Study on Community-based Peripheral Attribute Attractiveness and Product Attractiveness Advantage: Bridging Product Innovation and Consumer Purchase Intention

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Abstract - The purpose of this study is to analyze the role of community-based peripheral attribute attractiveness as a mediating variable in relationship of product innovation and consumer purchase intention. Honda motor matic community in Central Java and Yogyakarta used as a sample. Sampling used in this research is purposive sampling technique. Data are collected by giving questionnaires directly to the respondents. The total data that can be further analyzed are 263 respondents. Data analysis uses Structural Equation Modeling - SEM by using AMOS program. The results show that the community-based peripheral attribute attractiveness has significant role to mediate relationship of product innovation and consumer purchase intention.

Keywords - product innovation; community-based peripheral attribute attractiveness; product attractiveness advantage; consumer purchase intention

1. INTRODUCTION

Innovation is the key to achieve competitiveness advantage in a high turbulent environment, and is the main driving force for the growth of a country. The ability to innovate can consequently lead to the ability to compete at the level of individuals, companies, regional and also national. Values created by innovation in the form of a new way to do a process or new product that highly contribute to the prosperity (Gunday, Ulusoy, Kilic, & Alpkan, 2011; Neely & Hii, 1998) [15]. In a business environment with high turbulence and complexity, company’s innovation will include innovation in models, products, services, processes, and networks are actions taken by the manager/company in order to maintain or take over the market, step ahead of competitor, assure growth, maintain better performance and sustainability of the company (Carsino, 2008; Dunk, 2011; Siguaw, Simpson, & Enz, 2006) [4][9][41]. In today’s dynamics and competitive environments, the approach to increase purchase intention is very important and relevant as a result of three main trends, that is, the increasing competition, fragmentation and market demand, and rapidly change and diverse of technology. To increase consumer’ purchase intention, Holak and Lehmann (1990) [19] and Hanzae and Adibifard (2012) [17] stated that innovative products, marketing interface, and technology become a major determinant factor. In order to gain a sustainable competitive advantage, the company must offer products that suit the needs and wants of the target customer and sell to the market more quickly and efficiently than other competitor (Hanzae & Adibifard, 2012) [17]. Based on consumer perception approach, it is widely accepted that the knowledge of innovative products is a key to the behavior of the determinant of consumer purchase intention, however, there are still difference results of previous research on the relationship between product innovation and purchase intention. Moon, Chadee, and Tikoo (2008) [27], Hung et al. (2011) [21], and Leerapong, Mardjo, and Songkla (2013) [26] found positive effects of product innovation to purchase intention. Meanwhile, Tang, Luo, and Xiao (2011) [42] and Pirayesh, Mansori, and Ismail (2013) [33] found that product innovation does not significantly influence the purchase intention. Referring to the inconsistency effect of product innovation on purchase intention based on the results of previous research, it is then this study aimed to examine the role of community-based peripheral attribute attractiveness as mediator of the relationship between product innovation and consumer purchase intention.

2. CONCEPT DEVELOPMENT AND HYPOTHESES

2.1 Community-based Peripheral Attribute Attractiveness

The concept of community-based peripheral attribute attractiveness was developed to bridge the gap in research of relationship between product innovation and consumer purchase intention. This concept is derived from prospect theory. Kotler and Keller (2008) [25] and Su (2009) stated that the product differentiation is a powerful strategy in
classical marketing, but in the context of competition, differentiation is more likely possible at the level of additional product attributes, or peripheral attributes which attached to the core product. Brown and Carpenter (2000)[2] firmly stated the role of peripheral attribute as the differential attribute when the attributes of the basic function of product become blurry to differentiate from competitor’s product. Thus, differentiation in peripheral attribute in terms of shape and color design has a unique and aesthetic value can become a tool for the company to increase their competitiveness advantage and performance (Brouthers, O'Donnell & Keig, 2013).[1] Haarla (2003)[16] argued that product differentiation is not vacuum in a space because of product differentiation when marketer understands to whom the differentiated products are given, therefore a good market segmentation is very important for differentiation process, because it helps the company to understand the needs of each different group consumer. Although there are many variables that are used to perform segmentation, Brunner and Siegrist (2011)[3] emphasized the benefits of market segmentation based on social values play an important role in improving the company’s competitiveness. On the other hand, increasing the benefits they get, the consumer usually relies on a certain reference point. One of them is a social or group reference that gives a strong effect in decision-making (Taránanidis, Owusu, Frimpong, and Marciniak, 2010).[43] Having understanding as described above, then the concept of community-based peripherals attractiveness attribute is defined as the characteristic attributes to complement product as the main functions which is uniquely designed and has aesthetic value that refers to a particular community.

