

## Antecedents of Competitive Advantage and Its Impact on Firm Performance: Empirical Study on Construction Industries in Indonesia

Dhiraj Kelly Sawlani<sup>a</sup>, Idris Gautama So<sup>b</sup>, Asnan Furinto<sup>c</sup> & Mohammad Hamsal<sup>d</sup>

<sup>a</sup> Corresponding author. Binus University Business School, 10271 Jakarta Pusat, DKI Jakarta, Indonesia.

<sup>b</sup> Binus University Business School, 10271 Jakarta Pusat, DKI Jakarta, Indonesia.

<sup>c</sup> Binus University Business School, 10271 Jakarta Pusat, DKI Jakarta, Indonesia.

<sup>d</sup> Binus University Business School, 10271 Jakarta Pusat, DKI Jakarta, Indonesia.

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**Abstract:** The construction industry is the 4th largest contributing industry to the gross domestic product in 2016 in Indonesia. However, its' growth is slowing down recently because of the companies' low competitiveness that causes production inefficiency. Despite the urgency for a comprehensive solution to increase its productivity, research in this area is still lacking. The aim of this study is to examine the development and application of electronic customer relationship management (e-CRM) theory, project innovation (PI), project organizational culture (BO), and dynamic capabilities (KD) in increasing competitive advantage (KB), and its implications for business performance (KP), moderated by the size of construction companies in Indonesia. By collaborating with PT BCI Asia for data collection, at least 200 responses are targeted to collect online questionnaires and analyzed using structural equation modeling (SEM). We found that (1) there is a significant influence of e-CRM, PI, and KD on KB; (2) there is an influence of PI, BO, and KD on KP, while e-CRM has no significant effect; (3) there is a significant influence of KB on KP in Indonesian construction firm; (4) KB mediates the influence of e-CRM, PI, BO, and KD on KP; and (5) firm size moderates the effect of KB on KP.

**Keywords:** Construction; Electronic customer relationship management; Innovation; Organizational culture; Dynamic capabilities

**JEL Classification:** XXXX

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### 1. Introduction

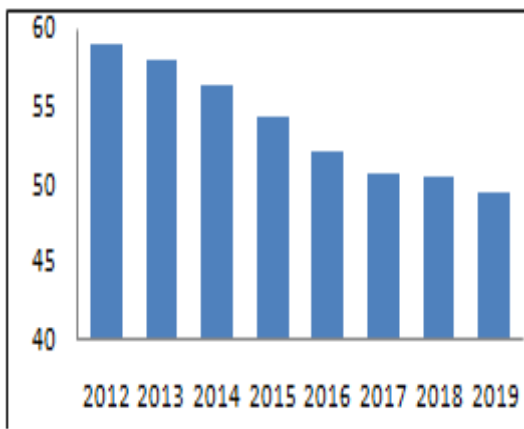
The competition in the construction company market is getting more competitive, especially because of the increasing number of construction companies, the quality of human resources, technology, and global competition. Therefore, companies are required to be smarter in increasing their

competitiveness. The number of construction businesses in Indonesia demonstrates the

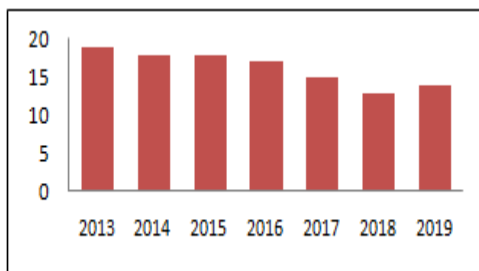
issues with competitiveness in the construction sector, which continues to grow every year. In 2013 the number of construction companies reached 131 thousand, increasing to 160 thousand in

2018. This shows an average growth of 500 companies each year (see Table 1). The increase of companies without increasing the number of projects and project value has made the efficiency of construction companies decrease due to weak competitiveness.

**Figure 1:** Indonesian Construction Industry Efficiency Index



**Figure 2:** Growth in Production Value of the Indonesian Construction Industry



In addition to the weak competitiveness of construction companies that continues to occur due to the increase in the number of existing companies, the construction industry in Indonesia has also experienced a decline in production value every year (see Figure 1.2) (Central Statistics Agency, 2020). This has led to a decline in the performance of construction companies in Indonesia. Table 1.1

illustrates the increase in the number of construction companies in Indonesia and the comparison with the performance of construction companies.

**Table 1:** Number of Companies and Company Performance

Year	Number of Construction Companies	Company Performance	
		ROA	Current Ratio
2013	131,080	0.060	1,489
2014	129,819	0.048	1,446
2015	134,029	0.039	1,405
2016	142,852	0.026	1,406
2017	155,833	0.029	1,425
2018	160,576	0.018	1,390

Source: Central Bureau of Statistics (2019)

This situation is extremely alarming, given that the construction industry is among the primary contributors to Indonesia's economic development. It can be seen from its contribution to Indonesia's Gross Domestic Product (GDP), which in 2018 contributed 10.38%, placing it as the 4th highest contributing sector in Indonesia after industry, agriculture, and trade (Ministry of Public Works and Public Housing, 2017). Therefore, it is necessary to solve problems or strategies that can increase construction service companies' production value and productivity in Indonesia. This needs to focus on two important things: reducing costs or efficiency and increasing production output or effectiveness.

