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DEVELOPMENT MODEL OF PRODUCT AND PACKAGING ON THE PRODUCT MARKET VALUE FOR LOCAL PRODUCTS OF RANONG PROVINCE, THAILAND

[1]YANANDA SIRAPHATTHADA, [2]DUANGKAMOL THITIVESA, [3]PAWINTANA CHAROENBOON and [4]WALAILUCK WITKITTILUCK

[1,2] Suan Sunandha Rajabhat University, Thailand.
[3] Mahidol University, Thailand.
[4] Achieve Pharma Co., Ltd.
Email: [1]yananda.si@ssru.ac.th, [2]duangkamol.th@ssru.ac.th2, [3]pawintana.cha@mahidol.ac.th, [4]walailak4560@gmail.com

Abstract

The product value is considered to be important part to enhance the product competitive advantage in the modern age. If the value of the product is not properly improve then the product market value could be minimized. Various factors could enhance the product market value (PMV) but among of them product development (PD) and Product packaging (PP) are important that could enhance PMV. This is reason, the research aim was to examine the effect of PD and PP to enhance the PMV of local products of Ranong province, Thailand. For the purpose, the data was collected from 400 respondents by using a convenient sampling from the local products department of Ranong province, Thailand. Using cross sectional research design and quantitative research approach. The Partial Least Square (PLS)-Structural Equation Modeling (SEM) findings had shown that PD and PP have positive and significant impact to enhance the PMV of local products of Ranong Province, Thailand. By taking a critical analysis on the study findings, it could be grasped that most of customers or consumers are being interested for purchasing the local products because they found that these products are more attractive designed.

Keywords: product development, product packaging, product market value.

INTRODUCTION

Over time, packaging has become increasingly important in the local products. Such that, packaging is evolved from a simple means of defending a product in a critical marketing tool for building shelf appeal, giving information about the product, and creating awareness about the brand. L. E. Wells, Farley, and Armstrong (2007) define packaging as a distinguishing mechanism that aids customers in making a decision from among diverse variety of identical items while also encouraging buying intention (L. E. Wells et al., 2007). Product development and packaging are critical to a product's marketability. That's also due to fact that such aspects serve as a link between the customer and the product. It communicates the product's brand image, inherent traits, and concept. The product's initial sales pitch has been its development and packaging, which is critical with its market placement. Customers are turning towards packaged things because of their structure, color combinations, development , and material, which entice them to get closer, raise it up for a better look, study it, manage it, buy it, ultimately bring it home in using (Spears et al., 2009).

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Fisheries products have varying handling requirements, resulting in a variety of packing options to guarantee that items arrive safe and ready for sale and to use. Market share of local products is crucial for increasing output and speeding up economic growth. As the primary means of marketing communication, mass-media advertising and word-of-mouth have been used. Such characteristics of the marketing knowledge creation, together with the present rapid shift for customer behavior, have pushed product development and packaging towards the forefront. According to researchers, despite massive efforts for mass-media advertising to influence customer purchases, the atmosphere of the market place impacts a greater percentage of transactions. Approximately 66 percent of all supermarket purchases are made in the shop (Annan, 2018).

Keeping in view the local products prominence, the previous studies still had more attention on the countries of developed (Belem, 1999; Nguyen, 2012; Pettit & Liu, 2011) whereas previous researchers have little attention on the underdeveloped and developing nations like Thailand industry. The local products in Thailand played an integral role to increase the employment and Gross Domestic Product of Thailand (Sampantamit, Ho, Lachat, Hanley-Cook, & Goethals, 2021). It has been seen that the market value of the local products of the Thailand had declined from the previous several years. Various factors had become the foundation in declining the product market value. Among those, the product development and packaging are important indicators in declining product market value of local products (Kritzer et al., 2022). In addition, the previous researches still also had inconsistent results (Accorsi et al., 2022; Karima, Claudia, & Jacques, 2022; Lydekaityte & Tambo, 2020; Scollo, Bayly, White, Lindorff, & Wakefield, 2018; Shukla, Misra, & Singh, 2022). These inconsistent findings had shown that there is a need of further research. In addition, the previous studies had major focused on other sectors (Shukla et al., 2022; Wijayanti, Astawinetu, & Sihmawati, 2018). In this regards, the objective of the research was to examine the effect of product development and packaging to enhance the product market value of local products of Ranong province, Thailand. The study was significant for the theoretical and perspective which could help to the researchers and local products departments. The study was only mainly focused on local products of Ranong province, Thailand.

