

The Roles of Green Competitive Advantage as Intervention Between Core Competence and Organisational Performance

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This research aims to analyse the effect of green competitive advantage as the intervention between core competence on the organisational performance which is motivated by the phenomena of the chemical manufacturing sector in Indonesia since productivity declined for the past 5 years, triggered by several reasons such as the weakening of competitive advantage for the sector, and many environmental and social issues as well as problems concerning human deficit capital due to job skill mismatch. This research uses a structural equation model (SEM PLS) approach. Core competence is measured by 24 indicators, meanwhile the green competitive advantage as the rare variable measured by 4 indicators and organisational performance by 6 indicators. The results have a Goodness of fitness model and show that green competitive advantage serves as an intervening variable that improves the relationship between core competence and organisational performance, with the total influence magnitude of 83,8%.

Keywords: *Core Competence, Green Competitive Advantage, Organisational Performance*

Introduction

The chemical manufacturing sector in Indonesia plays an important role as the second largest contributor to National GDP from the manufacturing sector and absorbing a workforce of more than 280 000 workers. However, during the last 5 years along with the opening of free trade in

Asia created the import of chemical products have flooded the domestic market. This condition has increasingly led to competition in the chemical manufacturing sector in gaining the market. This case corresponds with research from Rybakovas (2015) where the manufacturing sector is the most active and intensive in international cooperation and competition. The next phenomenon is related to environmental and social issues due to industrialisation. The large number of populations along with high growth rate are two important driving factors of environmental and social problems. Both challenges in the high population and population growth rate were attempted to overcome by development and industrialisation. The main goal of industrialisation is to accelerate the availability of the fulfilment of human needs, While its negative impact occurs in the form of environmental degradation leading to decline in human life. Development and environmental issues are like two sides of a coin that cannot be separated (BPS Statistics Indonesia, 2016). Environmental and social problems are not only the responsibility of government but everyone including the manufacturing sector. In the Indonesian business context, a large size enterprise requires to control and manage environmental impact caused by operations (Yanto, Susanti, & Baroroh, 2019). Through the Ministry of Environmental and Forestry, the Government of Indonesia has good practices to implement PROPER as an effort to control the environmental impacts caused by companies' operations (KEMENLHK, 2015). However, the program's implementation still faces many obstacles including the problem of knowledge and competence towards environmental sustainability, the weakness of internal management and limitation of environmentally friendly financing.

Recently, more firms are paying attention to environmental protection, and it has become a rapidly emerging trend for an increasing number of companies to label their products or services as environmentally friendly (Y. S. Chen, Lin, & Chang, 2009). Socially responsible or "green" goods and services are increasingly important, as their presence continues to increase dramatically (Tully & Winer, 2014). Accompanied by appropriate regulation, trade can assist the transition to a green economy by encouraging the exchange of environmentally friendly goods and services. Additionally, (Tully & Winer, 2014) over half of participants (60,1%) are willing to pay a premium for such products. The production process involves the transformation of various inputs into outputs required by the market. The field of environmental ethics concerns human ethical issues and includes product and service values. Adding values involves increasing the desirability of a product to a customer so that he or she will pay a higher premium (Lin & Chen, 2017). Adding value to increase an organisation's performance is not simply about manufacturing, but also about human resources such as core competence and green competitive advantage. Firm know that linking a product or service to environmental benefits increases desirability. Pujari, Wright, & Peattie (2003) point out that higher environmental benchmarking improves organisational performance.

In this competitiveness environment, firms are continuously striving to attain a sustainable competitive advantage and need to count more on their internal strengths to provide added customer value, strong differentiation and extendibility, in other words to count more on their “core competence” (Hamel, G. & Prahalad, 1994). Core competence has to be a primary factor for strategy formulation as it is an important source of profitability. Scholars have acknowledged the importance of the concepts of core competence by suggesting core competence models to sustain competitive advantage (Hafeez & Essmail, 2007). Core competency is about the knowledge regarding successes or failures in recommending knowledge resources (Banerjee, 2003); some researches even define core competence in short straight-forward words: “it is the ability to operate efficiently within the business environment and to respond to challenges” (Y. F. Chen & Wu, 2007) linking its definition directly with performance.

Core competences are valuable capabilities, which are collective and unique in their characteristics, as well as strategically flexible contributing towards the success of potential business (Hafeez & Essmail, 2007). Moreover, (Y. F. Chen & Wu, 2007) point out, that the importance of core competence in the traditional manufacturing (T-M) sector is higher than in the high-tech sector (Agha, Alrubaiee, & Jamhour, 2011). Therefore, this research is of great value for the chemical manufacturer sector since it is considered as a high-tech sector. However, since core competencies are key ingredients in organisational success, the primary purpose of this study is to examine the relationship between core competence, green competitive advantage and organisational performance in the chemical manufacturer sector. The study was conducted in the chemical manufacturer sector in Banten Province Indonesia, which has four districts as an industrial area with a chemical plant: Serang District, Tangerang District, Cilegon and Tangerang City. Banten Province has 291 chemical plants that can accommodate as many as 54 000 workers and became the third largest province in the chemical industry after the provinces of East and West Java .

