Co-Creating values and values perception of Delivery Services through Mobile Phone Application experience in Lazy Economy Society.

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ABSTRACT: Mobile phone application are now widely acknowledged as a potential means of service deliveries to customers in new trending called Lazy Economy. The possible success of the convenience economy market for smart phone application is based on how much of co-creation value can be perceived by their potential customers’ perception. Using the mobile technology of application within online retailing, the current study aims to explore the role of co-creation value in terms of customer participation (information participation, attitudinal participation, and actionable participation) in enhancing customer perceived value in terms of quality value, financial value, social value and emotional value. This paper constructs a multi-scale model for the measurement of Customer perceived value based on surveys, which is applied to delivery services on smart phone application based. The data collection employed a survey method with structured questionnaires which were distributed to 400 respondents who purchased food through from mobile application. The findings showed that interactions through mobile internet are able to increase customer perceived values, facilitating collaboration in co-creation value, allowing the company to improve and develop product offers based on customers’ needs and desires. The results were found that structural equation model developed by the researcher was consistent with the empirical data. The structural formula showed the confidence index for forecast that was equivalent to 65%. Therefore, the result supported that co-creation values significantly influenced to consumer perceive values at the level of statistical significance 0.001.

KEYWORDS: co-creation value; customer perceived value, food delivery application, lazy economy; mobile phone application

I. INTRODUCTION

Digitization of the marketplace brings evolution in consumers’ behavior and expectation towards the product and service platform and integration of various channels. Consumers’ expectation of retailers are to provide endless, consistent and personalized service in which digitalization enriched customer experience (Picot Coupey et al., 2016). The value of digital economy in Thailand is being greater, stronger and more common, it was approximately US$16 billion in 2019 and is expected to grow to $50 billion by 2025. An annual growth rate of Thai online economy has significantly risen up with an annual growth rate (CAGR) of 29 percent. The number of internet users grew to 47 million people in 2019, up from 38 million in 2018. In 2019, electronic commerce in Thailand generated $5 billion in gross merchandise volume (GMV) with a CAGR of 54 percent, in particular, food delivery application based has generated $1 billion in GMV and had a 39 percent CAGR. (Bangkokpost, 2019). Over the past decade, the emergence in mobile technologies and application based in smart phone widely and rapidly spread all over the world (Hüseyin E., 2019). Recent developments in mobile technologies, the increase of the number of smart phone users has led to the developments in mobile applications. By this rapid improvement of the technology and its impact on smart phones, continuous advancements in mobile technologies resulted in the wide spread of smart phone applications.