LITERATURE REVIEW

Theoretical review on product Development and Packaging

Various writers from throughout the world have looked at the subject of product development and packaging for the market. Packaging, such as, is defined by Dileep (2006) as the procedures, wrapping materials, and development s used to hold and preserve, protect, manage, deliver, label, exhibit, describe, advertise, and generally draw more attention to objects on display. Packaging, according to P Kotler and Armstrong (2006), includes any process involving the development and manufacture of a product's container, as well as the product wrapping. Packaging, as described by Appiah and Kumah (2009), is the art, science, and technology of covering or protecting items for distribution, sale, warehousing, and usage. This is a method of producing a product more accessible by placing it in suitable containers for

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improve mobility, avoid contaminates like diseases, dirt, other unfavorable environmental reactions. Packaging is defined by the Flanagin and Metzger (2011) as "the technique and art of pre-paring a product before efficient transportation, store, and sale."

Packaging seems to be the physical vessel which protects the contents of the product throughout transit and delivery, as well as having a well-development ed tag which provides all necessary details regarding the product that, most significantly, looking appealing. Packaging has a rich history that dates back towards the beginning of time. As per the Kwaku and Fan (2020), packaging seems to be defined as the techniques of storage and drying, as well as the materials utilized to hold and preserve, protect, manage, and transfer a product, like paper, plastic, glass, cardboard, and metals. Packaging would not have been a new procedure to Ghana, as per a research done by (Essuman, 2008). Most critical stage in the history of packing remained at that time when man began to put a few of his commodities in natural containers such as “leaves, gourds, and shells. Animal skins, shells, wide leaves, and hard "skin" fruits and vegetables” were the early methods of packing. Animal skins, sunken logs, gourds, coconuts, as well as shells were used to store liquids. According to the study, most maize meals in Ghana, for example "Ga kenkey" and "nkyekyera," were always covered with corn husk till this day.

Food was and is still carried on braided palm leaves from of the farmland towards market areas or houses. Advanced packaging, particularly in the field of food storage, stems from the late 16th century. For example, during the French War in 1795, at that time there had been a pressing necessity for food storage, which led to the canning of food. Nicholas Appert, a confectioner, devised the canning method in 1809 that was further evolved into today's low weight cans (Raheem, 2013). The nineteenth century saw breakthroughs in canning and the production of paper containers for packing. It ushered in the era of packaging, advertising, and branding. Mechanical printing methods, photoengraving, and digital printing have all emerged as a result of progress in the packaging business. Numerous packages have been embellished by printing procedures to attract the target audience, and they include the names of the items as well as information about their producers. Package development , according to Essuman (2008), entails the activity of development and verifying that packages meet the following overarching goals: safe delivery as well as the capacity to transmit their sales message. As a result, package development encompasses a wide range of a systematic method of ensuring that package accomplishes its two major objectives of providing the product to customer through fine condition because of its intended usages, as well as delivering both efficient sales advertisement and then all key requirements across the supply chain and to customer.

Importance of Product Development and Packaging

Essuman (2008), product development (PD) is an important and critical sales instrument inside this creating brand awareness. Packaging is served as the main medium for transmitting marketing messages in changeable sales situations, including rising competition, increasing prices, and decreasing advertising efficacy. Whereas the form, size, style, and efficiency aspects of a box could all help to promote purchase, the key information is typically given by the text and artwork on the packaging. This is why the look of packages is receiving so much

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attention and resources. Components of packaging, in the view of Rita Kuvykaite, Aiste Dovaliene, and Laura Navickiene (2009a), increase customer attraction toward a brand, enhance its reputation, and impact customer impressions of product. Such perspective backs up Rundh (2005) claim as packaging draws customers' attention toward a brand, elevates its reputation, and improves customers' expectations regarding brand. Additionally, Deliya (2012) observed that the correct packaging might affect a brand's standing inside the marketplace or in the eyes of customers. Packaging, as per the research of Spears et al. (2009), is interaction between product and customer. It communicates the product's brand identity, intrinsic traits, and "philosophy." As a result, packaging becomes the product's voice, fashion choices, and "style." Packaging is described in the study as the product's first sales presentation, which is critical for its market placement. The physical proximity of packaging draws customers closer to it, encouraging them to pay attention on it, raise it up for a better view, study it, manage it, bring it home, and utilize it. Customers are stimulated by packaging's shape, color, and touch. In such a nutshell, this is the product's spokesperson (Spears et al., 2009).