The study focuses on specific core competencies including: shared vision, co-operation and empowerment as well as four important green competitive advantage dimensions. These consists of valuable, rare, inimitable and non-substitutable, as well as two organisational performances: growth and profitability. Addressing the major issues discussed above, we seek to accomplish the following specific objectives: to examine the effects of core competence on green competitive advantage variable in the chemical manufacturer sector in Banten Province, Indonesia. Furthermore, to test the effect of green competitive advantage on organisational performance of the chemical manufacturer sector in the Banten Province, Indonesia and investigate the effect of core competence on organisational performance of the chemical manufacturer sector in the Banten Province, Indonesia.

Literature Review

One of the most important agendas in improving the economy in the era of free markets and globalisation is the development of competitiveness, therefore there is a need for human capital management that supports the improvement of human resource competencies (Ismail, Domil, & Isa, 2014) where competence has a major influence on improving quality and excellence. Competence has a positive and significant effect on competitive advantage if managed properly so as to improve company performance (Putu, Adiputra, & Mandala, 2017).

The core competence in the industry is the ability to improve and maintain the ability to be able to preserve sustainable competitive advantage, so that the current highly competitive market competition is the core competence which plays a central role in increasing the industry's competitive advantage (Hastjarjo, et. al., 2016). If core competencies are difficult to observe, it will be very difficult for competitors to imitate them so as to increase sustainable competitive advantage. So, it can be concluded that core competence is a collection of knowledge that distinguishes a company and provides a competitive advantage (Hastjarjo et al., 2016). Core competence is consistent with the basis of the RBV theory where competitive advantage consists of a collection of resources that originate from internal organisations.

Core competencies also have a significant impact on competitive advantage for organisations, because organisations become more energetic at work and in teams that support each other to achieve their vision (Agha et al., 2011). This can be used as a reference for a manager to improve competence so that the organisation can maintain its competitive advantage and improve organisational performance (Agha et al., 2011). In addition to core competencies, there are also special or distinguishing competencies first termed by Selzink (1957) in (Mooney, 2007) a specific competency of companies that produces different views and is not only centred on the goals of the initial vision. In other words, special abilities will help companies to stand out in their markets to increase their competitive advantage. Ko (2015) provides a deeper examination about competence using professional competencies, which is a collection of knowledge, abilities, standards, competencies and the ability to identify beneficial factors to increase competitive advantage. Thus, the following hypothesis is presented:

H1: There is a positive relationship between core competence and green competitive advantage in the chemical manufacturing sector at Banten Province, Indonesia.

The results of research conducted by Cantele & Zardini, (2018) 348 manufacturing companies in Italy engaged in small and medium-sized businesses resulting in the conclusion that competitive advantage becomes a supporting variable on company performance as seen from the company's financial performance. While competitive advantage is influenced by four dimensions of the company's long-term sustainability including social, political, economic and

environmental. This research contributes to the long-term sustainability model of the company and the financial performance of small and medium business sectors.

The beverage industry sector in Spain is formed by small and medium industry sectors and the results of research about 339 beverage companies have shown significant results between competitive advantage and company performance, where competitive advantage is strongly influenced by a company's ability and other internal resources and external organisations (Lorenzo, Rubio, & Garcés, 2018). While the results of research regarding 39 cooperatives in Malaysia and registered in the annual report refer to the RBV theory which shows that competitive advantage obtained from tangible and intangible assets, financial conditions and total assets owned will significantly influence the performance of the cooperative as a whole (Othman, et. al. 2015).

The results of research conducted by Kusuma & Devie, (2013) reveal that competitive advantage is strongly influenced by knowledge management, where research is conducted on 100 company managers located in Surabaya. Competitive advantage has a positive and significant impact on company performance as measured through two performance dimensions, operational and financial performance. The study was conducted using SEM PLS analysis method.

Competitive advantage seen from the four dimensions of quality, cost, flexibility and delivery has a positive and significant impact on company performance measured using two performance indicators, sales growth and stock prices (Amoako-Gyampah & Acquah, 2008). The study was conducted on manufacturing companies in Ghana. Each dimension of competitive advantage has a positive and significant influence on company performance. These results prove that the cost of leadership and differentiation proposed by Porter, (1985) will affect a company's sustainability. Therefore, the following hypothesis is developed:

H2: There is a positive relationship between green competitive advantage and organisational performance in the chemical manufacturer sector of Banten Province, Indonesia.

According to the results of Otoo & Mishra (2018) of the analysis of 700 hotel employees using the SEM analysis method show that human resource management practices affect organisational performance through employee competence. This research was conducted in the hospitality industry through cross sectional analysis based on which the results cannot be generalised in various sectors and the international environment. The research findings have the potential to assist stakeholders and hotel management in adopting effective and articulate human resource practices in building human resources and stimulating better competencies in order to create organisational through improving organisational performance.



To create and improve competitive advantage and organisational performance, companies must be able to adapt to existing environmental risks through dynamic capabilities and increase a company's core competencies. Research conducted by Hastjarjo et al., (2016) has produced phenomena, research problems, theoretical foundations, literature maps, models and hypotheses to build core competencies in the real estate sector. This research also produces insights that can help companies develop strategic and highly competitive real estate industry development processes.

Core competence is a combination of knowledge gathered and technical capabilities that enable businesses to compete. The results of research by Nimsith et al, (2016) show significant results between core competencies towards competitive advantage and improvement in organisational performance. This research focused on the banking industry in Sri Lanka, other findings reveal that various banking companies have different regions they consider to be their core competencies, Proving that competence has a significant impact on a company's progress.

