

The Effect of Performance & Conformance Innovation Towards Product Life Cycle Through Customer Relationship Management

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Abstract. The research on The Effect of Performance Innovation, Conformance Innovation with the mediation of Customer Relationship Management (CRM) toward Product Life Cycle (PLC) on Batik Madura SMEs is intended to analyze the linkage of those research variables. The research population is all Batik Madura SMEs at Madura Island. The sampling technique uses a proportional sampling technique in 4 (four) districts on Madura Island, namely, Sumenep, Pamekasan, Sampang, and Bangkalan District as many as 200 respondents. While the analysis technique uses Partial Least Square. Based on the results of primary data analysis, it was revealed that both performance and conformance innovation significantly affect the product life cycle and also mediate the effect of Customer Relationship Management (CRM) toward the product life cycle. However, customer relationship management does not affect directly the product life cycle. Of course, it is necessary to synergize those innovations to extend the product life cycle of Madura Batik.

Keywords: *product life cycle, performance, conformance innovation*

INTRODUCTION

During this time, batik is attached as part of the culture of some areas such as Solo, Yogyakarta, Pekalongan. In East Java, Madura Island, besides being known as a salt island, has a wealth of cultural sites in the form of batik. Batik products produced from Madura have a specificity starting from the motifs, striking colors, and the production process. Variety motifs owned by Madura batik include spear buds, rhombus, knitting, machetes, and various flora and fauna. Batik Craft Centers-Each district in Madura has artisans with their unique characteristics. However, the most numerous are in Bangkalan and Pamekasan Regencies. Some places include the Tanjung Bumi batik center in Bangkalan, the Banyumas Klampar batik center, Pamekasan, and

the Pakandangan Sumenep batik center. The Government of Pamekasan Regency stipulates the village of Banyumas Klampar, Proppo district as a batik village. The uniqueness of Madura batik is the manufacturing process. Batik Gentongan is one of the most famous batik traditions in Madura. Batik Gentongan is quite widely known for its color strength. A longer manufacturing process makes batik gentongan more exclusive [1].

As a brand that represents Madura, Madura batik can show the supreme aspects of its motifs, manufacturing processes, and philosophical meaning. This can make batik not only as a cultural product but also a legacy that needs to be preserved. Indonesia as part of ASEAN has the potential of heritage tourism with the most market share. From a marketing perspective, this legacy management can be used professionally and comprehensively to maintain and preserve the authenticity of cultural heritage for future generations. On the other hand, it can attract suppliers, distributors, regulators, and consumers [2].

The Madura batik brand as one of the cultural attractions plays an important role in the development of creative industries with positive economic and social impacts. The number of Madura batik craftsmen in Sumenep 200, Pamekasan 592, Sampang 44, and Bangkalan 1503 craftsmen [3]. Unfortunately, the marketing of Madura batik products still fluctuates. In fact, in the last three years, it has stagnated and declined downward. The results of preliminary studies indicate that Bangkalan Regency, as the producer of quality batik such as Batik Gentongan, continues to experience declining sales. Even the existence of Batik Gentongan begins to be disrupted by the spread of batik printing that can be produced quickly with more innovative and varied designs. While Madura batik mostly relies only on striking colors and is far from being innovative, which should be dug out continuously from the motifs of the Madurese civilian heritage. The urgency of research on innovation especially the synergy of incremental innovation and customer relationship management in Madura batik is undeniable, with the hope of finding an adaptive innovation and customer relationship management synergy model, which when

applied contributes to the product life cycle (PLC) of Madura batik.

Further, the objectives of this study are (a) to analyze the effect of customer relationship management toward product life cycle, (b) to analyze the indirect effect of customer relationship management toward product life cycle through performance innovation and (c) to analyze the indirect effect of customer relationship management toward product life cycle through conformance innovation.

It is stated that the product life cycle describes the different stages of product sales. These stages relate to opportunities and problems different about marketing strategies and potential profits [2]. By identifying the different stages of the challenge with the different stages of a product being, or the stage to be achieved, the company can formulate a marketing plan better. The stages of the product cycle include introduction, growth, establishment, and setback. Further, incremental innovation includes modification, refinement, simplification, consolidation, and improvement of existing products, processes, services, and production and distribution [4].