This development is affecting competitive strategies, as new channels will break down common barriers such as geography limitations (Brynjolfsson et al., 2013). Concurrently, consumers’ expectations of integrated application of mobile touch points provide retailers’ opportunity to create value and innovative offering designed to enhance consumer value as well as maximize organizational value. Due to its convenience and availability, a higher number of mobile users would be capable in generating more businesses that witness the shift of consumerism through mobile commerce adoption (Hure et al., 2017). With the rapid proliferation of mobile devices, mobile phone application based is widely recognized as the influential driving force for business practice (Satwinderjit S., 2018). Nevertheless, food, in the past, were never thought of as items for mobile delivery. However, with the change of working habits in such a convenience economy, and consumers opt for adaptability and convenience. At present, innumerable mobile platforms have emerged as a major connective gateway between food providers and mobile phone users (Pappas et al., 2016). Innovative mobile technologies deliver alternative tools to save time of purchasing food and the time of actual consumption by
allowing consumers to make a purchase from a mobile device and collect the product at their convenience place, instead of the traditional model of purchase and consumption in the store (Pantano and Priporas, 2016). Mobile apps bring enormous benefits to consumers and mobile application attract high attention among mobile phone users (Tung-Sheng K., 2019). Due to the popularization of the mobile commerce, worldwide companies have created new consumption platforms for their customers on mobile application in addition to traditional platforms in food business. In Thailand, food delivery through mobile application platform is becoming more extensive. The amount of revenue in online food delivery segment in Thailand US$275m in 2020. Revenue is expected to show annual growth rate (CAGR 2020-2024) of 13.5 percent, expecting in a market volume of US$455m by 2024. The food delivery in Thai market is booming, the number of food delivery services in Thailand has been developed more and more among small, medium and large-scale cafes and restaurants; GrabFood is one of the most visible delivery services, Lineman has more venues to choose no matter how far the distance between customer and restaurant and Foodpanda is good reputation at quick, easy and fast service. Consequently, the cause for the emergence of recently developments and market penetration in mobile applications has drawn a great deal of attention in both academically and industrially (Abdul R. et.al., 2017). Unfortunately, there have been very few researches on what factors may influence of mobile apps users’ perceived values. Besides, the importance of developing service delivery systems that enable and enhance the process of co-creating value has progressively increased over the last few decades to the point of being considered critical for marketing success (Dong et al. 2008; Wu 2011). However, the interrelationship between co-creating values and perceived values are still hardly unexplored. This interrelationship is the gap in the food delivery on mobile application. Hence, the main purpose of this study is to examine the features of the mobile phone applications and the effects of these features’ co-creating value on their perceived values on food delivery mobile application. In this study, co-creating values including customer participation behaviors, customer citizenship behaviors and co-creation behaviors were determined as the factors assume to have an impact on perceived value, consist of quality value, financial value, social value and emotional value.

II. REVIEW OF LITERATURE

Co-creating values: Value co-creation is a process to facilitate a range of organizational resources, activities and experiences that encourage exchange and interaction with customers which, in turn, can lead to better practice and innovation. In the adoption of a co-creation process, the organization forms a reciprocal and sensible relationship with their consumers, allowing for a wider range of consumers’ needs, wants, and demands to shape all aspects of the service, product, and/or delivery (Prahalad & Ramaswamy, 2004). Co-creation value is a series of interactive activities and experiences being exchanged between customers and companies (Bharti, Agrawal, &Sharma, 2014).

Yi & Gong (2013) conceptualized the customer value co-creation behavior as a multidimensional concept which consists of two factors (customer participation behavior and customer citizenship behavior), and each factor contains multiple dimensions. The customer participation behavior comprises four dimensions: information seeking, information sharing, responsible behavior, and personal interaction. Besides, the customer citizenship behavior consists of feedback, advocacy, helping, and tolerance. Finally, Chen & Raab (2014) developed and validated the mandatory customer participation (MCP) scale which was applied for Engel-Blackwell-Kollat model. This scale can be divided into three dimensions: information participation, attitudinal participation, actionable participation. This research evaluated how the intrinsic antecedents as role clarity, self-efficacy, and purchase importance could influence MCP. The customer participation behaviour belongs to the required behaviour which is necessary for a successful value co-creation. The customer citizenship behaviour is voluntary behaviour that provides an extraordinary value to the firm but is not necessarily required for the value co-creation (Groth, 2005; Bove, Pervan, Beatty & Shiu, 2008; Yi, Natarajan & Gong, 2011). The customer participation behaviour comprises four dimensions: information seeking, information sharing, responsible behaviour, and personal interaction Yi & Gong (2013). In addition, Chen & Raab (2014) developed and validated the mandatory customer participation (MCP) scale which was applied for Engel-Blackwell-Kollat model. This scale can be divided into three dimensions: information participation, attitudinal participation, actionable participation. Customer participation in services generally refers to customers' ability to influence the process and quality of service delivery. Marketing and consumer behaviour scholars have long paid close attention to customer participation at the level of individual firms (Bowen, 1986; Namasivayam, 2003). This paper is, thus, focus on consequences of value co-creation behavior. The author examined relationship between the value of food service activities on mobile phone application and quality of its services. Besides, we have defined the co-creating value dimensions of food delivery services on mobile platform, and we want to investigate value co-creation from the customers’ perspectives.
Customer Perceived Values: In modern marketing era, to maintain or even gain higher market share, companies are required to emphasize on the concepts of values of products to their customers’ perspectives. Perceived value has long been acknowledged as one of most important marketing constructs affecting consumers’ post-purchase responses and behaviors. Perceived Value or ‘Customer Value’, has been provoked by the phenomenon of ‘value creation’ among researchers in both academics and business industry. It has been also pointed out that CPV analysis is not only a marketing method. It is a strategic marketing tool lead companies to positioning themselves and gaining competitive advantage over their competitors along with balancing the gaps in the buyer’s and vendor’s value perceptions (Ulaga and Chacour, 2001). Wang et al. (2013) proposed customer value as customers’ perceived preference and evaluation of product attributes, which could fulfil of individual needs and wants. The definition emphasized that customer value originally from customers’ perception, preference, and evaluation acquired from the connection of customer learning experiences and generated by a product under certain purchasing situations. Customer perceived value is subjective evaluation between the gains or receives and loss or what is given after the purchasing process ((Ulaga, 2000). Customer perceived value can be defined as quality of value after comparison of customer’s benefits and sacrifices. The adoption of perceived value is commonly determined by a ratio between the perceived benefits and the sacrifices required when applying technology or innovation (Souza and Baldanza, 2018).