All of the aesthetic and informational components that are associated with package are referred to as packaging characteristics elements. Color, size, form, visual development , photographs, and pics are some of the visual traits, as per Vyas (2015), while information - based characteristics include details about the product's home of origin, consumer guidance, as well as all essential data that enables customers to pay more attention on product. As said by the Dobson and Yadav (2012), the visual features part of package remain important for product evaluation because it attracts a lot of attention and is caught quickly. On the other hand, Kuvykaite et al. (2009a) indicated that the key effective visual features for determining customers' buying decisions on dairy products and laundry detergent were material. Researchers further admitted that graphic shapes and colors have been less important in the packaging of the milk or laundry powder. Including both milk as well as washing powder, researcher's examination on verbal components found that product identification and region of origin seem to be the most vital aspects of package. While purchasing laundry detergent and milk, the research found that the effects of verbal aspects were far more beneficial than visual features.

Brand marking packages, as mention in the study of Appiah and Kumah (2009), can aid with exposure for the product's maker, packer, and transporters. As a result, shipping, distributing, and promotional tags may include one or more of the appropriate details: "the product's common name, weight, measure, or quantity, registered trademark, shipper's contact details, country or region of origin, size and grade, recommended storage temperature, special handling instructions, and names of approved waxes and/or pesticides used on the product". These are in line with the "General Labeling Rules of the Ghana Standards Board", which provide that the content on the brand may be solely word-based or include a logo, drawings, and images. Mostly on product it has already been fastened to or implanted, the label should specify the ingredients, nature, production and expiration dates, title, orientation of using it, and location of manufacture, as required by current local and international standards. Simple to comprehend, uninformed price, voluntary qualifications, truthfulness, scientific training, removal of redundant commercial obstacles, a project management lifecycle approach, encourage for

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advancement, minimal presidency, and constructive discussion with the goal of reaching an agreement (Network-GEN, 2004).

In addition, various materials can be utilized for package different things in different ways over the decades. Most of those naturally derived with in previous were more or less fully prepared and needed simple procedures to produce. "Animal skins, gourds, shells, hollowed wood, leaves, coconut shells, bamboo", and anything else that nature is provided with comparable functions that does not require scientific conversion. "Paper, paperboard, plastics, glass, wood, cellophane, steel, aluminum, and textiles" are all common packaging materials in contemporary times. Similar materials would then be manufactured and produced into many types of packaging that are available today. Kwaku and Fan (2020) divides packaging materials under three categories: primary, secondary, as well as tertiary. The packing material is a vital component that protects the goods from harm or damage. There seems to be a good chance that rising packaging will appeal to buyers further than poor packaging. In the line with this, the package material seems to have a significant influence on purchasing behavior. Consumers in Booth, Warner-Smith, Allan, and Glencross (2004) investigation, such as, associate package materials with particular product fundamental attributes. Consumer views of specific materials, once again, may influence the overall product quality (Booth et al., 2004).

Product Development and Packaging on the Product Market Value

Customer experience and attractiveness may be affected by product branding in a variety of ways. Packaging components and their influence on customer buying behavior have been thoroughly researched. Such as, Adelina and Morgan (2007) stated that packaging has become one of the most important aspects of marketing communications in recent years. Researchers claimed that packaging had a significant impact on consumer purchasing behavior, indicating that the influence of packaging aspects may affect customer purchasing decisions. According to J. A. Wells and McClendon (2007) packaging acts as a differentiating factor, allowing customers to choose amongst a selection of comparable items while also inciting purchasing behavior. Lunardo and Guerinet (2007) did a research on the impact on eco-labelling upon customer behavior, comparing the relevance of eco-labelling in packaging to other product features including price, brand, or others on consumer purchase choices. He discovered that there was a strong demand to buy things which have been packaged using resources materials. These were reinforced by a research Hysen et al. (2008), whom looked at customer purchase behavior for dairy products in Kosovo and discovered that packaging has a bigger influence. According to Rita Kuvykaite, Aistė Dovaliene, and Laura Navickiene (2009b), there have been six essential characteristics that package development needed to focus in order to develop effectiveness even though they had a substantial impact on customers' product choices. "Material, flavor, color, shape, graphics, and size" are only a few of them. This conclusion corroborated the findings of Philip Kotler, Keller, Brady, Goodman, and Hansen (2019), which identified six factors that should be considered during selecting packaging selections. Color, shape, style, material, inscription, as well as brand are just a few of them.

On the other hand, the various previous studies also found that when the product development had increased then the product market value had also increased (Kerdpitak, 2022; Morgan &

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Liker, 2020; Sharma & Lacey, 2004). In other words, it also found the positive and significant relationship between the product packaging and product market value (Rundh, 2009, 2016). Various other studies also found that product packaging also have significant relationship with product market value (Bakar, Lee, & Rungie, 2013; Rundh, 2016). In the same vein, it is also further found that production packaging has significant relationship with product market value (Gonzalez, Thornsbury, & Twede, 2007).