The results of other studies conducted in the UAE regarding 77 paint company managers using an electronic questionnaire show that core competencies have a significant impact on company competitive advantage and organisational performance. Another finding is that flexibility has a higher impact on a company's response to deal with dynamic change. As a result, Agha et al., (2011) suggest that increasing core competencies become prioritised and must be managed effectively by the company. Therefore, this research can be used as a reference for managers of painting companies to be able to raise their core competencies so as to produce competitive advantage and organizational performance.

In line with the results of the research conducted above, Jamhour, (2010) also found that core competencies have a significant impact on organisational performance, and the effect would be greater by using variable competitive advantage. Core competencies are classified into three dimensions: shared vision, collaboration and involvement. Of these three dimensions, shared vision has the greatest influence on organisational performance, while organisational performance is measured using financial performance. Therefore, managers who work in a paint factory can use these findings to develop strategies that strengthen competitive advantage and improve organisational performance. Thus, the following hypothesis is developed:

H3: There is a positive relationship between core competence and organisational performance in the chemical manufacturer sector of Banten Province, Indonesia.

Methodology Research

This research is designed to answer those problems that have been formulated through hypothesis testing. The design created by Kerlinger, (2000) is based on an inquiry structure

which helps researchers obtain a definite answer. It uses a deductive approach consisting of exploratory research to find some relatively new relationships and explanatory research, a study conducted by explaining the indications emerging from the research object. By applying a deductive approach, the researcher seeks to examine the data both empirically and systematically, then compare it with existing theories. As seen from the objectives, causal studies attempt to explain causal relationships based on the influence of core competence and green competitive advantage on organisational performance in the chemical manufacturing sector at the Banten Province Indonesia.

This research uses the statistical methodology of PLS Structural Equation Model (SEM-PLS), to predict the relationship between constructs and analyse the effect of exogenous variables on endogenous variables. The effect is very complex where there used are independent variables and dependent variables. These variables are latent, formed by several indicators. Therefore, to analyse the data, variance based structural equation modeling (VB-SEM) analysis techniques were used incorporating the Smart PLS 3 (Partial Least Square) program. The stages of analysis using statistical programs include research instrument and descriptive statistical tests using SPSS Version 22. The SEM PLS test begins with a model fit or Goodness of fit (GoF) test, which is a measure of the discrepancy between values, the results of observations with expected values in the model or in other words the extent to which the observation data support the research model. The first GoF test is called the Outer analysis model or measurement model, the second GoF is the inner analysis model or structural model continued with the significance test or hypothesis testing.

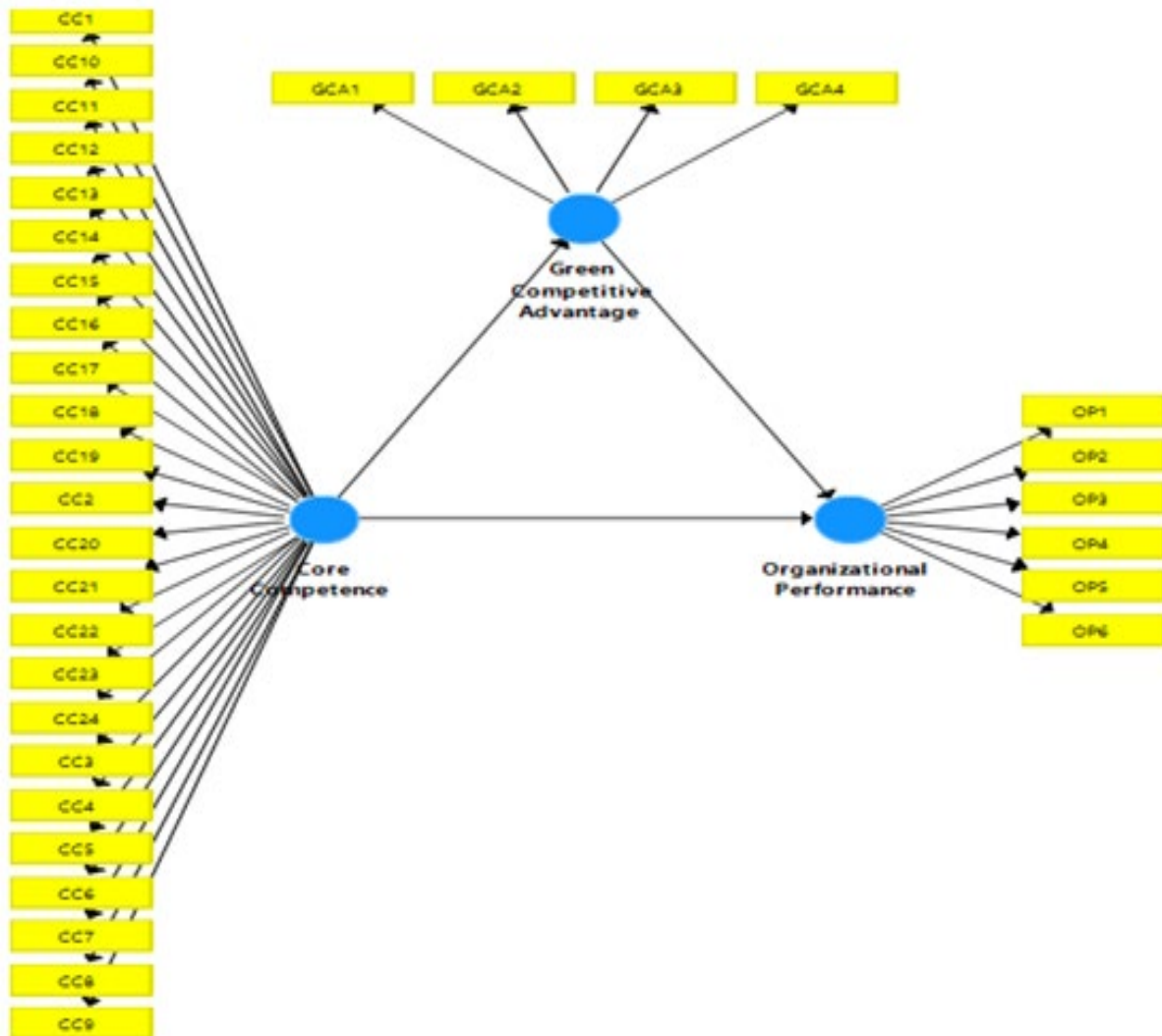
The researcher uses the SEM PLS (VB-SEM) method with the aim of reducing weaknesses that reduce the comprehensiveness of the analysis. Such assumptions must be checked by researchers to ensure that the regression equation formed by BLUE (Best Linear Unlocked Estimate) is one of the assumptions of normality. Hair, et. al. , (2014) state that in business and management research which measures perception, it will be difficult to obtain normally distributed data so that researchers will find it difficult to attain a BLUE regression equation. On the other hand, PLS uses the Bootstrapping method or random iteration duplication so that the assumption of normality will not be a concern for PLS.

