

## DETERMINING FIRM'S PERFORMANCE: MODERATING ROLE OF CSR IN RENEWABLE ENERGY SECTOR OF INDONESIA

Widiyanti M., Sadalia I., Zunaidah, Irawati N., Hendrawaty E.\*

**Abstract:** Energy plays crucial role in economic development of country to contribute in business activities for large sectors. The availability of energy helps to fulfill the development demands and initiatives of government's policies. Energy is required in any sector of country to conduct their business activities and to develop infrastructure sector in Indonesia. Strategic management of firms enables them to develop long-term goals and to gain competitive advantage in highly turbulent and rapidly changing environment. The present study empirically examined the influence of strategic management practices and strategic clarity on performance of energy sector of Indonesia. Moderating role of corporate social responsibility is also examined between the constructs. The results show that independent variables influence significantly performance of firms, but CSR doesn't moderate between the strategic clarity and firms' performance. The data was collected from industry related managers and was examined by using SMART-PLS (MM and SEM techniques).

**Keywords:** Strategic Management Practices (SMP), Corporate Social Responsibility (SCR), Strategic Clarity (SC), Firm's Performance (FP), Renewable Energy

DOI: 10.17512/pjms.2019.19.2.37

Article's history:

Received February 01, 2019; Revised March 29, 2019; Accepted April 20, 2019

### Introduction

Natural resources are utilized for energy and considered as major source to produce power and energy. Natural resources including oil and gas, water, coal, biomass, geothermal and peat utilized as energy to provide power to industry, production sector and general household in any country. The energy is now produced by using latest technologies available which enable to produce renewable energy and non-renewable energy which includes hydrogen, coal bed methane, coal gasification and nuclear method (Hosseini and Wahid, 2016). The method of generating renewable energy doesn't exhaust natural resources and remain sustainable by proper management (Arafah et al., 2018). There are various sources have been used for production of energy and diversified energy supply framework are used these days. Conservation of energy enables to create efficiency with limited usage of energy resources and utilization of energy where necessary (Pittman et al., 2011). The ratio between rate of economic growth and growth rate of energy usage are

---

\* **Marlina Widiyanti**, PhD., **Zunaidah** PhD., Economics Universitas Sriwijaya, Palembang Indonesia; **Isfenti Sadalia** PhD., **Nisrul Irawati** PhD., Economics and Business Universitas Sumatera Utara, Medan, Indonesia; **Ernie Hendrawaty** PhD., Economics and Business Universitas Lampung, Bandar Lampung, Indonesia

✉ Corresponding author: marlinawidiyanti68@yahoo.co.id

known as energy elasticity. Various costs such as production cost, environmental cost and managerial costs are included in determining the economic price of energy (Nugroho et al., 2017). Renewable energy usage is encouraged by government for meeting national energy needs in future due to high economic level. Researcher in present study intends to examine the relationship between strategic management practices and performance of Indonesian energy sector firms. Environmental analysis, corporate mission setting, formulation of strategy, execution of strategy, evaluation and control comes under the umbrella of strategic management as key aspect of strategic management (Permana, 2017; Bazmi and Javed 2018). Strategic clarity is associated with improvement in collaboration and implementation of strategies at energy management of Indonesia. Researchers have depicted various different findings in empirical examination of strategic clarity (Parand et al., 2011). Strategic clarity and strategy implementation found to be supportive in relationship with performance; contrary, partially supportive results have been depicted by other researchers. Ambiguous results also found to be empirically related with strategic clarity and it acquired attention of researchers (Yuliansyah et al., 2016; Haseeb et al., 2019).

Therefore, according to previous studies the researchers believed and suggested that strategy clarity must be examined and measured on the base of vision, scope, priority and strategy to empirically examine relation with performance. Current study intends to examine the empirical examination between strategic management practices, strategic clarity and performance with moderating role of corporate social responsibility. The study found to be unique in terms of its variables relations and will be empirically examined first time as the best knowledge of researcher.

### **Literature Review**

Indonesia as an emerging and rapidly growing market transitioned from dictatorship to democratic economy (Taticchi et al., 2010). Similar transition has been faced by other economies including Asian, Eastern European, African and South American regions. Indonesian service and production sector has experienced growing activities such as entrepreneurial mind set and initiatives which resulted in high competitive environment.