Certain dimensions of perceived values are generally fundamentally proposed as a functional or utilitarian dimension as well as an emotional or hedonic dimension (Stoel, Wickliffe, & Lee, 2004). Kim et al. (2007) suggested that modeling the perceived value of a product solely considering only based on its price is insufficient, the perceived quality of the product is also need to be considered. Previous studies have suggested several types of value: functional, social, and emotional (Hsiao and Chen, 2016). Functional value is impacted primarily by organizational initiatives related to the functional benefits of the product for consumer, the utility derived from the product due to the reduction of its perceived short term and longer term costs while emotional value can be defined as the utility derived from the feelings or affective states that a product generate. (Ihsan Hadiansah, Rendika Nugraha, Adhi Setyo Santoso, 2018). This value can be increased both by improving the benefits for the individual and by reducing the costs of buying and using the good or service. However, the valuation of the total value is not based solely on price and quality. Social dimension is also universally anticipated in this conceptions (Boksberger & Melsen, 2011). Social Value is defined as the perceived utility acquired from developing communication skills with one or more specific social groups and is interacting with others (Rhoads, 2002). There is a research suggested that better social performance at corporate level becomes, at product level, better perception of value for money (Klein & Dawar, 2004). Another commonly used in studies of customer perceived value can be classified in economic aspects. Companies perceived as more productive, with better economic performance in the long term, and which offer good products at competitive prices are able to generate sensations of utilitarian value for consumers. (Rafael et.al, 2017). Price is a variable is much more referred to an economic entity which is considered in CPV studies as an economic value (Herman et.al., 2017).

III. CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Based on the traditional marketing concept, value perception is the dependent output variables of a company’s creation that then is co-create with their customers in the form of products launch into the market (Vargo and Lusch, 2012). Besides, The concept of co-creation value enables service providers to propose their services to their consumers’ needs. The result of value co-creation gives value for consumers as well as providers (Ida, 2017). In addition, From the renovation of traditional exchange relationship between seller and buyer, value co-creation emerges allowing the sellers to create value and the consumers perceived it (Vargo & Lusch, 2008). In general, value co-creation is recognized as one of important marketing strategy that incorporates consumer resources to jointly co-create new and innovative forms of perceived value (Perks, Gruber, & Edvardsson, 2012). In this regard, Porter and Kramer (2011) introduce the concept of creating shared value, which involves creating economic value for firms in a way that also creates social value by addressing social needs and challenges. As discussed earlier, customers help create economic value by directly participating in firms' business activities and contribute to the creation of social value by participating in business ecosystems through collaboration with firms (Joo and Chin, 2018). Besides, consumers seek products with convenience networking and communication in different formats and features, so functional value and emotional value are also significant in understanding the components of consumer co-creation value when using mobile delivery application and their relationship to consumer perception of values. To find out how is perceived value formed, and what are the antecedents for it in the context of mobile commerce has been considerably researched. This study uses models and theories of co creation value, in which, have a direct influence on the value perceived by individual customers.
Co-Creating values and values perception of Delivery...