The study population consists of chemical companies in the Banten province, spread out in four districts and cities. The unit of analysis used as the respondent is a managerial position during the last at least two years, so it the person expected to have understood his or her duties and responsibilities in detail. Samples consist of 177 managers using purposive sampling techniques. The research instrument includes interview, observation and questionnaire techniques. The data collected from the questionnaire was calculated using the Likert scale where the scale of value is 5 for the highest value and 1 for the lowest. Value 5 shows strongly

agreement with the actual condition at the field while value 1 strongly disagrees with opposite conditions.

The study was grouped into three groups of variables core competence, into exogenous variable, green competitive advantage including intervening variable and organisational performance including endogenous variable. Core competency uses three dimensions: (1) shared vision measured by 7 indicators (CC1 - CC7), (2) cooperation which is measured using 7 indicators (CC8 – 14) and (3) empowerment which is measured using 10 indicators (CC15 – CC24) that refer to Agha et al., (2011) and Ghani & Farisya, (2019). The variable green competitive advantage uses four dimensions including (1) The company has the competitive advantage of low cost about environmental management or green innovation compared to its major competitors (GCA1); (2) The quality of the green products or services that the company offers is better than that of its major competitors (GCA2); (3) The company is more capable of environmental R&D and green innovation than its major competitors (GCA3); (4) The company is more capable of environmental management than its major competitors (GCA4), where each dimension uses one indicator that refers to the research of Lin and Chen (2016). While organisational performance variables use two dimensions, (1) growth which is measured using 3 indicators (OP1 – OP3) and (2) profitability which is measured using 3 indicators (OP4 – OP6) that refer to Agha et al., (2011). On the whole, this research uses 34 indicators. Thus, the following conceptual framework model is developed:

