmentally friendly.</th>
<th>1.000</th>
<th>0.805</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI2</td>
<td>I have intention to purchase if it benefits to me.</td>
<td>1.000</td>
<td>0.763</td>
</tr>
<tr>
<td>PI3</td>
<td>I will understand the product before purchase it.</td>
<td>1.000</td>
<td>0.683</td>
</tr>
<tr>
<td>PI4</td>
<td>I will compare the available alternative before I purchase.</td>
<td>1.000</td>
<td>0.720</td>
</tr>
<tr>
<td>PI5</td>
<td>I will gather information of product before buying it.</td>
<td>1.000</td>
<td>0.695</td>
</tr>
</tbody>
</table>
Table 3: Factor Loading (Independent Variables)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Initial Extraction</th>
<th>Extracted</th>
<th>PC1</th>
<th>PC2</th>
<th>PC3</th>
<th>PC4</th>
<th>PC5</th>
<th>QA1</th>
<th>QA2</th>
<th>QA3</th>
<th>QA4</th>
<th>QA5</th>
<th>AD1</th>
<th>AD2</th>
<th>AD3</th>
<th>AD4</th>
<th>AD5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price is an important factor to me for purchase intention in Solar Panel.</td>
<td>1.000</td>
<td>0.715</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The price for solar panel in Malaysia is questionable.</td>
<td>1.000</td>
<td>0.564</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solar panel installation will allow me to reduce my house electricity cost.</td>
<td>1.000</td>
<td>0.434</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will consider purchasing solar panel at lower price.</td>
<td>1.000</td>
<td>0.539</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance cost of solar panel important to me.</td>
<td>1.000</td>
<td>0.541</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The quality of solar panel product is questionable.</td>
<td>1.000</td>
<td>0.625</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I prefer to buy long lasting quality products.</td>
<td>1.000</td>
<td>0.689</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product quality will be important factor to me when I buy household products.</td>
<td>1.000</td>
<td>0.668</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will trust product with good quality.</td>
<td>1.000</td>
<td>0.645</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will consider for purchase if the product quality is guarantee.</td>
<td>1.000</td>
<td>0.535</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising creates awareness about solar panel products.</td>
<td>1.000</td>
<td>0.606</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising will provide information regarding solar panels.</td>
<td>1.000</td>
<td>0.669</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In Malaysia there are less advertising promoting benefits of solar panel.</td>
<td>1.000</td>
<td>0.346</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising allows me to control my own purchase intention.</td>
<td>1.000</td>
<td>0.632</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social media advertising will attract my purchase intention.</td>
<td>1.000</td>
<td>0.658</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cronbach Alpha results should used to measured the stability and internal consistency of the data collected. It will be statistically reliable if Cronbach Alpha value in between 0.70 and 0.90. For exploratory research, the Cronbach alpha value greater than 0.6, it will be accepted (Nunnally, 1978). This supported by Sekaran and Bougie (2019), the reliability below 0.6 considered poor, however it will be acceptable above 0.6 to 0.7 and above 0.7 will be consider good. Based on the Reliability Analysis results, all the Cronbach's Alpha value ranging from 0.6 to 0.8 respectively indicated a good result as opined by (Hair et.al., 2018). The dependent variable (Consumers' Purchase Intention) Cronbach’s Alpha value shows 0.704 which can be identified as good reliability. For independent variables price which is the lowest Cronbach’s Alpha 0.621 followed by quality 0.741 and advertising has the highest Cronbach’s Alpha value among all which is 0.783.

Table 5: Reliability Analysis (Cronbach’s Alpha) (n=293)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumers' Purchase Intention</td>
<td>0.704</td>
<td>5</td>
</tr>
<tr>
<td>Price</td>
<td>0.621</td>
<td>4</td>
</tr>
<tr>
<td>Quality</td>
<td>0.742</td>
<td>5</td>
</tr>
<tr>
<td>Advertising</td>
<td>0.783</td>
<td>4</td>
</tr>
<tr>
<td>Overall</td>
<td>0.843</td>
<td>18</td>
</tr>
</tbody>
</table>

The purpose of the hypothesis test is to identify different input variable correlates with the response variable. Hypotheses testing is used to examine if there is relationship between consumer purchase intention as dependent variable and its independent variables product price, product quality and advertising. R2 value determine measurement to predict the quality of model's fit (Saunders et. al., 2019). The model will be fit for research if the value of R2 greater than 0.5 and if the value below 0.5 shows that this model will be not fit for research (Zikmund et. al., 2013). However according to Cohen (1988), if the R2 value above 0.26 it indicates a substantial or acceptable model for social science research.