Also, it is elaborated that incremental innovation as an improvement and expansion of an established design that results in substantial prices or functional benefits [5]. It should be noted, customer relationship management is a consolidation of customer management and creates a flurry of activity between companies. Customer relationship management is a double-edged sword, presenting opportunities and challenges to the company given its adoption and implementation. Customer relationship management is seen as rooted strongly in the concept of relationship marketing, aiming at increasing long-term profitability by moving from transaction-based marketing to customer retention [6].

In recent times, it has been recognized that the company's relationship with customers can be improved by using information technology. It will facilitate and enhance customer relations in various ways but especially allows the company to achieve adjustments, which is the core of a customer-centric organization. In this context, customer relationship management has emerged as an ideal vehicle for implementing relationship marketing within companies, with some practitioners suggesting that customer relationship management provides a platform for operational manifestations of relationship marketing [7].

The most appropriate way to implement this management is through the use of software applications in the form of electronic customer relationship management technology. This type of

customer relationship management software provides functionality that enables companies to make local points of customers from all organizational decisions and such technological and Internet innovations are just a few of the factors that now make relationships through one-on-one initiatives a reality [8]. The internet has allowed new patterns of intermediation to emerge, enabling companies to adopt customer relationship management to focus on effective customer relationship management as well as utilizing the application of on-line technology to facilitate customer-supplier relationships [9].

Empirically, innovation is one approach to extend the product life cycle [10]. Then, in a research article on absorptive capacity, technological innovation, and product life cycle: a system dynamics model revealed that innovation influences the product life cycle [11]. Further, it is explained that competitive advantage through innovation: the case of Nespresso revealed that innovation can build business continuity. Besides, innovation affects the life cycle of a product [12]. A model for the development of sustainable innovations for the early phase of the innovation process revealed that incremental innovation impact on organizational survival [13].

Also, the research results of Apple Products: A Discussion of the Product Life Cycle revealed that incremental innovation as a media extends product life [14]. The article Sustainability and Innovation in the Automotive Sector: A Structured Content Analysis shows that the importance of incremental innovation in increasing competitiveness as well as in the product life cycle [15]. Also, the results of his research on the relationship between customer relationship management, customer satisfaction, and customer loyalty, demonstrated that customer relationship management positively relationship with customer satisfaction and loyalty. This means that electronic-based customer management can indirectly extend the product's life cycle [16].

Meanwhile, the impact of customer relationship management implementation on customer loyalty, customer retention, and customer profitability for hoteliers along the Vaal Meander of South Africa further reinforces previous findings that e-customer relationship management (e-crm) can indirectly extend the product life cycle period [17].

An empirical study of online shopping stated that e-crm directly affects customer satisfaction [18]. Another research article of examining customer relationship management from a management fashion perspective, explains that electronic-based customer management influences customer satisfaction [19]. The benefits of electronic customer relationship management to the banks and their customers revealed that one of the benefits of electronic

customer service management is that it can increase customer satisfaction [20]. The implementation of information technology-based customer management contributed to the product's competitive advantage [21].

Implementation of crm in Macedonian Companies found in her research activities that the implementation of IT-based customer relationship management contributed to the increase in sales [22].

Then, the relationship between e-crm and customer loyalty: a Kenyan Commercial Bank case study found that e-customer management relationships significantly affected customer loyalty [23]. Further, successful factors of implementing customer relationship management on e-commerce companies revealed that e-crm implementation succeeded in increasing customer satisfaction impact on the longer period of the product life cycle [24]. An empirical article also stated the impact of the customer relationship management on organizational productivity, customer trust and satisfaction by using the structural equation model: A study in the Iranian hospitals, revealed that there was an interrelation between IT-based customer management and customer trust as well as customer satisfaction [25].

Customer relationship management in the agricultural machinery market found that electronic-based customer relationship management was superior to conventional customer management in boosting sales [26]. Furthermore, it is also stated that customer relationship management-complications and implementation in an organization revealed that customer relationship management applications have benefits in increasing product market share. Interestingly, current research stated that incremental innovation affects customer relationship management, incremental innovation affects product life cycle, customer relationship management affects product lifecycle [27]. This research finding was also supported other researcher that migratory culture and information acquisition support entrepreneurship [1].

METHOD

This research uses a survey & participatory approach. The research variable consist of four, namely performanceinnovation and conformance innovation are the activity of innovation which includes modification, refinement, simplification, consolidation and multiplying existing products, processes, services, and production as well as distribution activities.