Diagram 1. Conceptual Framework Model

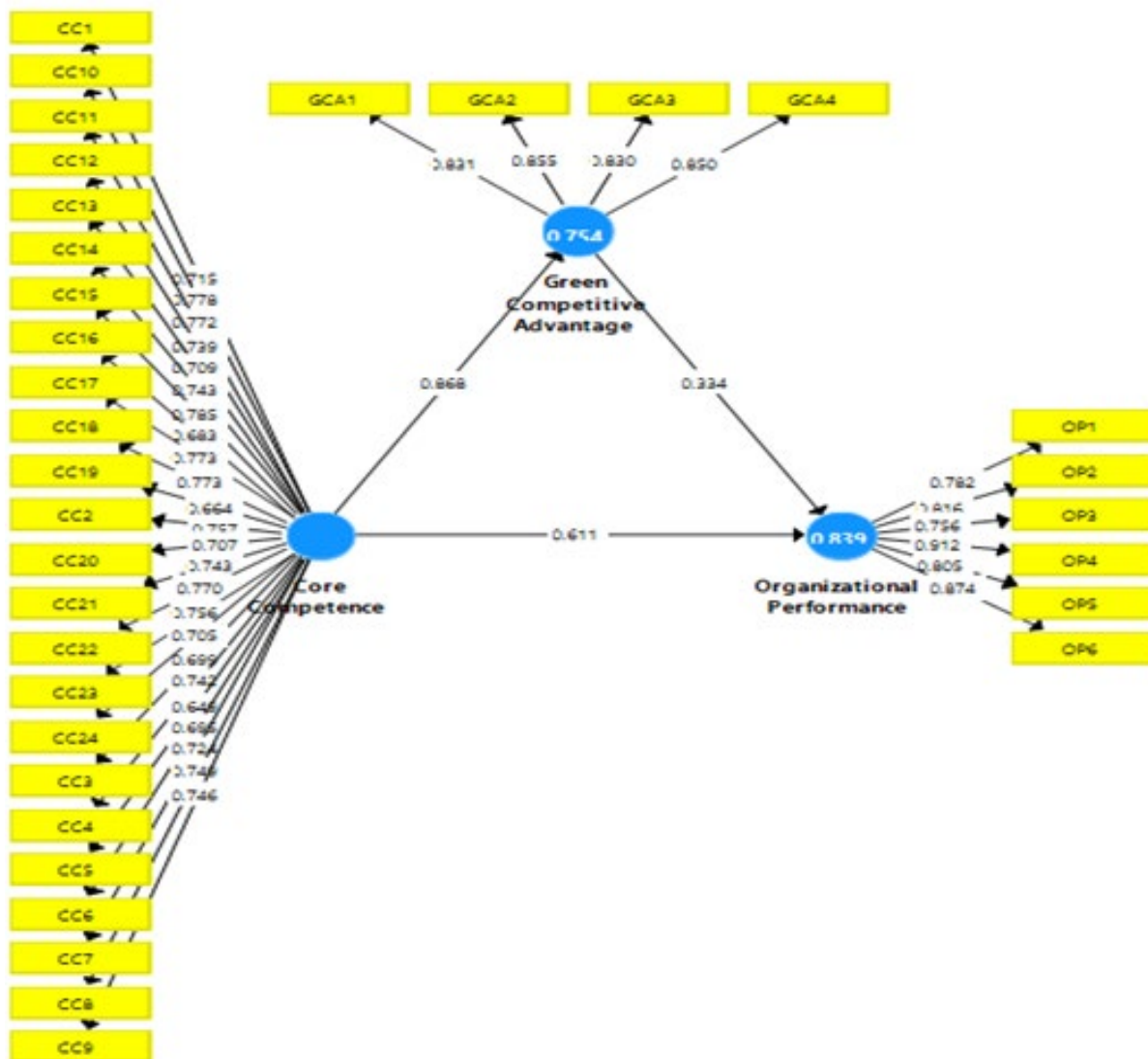


Result and Discussion

Outer Model Analysis

The results of the outer model analysis of the conceptual model using PLS Algorithm obtained the factor loading values for each indicator as follows:

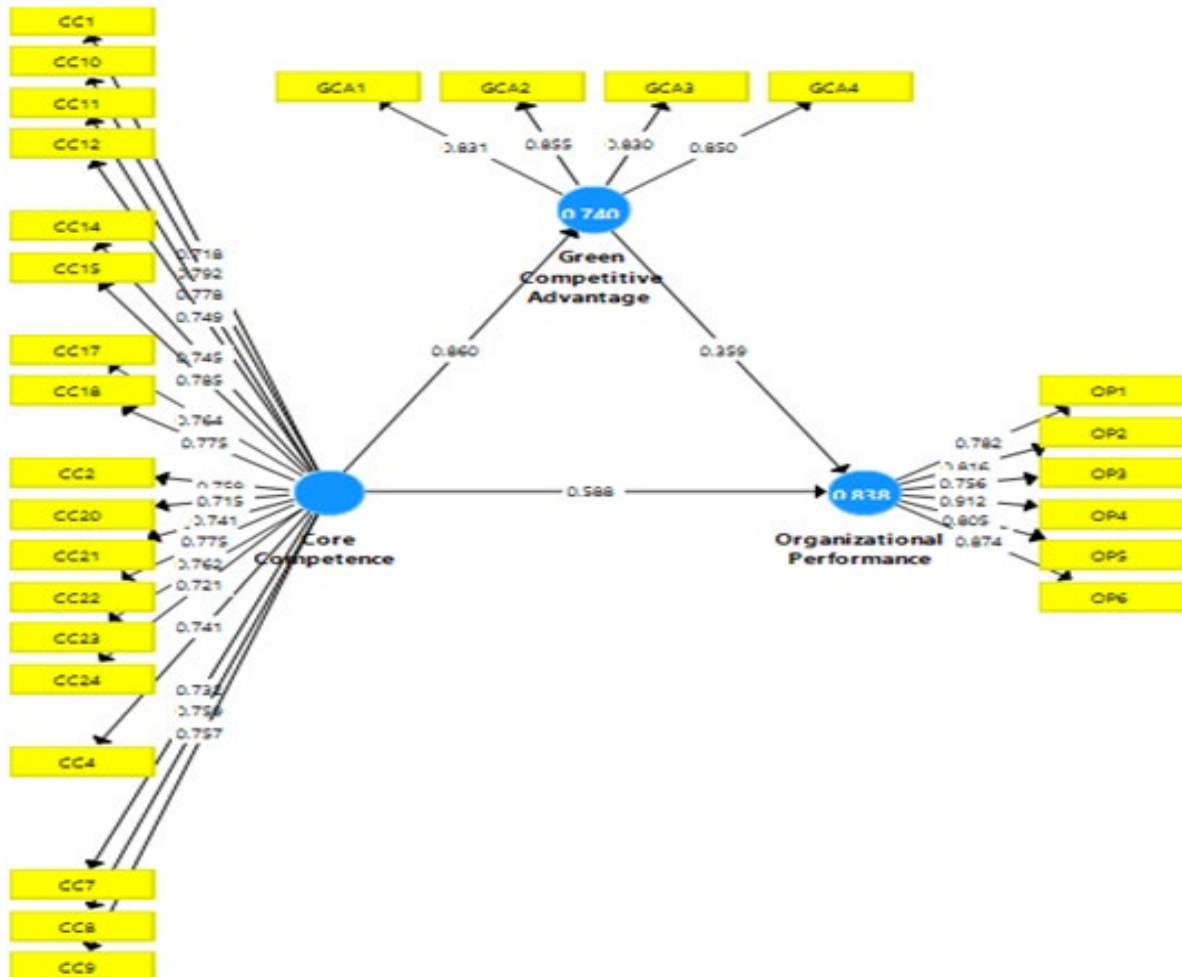
Diagram 2. First Model PLS Algorithm Analysis