The R² value of the regression model is 0.336 (Table 6 ). This shows that there are 33.6% of the variables has the influencing consumers’ purchase intention towards solar panel in Malaysia that can be explained by price, quality and advertising.
The relation between DV and IVs will be examined by regression Anova if the results statistically significant and correlate. As shown in Table 7 for Regression Anova the p-value (Sig.) 0.000 is below 0.05. This shows that statistically there is significant relationship between the DV and the IVs (Bougie and Sekaran, 2019).

Quality and Purchase Intention has statistically strong significant linear relationship \((r = 0.548, p<0.01)\), Price \((r=0.430, p<0.01)\) and Advertising \((r=0.309, p<0.01)\) has statistically medium significant linear relationship. This shows that the independent variable has positive direction of relationship to dependent variable. Beta coefficients results will help to determine which variable has the greater influence based on the beta value of standardized coefficients. the higher the value closer to 1 will have the greater influence of the independent variable on the dependent variable.

Based on the beta coefficient results (Table 8), Quality has the highest Beta value 0.420 which is the main factor influencing the consumers’ purchase intention towards solar panel in Malaysia. This followed by Price with Beta value of 0.154 and Advertising with Beta value of 0.129. The t-value for all the hypotheses more than 1.64 for two-tailed showing that the hypothesis is supported. The t-value has the influence to the beta value to be positive or negative (Cooper and Schindler, 2018). Thus, quality is the main factor that determines consumers’ purchase intention. Based on the summary results for hypothesis testing, all the results statistically positive significant and accepted as it in line with the defined rule of thumb.
Table 9 Summary Results for Hypotheses Testing

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Statement</th>
<th>Criteria</th>
<th>Results</th>
</tr>
</thead>
</table>
| H₁         | The product price has significant influence on consumers’ purchase intention towards solar panel in Malaysia. | p-value: 0.009  
t-value: 2.618  
β: 0.154 | Accepted |
| H₂         | The product quality has significant influence on consumers’ purchase intention towards solar panel in Malaysia. | p-value: 0.000  
t-value: 7.086  
β: 0.420 | Accepted |
| H₃         | The advertising has significant influence on consumers’ purchase intention towards solar panel in Malaysia. | p-value: 0.012  
t-value: 2.526  
β: 0.129 | Accepted |

DISCUSSION AND CONCLUSION

The objective of the study to examine and analyze factor influencing including product price, product quality and advertising towards consumers’ purchase intention of solar panel in Malaysia. Hypotheses testing results shown in this section will be reviewed and discuss as below.

The hypothesis 1 as shown in Table 9, shows that the p-value 0.009 (p<0.05) and beta value 0.154. This concluded that statistically significant to accept the hypotheses based on the research finding. Therefore, product price has the influences on consumers’ purchase intention is relevant and true. This in line with the finding from Manandhar (2020), price play important roles between buyer and seller transaction as price satisfaction is always a key element that influence the consumers’ purchase intentions. Price will have influence to consumers’ purchase intention which found in Aschemann-Witzel and Zielke (2017) study where higher price will lead to negative influence while lower price will positive influence. Therefore, the finding from Ali et. al. (2019) for the previous study for energy saving product, reduce in product price may help to influence the consumers’ purchase intention in energy-saving product in Malaysia and government can help to play roles to reduce the taxes and duties for renewable energy products. Demographic profile 34.8% of the respondent were with annual income above RM84K which means price have influence for the context of purchase intention towards solar panel. With majority of respondent with high income will also considering product price when purchasing product such as solar panel in Malaysia.