Figure 1 Conceptual Framework of the study

Four hypotheses can be proposed in this study: Hypothesis 1: Informational values toward purchasing food through mobile application is positively related to customer perceived quality value (H1a), to customer perceived economic values (H1b), to customer perceived social values (H1c), to customer perceived emotional values (H1d). Hypothesis 2: Attitudinal values toward purchasing food through mobile application is positively related to customer perceived value (H2a), to customer perceived economic values (H2b), to customer perceived social values (H2c), to customer perceived emotional values (H2d). Hypothesis 3: Actionable values toward purchasing food through mobile application is positively related to customer perceived value (H3a), to customer perceived economic values (H3b), to customer perceived social values (H3c), to customer perceived emotional values (H3d).

IV. RESEARCH DESIGN AND METHODOLOGY

Data were analyzed using combination methods: qualitative and quantitative method. Once a qualitative method, interviewing three customers who purchased food from mobile application, was conducted, questionnaires was developed based on multi-item scale of previous research studies and the results of qualitative methods. Afterwards, this paper constructs a multi-scale model for the measurement of co-creating values and customer perceived, is applied to delivery services on smart phone application based. The data collection employed a survey method with structured questionnaires. All of the measurement items were adapted from previous studies. Co-creating values was based on measures developed by Chen and Rabb (2014) and revised for our setting. The customer perceived values construct was measured with five items developed from adapting the original items of Seegebarth (2015). Using Slovin's formula with 95% confidence level and 5% margin of error, the sample size is equal to 400 respondents who purchased food through mobile application. The validity testing in this study employed construct validity with Exploratory Factor Analysis (EFA) with principal components analysis and varimax rotation. All of the items corresponding to customer perceived values (quality value, economic value, social value and emotional value) and co-creating value (informational value, attitudinal value, actionable value). We then calculated Cronbach’s α, which is a measure of internal consistency reliability, for each multi-item scale. Hypotheses testing then analyzed with a structural equation model assisted with AMOS 22.0 software.

V. RESULTS AND DISCUSSION

According to exploratory factor analysis, all the other items were loaded on their intended factors, and the item loadings across all seven factors were satisfactory. The seven factors accounted for 74.76 percent of the total variance. Cronbach’s α is measured internal consistency reliability for each multi-item scale. It was found that all of the alphas are above 0.70, which suggests that the items were measured reliably. The analysis results of the full structural equation model are illustrated in Figure 2. Based on the observation results, the model has met the fit criteria as marked by the score of calculation output which meets the adequacy criteria of the full model. The results of calculation for several goodness indices to evaluate the overall model goodness used are GFI index (GFI) = 0.981; the adjusted GFI index (AGFI) = 0.953; Tucker-Lewis Index (TLI) = 0.958; and root mean square of approximation (RMSEA) = 0.061. The results show that the overall model meets the criteria of fit model as shown in the following diagram. The results of the process indicate that each indicator or dimension which measures every latent variable shows good results where the score of critical ratio (CR) is above 2.58. Next, the correlation between each pair of constructs were constrained, one at a time, to equal 1.0 (Anderson and Gerbing 1988).
The test confirmed that all of the correlations among the latent constructs were significantly less than 1.0. In addition, our EFA results demonstrate discriminant and convergent validity. Collectively, these results suggested that the criteria for convergent and discriminant validity were met for all the constructs. The results of hypotheses testing in this study are presented in Table 1.