From these results there are six core competence indicators that are not valid as they have a factor loading value below 0.70, among others indicators CC3, CC5, CC6, CC13, CC16 and CC19. While the green competitive advantage variable has four indicators (GCA1 - GCA 4), all of which are valid, as well as organisational performance variables that have six valid indicators (OP1 - OP6). From the 24 core competence indicators, the researcher dropped the six invalid core competence indicators and then retested the PLS Algorithm, so that a second conceptual model was obtained that showed all indicators (28 indicators) were valid with the factor loading value entirely above 0.70. PLS Algorithm results of the second model, for core competence variable has the lowest loading factor of 0.715 shown by the CC20 indicator while the highest loading factor of 0.792 is shown by the CC10 indicator. Green competitive advantage variable has the lowest factor loading of 0.830 as indicated by the GCA3 indicator and the highest factor loading of 0.855 indicated by the GCA3 indicator. The Organisational

Performance variable has the lowest factor loading of 0.756 shown by the OP3 indicator and the highest factor loading of 0.912 which is indicated by the OP4 indicator as seen in the following figure:

Diagram 3. Second Model PLS Algorithm



The results of the outer model analysis of the second conceptual model obtained AVE value for the core competence variable of 0.569, for the green competitive advantage variable of 0.708 and organisational performance variable of 0.682. The three latent variables have AVE values above 0.50. The value of AVE shows the variance value of each indicator in the constancy that the variable can capture more than the variance caused by the measurement error. As for the results of discriminant validity testing, the value of loading indicator indicators for the variables built is greater than the value of cross loading for other variables. This shows that the indicator is able to measure the latent variable effectively. The results of composite reliability testing show that the CR value for the core competence variable was 0.960, the green competitive advantage variable was 0.907 and the organisational performance variable was

0.928. This highlight that the three latent variables have sound internal consistency because they have CR values above 0.70. Testing of reliability was also compared using alpha cronbachs where the core competence variable had an alpha cronbachs value of 0.955, green competitive advantage variable was 0.863 and the organisational performance variable was 0.906. These results indicate that latent variables have very good internal consistency.

Inner Model Analysis

The results of the bootstrapping analysis of the second conceptual model obtained the value of the core competence path coefficient of green competitive advantage by 0.860 while for the green competitive advantage variable path coefficient of organizational performance is 0.359 and the core competence variable path coefficient of organisational performance is 0.588. This shows that core competence and green competitive advantage variables have a positive influence on organisational performance.

The value of R square variable green competitive advantage is 0.740, which shows that the core competence variable has an effect of 74.0% on the variable green competitive advantage. While the value of R Square organisational performance is 0.838 which illustrates the influence of core competence and green competitive advantage variables on organisational performance by 83.8%. The magnitude of the effect of size is illustrated by the value of f^2 for the core competence variable to the green competitive advantage variable is 2,842 where this value falls into the medium category, while the f^2 value of the green competitive advantage variable to organizational performance is 0.207 where this value falls into the medium category. The magnitude of the effect size of the core competence variable on organisational performance variables is 0.554 where this value falls into the strong category. GoF test results from the research model obtained a GoF value of 0.718 where the value entered into the range of 0.38-1.00 illustrates the high fitness model category. The Stone Geiser Value (Q²) test results on the green competitive advantage variable obtained a value of 0.493 while for organisational performance variables of 0.533 where this value is greater it can be illustrated that there is a sound structural model relevance matching.

Hypothesis Test

The results of testing the three hypotheses, obtained the value of T Statistics and P Values as follows:

Table 1: Original Sample, STDEV, T-Values and P-Values

Significance Test	Original Sample (O)	STDEV	T Statistics (O/STDEV)	P Values	Result
Core Competence → Green Competitive Advantage	0,860	0,020	42,732	0,000	Significant
Core Competence → Organisational Performance	0,588	0,069	8,496	0,000	Significant
Green Competitive Advantage → Organisational Performance	0,359	0,072	4,971	0,000	Significant

Hypothesis 1

The results of testing the first hypothesis obtained a T value of 42.732 where this value > 1.96 so that H₀ is rejected. This illustrates the significant influence of core competence variable on green competitive advantage where these results are consistent with the research results (Hastjarjo et al., 2016). If core competencies are difficult to observe, it will be challenging for competitors to be able to imitate them so as to increase sustainable competitive advantage. Therefore, it can be concluded that core competence is a collection of knowledge that distinguishes a company and gives it a competitive advantage compared to its competitors. This research is also consistent with the results of Jamhour, (2010). Core competencies also have a significant impact on competitive advantage for organisations, as organisations become more energetic at work and teams that support each other to achieve their vision. This result also proves that core competence is consistent with the basis of the RBV theory where competitive advantage is a collection of resources that comes from internal organisations. The results of interviews with 177 respondents who have managerial positions indicate that core competence will be able to increase green competitive advantage where the competencies possessed will play a great role in increasing competitive advantage associated with environmental management. Especially when this is the case, the regulations implemented by local governments are very concerned about environmental management. Employee competencies will be able to increase understanding and awareness of environmental management, which will encourage the creation of green competitive advantage for the company so that it becomes a differentiating value with similar competitors.