For hypotheses 2 for the product quality shows statistically significant influence on consumers’ purchase intention with the p-value 0.000 (p<0.05) and has the highest beta value 7.086 compared to other variables. This shows that product quality is the key influence factor for consumers’ purchase intention towards solar panel in Malaysia. This hypothesis similar to the finding by Ganesh and Vakayil (2018) as product quality is important for consumers’ purchase intention for all type of product and services. Therefore, product quality has been widely put as main consideration for determinant of consumers’ purchase intention (Rai and Gupta, 2019). Another finding in the research by Sestino (2018), product quality will influence consumers’ purchase intention to the product related to psychological benefits and environmental concern. The majority of the respondent 50.9% with bachelor degree, assuming product quality play important roles in purchase intention for solar panel.

Hypothesis 3, which is the advertising has statistically significant influence on consumer’s purchase intention towards solar panel in Malaysia. The p-value for advertising 0.012 (p<0.05) with Beta value of 0.129. Previous study by Manandhar (2020), advertising can be used as a source to influence and develop trust for consumers to purchase a specific product based on product evaluation and promoting brand image. This study also consistent with Martins et.al. (2019) research study found that advertising able to influence consumer to develop positive attitude and behavior based on the information, brand awareness and entertainment in the advertisement. Therefore, it will be recommended for optimising the efficiency of marketing strategies by advertising to promoting...
product with the advice of specialists or consultants (Hanaysha, 2018). According to Tahir et. al. (2019), the effectiveness of advertising has the ability to change the consumers' behaviour towards the brand of product. In summary for the finding of this research, all three the hypotheses product price, product quality and advertising has shown statistically significant influence on consumers' purchase intention towards solar panel in Malaysia.

Based on the research results, product quality has the highest influence on consumers' purchase intention towards solar panel in Malaysia followed by product price and advertising. Below are some recommendations for marketing to strategies its strategy for further influence consumers' purchase intention towards solar panel in Malaysia.

Product Quality as a product differentiation will be recommended as marketing strategy for entering this new renewable market in Malaysia. Product differentiation will play important role to be competitive advantage which a firm shall develop the technologies that capable to build solar panel product with more reliable and efficiency. Product quality will be the key factor for the consumer to purchase solar panel. Consumer will make their purchase intention during justify product quality in their purchase (Sugrova, Sedik, Kubelakova, et. al., 2017). In order to have good return of consumers to re-purchase, good quality product will be one of the main considerations whether the situation not in good shape (Lekhanya and Dlamini, 2017). To have the quality product with lower price will have directly influence to the brand image which will lead to negative impression for the consumers purchase intention (Hanaysha, 2018).

Product price will be one of the marketing strategies in the same industry in order to be competitive in the market as price sensitivity is a critical aspect in evaluating the competitiveness position of a product or service (Zhang and Dong, 2020). In this growing market in renewable energy, it will be recommended for firm to lower price than its competitor while maintaining the product quality or it will influence the brand of the product in the market. Reducing the product price will help marketing to encourage consumers purchasing renewable energy product as this observed for the study conducted in Malaysia for consumer purchase intention for energy saving products (Ali et. al., 2019). Product price can be lower down by the help from the government which should play a role to reduce the taxes and duties for renewable energy product to enable it affordable (Ali et. al., 2019). The recommendation as finding in this study, lowering the product price should not influence the product quality as product quality has more significant to influence consumers purchase intention.

Lastly advertising can be used as marketing communication strategy to promote the solar panel product to the consumer. According to Manandhar (2020), advertising can be utilised to promote brand image and influence the consumers' purchase intention as it is a part of the promotional mix. Advertising can be in various form such as social media, television ads, newspaper or any other form of distribute the product information to influence the consumers' purchase intention (Tahir et. al., 2019). According to Manna and Mondal (2017), advertising is important for sales of a product as it will depend to the public marketing where advertising has the roles to growth the value of a product. Advertisement is the source for encouraging and convince consumer to purchase a specific product which will also developing trust for purchase intention and brand image of a specific product (Manandhar, 2020).

ACKNOWLEDGEMENTS

This work is supported/funded by INTI International University, Nilai, Negeri Sembilan, Malaysia

REFERENCES

of Management Studies. 5(1(2) p.124.


DOI: https://doi.org/10.15379/ijmst_v10i3.1805

This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/by-nc/3.0/), which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.