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# The mediating role of customer value on innovation and firm performance: evidence from Indonesian SMEs

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**Abstract.** Innovation and customer value are central issues in successfully business research. Firms need to determine how they are willing to meet their customers' needs through the product innovation. This study examines the role of customer value in the relationship between innovation and firm performance on Small and Medium-sized Enterprises (SMEs) Food in Malang City, Indonesia. Due to answer the purpose, questionnaire was developed and data was analyzed by Partial Least Square (PLS). The result indicated that customer value partially mediates the relationship between innovation and firm performance. Moreover, these findings provide evidence that SMEs can achieve competitive advantage through improved innovation encouraged customer value.

## 1. Introduction

In this free trade era, SMEs was more threatened by high competitive market. Moreover, some substantial practitioner-oriented literature like Kim and Maubourgne [1] suggests that order to survive and thrive in increasingly hypercompetitive markets, innovation is the only solution. Nevertheless, another researcher say innovation implies increased uncertainty and risks [2] especially for SMEs the failure of an innovative product evokes existential risks. Furthermore, it turned into an interesting topic due to its role in explaining sustained competitive advantage to firm performance.

Innovation was defined as implementation of new ideas in order to create value either directly for the firm or indirectly for its customer. According to Ngo and O'Cass [3] innovation capabilities affecting service quality through customer participation, thereby enhancing firm performance. In additional, other studies reported that customer value is the priority in all business areas and it is important for companies to understand how to create, communicate and deliver value to customers, so that it becomes a key factor that differentiates from competitors and gains competitive advantage [4, 5]. Customer value is the quality perceived by customers that is adjusted to the relative price of a product [6]. Moreover, Kotler et al. [7] stated that customer value is differences of cost and benefits of product perceived by customer. Involving customers is considered an important factor affecting innovation success.

The purpose of this study is to explore the relationship between innovation, customer value and firm performance in the SMEs agro-industry in Malang, Indonesia. These studies also explore the indirect relationship between innovation and firm performance with customer value as mediating role. A conceptual model and hypothesis was developed and tested by structural equation modeling.



## 2. Literature review and hypothesis

### 2.1. Innovation and customer value

Innovation is the new solutions to meet new or existing customer and market requirements. While, another defined as new product that introduced or launched to market and consumer. Innovation also describes as new process for express better quality and value than competitor. Moreover, Keh et al. [8] explain innovation is very important to enterprises because consumers are smarter than before. They demand better fulfillment of quality, renewal, and price or they called as customer value.

Most of empirical studies provide the relationship between innovation and customer value. For instance, Slater and Narver [9] indicated one of the factors for succeeding innovation knows what consumer need. Payne and Frow [10] assert that innovations would more effective and efficient to influence customer value. In accordance with Nasution and Mavondo [11] that determinants of customer value are associated with the implementation innovative products and innovative processes. Besides, Schaarschmidt and Kilian [12] revealed that customer integration is an integral element of the innovation. Some researchers also express that innovation had a positive relationship with customer value [13, 14]. Consequently, firms need develop product innovation and marketing capability into superior value offerings for customers. Clearly, from some study conclude that innovation and customer value has a positive relationship.

**H1.** Innovation will positively influence customer value

### 2.2. Innovation and firm performance

Innovation is essential to enterprises since it makes they be able to adapt market change and meet new demand its importance in both manufacturing and service industries. Innovation tends to be strategic activities of a firm to face the change on internal and external environment. Furthermore, innovation is one of the most important factors for firm performance especially in high competitive market. In this case companies with better innovation capabilities will be able to respond to challenges more quickly and be able to exploit new products and market opportunities. Firms without innovation will be weak, so innovation as a critical business process.

Many researches, argued that the relationship between innovation and firm performance is positive [15, 16]. However, another study provides contradictory results [17]. As reported by Mansury and Love [18] that focusing on service companies in the US concluded that service innovation levels have a positive effect on company growth but have no effect on productivity. Although there are differences in the results, most of them state that there is a positive relationship between innovation and performance.

**H2.** Innovation will positively influence firm performance

### 2.3. Customer value and firm performance

Key intangible assets of a firm are customer especially in highly competitive market is customer value. Customers are becoming more sophisticated, segmented and demanding. They expect more in terms of customization, newness, quality and price. Customer value is a value added by manufacturer so the products can produce in accordance needs of consumers. It can be simply conceptualized as a comparison of weight of 'get' attributes to 'give' attributes [19]. Hence, every manufacture will try to create the best product according to customer needs by giving better customer value. Aslund and Backstrom [20] revealed that management process must encourage customer creation value, driven by "need", "opportunity", "interest" and "demand". Therefore, companies must anticipate customer value.

Customer value management can make sales more effective. According to Gale *et al.* [21], customer value can affect sales and customer loyalty. It is strengthened by other similar research which point out customer value has positive significant effect to firm [22, 23]. Research by Pecovic and Rolland [24] indicated that customer orientation practices directly improve firm's performance in small firms. This result implies that customer orientation is a valuable asset. Some researchers demonstrate that customer value could enhance firm performance [14, 25].

**H3.** Customer value will positively influence firm performance*2.4. The mediating effect of customer value*

Innovation performance can facilitate firms to generate market performance in numerous ways like improving value product to the customer. Innovation can make manufacture to clarify their competitive advantage through different product and creating value to consumer. Reflecting on the perils of innovation, it needs to be noted that innovation is a task fraught with high failure rates. To improve the manufacturing process must pay attention to consumer perspectives, including consumer needs and customer satisfaction through the design of new products. Therefore, consumers are the main focus in product development. Furthermore, Valmohammadi [26] claims that innovation improvement caused by customer relationship management (CRM) will impact better organizational performance in Iranian. Result study by Anning-Dorson [27] revealed that develop innovative product which is tailored to customer preferences, has an impact on improving performance.