Hypothesis 2

The results of testing the second hypothesis obtained a statistical T value of 8.496 with a P value of 0.000., Where the T statistic value > 1.96 so that H₀ is rejected. This shows that there is a significant influence of green competitive advantage variable on organisational performance. Where these results are in line with the results of previous studies examining the

effect of the relationship between competitive advantage on organisational performance including the research results. Kusuma & Devie, (2013) show that competitive advantage is strongly influenced by knowledge management, where research is conducted on 100 company managers located in Surabaya. Competitive advantage has a positive and significant impact on company performance as measured through two performance dimensions, namely operational and financial performance. The results of this study are also consistent with Othman et al., (2015) where the research results regarding 39 cooperatives in Malaysia and registered in the annual report that refers to the RBV theory showing that the competitive advantage obtained from assets in the form of tangibles, intangibles, financial conditions and total assets owned will have a significant influence on performance of the cooperative as a whole. One of the improvements in core competence can be done by using information and communication technology (ICT) facilities to increase insight in absorbing existing information (Zaid, et. al., 2019). The results of interviews with 177 respondents share common indicators proposed in this study show a difference for chemical manufacturing companies in improving organisational performance. Not all companies have a high commitment to environmental management, therefore with attention to green competitive advantage will be able to boost organisational performance. Companies that do not pay attention to environmental issues will be difficult to develop considering there will be many obstacles from the surrounding social environment and the government. One application of green competitive advantage is the diversity of products of nature and newly created products forms the natural basis of the social section of labor; due to the change of the natural conditions in which each new generation finds itself and in which a person has to manage his or her household, this diversity contributes to the multiplication of his or own needs, abilities, means and methods of work and communication (Kulik & Kulik, 2019). Therefore, it is appropriate if the results of this study are in line with the initial hypothesis that has been formulated earlier.

Hypothesis 3

The results of testing the second hypothesis obtained a statistical T value of 4.971 with a P value of 0.000, where the T statistic value > 1.96 so that H₀ is rejected. This shows that there is a significant effect of core competence on organisational performance. These results agree with the results of previous studies that examine the effect of the relationship between core competence on organisational performance including the research results (Nimsith et al., 2016) where the results show significant results between core competencies towards competitive advantage and improvement in organisational performance. These findings have the potential to assist stakeholders and hotel management in adopting effective and articulate human resource practices in building human resources and stimulating better competencies in order to create benefits for organisations by improving organisational performance. Jamhour, (2010) also found that core competencies have a significant impact on organisational performance. The results of interviews with respondents show the same common thread where core

competence is an internal asset that will be difficult for competitors to imitate to improve the performance of their organisations. Therefore, this research can be used as a reference for chemical manufacturing managers to be able to raise their core competencies to produce competitive advantages and improve organisational performance. This study confirms that human capital not only drives the productivity of these economies, but also plays a role in producing the most efficient ways possible (Al-shammari & Al, 2019). Management should differentiate knowledge management levels, because the core of the decision-making process could be severely damaged if they were intended as similar. Indeed, knowledge workers (strategists, engineers, technicians, researchers, etc.) can offer experiences in the concerns or potential new situations. In the upper level, they can also make a radical contribution to include more evident values into the company's offering in order to generate customer's preferences (Jusoh & Abdul, 2019).

Mediating Effect of Green Competitive Advantage

The second conceptual model shown the coefficient value of core competence on organisational performance is 0.588 with a P value of 0.000 which represents a significant direct relationship. While results of specific indirect effect show the value of the coefficient of relationship between the core competence on organisational performance through the green competitive advantage is 0.309 with a P value of 0,000 where these results indicate a significant mediating effect. Based on the above two results, we can conclude that the green competitive advantage variable has a partial mediation effect type. This is the same model as suggested by (Zhao, X., et. al., 2010) in the below figure. Hair, J. F., et. al., 2017) also propose PLS-SEM.