#### Firm's performance

Performance measurement is defined in terms of its relevance of existence and success as organizations strive to carry out their activities to meet their objectives. Achievement of growth and objectives of organizations depicts its success and it can be determined in all aspects of performance to gain competitive advantage and to improve performance. Researchers have given more than one criterion to assess the performance of industry of any sector and it has been established over number of years. Strategic management of organizations assists them to develop well organized system to determine performance and enhance the probability of success and to gain competitive advantage. Strategic decisions and policy plays central role

in development of competencies to gain better outcomes. Strategic policies help organizations to focus on long term goals for gaining competitive advantage and to improve performance while enhancing their market share (Otelea, 2018). The direction helps to identify clear goals to improve performance as it must be defined for focus and quantifiable measurement of performance (Efendioglu and Karabulut, 2010).

#### Strategic management and performance

Researchers have discussed relation between strategic management and performance and criticized that the relationship is ambiguous (Saenz, 2010). Literature has discussed the relation between these constructs and stated formalized and non-formalized strategic planning. Researchers preferred non-formalized planning and criticize formalized planning due to its rigid and inflexibility. Contrary; researchers prefer formalized strategic planning due to its structure and direction and criticize non-formalized planning as it is non-structure and non directional (Nason and Wiklund, 2018; Bokhtiar et al., 2018). Current study focuses to determine the performance related outcome in oil and gas industry of Indonesia with influence of strategic management practices and strategic clarity, further, study entails the moderating effect of corporate social responsibility. Studies have showed that firms are now focusing more on their strategic issues, strategic tools and processes as countries transform from different economic settings but the issues is still unanswered (Stam et al., 2010).

The current study will investigate relationship between strategic management practices, strategic clarity and performance with moderating effect of corporate social responsibility and will give interesting findings and conclusion at energy and power sector of Indonesia. After formulation of strategies the implementation phase occurs and organizations must take effective measure for successful implementation (Andrews et al., 2012).

#### Strategic clarity and performance

The impact of strategic management on increase in performance has been examined in banking sector of Indonesia previously. Studies found that well formulated strategy helps to achieve required performance standards but in banking sector of Indonesia still unsatisfactory measures in achieving overall objectives of banks. Conversely, few other challenges are found in development of Islamic bank in Indonesia and they must be solved. Lack of clear strategic policies and management identified that Islamic banks have failed to achieve their targets in performance aspects (Permana, 2017; Brown and Ibekwe, 2018). The 'Priority strategy' known as an element of 'strategic clarity'; imperatives for middle management for understanding strategies and in translation of managerial objectives into actions (Muafi, 2016).

#### Corporate Social Responsibility (CSR) in Indonesian Context and its moderating role - CSR and Performance

Corporate social responsibility (CSR) is stated as way for companies to take responsibility for social and environmental impact due to their business activity.

Through CSR program companies avail opportunity to demonstrate good corporate citizenship behavior; objective is to protect environment and social surroundings. Indonesian firms and companies use Law of Limited Corporation N.40 year since 2007 for CSR implementation. The SCR guidelines in Indonesia has objective to create economic development while enhancing quality of companies and stakeholders (Suprpto, 2006). Organizational performance in various studies used as non-financial measurement approach namely work quality, satisfaction, capability, adaptability and service quality as used in the previous studies Suprpto, 2006). Current study, investigates the relations between strategic management, strategic clarity and performance with moderating effect of corporate social responsibility.

Hypothesis Development

*H1: Strategic management practices influence firms’ performance at renewable energy sector of Indonesia*

*H2: Strategic clarity influence firms’ performance at renewable energy sector of Indonesia*

*H3: CSR influence firms’ performance at renewable energy sector of Indonesia*

*H4: CSR moderate relationship between strategic management and firms’ performance at renewable energy sector of Indonesia*

*H5: CSR moderate relationship between strategic clarity and firms’ performance at renewable energy sector of Indonesia*