The above literature review discussion the research framework foundation had formulated. The current study framework has been consisted of two categories of variables. Two independent variables namely product development and product packaging and one dependent variable that is product market value. These variables are predicted in the following Figure.1 below.

Figure 1: Conceptual Framework

Based on previous discussion, it has been hypothesized that,

H1: The product development had a significant association with the product market value.

H2: The product packaging had a significant association with the product market value.

RESEARCH METHODOLOGY

The rest of this section had described the current study's approach, which was then applied for the present study. In addition, the deductive quantitative approach was used for this investigation, which employed the positivist research approach. According to the existing literature, quantitative research is believed to become a more appropriate method than qualitative research. Furthermore, the current study used a cross-sectional research methodology. Because the respondents failed to properly answer face to face during the epidemic, the data was obtained via an online survey via a Google form. The campaign of the data collection was began in December 2021 from the local products department of Ranong province, Thailand, using a simple random sample technique. The questionnaire was distributed among 500 respondents from local products of Ranong province, Thailand. Among of those, 300 questionnaires were returned back which shows 75 percent response rate. For the data collection, the reserch instrument adapted from previous literature. The Product packaging was measured by three adapted items of (Silayoi and Speece 2004). In addition, the product development was measured by 4 adapted items of (Jabbour, Jugend, de Sousa Jabbour, Gunasekaran, & Latan, 2015). Lastly, the product market value was measured by 5 items which were adapted from the study (Jermsittiparsert, Wattanapongphasuk, & Phonwattana, 2019).

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The items were already in use. As a result, this instrument was more reliable. The questionnaire was graded on a five-point scale ranging from strongly disagree 1 to strongly agree 5.

DATA ANALYSIS AND RESULTS

Convergent and Discriminant validity

The present study had used the Smart-PLS 3.28 for analysis. The smart PLS is considered to be better software which is suitable for the complex model. The data was analyzed in two models measurement and structural. Two criteria's namely convergent and discriminant validity measurement model which was also assessed by various other researchers (M. J. Ahmad, Farhan, & Fareed, 2019; R. Ahmad, Ahmad, Farhan, & Arshad, 2020; Bhatti, Farhan, Ahmad, & Sharif, 2019). Therefore, the convergent validity has been assessed. For the convergent validity, Crohnbach alpha recommended value is 0.7, factor loading is 0.5, and composite reliability (CR) is 0.7 and average variance extracted (AVE) recommended value if 0.5. These values were recommended by several researchers (Hair, Hult, Ringle, Sarstedt, & Thiele, 2017; Hair, Sarstedt, Pieper, & Ringle, 2012; Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014). The Table.1 predicted values had shown that construct convergent validity is verified because the construct values are above from above recommended values.

Table 1: Measurement Model Results

Variable	Items	Factor Loading	Cronbach's Alpha	Composite Reliability	AVE
Product Development	PD1	0.928	0.842	0.892	0.685
	PD2	0.665			
	PD3	0.727			
	PD4	0.861			
Product Packaging	PP1	0.712	0.877	0.885	0.697
	PP2	0.842			
	PP3	0.847			
Product Market Value	PMV1	0.841	0.859	0.887	0.639
	PMV2	0.901			
	PMV3	0.745			
	PMV4	0.726			

Note: PD-product Development, PP-product Packaging, PMV-product market value.

In addition, the second step to measure the measurement model is discriminant validity. There are three recommended procedures which has been measured in the extant literature, namely Fornell and Larker, cross loadings Fornell and Larcker (1981). The Fornell and Larker shows that all square roots of AVE diagonal values should be greater from below values. The Table.2 predicted values shows that constructs fulfill the criteria of Fornell and Larker. Secondly, the cross is being used for the evaluation when the instrument is not considered to be more than base instrument. The cross loading values should be equal to the factors loadings (Hair Jr, Matthews, Matthews, & Sarstedt, 2017). Thirdly, the hetrotrait monotrait correlation (HTMT)

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correlated values should be less than 0.85 or 0.90 (Henseler, Ringle, & Sarstedt, 2015). The Table.3 predicted values had shown that construct fulfill the criteria of HTMT.

Table 2: Discriminant Validity (Fornell & Larcker, 1981)

	PD	PP	PMV
PD	0.822		
PP	0.176	0.872	
PMV	0.136	0.368	0.789

Note: PD-product Development, PP-product Packaging, PMV-product market value.

Table 3: Discriminant Validity (HTMT

	PD	PP	PMV
PD			
PP	0.598		
PMV	0.483	0.652	

Note: PD-product Development, PP-product Packaging, PMV-product market value.