2.2 Product Innovation
Innovation is considered as “the level of creativity in getting new ideas of products and design process” (Sethi, Smith, and Park, 2001). Pla-Barber and Alegre (2007), defined innovation as “taking ideas related to new products for a company”. Product innovation can be described in three dimensions: technology, customer, and the combination of technology and customer. Firstly, Gatignon and Xuereb (1997) and Pla-Barber and Alegre (2007) described the innovations in technology perspective. Secondly, Cooper (2000), Govindarajan and Kopalle (2006), Sethi, Smith and Park (2001) described the innovation from the customer’s perspective. Finally, Atuahene-Gima (2005), Booz-Allen and Hamilton (1982), Kleinschmidt and Cooper (1991), and Zhou, Yim, and David (2005) described the combination of innovation in technology and customer’s perspective. Gunday et al. (2011)[15] emphasized that innovation is a process to generate, develop, and implement new ideas and behaviors, as a means of change in the organization as a response to changes in external environment or as a preemptive act to influence the environment. Jiménez - Jiménez and Sanz-Valle (2011)[22] stated that the product innovations related to the product that can meet the wants and needs of the market where product innovation is driven by market needs and demands of external customer, while the innovation process and administrative innovation is driven by the needs of production or internal factor. Accelerating the advance and progress of technology can increase the importance of competition in managing product and process innovation for manufacturing company. Innovation, from demand point of view is defined as new technology diffusion, in which the process of new technology diffusion can be modeled from the perspective when purchasing a new product (Gjerde, Slotnick, & Sobel, 2002).[14] Framework developed by Gjerde et al. (2002) is the attractiveness of a product which is reflected in the feature (privilege) products as a result of product innovation. Sharifi and Pawar (1996)[40] stated that the organizational issues in product design known in the theory of organizational strategies related to innovation that has traditionally been viewed as a sequence of stages of design, production, and marketing. In this perspective, the two main models of product design is the first “technology-driven” and “customer or need-driven”. In customer-driven, the powerful driving is consumer perceptions to innovative product that manifested in the attractiveness of a product that has been attributed to the effective planning and communication in organization and the existence of champion product. Fuller, Matzler, and Hoppe (2008)[12] stated that the innovation of products based on community, will produce a product that has the characteristics of community and can increase the level of trust of the brand or product. This also confirmed the result of research by Fuller, Jawecki, and Muhlbacher (2007)[11] and Oost, Verhaegh, and Oudshoorn (2009)[30] related to the community role in product innovation that ultimately produce product innovations that improve the characteristics of a product that also reflects the characteristics of the community. Karjalainen and Snelders (2009)[23] stated that introduction of the value of a product can be developed through explicit and implicit visual reference. Explicit reference inherently attaches in features designed with the intention of immediately felt and recognized. Implicit reference, on the other hand, is based on features that are not immediately recognized by the consumer. Furthermore, the characteristic product of a new product or innovative product attributed to the reference customer or certain groups in order to increase the value and introduction of the product. Thus, the hypothesis can be developed as follows:

H1: Product innovation has a positive effect on community-based peripheral attributes attractiveness