Third,customer relationship management as about identifying the company's best customers and maximizing the value of customers by satisfying and maintaining them using information technology

media. Four,the product life cycle describes the different stages in the history of selling a product. These stages relate to different opportunities and problems regarding marketing strategies and potential profits in terms of the stages of introduction, growth, maturity, and setback.

The population of this research is 2,239 units of Madura Batik SMEs in the Bangkalan, Sampang, Pamekasan & Semenep districts. The sampling technique is purposive sampling. Namely, Madura Matik SMEsin Bangkalan Regency, Sampang Regency,Pamekasan Regency & Sumenep Regency. Further, 50 craftsmen from each district were assigned as informants and focus group discussion participants. Further, all primary data was analyzed by the Partial Least Square technique analysis.

RESULT

Based on the primary data analysis, the linkage of customer relationship management (CRM), performance innovation (PI), and conformance innovation (CI) & product life cycle (PLC) is demonstrated at the path diagram below.

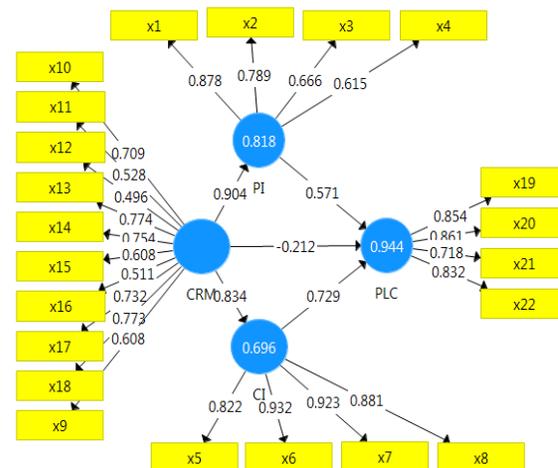


Figure 1. Path Diagram
Source Primary Data Processed, 2020

As seen in figure 1,loading factors of x11, x12, and x16 are not valid. This is due to the coefficients are less than 0.600. That is why those loading factors have to be dropped and after that, it must be recalculated. The results are demonstrated in figure 2 below.

As shown in figure 2, all loading factors have been valid. This is due to the coefficients of more than 0.600. Therefore, it can be continued to calculate with bootstrapping analysis and the result can be seen at table 1 (path coefficients)

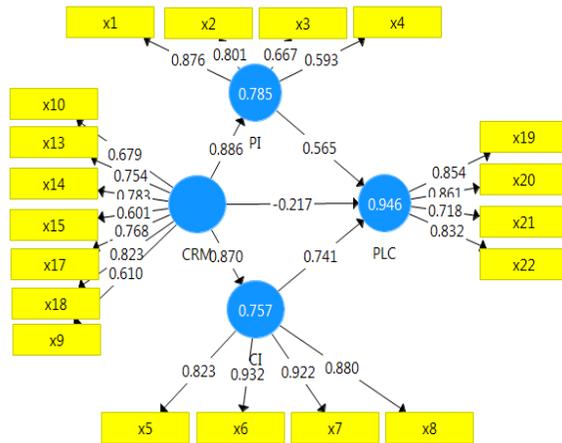


Figure 2. Path Diagram (Second Calculation)
Source: Primary Data Processed, 2020

Table 1. Path Coefficient

	Original Sample	Standard Deviation	P. Values
CRM->PI->PLC	0.645	0.653	0.000
CRM->CI->PLC	0.501	0.500	0.000
CRM->PLC	-0.217	-0.223	0.058

Source: Primary Data Processed, 2020

Based on table 1, customer relationship management indirectly affects toward product life cycle through performance innovation. Also, customer relationship management indirectly affects toward product life cycle through conformance innovation. However, customer relationship management does not affect directly the product life cycle. It means, all hypotheses are supported and the only hypothesis that customer relationship management affects the product life cycle is rejected. Of course, these research findings can enrich management science. That is due to several previous research result always stated that customer relationship management affects significantly toward the product life cycle.

CONCLUSION

Based on the results data analysis and discussion, it was revealed that both performance innovation and conformance innovation affect the product life cycle and also mediate the effect of Customer Relationship Management toward the product life cycle.

However, customer relationship management does not affect directly the product life cycle of Madura handmade batik products. Of course, this information

is extremely necessary to combinethose innovations to extend the product life cycle of Batik Madura.

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