Hypothesis Testing

The 500 resampling technique had been applied by using bootstrap in PLS-SEM for the hypothesis testing. The study PLS-SEM findings shown that product development (PD) was positively and significantly effect to the product market values (PMV) of local products in Thailand that supports to hypothesis 1. This outcome had shown that when development in the products of local products had increased then market value of products had increased. This shows that the respondent's gives more rating that PD played an important role to increase the PMV of local products in Thailand. On the other hand, the product packaging (PP) had also a positive and significant relationship with the PMV that supports to hypothesis 2. This result indicate that packaging is an important part to increase the market value of the product. This argument is further supported by various researchers in extant literature that when the packaging of the product is attractive then the market values of the product had also increased (Wang, 2013). All of the above results are predicted in the following Table.4 and Figure.2 below.

Table 4: Hypothesis Testing

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
PD1 -> PMV	0.137	0.136	0.069	1.982	0.048
PP -> PMV	0.786	0.79	0.044	17.69	0.000

Note: PD-product Development, PP-product Packaging, PMV-product market value.

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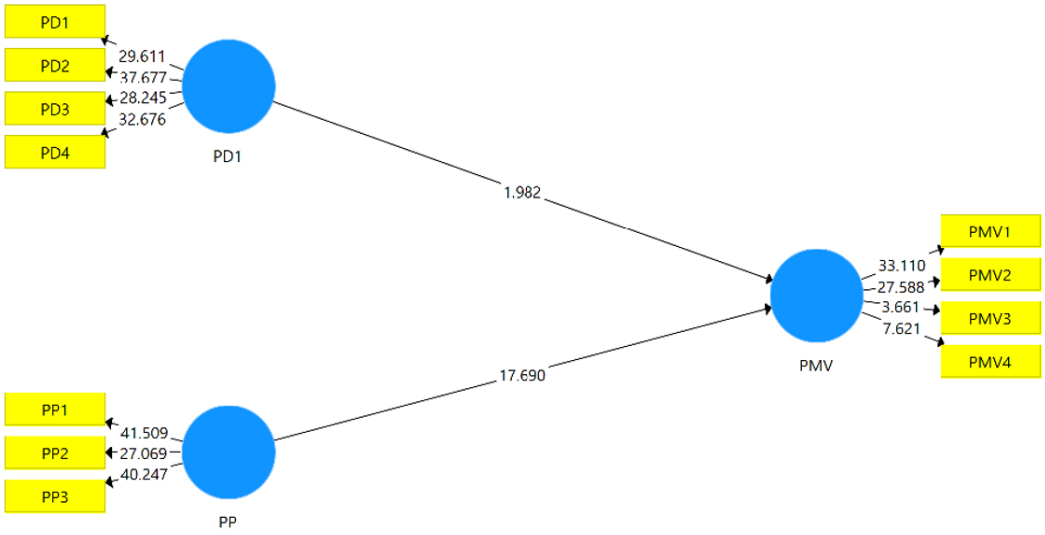
Figure 2: Structural Model



CONCLUSION AND RECOMMENDATIONS

The product value is considered to be important part to enhance the product competitive advantage in the modern age. If the value of the product is not properly improve then the product market value could be minimized. Various factors could enhance the product market value (PMV) but among of them product development (PD) and Product packaging (PP) are important that could enhance PMV. This is reason, the study aim was to evaluate the impact of PD and PP to enhance the PMV of local products of Ranong province, Thailand. For the purpose, the data has been gathered from the local products department of Ranong province, Thailand. The key findings had shown that PD and PP have positive and significant impact to enhance the PMV of local products of Ranong Province, Thailand. These findings are further supported from the previous studies (Bakar et al., 2013; Khan, Lockshin, Lee, & Corsi, 2017). By taking a critical analysis on the study findings, it could be grasped that most of customers or consumers are being interested for purchasing the local products because they found that these products are more attractive designed. The results had various practical and theoretical contributions. Firstly, the research added literature that could be future research area. Secondly, the current research could create a collaboration among the researchers and industry. Thirdly, the current study could helped to the entrepreneurial and local products department to know about the importance of PP and PD to enhance the PMV.

Along with significant contributions, the current research still have some limitations that could become future research. Firstly, the study was limited on Thailand province that has generalizability limitation, a future research could be done on other provinces of Thailand or other countries to increase the research findings variations. Secondly, the study was consist of direct relationship while there are various other variables that could enhance the predictive

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relevance of the study therefore a future research could be conducted on adding various other independent, moderating or mediating variables that could enhance the research reliability.

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