2.3 Product Attractiveness Advantage
Dumovic and Knowles (2008)[8] said that the challenge of marketer in accelerating and developing product is to ensure that the product is perceived differently in both relevance and significance for the customer when they compare to competitor’s product. It is therefore, the marketer needs to offer a product that has a unique value.
Douglas and Davies (2010)[7] mentioned that differentiation needs to offer a product or service that is uniquely perceived by and through the industry and offers unique attribute which is assessed by the customer. The marketing strategy which possibly allows to achieve differentiation include assurance, brand image, feature, service, quality, and value. The results of research by Douglas et al. (2010)[7] proved the effect of product differentiation to competitiveness advantage in small industry. Meanwhile, Haarla (2003)[16] in a research which focus on whether the differentiation in Paper Company brought the company to have competitiveness advantage, and the results showed that product differentiation can provide competitiveness advantage. Nancarrow, Wright, and Brace (1998)[28] and Rundh (2009)[36] examined the attribute peripherals that is packaging design in relation to the achievement of competitiveness advantage. It is stated that packaging and its packaging design become an important factor in marketing of goods and have a key role in communicating the benefits of the product to the customer. Results of the research showed that the role of packaging and its packaging design enable company to develop competitiveness advantage. De Angelis (2008)[6] mentioned that from a consumer point of view, the attractiveness of a product can be interpreted as an advantage for the product so the consumer has the possibility to make their choices. Studies conducted by De Angelis (2008)[6] related to the trivial or peripheral features because the features do not provide real benefits for the consumer, but it has a strong role as a preference to determine the consumer’s choice. The results of the study found that peripheral attributes or attribute added to the product is able to significantly increase the attractiveness of the product. Product with unique design is a determinant for the attractiveness of products so there is possibility for consumer to do a positive evaluation. Giving to this understanding, it can be formulated as the following hypothesis:

H2: Community - based peripheral attributes attractiveness has a positive effect on product attractiveness advantage

2.4 Determinant of Consumer Purchase Intention

The essence of consumer behavior can be seen in determinant of consumer purchase intention. Experts agree that the purchase decision-making model consists of variables marketing stimuli and other stimuli, consumer psychology, consumer characteristics, the purchasing decision process and purchasing decisions. Models of consumer behavior starts with the marketing stimuli and other stimuli such as product, price, distribution, communication, technology, politic, culture that affect consumer psychology and characteristics. Consumer psychology consists of motivation, perception, learning, and memory that influence in the process of decision-making related to the introduction of the problem until the decision-making (Kotler and Keller, 2010)[25] and Khan, 2006). Moon et al. (2008)[27]and Haryanto and Polluan (2009)[18] stated that innovative product provides a differentiation in purchase decision process, Hung et al. (2011)[21], Ke-yi and Lin-lin (2010)[24] and Shaharudin et al. (2010)[39] believed that the innovative product as an important element when individual decides to buy the product. The study conducted Moon et al. (2008)[27], Carlos and Polluan (2009), Hung et al. (2011)[21], Ke-yi and Lin – lin (2010)[24] and Shaharudin et al. (2010)[39] found that product innovation has a positive effect to consumer purchase intention, so the hypothesis can be formulated as follows:

H3: Product innovation has positive effect to consumer purchase intention

Sashi and Stern (1995)[37] believed that basically the benefits of product consumption are based on the characteristics of the product. A good product differentiation will give clear introduction and differentiation when the company’s product compared to competitor’s product, in this way, the customer can easily make a purchase decision-making as seen in stages of consumer’s purchase behavior. Pelham (1997)[32] said that a good customized product basically rely on the characteristics that reflect the target market which is well received by the customer. Randall and Ulrich (2001)[34] explained that the attractiveness attributes of product as a result of variation in product innovation gives benefits in analysis the differences and level of product attributes are well understood in the literature of product for consumer as a complete product which is modeled as a bundle of consumer’s attributes. These attributes then have impact on the knowledge and the introduction of consumer product, which in turn will influence the consumer purchase intention. Yoo and Lee (2012)[46] found that the experience of using the product has a significant effect on consumer purchase intention because of the attractiveness of the products seen in the expression of consumer’s experience. Thus, the hypothesis can be formulated as follows:

H4: Community-based peripheral attribute attractiveness has positive effect to consumer purchase intention