Data regarding the slowing and decreasing value of production, efficiency, and performance of the construction industry in Indonesia is inseparable from several factors causing the decline in the competitiveness of construction companies, namely project management, organizational structure, competitiveness strategy, supply, marketing, technical and technological capabilities, and capabilities finance (Lu et al.,

2018). National construction companies are currently unable to compete with global companies. In the last three years (2017-2019), of the 80,000 contracting companies in Indonesia, 37,000 private contracting companies suffered heavy losses and went out of business (Jannah, 2019). The causes are losses due to unhealthy financial conditions, global competition, and late innovation in technology.

To continue improving the ability to compete globally, the company's strategy in winning the competition in the current technology era requires companies to have a competitive advantage (or what is called a competitive advantage). Competitive advantage refers to all that the company owns, both in terms of costs, company uniqueness, and specific targets. This competitive advantage can be implemented by creating a good portfolio, innovative designs, and information related to available project tenders (Polat, 2010). Increasing competitive advantage can be one solution to overcome the problems faced by the Indonesian construction industry.

This notion is confirmed by Tarabieh (2016), who shows a substantial positive relationship between competitive advantage and company success. However, Kumar and Kaur (2016) argued against it by showing an insignificant influence between the two. The inconsistency of these results is interesting for further investigation. Even so, there are indications that competitive advantage is related to company performance.

Companies should have a good marketing strategy, a good performance portfolio, a broad connection, and a flexible funding platform strategy to win the competition in getting projects (Horta & Camanho, 2013).

The problem of intense competition, which is getting fiercer in construction companies in Indonesia, is exacerbated by the dominance of BUMN Karya, which controls strategic projects of the government and BUMN. The Indonesian Chamber of Commerce and Industry (Kadin) stated that 37,000 local private contractors went out of business during the 2014-2018 period due to their lack of involvement in the infrastructure development process in Indonesia. The reason is that the massive infrastructure development built in Indonesia does not have a good impact on business growth in the local construction sector and is the main trigger for the majority of infrastructure projects controlled by BUMN and its subsidiaries in the name of BUMN synergy (Baderi, 2019).

Establishing relationships with customers by introducing products, capacities, work strategies, scheduling, and projects is important to gain trust. This approach is often referred to as Customer Relationship Management (CRM). ECRM is a marketing technological breakthrough that can gather and analyze data on consumer patterns, anticipate customer behavior, build predictive models to decide the best approach, and respond to complaints and information requirements in a timely manner (Chen & Popovich, 2003; Sinisalo, Salo, & Karjaluoto, 2005). The use of technology to optimize interactions between companies and customers can motivate customers to be loyal to using the services or products of the company (Fjermestad & Romano, 2003). The ability of ECRM certainly makes companies have high competitiveness in competing markets with other companies (Ab Hamid, 2005). ECRM can also be used to communicate various superior services, the

latest products, and the advantages of each product owned by the company so that perceptions of good firm performance can be shown to customers (Chaffey, 2009). The implementation of ECRM is expected to generate significant value for companies and customers in an age when society is connected (Jih & Lee, 2010).

Research from Fazlzadeh, Ghaderi, Khodadadi, and Nezhad (2011) found that CRM can improve company performance, a strong positive relationship between the two variables is also confirmed by Coltman, Devinney, and Midgley (2011). However, Siregar (2016) discovered that CRM had no effective influence on the performance of banks in Indonesia. Therefore, the data displays a research gap in CRM research and its link to business performance.

Another important thing to do is to increase product innovation. Companies are required to see opportunities quickly and agile because customers need products that suit their needs. Unfortunately, at this time, innovation in Indonesia is still low. According to the 2019 Global Innovation Index published annually by Cornell University, INSEAD, and WIPO, it is stated that Indonesia has a score of 29.8 and is ranked 85th out of a total of 129 countries, occupying the second lowest rank in ASEAN. Therefore, product innovation is an important variable that needs to be raised in this study to find relevance that can be used as meaningful input.

Rutherford and Zaman (2017) confirm that product innovation substantially and positively influence the product's competitive advantage. This is also reinforced by Lii and Kuo (2016), who say that innovation is necessary to increase the value of the

company's products and supply chain to improve their performance. According to Shouyu (2017), innovation does not always increase a company's work performance; in some organizations where employees are resistant to change, innovation may be disruptive and detrimental to firm performance.

The individuals who engage in the project have a big impact on its success; people with negative cultures and attitudes pose a serious threat to the project's future success. It is also believed that cultural differences can lead to conflicts related to communication between individuals, which reduces the capacity of the construction organization to achieve project objectives (Tijhuis, 2011). Nguyen and Watanabe (2017) stressed the importance of project organizational learning and firm performance in carrying out construction projects. They also say that the effects of changing organizational learning must be taken into account because it can significantly affect firm performance. However, Ali, Said, Abdullah, and Daud (2017) arrive at a different conclusion, namely the correlation of organizational learning and corporate financial performance is not convincing, so it requires further investigation, this is what causes a research gap so that organizational learning variables are interesting to study. While Petrakis, Kostis, and Valsamis (2015) confirmed the strong influence of organizational learning on the competitive advantage of companies, even organizational learning has become a tool in facing the economic recession in Europe in 2008-2013. Djajaatmadja and Anggadwita (2018) also said that organizational learning has the highest score in its contribution to increasing the company's competitive advantage.