Research Framework

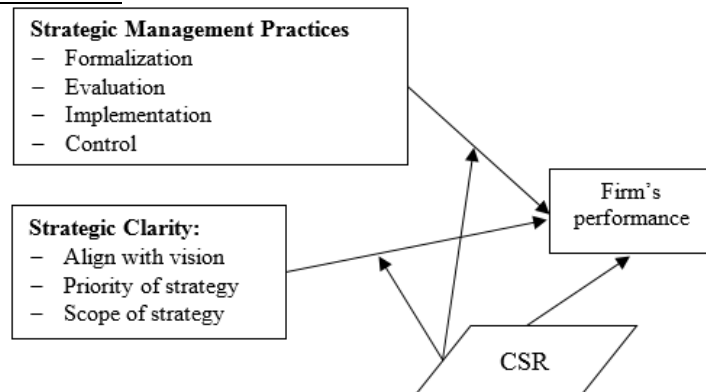


Figure 1. Research Frame work of study

**Research Methodology**

Population and sample

Population of study refers as group of people; event or things of interest that researchers wish to investigate a problem. Population of current study consists on middle management namely operational managers and business level managers in energy and power sector of Indonesian firms. There is 1088 operating and business

level managers are located in energy and power sector. The questionnaire was sent to all population of sector in Indonesia.

#### Instruments formulation

The measurement scale of Firm performance have been used previously by various studies for example (Pittman et al., 2011). The cronbach alpha ( $\alpha$ ) for said construct is 0.912. The scale for strategic management practices was adopted from the study conducted by (Yuliansyah et al., 2016). Cronbach alpha ( $\alpha$ ) found to be 0.823. The scale for measuring strategic clarity was adopted from the study of (Permana, 2017). The cronbach alpha ( $\alpha$ ) for this construct was reported as 0.810. The measurement scale CSR was adopted from adopted from (Muafi, 2016; Chi, 2018) and (Arafah et al., 2018) with cronbach alpha as 0.72.

**Table 1. Cronbach alpha ( $\alpha$ ) for constructs**

S3	Constructs	Alpha $\alpha$	Remarks
1	Firms' Performance	0.912	Good
2	SMP	0.823	Good
3	SC	0.810	Good
4	CSR	0.721	Good

#### Composite Reliability (CR)

**Table 2. CR of constructs**

S3	Constructs	CR	Remarks
1	Firms' Performance	0.891	Good
2	SMP	0.833	Good
3	SC	0.763	Good
4	CSR	0.701	Good

#### Discriminate Validity

**Table 3. Discriminate validity**

S3	Constructs	FP	SMP	SC	SCR
1	Firms' Performance	<b>0.921</b>			
2	SMP	0.892	<b>0.864</b>		
3	SC	0.832	0.851	<b>0.883</b>	
4	CSR	0.796	0.745	0.712	<b>0.782</b>

#### **Structural Model**

The current study used PLS-SEM for hypothesis testing as hypothesis developed in previous part of study; direct and moderating relationships are examined and shows in table below.

#### Direct Effects

**Table 4. Direct relationship testing**

Hypothesis	Relationship	$\beta$	T-value	Remarks
H1	SMP $\rightarrow$ FP	0.272	6.912	Significant

H2	SC → FP	0.435	4.324	Significant
H3	CSR → FP	0.523	5.234	Significant

H1: Direct Test

The hypothesis 1 of study found to be significant and supported by analysis of collected data; there is positive significant relation between strategic management practices (SMP) construct and endogenous construct Firm's performance (FP). The analysis has depicted the  $\beta = 0.272$  and T-value as 6.498; where sig value or p-value is less than 0.01 ( $p < 0.01$ ); the cutoff point for t-value is 1.96; if the t-value appears less than 1.96; hypothesis will be rejected; higher value is appreciated and hypothesis accepted; hence H1 of the current study found to be significant and accepted.

H2: Direct effect

The study established the relationship between strategic clarity and firms; performance as influential predictor. The hypothesis claims that there is positive and significant relationship between exogenous construct strategic clarity (SC) and firm's performance. The data analysis depicted the  $\beta$  value positive 0.435; which shows the positive direction of relationship; t-value found to be higher than the cutoff point 1.96 and reported as 4.324; which is higher than cutoff point;  $p < 0.01$ ; hence on the basis of beta value; hypothesis is positively related and accepted; on the basis of t-value and sig value (p-value) hypothesis H2 is accepted.