Succeed manufacture depend on the innovation capability to create new value to their product. An enterprises do an innovation by creating value to customers will improve firm performance, meaning that customer value is important for process of innovation product in order to improve firm performance. By paying attention to customer value, firms can minimize the risk in innovating also make the product more focused in entering market for better firm performance. Ngo and O'Cass [3] note that customer participation mediated the relationship between innovation and business success. Additionally, Dekoulou and Trivellas [28] have empirical evidence that customer relationship value mediates the relationship between innovation and firm performance.

**H4.** Innovation will positively influence firm performance via customer value**3. Method**

To carry out the empirical study, this study based on a survey of SMEs food agro industry in Malang, Indonesia. The data were obtained using structure questionnaire. The five-point Likert-type scales ranging from 1 (totally disagree) to 5 (totally agree) were used throughout the questionnaire. A total of 53 questionnaires can be used from SMEs. The questionnaire of innovation, customer value, and firm performance were developed from [29 -31] with a total of 13 items that shows in Table 1.

**Table 1.** Variables and items.

Variable	Item
Innovation	1. Product diversification
	2. Imitation of product
	3. Substitution of product
	4. Developing design product
	5. Developing product packaging
Customer Value	1. Price
	2. Quality
	3. Practicality
	4. Prestige
Firm Performance	1. Profitability
	2. Sales
	3. Market share
	4. Productivity

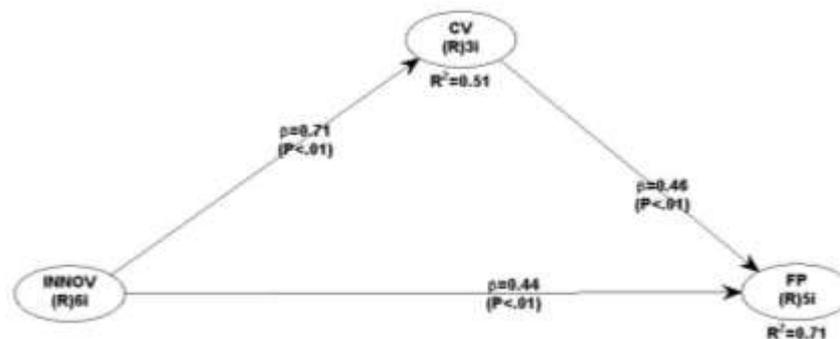
**4. Results and Discussion**

Hypothesis relationship was accomplished with a structural equation model via PLS 0.5. The result of measurement model show indicates factor loadings in the measurement model are greater than 0.50 it

means convergent validity approves. In addition the results show our model meets the discriminate validity criteria (loading factor > cross loading). Composite reliability coefficients for the variables in the measurements model are all greater than 0.06 that mean a high internal reliability exists in a model. Moreover, the measurement model shows acceptable fit values for AFVIF, GoF, SPR, RSCR, SSR and NLBCDR reveals that the model does a good job in explain the relationships between latent variables and observed variables.

**Table 2.** Hypothesis testing.

Hypothesis	Variable correlations	Path Coefficient	$p$ value	Description
H1	Innovation => customer value	0.44	<0.01	Supported
H2	Innovation => firm performance	0.71	<0.01	Supported
H3	Customer value => firm performance	0.46	<0.01	Supported
H4	Innovation => customer value => firm performance	0.26	<0.01	Supported



**Figure 1.** Research model and testing result.

The result of H1 is influence of innovation on firm performance was showed in Table 2 and Figure 1, the effect of innovation on customer value has value of < 0.01 ( $p < 0.05$ ) that mean hypothesis 1 supports. After that H2 was examined that show, the effect of innovation on firm performance, have value of < 0.01 ( $p < 0.05$ ), as expected. By H3, we examined the influence of customer value on firm performance has value of < 0.01 it means significant ( $p < 0.05$ ) and provide support H3. Furthermore, the result of detects H4 finding that the innovation has a positive effect on both customer value and firm performance. In this sense, customer value has a partial mediation role on innovation and firm performance. Thus H4 was accepted.

First, the result shows a positive relationship between innovation and customer value. Innovation will increase the added value of a product and must be able to make different products in the minds of consumers so that consumers are more interested in buying these products than competing products. This finding provides additional evidence of previous research conducted by [11-14]. Second, the finding demonstrates a positive impact between innovation and performance. In this sense, that the firm must actively innovate to increase competitiveness. If the firm regularly up to date, creative ideas, develops products or processes that are more efficient, then it will be more profitable. Therefore, innovation is a driver of long-term business success, especially in a dynamic market. This finding is consistent with previous studies [15, 16].

Third, the result indicates that customer value has direct influence on firm performance. This study illustrates that a firm must pay attention to customer value as a strategic customer and actively shares knowledge with them. Accordingly, involving customer value in creating innovation will be able to improve competitive advantage. This result is in line with other studies [20, 23, 24]. Finally, this study found that innovation affecting firm performance through customer value. It indicates that

competitive advantage is built on a full understanding of customer needs. This new insight implies that a firm must strive to apply their knowledge and skills for innovation, which should involve customer value so as to get better results. In particular, innovation is important, but its existence without regard to customer value does not provide good competitiveness. This study reinforces previous recommendation [3, 27, 28]. More specifically, this study clarifies how customer value contributes of innovation to firm performance as mediating role.

## 6. Conclusion

The result of this study explains that SMEs should develop innovation capabilities to achieve competitive advantage. Even with limited resources, they should consider customer value as an asset in business to get better results. The practical guidelines assert on managers to deliberate the role of customer value in realizing innovation, especially at highly competition.

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