In construction services, intense competition between companies requires an organizational culture in a creative and innovative project (Project Organizational Culture). Rosabeth (2017) states that the Project Organizational Culture of a construction company must be considered because it involves the future of a project and the company itself. Conflicts that occur due to low organizational learning can destroy companies instantly (Flamholtz & Randle, 2011).

The main focus of project organizational learning is by encouraging a culture of individual creativity. Individual creativity will form a culture of group creativity to become a culture of creativity as a whole in an organization (Erez & Nouri, 2010). The results show that the creative culture of an organization affects the entire process of creativity (Chiu & Kwan, 2018). However, in a project operated by many individuals with various backgrounds, it is possible to have a conflict that significantly affects the project's success (Tijhuis, 2019). Therefore, management must create a good project organizational learning. Thus, project organizational learning can play a role as conflict control, improve the quality of results, and encourage innovation in a project as well as project performance in general (Ankrah & Langford, 2005).

Furthermore, changes that occur outside the organization can also affect firm performance. Hana (2013), argues that in a volatile and dynamic business, the goal of any organization is to outperform its competitors and attract potential buyers to purchase its products and services while retaining current customers.

Chukwuemeka and Onuoha (2018) stated

that the company's dynamic capabilities substantially impact the company's competitive advantage. As well as, Aguirre (2011) which studied the dynamic capabilities and competitive advantages of Mexican companies, concluded that dynamic capabilities and competitive advantages are important for the survival of companies in the market. This is indicated by the readiness to adapt to technological changes. It is said that local companies must stimulate their dynamic capabilities to compete in the market successfully. Therefore, dynamic capabilities and competitive advantage cannot be separated, because companies continue to develop capabilities to face new capabilities from the environment.

However, despite the major research efforts in analyzing the relationship between dynamic capabilities and competitive advantage, there is still a lack of in-depth empirical studies investigating the specific relationship between the two concepts, especially as they concern Nigerian business settings. As a result, observations of various study reports are made in the field (Ogunkoya, Hassan, & Shobayo, 2014). This creates a research gap so that this variable is interesting to study.

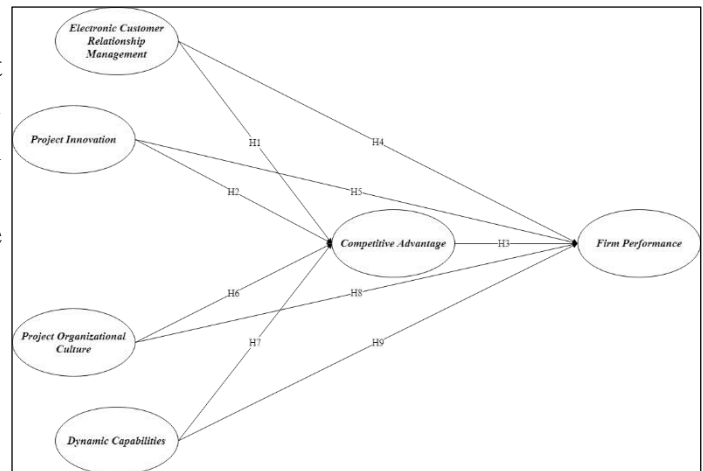
Next, Adiputra, Pratama, and Mandala (2017) prove that competitive advantage and performance are positively and significantly affected by the company's dynamic capabilities, implying that existing resources must be managed properly because they can be a competitive advantage that affects overall firm performance. This was also confirmed by Kristinawati and Tjakraatmadja (2018) which say that knowledge management alone is not enough, but companies must have dynamic capabilities to adapt and improve firm

performance. The purpose of this research is to find out how electronic customer relationship management, project innovation, project organizational learning, and dynamic capabilities affect firm performance through mediating competitive advantage.

So, from the above explanations, we formulate several hypothesis as follows.

- H1: Electronic Customer relationship management has a significant positive effect on competitive advantage
- H2: Project innovation has a significant positive effect on competitive advantage
- H3: Competitive advantage has a significant positive effect on firm performance
- H4: Electronic customer relationship management has a significant positive effect on firm performance
- H5: Project innovation has a significant positive effect on firm performance
- H6: Project organizational learning has a significant positive effect on competitive advantage
- H7: Dynamic capabilities have a significant positive effect on competitive advantage
- H8: Project organizational learning has a significant positive effect on firm performance
- H9: Dynamic capabilities have a significant positive effect on firm performance

**Figure 4: Research Model**



## 2. Literature Review

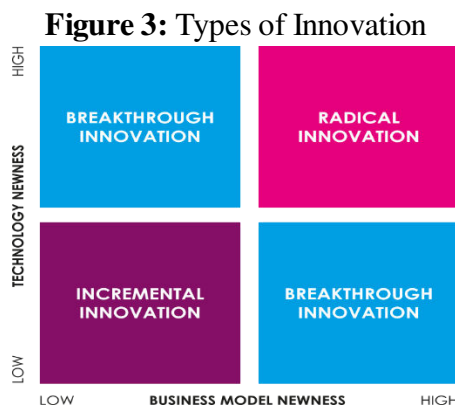
### 2.1. e-CRM

ECRM is a CRM that utilizes business processes and data online. ECRM consistently governs personally relevant and productive, meaningful interactions to build successful relationships with customers, salespeople, employees, investors, and others using the latest technology (Turban, 2006). ECRM is an effort to increase loyalty in the use of products and services produced by certain companies using Internet media by managing the relationships between companies and customers (Sutedjo & Philip, 2003).