Rogers (1983)[35] argued that the product advantages, from the point of view of concept innovation diffusion on consumer-basis, then, has a relationship with consumer purchase intention. It is stated that the product innovation as one of the characteristics of innovation diffusion is relative advantage where innovation is considered as a better idea than the previous idea stated, which an individual’s perception to innovation is favorable. Holak and Lehmann (1990)[19] tested the purchase intention and dimension of innovation from the perspective of consumer and found the positive effect of the relative advantage of the product to consumer purchase intention. Chen (2010)[5] suggested that the attractiveness of a product mainly depends on the interior perception of consumer which influences the consumer’s purchase decision making. However, the influence of the exterior of a product on the first visual contact is considered as the first step and the
most important in developing purchase intention. Furthermore, it is also argued that the consumer’s purchase decision-making process is at least influenced by four aspects of attractiveness which refers to the sensory familiarity of individual perception based on experience with previous product, functional attractiveness, symbolic attractiveness, and inherently intrinsic attractiveness in the beauty of the product.

Xu (2009)[45] measured the attractiveness of a product based on consumer’s perception into three characteristics, that is, meaningful creative product (meaningfulness), a new creative product (novelty), and a communicable creative product (communicableness). These three characteristics of the product advantages are hypothesized to have positive effect to consumer purchase intention. In addition, studies by Giese, Malkewitz, Orth, and Henderson (2013)[13] found theoretically and empirically that consistently attractiveness of product plays an important role as marketing stimuli that influence customer’s behavior intention. Therefore the hypothesis can be formulated as follows:

H5: The product attractiveness advantage has positive effect to consumer purchase intention

3. RESEARCH METHOD

This study used a population of community Honda motorcycle in Central Java and DI Yogyakarta. The purposive sampling technique was used as a sampling technique. The age and a monthly-income was used as requirements to determine the sample. In order to collect the data, it used questionnaires and given directly to respondents. There were 400 respondents collected as data. Data analysis was performed by using a structural equation model analysis by using AMOS v.20

4. DATA ANALYSIS

Data analysis started by validating the data collected. The results of validation data was 263 respondents which was distributed normally so that the data can be used for further analysis. The results of the analysis of structural equation modeling using AMOS program v.20 as shown in the figure 1, that the goodness of fit test of the constructed model is showing good value, where CMIN/DF= 1.546, RMSEA= 0.046, GFI= 0.952, AGFI= 0.924, CFI= 0.973, TLI= 0.964. Although, Chi-square and probability value have less ideal value, but overall the constructed model can be accepted.
The analysis highlights the regression coefficient value of the causal relationship is shown in the following table.

<table>
<thead>
<tr>
<th>Hypotheses Test</th>
<th>P</th>
<th>Estimate</th>
<th>(H1) Product Innovation</th>
<th>(H2) Community-based Peripheral Attribute Attractiveness</th>
<th>(H3) Product Innovation</th>
<th>(H4) Product Attractiveness Advantage</th>
<th>(H5) Community-based Peripheral Attribute Attractiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supported ***</td>
<td></td>
<td>.359</td>
<td></td>
<td>Community-based Peripheral Attribute Attractiveness</td>
<td></td>
<td>Consumer Purchase Intention</td>
<td>Community-based Peripheral Attribute Attractiveness</td>
</tr>
<tr>
<td>Supported ***</td>
<td></td>
<td>.691</td>
<td></td>
<td>Product Attractiveness Advantage</td>
<td></td>
<td>Consumer Purchase Intention</td>
<td>Product Attractiveness Advantage</td>
</tr>
<tr>
<td>Supported .048</td>
<td></td>
<td>.171</td>
<td></td>
<td>Product Innovation</td>
<td></td>
<td>Consumer Purchase Intention</td>
<td>Consumer Purchase Intention</td>
</tr>
<tr>
<td>Supported .003</td>
<td></td>
<td>.274</td>
<td></td>
<td>Product Attractiveness Advantage</td>
<td></td>
<td>Consumer Purchase Intention</td>
<td>Consumer Purchase Intention</td>
</tr>
<tr>
<td>Supported .001</td>
<td></td>
<td>.461</td>
<td></td>
<td>Community-based Peripheral Attribute Attractiveness</td>
<td></td>
<td>Consumer Purchase Intention</td>
<td>Consumer Purchase Intention</td>
</tr>
</tbody>
</table>