Diagram 4. Mediator Model PLS-SEM

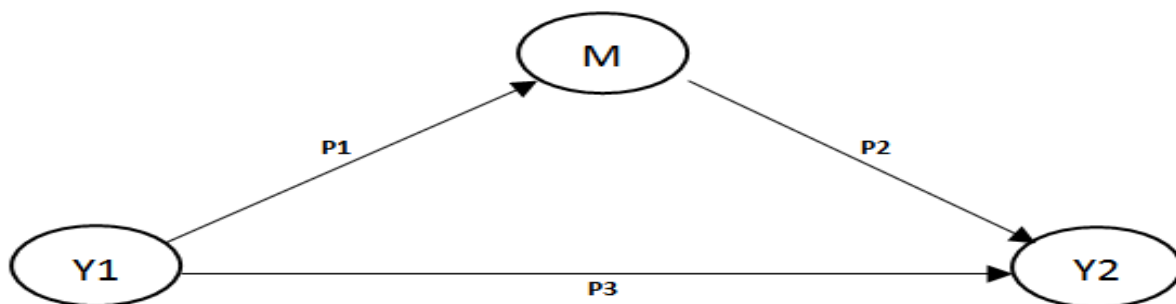
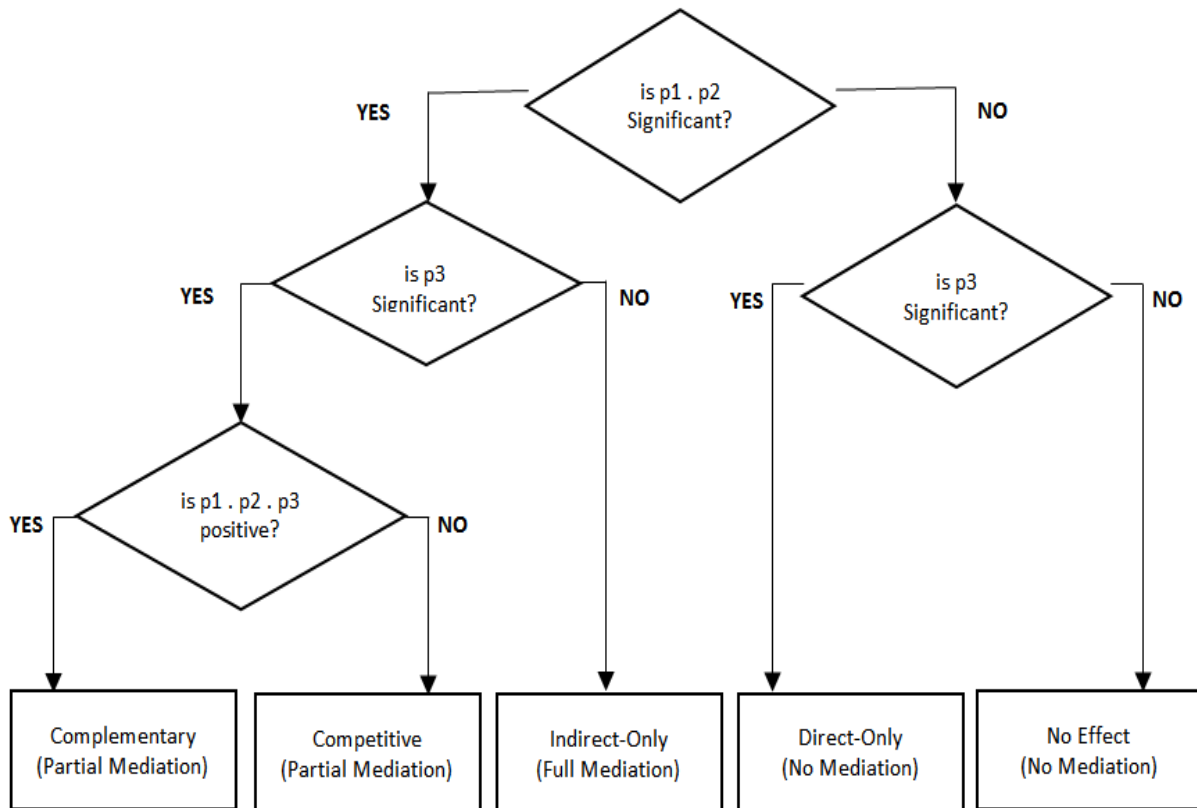


Diagram 5. Type of Effect Mediation Variable PLS-SEM



Summary and Conclusion

The results of the confirmatory factor analysis test on the conceptual model of the second research show sound validation and reliability results. Of the 34 indicators tested, there were six invalid indicators while the remaining 28 were valid and could be used to measure latent variables. Structural test results show that the conceptual research model has a positive influence with the magnitude of influence of the core competence and green competitive advantage variables on organisational performance by 83.8% while the remaining 16.2% is influenced by other variables outside this research variable. From the three proposed hypotheses, all hypotheses are accepted which illustrate the significant influence of each relationship between the exogenous and endogenous variables .

The results of this study have theoretical implications, where this research has proven the resource base view (RBV) first proposed by Penrose, (1959) according which a company's growth will be sustainable depending on the company's internal characteristics which are further developed by Porter where the organisation will have more value than competitors' if they have valuable, different, irrevocable and irreplaceable resources through competitive advantage. The renewal of this research is focused on green competitive advantage where the



test results prove that green competitive advantage has significant results on the company's growth and profitability.

The results of this study also have managerial implications in which core competence has a role in improving the four dimensions of the green competitive variable advantage so that it can be used to increase company growth and profitability. This result can be the focus of managerial level to be able to continue to increase core competence and green competitive advantage. This becomes very important for the chemical manufacturing industry sector, considering that organisational performance is not only oriented towards the economy but must be integrated with other dimensions. In the era of industrial revolution 4.0 and globalisation, social demands originating from the community and from regulators namely, that is government towards the green industry are growing given the increasingly limited natural resources require efficiency in the use of raw materials and increasing population demands high social performance given increasingly limited employment opportunities and the closeness between industry and the community environment creates the risk of exposure to industrial side effects such as waste and air pollution which have a direct impact on the community's environment.

Further Study

Future research may focus on the antecedent of core competence. Secondly, it can focus on other industries and compare them with this study. Thirdly, future studies could extend this framework to include other variables as well as exploring areas with potential for further development of different industries.



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