### 2.2. Product Innovation

Product innovation is the development of new products, making changes in current product designs or using new techniques and methods in current production methods (Reguia, 2014), in other words, it focuses on the existing market for an existing product, differentiating through features and functionality that the current offering does not have. We can see product innovation

from two sides; the internal side where it depends on the knowledge, capacity, resources and technology used in the company; From the external side, product innovation focuses on consumer needs and owner expectations.



Source: Fu & Elliott (2013)

### 2.3. Competitive Advantage

Competitive advantage refers to the things a company does well compared to its competitors. When a company can accomplish something that another cannot, or having what other competitors desire (David, 2011), according to Porter inside Rangkuti (2015), companies could achieve a competitive advantage by using three strategies; cost leadership, differentiation and focus. Cost advantage refers to how a firm charges the lowest price compared to its competitors while maintaining the quality. Differentiation is how a company can create a product or service that is different from its competitors. The focus is that the company must be focused on a particular segment in more detail. Porter's strategy requires different organizational structures, control procedures, and intensive systems. Large companies with large resources tend to compete on a cost advantage basis.

### 2.4. Firm Performance

Firm performance is distinct from the broad construct of organizational effectiveness. Venkatraman and Ramanujam (1986) mention that the broad construct contains three overlapping concentric circles, with the biggest referring to organizational effectiveness. Organizational effectiveness encompasses all elements of organizational functions (Cameron, 1986a). Business performance or firm performance is part of organizational effectiveness which includes operational and financial results. Operational performance, as described by Venkatraman and Ramanujam (1986), can be viewed as an antecedent to financial performance, by mediating the influence of resources.

### 2.5. Value Chain Concept

According to Porter, quoted by David (2011), a company's business is best represented as a value chain, in which total revenue minus the total cost of all actions performed to produce and market value-generated products or services equals total revenue. According to David (2011), value chain is a group of interrelated activities starting from the source of basic raw materials for component suppliers to the final product that is given to the end consumer. Porter (1994) defines value chain as the process of categorizing a firm into several strategically significant activities to understand cost behaviors and present and future sources of difference. In classifying activities in value chain analysis, the conditions that must be met are as follows:

- a. Has different economic properties
- b. Has a possibly large impact on differentiation
- c. Taking a large proportion of the cost

or it tends to get bigger

### 3. METHODS

This study uses primary data obtained from an online questionnaire distributed to construction companies in Indonesia. The population is all construction companies in Indonesia that are registered with the Construction Services Development Agency (LPJK), totaling 132,985 business entity contractors (consisting of 126,827 national general contractors and 6,158 national specialists) (Construction Services Development Institute, 2020). Not only that, the target population of this study also needs to meet the following criteria, namely (1) having been around for at least 2 years, (2) having won a tender, (3) using a Big Data-based ECRM system, and (4) willing to be a respondent. The data collection method is using questionnaire, and the questionnaire was given with a screening question to ensure that the respondent had the position of at least a manager from the relevant department, namely marketing, production, and human resources, as well as R and D to become respondents in this study. Researchers used a stratified random sampling technique. Stratified random sampling is a sampling technique that considers levels or strata in a population so that every element in the population level has the same opportunity to be selected.

This study uses a six-point Likert scale consisting of "Strongly Disagree" (1), "Disagree" (2), "Somewhat Agree" (3), "Somewhat Disagree" (4), "Agree" (5), and "Strongly Agree" (6). After we collect the research data, we then mapped the questions relevant to the conditions of construction companies in Indonesia and the research

objectives. Next, the researchers compiled the items in the questionnaire and demographic questions and distributed them online using the google form. After distributing questionnaires and obtaining results from research participants, the researcher then screened the data so that the data obtained and analyzed next were not duplicate data or incomplete data. The next step is data analysis so that later conclusions can be drawn about the things being researched at the construction companies in Indonesia, which are the target targets. We analyze the data using Structural Equation Modeling (SEM) which is a statistical analytic approach used in this work. According to Hair et al. (2010), employing SEM allows for the simultaneous examination of several relationships, resulting in statistical efficiency.

### 4. RESULT AND DISCUSSION

#### 4.1. Convergent Validity Test

The convergent validity test is used in the validity test to determine if the construct (indicator) has a large proportion of variation or not. The CFA test is performed by evaluating the loading factors of each indicator utilized in the research. So that each indicator will show the results are valid or not. When the results are invalid, the indicator must be removed or not included in model testing. The indicator is feasible on the CFA test if it meets the criteria if the CR value is  $> 1.96$ , while the Loading Factor or Standardized Loading Estimate is  $> 0.5$ . From our convergent validity test, we found that all indicators on all variables have a CR value greater than 1.96 ( $CR > 1.96$ ) and have a standardized estimate value greater than 0.5 so that it can be said to be quite feasible to measure each research variables. This shows

that all indicators of variable loading factor values and high validity values meet convergent validity.