The results of the analysis of the relationship of all hypothesis developed can be seen in Table 1, indicate that all hypotheses are well-supported. The results can be seen that there is a positive and significant effect of the product innovation on community-based peripheral attributes attractiveness (H1), a community-based peripherals attractiveness attribute on product attractiveness advantage (H2), product innovation on consumer purchase intention (H3), and Community-based peripheral attribute attractiveness (H4), and product attractiveness advantage on consumer purchase intention (H5). To make sure the role of community-based peripheral attributes attractiveness as a mediating variable, then, it examined by using the Sobel test which is calculated online at http://www.danielsoper.com/ and the result of the Sobel test statistics is 2.780 and probability value is 0.003, so that it can be stated that the variable community-based peripherals attribute attractiveness contributed a significantly role in mediating the relationship of product innovation and consumer purchase intention.

5. DISCUSSION

The results of this study showed a positive and significant effect of product innovation on community-based peripheral attributes attractiveness, which means that the higher the product innovation perceived by the consumer, then, the higher the community-based peripheral attributes attractiveness. The results also gave strong support to the arguments stated by Fuller et al. (2008)[11], Oost et al. (2009)[30] and Karjalainen and Snelders (2009)[23] that the community-based product innovation can increase the attractiveness of and confidence in the product produced, because this innovation improve the product characteristics that reflect the characteristics of the community. These results also proved that community-based peripheral attribute attractiveness has a positive and significant effect on the attractiveness of product, which also provide strong support the research of Nancarrow et al. (1998)[28], Rundh (2009)[36], De Angelis (2008)[6] and Seva, Gosiaco, Santos, and Pangilinan (2011)[38] found that the peripheral attributes play a key important role in developing the company's competitiveness advantage.

This paper started from the research gap relating to the effect of product innovation to consumer purchase intention, in which there are studies found a significant effect of product innovation on consumer purchase intention, while other studies found no significant effect of product innovation on consumer purchase intention. The results of this study found that product innovation has significant positive effect on consumer purchase intention, in which it provided strong supports for Tung (2012)[44], Hung et al. (2011)[21] and Moon et al. (2008)[27] that product innovation is reflected in product differentiation and adding attributes of the product is important information for consumer in purchase process. It was found that the community-based peripherals attribute attractiveness has a positive and significant effect to consumer purchase intention, which is gave strong supports to concepts developed by Eckman and Wagner (1994)[10], Sashi and Stern (1995)[37], Huber, Hermann, and Morgan (2001)[20], and Pan, Kuo, Pan, and Tu (2012)[31] on the role of product characteristics are reflected in the product attributes as a result of the introduction and clear differentiation between the company's product and competitor's product so it is easy for the consumer purchase decision. The results also indicated that the advantage of the product attributes gave positive and significant effect to consumer purchase intention, so it gave strong support to the results of research conducted by Rogers (1983)[35], Holak and Lehmann (1990)[19], Xu (2009 )[45] and Chen (2010)[5] who found the positive effect of attractiveness of product advantage, functional attractiveness, symbolic...

Fig 1: Model of Proposed Hypotheses
attractiveness, and inherently intrinsic attractiveness advantage of product that influence consumer behavior and decision to purchase the product. Furthermore, the results of this study also confirmed the results of research conducted by Giese et al.(2013[13] found that empirically the attractiveness of the product plays an important role as a marketing stimuli that influence the consumer behavior intention. The results of this study provided some implications for managerial action related to the stimulation to increase consumer purchase intention. Firstly, the consumer purchase intention can be increased by improving the product innovation. Product innovation can be improved by strengthening consumer perception of specifications, features and uniqueness of the product. Secondly, consumer purchase intention can be also improved by increasing the community-based peripherals attribute attractiveness. Secondly, it also needs to increase and pay attention to the value of aesthetics, designs and additional functions of the product. Finally, to increase consumer purchase intention, the managerial needs to increase the attractiveness of the product advantage based on perceptions of consumer by improving the quality, features, and benefits of the product.

6. LIMITATION AND FUTURE RESEARCH

Limitations of this study indicated that almost all variables have squared multiple correlation values which are relatively low or less than 0.50. Therefore, it is hoped that in the future research agenda, it needs to add more variables required to produce the squared multiple correlation values which are higher, such as by adding variables innovation processes and company image.

REFERENCES


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