![Structural Equation Model of the study](image)

**Figure 2** Structural Equation Model of the study

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Sig. Correlations</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>Partial</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.674</td>
<td>.176</td>
<td>.950</td>
</tr>
<tr>
<td></td>
<td>Informational</td>
<td>.209</td>
<td>.035</td>
<td>.258</td>
</tr>
<tr>
<td></td>
<td>Attitudinal</td>
<td>.637</td>
<td>.032</td>
<td>.395</td>
</tr>
<tr>
<td></td>
<td>Actionable</td>
<td>.064</td>
<td>.042</td>
<td>.083</td>
</tr>
</tbody>
</table>

According to the above table, coefficients can be suggested as Perceive Value = 1.674 + 0.209 Informational + 0.237 Attitudinal + 0.064 Actionable + e. Informational of food delivery services through mobile application on perceived value of consumers at the statistical significance level of 0.05 and b₁ = 0.209. It can be implied that the positive coefficients of informational co creating value increase by 1 percent, the value of consumers’ perception will be increased by an average of 0.209 percent. In similar, attitudinal co creating value of food delivery through mobile application increase by 1 percent. Customer perception will increase by 0.637 percent. While the two independent variables reflect positive coefficients, actionable co creating values of food delivery via mobile application has no influence on customer perceived value at the statistical significance level of 0.05.

**VI. CONCLUSION AND IMPLICATION**

As co-creating values plays an important role in the virtual environment, mobile application can be regarded as vital tools that help consumers to order food delivery via their mobile phone. In addition, co-creating value can be useful in explaining variations in perceived values among individual customers. Also, this study underlined co creating value that are salient to perceived high value to purchase food through mobile application context. Three scales, incorporating the purchase decisions of food items from mobile application and its effects on customers’ perceived value, were examined in the study. The findings suggested that two measurement scales including informational and attitudinal co creating values are predictable to explain customer perceived value in mobile application context. The findings support the view that informational co creating values have a positive impact on customer perceived values. Furthermore, attitudinal co creating value can be defined to be a powerful predictor of the customer’s perceived values in the relationship with sellers in mobile communities. However, actionable co creating value appeared to have no impact on the relationship with perceived value, as the offline retail services are more intensely customized and attached for individual customers comparing to online context.

Hence, this study incorporated two dimensions of co-creating values that apply to food products purchasing from certain channels of mobile application. Measurement scale captures a variety of co creating values and perception of values that underlie a specific form of mobile shopping. The proposed scale offers a validated measurement tool, the scale’s reliability and its convergent and discriminant validities were confirmed. From a theoretical perspective, the study uncovers correlations between co-creating values and perceived values, exploring which factors of co creating values can identify perceived values in mobile purchasing environment.
Furthermore, the study offers some useful managerial implications. This study implied that informational co-creating value play a significant role with regard to perceived value in purchasing food items through mobile application. The findings provide useful information for e-retailers to better understand that customers’ response processes when shopping food online. Online food retailers must provide adequate product information and educate customers regarding their product benefits as the determination of effective marketing strategies. Attitudinal co-creating values reflected the customers differing perceived value formation. Online retailers can enhance customer perceived value and promote their intent to shop via mobile application by balancing attitudinal co-creating values between firms and customers. Customers are reserved to have new experiences and create new product experiences incorporated with companies.

VII. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The findings from this study should be interpreted with caution for several reasons. First, the results were accomplished using a single segment of mobile application. As a consequence, it should be noted in applying the results to other areas of industry. Related to this, the conceptualization of online shopping might benefit from additional investigation to other industry domains. Next, future studies may include different types of service/product categories to enhance the generalizability of the findings. Finally, while a cross-sectional survey method is applied to this study, longitudinal studies in the future may capture the dynamic nature of mobile application and provide a better understanding of consumers’ responses over a period of time.

REFERENCES