**4.2. Descriptive variable analysis**

Almost all respondents answers somewhat agree to agree for the questions regarding ECRM. It is predictable as our respondents have realized the importance utilizing ECRM for the greater performance of their companies, considering that they have been using big data-based ECRM system. They also noted the importance of project innovation, project organizational culture, and competitive advantage. They believed that they need to keep up with the current market trends and maintaining their companies' product innovation. Not only for the external relationship of the company, they respond that it is also important to maintain a good relationship for the internal of their company.

**4.3. Evaluation of SEM Assumption**

The CR Skewness's value is beyond the range ± 2.58. Therefore, it can be concluded that univariate normality data is not suitable. The multivariate test also shows the CR value of 2.032, where this figure is categorized normally distributed data multivariate. Thus, the data has been eligible for the normality test. Model match test is done to identify whether the model studied is appropriate or not.

The fitness facility results show that the Chi-Square value obtained by 1977,521 means that it does not meet the required requirements. However, this value can be To clarify the understanding of hypothesis analysis, it will be debatable through analysis of each hypothesis point. The hypothesis

accepted marginally and can perform the next analysis by viewing the value of GFI, AGFI, CFI, and RMSEA. That has fulfilled the criteria either, then the analysis can be done. Based on these results, the model in this research overall meets the criteria as a fit model.

The matching test index	Result	Cut Off Value	Information
Chi-Square	1977,521	It is expected to be small	Poor
Probability	0,059	Good Fit (>0,05)	Good Fit
CMIN/Df	3,297	Good fit (≤ 2)	Marginal Fit
GFI	0,9980	Good fit (≥ 0,9)	Good Fit
AGFI	0.840	Good fit (≥ 0,9) Marginal fit (0,8 ≤ AGFI ≤ 0,9)	Marginal Fit
TLI	0,851	Good fit (≥ 0,9)	Marginal Fit
CFI	0,974	Good fit (≥ 0,9)	Good Fit
RSMEA	0,033	Good fit (< 0,08)	Good Fit

**Table 2:** The result of the model of conformity model (Goodness of Fit)

**Table 3:** Hypothesis testing

			Estimate	S.E.	C.R.	P	Label
Competitive	<---	ECRM	,709	,171	4,158	***	par_58
Competitive	<---	Innovation	,232	,163	2,423	,025	par_59
Competitive	<---	Culture	,316	,131	2,424	,015	par_60
Competitive	<---	Dynamic	,414	,104	4,001	***	par_61
Performance	<---	Competitive	,759	,420	4,140	***	par_62
Performance	<---	ECRM	,533	,277	3,479	***	par_63
Performance	<---	Innovation	,670	,112	4,627	***	par_64
Performance	<---	Culture	,027	,162	,165	,869	par_65
Performance	<---	Dynamic	,373	,193	1,938	,053	par_66

testing results of this research are explained as follow:

### **ECRM Effects on Competitive Advantage**

The hypothesis testing 1 result, i.e., the power of ECRM on competitive advantage, revealed that ECRM has a positive and substantial influence on competitive advantage. It is shown from the CR value of 4.158 and the value of 0.000. The CR value is larger than 1.96 ( $4,158 > 1.96$ ), as is the P value less than 0.05 ( $0,000 < 0.05$ ) indicates that ECRM has a substantial influence on competitive advantage. The positive value estimate value (0.709) shows that the influence given by the ECRM is positive. That is, the better the ECRM Company of MSMEs competitive Advantage will be escorted. The results of the hypothesis test show the hypothesis 1 (H1) received.

Tarabiheh (2011) previously had conducted a study that proved a significant positive influence between Competitive Advantage with Firm Performance, but Kumar et al. (2011) Arrange it by showing an unusual impact of competitive advantage against Firm Performance. In research conducted by Fazzladeh et al. (2011) found that CRM can improve Form Performance. A strong positive relationship between the two variables has also been confirmed by Coltman et al. (2011).

### **Influence Project Innovation to Competitive Advantage**

The result of hypothesis testing 2, i.e., Project Innovation to Competitive Advantage, shows a positive and significant effect of Project Innovation to Competitive Advantage. It can be seen from the value of CR by 2.423 and the value of P-Value by 0.025. The value of CR is greater than 1.96 ( $2,423 > 1.96$ ) as well as value P-Value is smaller than 0.05 ( $0.025$

$< 0.05$ ), which shows there is a significant effect of Project Innovation on Competitive Advantage. The estimated value of positive (0.233) shows the influence given that the project innovation is positive. That is, the better the project Innovation Company SMEs the competitive advantage will be escorted. The results of the hypothesis test show the hypothesis 2 (h2) received.

Rutherford and Zone (2017) indicate that Product Innovation has a substantial and beneficial effect on product competitiveness. It is also reinforced by Lii and Kuo (2016), who state that innovation is necessary to raise the value of the business's products and the supply chain, allowing the company to improve its performance. However, Shouyu (2017) said that innovation does not necessarily improve the performance of a company.

Nguyen and Watanabe (2017) confirm a substantial relationship between organizational culture projects and firm performance in running construction projects. They also said that the impacts of organizational culture organization should be taken into account because it may significantly affect performance firm performance.

### **Influence Project Organizational Culture on Competitive Advantage**

The hypothesis testing 3 results, i.e., the Project Organizational Culture on Competitive Advantage, demonstrate that organizational culture has a positive and substantial influence on competitive advantage. It can be seen from the value of CR by 2.424 and the P-Value by 0.015. The value of CR is greater than 1.96 ( $2,424 > 1.96$ ), as well as the value of P. 015 ( $0.015 < 0.05$ ) shows there is a significant effect of

organizational culture against competitive advantage. The positive value estimate value (0.316) shows the influence that the Project Organizational Culture is positive. That is, the better the project organizational culture company UMKM the competitive advantage will be semi-urine. The results of the hypothesis test showing hypothesis 3 (H3) received.

Tendean and Devie (2014) found a significant positive relationship between Organizational Culture and Competitive Advantage, Organizational Culture and Entrepreneurship, Entrepreneurship and Competitive Advantage, and Organizational Culture and Supply Chain Integration in East Java manufacturing companies. Wien Dyahrin (2019) showed that organizational culture affects performance through the competitive advantage of cooperatives. These findings contain that meaning if the organizational culture is strong, then the benefit of competing for better is expected to have a beneficial influence on the performance of cooperatives in West Java Province.

Supported by Harrigan, Ramsey, and Ibbotson's (2012) research, the study reported how SMEs innovate in marketing, highlighting theoretical and practical areas of essential. Theoretically, this paper breaks up ECRM into keys to the capabilities that may apply to larger organizations. Sudana (2011), with the effort to improve efficiency, is one way that the company can use to maintain and improve its competitive advantage. The strategic approach to cost management can help companies have short-term economic difficulties and create a permanent efficiency culture.

According to Soebarjo and Rokhyadi (2014), there is a link between organizational

culture (hierarchy culture, group culture, development culture, and rational culture) and firm performance, and green strategy increase organizational culture on corporate performance. Supported by Andrew Klein's (2011) study, the generic strategy type is not as significant as the factor used in understanding the link between strategy and results, such as the culture type. Regardless of the approach used, constructive cultural norms appear to be favorably related to quality, whereas defensive norms are negatively connected with quality.

#### **Influence of Dynamic Capabilities against Competitive Advantage**

The results of hypothesis testing 4 of the influence of Dynamic Capabilities on Competitive Advantage reveal that Dynamic Capabilities have a positive and substantial effect on Competitive Advantage. It can be seen from the value of CR by 4.001 and value of 0.000. The value of CR is greater than 1.96 ( $4.001 > 1.96$ ) as well as P-Value is smaller than 0.05 ( $0,000 < 0.05$ ), demonstrates that Dynamic Capabilities have a substantial impact on competitive advantage. The positive value estimate value (0.414) shows the effect of dynamic capability car is positive. That is, the better the Dynamic Capabilities Company MSMEs competitive Advantage will be escorted. The results of the hypothesis test show hypothesis 4 (h4) accepted.

According to Farida (2016), entrepreneur orientation does not influence market capability or social capital, while innovation has a favorable and substantial impact on market capabilities and marketing performance. This demonstrates that innovation is a vital part of market capabilities' advantages while influencing the

small-scale marketing performance known as SMEs. Research Harrigan, Ramsey, & Ibbotson (2011), stronger managerial, where the practice of relevant implications and recommendations surrounding ECRM is provided for SME owners-managers, helping bridge the gap between theory and the practice.

In line with the research conducted by Suyono (2018), based on the above description, the concept filed by Tecee et al. (1997) is appropriate, this is because the college is in a dynamic and rapidly changing environment. Universities to be a World Class University through dynamic capabilities that include processes, positions, and path dependence. Path dependence can be developed by managing the behavior of its members in this case of academic co-establishment. According to Sudrajat (2013), there is a direct link between dynamic capabilities and innovative performance. Variables for dynamic capabilities include adaptive capabilities, absorptive capabilities, and innovative capabilities). In comparison, the link between dynamic capabilities and corporate performance could be either direct or indirect through innovation performance.

As mentioned by Bambbade et al. (2019), construction companies will likely use more sustainability in project delivery if they have efficient resource capabilities. This research adds to existing discussions on critical criteria for social sustainability in constructions. Kristinawati and Tjakraatmadja (2018) that the concept of dynamic capabilities not only saw the external and future environment but should also maintain today's competitive advantage through EFI SIESI. Hence, the concept of staged harmony also needs to be included as a dynamic capability component.

### **The effect of competitive advantage against firm performance**

The result of hypothesis testing 5, i.e., Firm Performance's competitive advantage, shows a positive and significant effective competitive advantage against Firm Performance. It can be seen from the value of CR by 4.140 and value of 0.000. The value of CR is greater than 1.96 ( $4.140 > 1.96$ ) as well P-Value is smaller than 0.05 ( $0,000 < 0.05$ ), which shows there is a significant effective competitive advantage against firm performance. The positive value estimate value (0.759) shows that the influence given by the competitive advantage is positive. That is, the better the competitive advantage company of MSMEs, then the firm performance will be escorted. The results of the hypothesis test show the hypothesis 5 (H5) received.

Chukwuemeka and Onuoha (2018) said that Dynamic Capabilities of the company have a significant effect on Competitive Advantage Company. Similarly, Aguirre (2011) who studied Dynamic Capabilities and Competitive Advantage among Mexican companies and concluded that Dynamic Capabilities and Competitive Advantage tended to be important for the survival of the company in marked markets to be innovative and in rapid technological changes Aguirre (2011), whose study was on Dynamic Capabilities and Competitive Advantage of Mexican companies, also stated that Dynamic Capabilities and Competitive Advantage is crucial for the company's survival in marked markets to be innovative and with rapidly-changing technologies.

However, regardless of the great research efforts in analyzing the relationship between Dynamic Capabilities and

Competitive Advantage, there is still a lack of intensive empirical studies investigating special relationships between two concepts, mainly because of the Nigerian business settings. Consequently, several research reports from the field were seen (Ogunkoya, Hassan, & Shobayo, 2014). In line with research conducted by Radulovich, Pendleton, and Scherer (2005), it is important for global marketers to understand how consuming decision-making on the web affects strategic and financial performance. The current literature by integrating consumer decision behavior on the web, CRM, and corporate performance. Creation of sustainable competitive advantage using customer-focused strategies to develop customer loyalty for superior company performance.

#### **ECRM Effects on Firm Performance**

The results of hypothesis testing 6, i.e., ECRM influence on firm performance, demonstrate that ECRM has a positive and substantial effect on firm performance. It can be seen from the value of CR by 3.479 and P-value by 0.000. The value of CR is greater than 1.96 ( $3.479 > 1.96$ ) as well as P-Value is smaller than 0.05 ( $0.000 < 0.05$ ), demonstrates that ECRM has a substantial impact on company performance. The positive value estimate value (0.533) shows that the influence given by the ECRM is positive. The better the ECRM Company of MSMEs, the better the Firm Performance will be escorted. The results of the hypothesis test show the hypothesis 6 (H6) received.

Research conducted by Alim and Ozuem (2014) on the effect of ECRM on customer loyalty in the mobile industry in the UK is ECRM's influence on customer loyalty. ECRM is critical in marketing strategies

development that can lead to consumer loyalty. As stated by Chen and Popovich (2003), despite most CRM involves technology, viewing CRM as a special technological solution may lead to failure. Managing a successful CRM deployment necessitates an integrated and balanced approach of technology, procedures, and people. Research conducted by Kelly et al. (2013) demonstrates how to improve customer management planning that ECRM can increase customer loyalty.

Mohammed and Rashid (2012) said that implementing a well-planned strategy formulation will result in good corporate performance. Mohammed and Rashid (2012) said that the literature on implementing strategies and attention to the implementation is less than the formulation of the strategy. The success of the implementation of CRM strategy results in corporate performance. Ngambi and Ndifor (2015) observed that return on Investment (ROI) is a valid parameter in assessing the company's performance. It was supported by Oualid (2016) that ROI is the rate of criterion.

#### **Influence Project Innovation on Firm Performance**

The outcome of hypothesis testing 7, namely the influence of Project Innovation on Firm Performance, demonstrates that Project Innovation has a positive and substantial impact on Firm Performance. This is shown by the value of CR by 4.627 and the value by 0.000. The value of CR is greater than 1.96 ( $4.627 > 1.96$ ), as well as P-Value is smaller than 0.05 ( $0.000 < 0.05$ ), which shows that Project Innovation has a major impact on Firm Performance. The positive value estimate value (0.670) shows the influence given the project innovation is positive. That

is, the better the project Innovation Company SMEs then the firm performance will be escorted. Therefore, the results of the hypothesis test show the hypothesis 7 (H7) received.

A strong organizational culture will provide support for an organization or company in the face of all challenges so that it has superiority except over other companies. This in accordance with the results of research conducted by Indiyati (2014) with the results showed that the organizational culture posed a positive effect on competitive advantage. According to Dyahrini (2019), organizational culture affects performance through the advantage of competing cooperatives. These findings contain that meaning if the organizational culture is strong, then the advantage of competing is better. The criteria in assessing the company's performance submitted in various literature, the criteria include financial and non-financial criteria. This study also supported Adeyeye (2013) in his research on Bank in Oyo City, Nigeria showing a significant positive influence of CRM on corporate performance, supported by Borsaly research (2014) in his research on Bank in Egypt showing a significant positive influence of CRM on corporate performance. Valmohammadi (2017) discussed the importance of CRM practices and how it directly affects the organization's ability and innovation of Iran companies.

Although limited, the importance of project Innovation for Firm Performance is discussed in some literature (Rosli & Sidek, 2013). Sandvik (2003), in the Journal of Rosli and Sidek (2013), found that the project Innovation positively impacts corporate sales growth. Additionally, Varis and Littunen (2010), in the Journal of Rosli and Sidek

(2013), using the estimated model, confirmed a very significant effect between innovative activities related to the market and firm performance.

### **Influence Project Organizational Culture on Firm Performance**

The result of hypothesis testing 3, i.e., the Project Organizational Culture Road on Firm Performance, shows a positive and insignificant organizational culture project on firm performance. It can be seen from the small CR value of 0.165 and the value of 0.869. The value of CR is greater than 1.96 ( $0.165 < 1.96$ ), as well as P-Value is greater than 0.05 ( $0.869 > 0.05$ ), which shows the project organizational culture does not affect the firm performance. The positive value estimate value (0.316) shows the influence that the Project Organizational Culture is positive. The results of the hypothesis test show the hypothesis 8 (h8) was rejected.

Results of Navimipour and Soltani (2016) also showed that customer costs positively influence the performance of customer relationships, which increased ECRM's effectiveness in the organization. As similarly stated by Pathirianage (2019), which concluded that organizational culture has a profound influence on the variety of organizational processes, employees, and performance.

### **Influence of Dynamic Capabilities for Firm Performance**

The hypothesis testing 9 results, i.e., Dynamic Capabilities tariff to Firm Performance, revealed that Dynamic Capabilities have a positive and insignificant influence on Firm Performance. It can be seen from the small CR value of 0.165 and

the value of 0.869. The value of CR is greater than 1.96 ( $0.165 < 1.96$ ) as well as P-Value greater than 0.05 ( $0.869 > 0.05$ ) shows that Dynamic Capabilities do not affect Firm Performance. The positive value estimate value (0.316) shows that the effect of dynamic capability potential is positive. Therefore, the results of the hypothesis test show the hypothesis 9 (H9) was rejected.

According to Protoerou et al. (2008), dynamic capabilities are antecedents for additional functional competencies that have a major impact on the company's performance; therefore, dynamic capabilities directly impact the company's performance. Similarly, Ambrosiini and Bowman (2009) mentioned that the performance of dynamic capabilities would impact more than just increased performance. This improvement will occur there is only a suitability of the expected dynamism and the common dynamic, and only the company actually has the necessary dynamic capabilities, the hope is a positive performance.

While Griffith et al. (2006) mention that the development of dynamic capacity or dynamic capabilities can improve company performance, Roberts and Grover (2011) discovered evidence of a positive connection between Dynamic Capabilities and performance. According to Teece et al. (2007), the company's competitive advantage stems from dynamic capabilities in the high-day daily performance, inherent in its process and conditioned by its development process.

## 5. CONCLUSION

Our research findings supports Polat (2010) and Basheer and Tarabieh's (2011) who stated that competitive advantage in construction companies will improve firm performance. These findings can be

generalized in Indonesian's construction companies. This seems to be relevant with Indonesian's circumstances in the last few years, as there are more growth in the number of construction companies but declining demands for it (Jannah, 2019). Despite this conditions, some public construction companies are dominating the market which have a great impacts on private companies in Indonesia. With less opportunities and demands, these private construction companies needs to escalate their values. Thus, competitive advantage plays a role on these circumstances. To survive, these private companies must upgrade their market value in any manner deemed appropriate so that their performance will be seen by prospective customers.

The relationship between competitive advantage and firm performance noted the important to identify on what kind of determinants that can improve construction companies' competitive advantage in Indonesia. As this can contribute for the private companies' survival in competing and can be used as a consideration for their added values. This research consider electronic customer relationship management, project innovation, project organizational culture, and dynamic capabilities.

Based on the results of this study, it can be concluded that almost of the determinants (e.g. electronic customer relationship management, project innovation, and dynamic capabilities) has some influences to increase the competitive advantage of the construction companies in Indonesia. However, the same can not be proven for project organizational culture effects on competitive advantage. We also found that there is a significant influence of project innovation, project organizational culture,

and dynamic capabilities on firm performance of the construction companies. Meanwhile, electronic customer relationship management seems to have no direct effect on the firm performance. These results shows that to improve one's value to win the competitions, a company should increase (1) their dynamic capabilities to be able to face the challenges in the current market and (2) project innovation to offer new breakthrough which make it possible for them to be different from other companies.

Beside that, two interesting results were found related to project organizational culture and electronic customer relationship management. First, project organizational culture turns out is not able to influence competitive advantage. We notice that organizational culture in a smaller scale like 'project' would not be able to be an advantage for the company to compete. Their influences were not big enough for the prospective customers to understand the uniqueness of their company. But, it is expected that project organizational culture would be able to affecting firm performance as it is closely related to the project that the company handled.

Second, the private construction companies needed to maximalize the use of electronic customer relationship as a media to improve their firm performances, as it has the ability to affect performance indirectly. Similar to Turban et al. (2008) and Hamid et al. (2011), we argue that accessibility of the company's detailed information is a great advantage to be known by others, and technology could be the answer for that. It is not time-consuming, easy to be accessed everywhere and anytime, and it makes the processes to be effective. Therefore, we recommend the private construction company

to utilized the technology maximally in order to improve their performance by making it a channel to built a better relationship with customers, identify customers' needs, and optimalizing the growth of their competitive advantage. It would ensure the company's sustainability in the future if they are willingly to invest their resources in it.

These results could be utilized as reference materials for scientists that want to further science. The company's results from this study may be used as reference material for managers in each sub-respect to maximize its business value as the main objective of obtaining taxpayer compliance.

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