H3: Direct effect

The study established the relationship between corporate social responsibility and firm's performance as influential predictor. The hypothesis claims that there is positive and significant relationship between exogenous construct corporate social responsibility (SCR) and firm's performance. The data analysis depicted the  $\beta$  value positive 0.523; which shows the positive direction of relationship; t-value found to be higher than the cutoff point 1.96 and reported as 5.234; which is higher than cutoff point;  $p < 0.01$ ; hence on the basis of beta value; hypothesis is positively related and accepted; on the basis of t-value and sig value (p-value) hypothesis H2 is accepted.

H4: Moderating Effect

**Table 5. Moderating results**

Hypothesis	Relationship	$\beta$	T-value	Remarks
H4	SMP*CSR → FP	0.401	4.121	Significant
H5	SC*CSR → FP	0.521	0.324	In-Significant

In table 5; moderation effect of SCR is shown; hypothesis 4; results shows t-value 4.121 found to be higher than cutoff point 1.96; which indicate that SCR moderate statistically significant between strategic management practices and firm's performance. Therefore, H4 is accepted. The moderating effect of SCR on the relationship between SMP and FP found  $\beta$  value as ( $\beta = 0.401$ ,  $t = 4.121$ ,  $p < 0.05$ ), hence H4 accepted on statistical grounds.

#### H5: Moderating Effect

In table 5; moderation effect of SCR is shown; hypothesis 5; results shows t-value 0.324 found to be lower than cutoff point 1.96; which indicate that SCR doesn't moderate statistically between strategic clarity and firm's performance. Therefore, H5 is rejected. The moderating effect of SCR on the relationship between SC and FP found  $\beta$  value as ( $\beta = 0.521$ ,  $t = 0.324$ ,  $p < 0.05$ ), hence H5 is rejected on statistical grounds.

#### **Discussion**

The results depicted that strategic management practices influence the performance of firms where statistical figures shows that  $\beta$  value is positive and 0.272 and t-value 6.498 which is higher than cutoff point, therefore it is accepted on statistical grounds. The results of the study in line with previous studies conducted to determine the performance of firm (Otelea, 2018). The second hypothesis determines the relationship between strategic clarity and firm's performance, the results of the hypothesis testing show that strategic clarity influence the performance of firm, where  $\beta$  value found to be positive and 0.435 and t-value found to be higher than 1.96 cutoff point and reported as 4.324, therefore hypothesis two accepted on statistical grounds the results are in line with previous studies to determine the strategic clarity and performance of firms (Kohles et al., 2012), on the other hand, the results of the relationship was contradictory with the studies of (Permana, 2017; Chima and Kasim 2018). The third hypothesis examines the relationship between corporate social responsibility and firms' performance. Corporate social responsibility plays moderating role between independent variables and dependent variable; the study also examined the direct relationship between CSR and firms' performance, the results of hypothesis show that CSR positively and significantly influence the firm performance where  $\beta$  value found to be 0.523 and t-value found to be 5.234, therefore direct relationship between CSR and firm' performance accepted statistically. The results are in line with previous studies conducted to determine the influence on firm's performance (Fang et al., 2010; Muafi, 2016). The study examined the moderating role of CSR between strategic management practices, strategic clarity and dependent variable firms' performance. The results show that CSR moderate relationship between strategic management practices and firm's performance, on the other hand moderating effect was not observed between strategic clarity and firm's performance. Therefore, hypothesis H4 was accepted and hypothesis H5 was rejected on statistical grounds.

#### **Conclusion**

The study determines the performance of firms related to energy and renewable energy sources to fulfill demand of Indonesian community. The study entails two factors including strategic management practices and strategic clarity. Strategic



management practices include formalization, implementation and control aspect of strategy development of firms to fulfill their requirements and achievement of objectives in energy and power sector of Indonesia. Strategic clarity has three dimensions as scope of strategy, alignment of strategy and priority of strategy. The study examined the relationship between strategic management practices and strategic clarity towards performance of firms in energy sector of Indonesia. The study entails moderating effect of corporate social responsibility between SMP, SC and performance of firms. The data was collected from the energy and renewable energy employees of Indonesian firms; it was statistically examined by using SMART-PLS while using MM and SEM techniques. Surprisingly, moderation effect of CSR was not found between SC and FP; but CSR moderated the relationship between SMP and firms performance at energy sector of Indonesia. The study recommends to renewable energy firms to adopt strategic management practices and effectively utilize skills, knowledge and abilities of their employees to influence and improve firm's performance. On the basis of results of study it is recommended for firms to ensure strategic clarity in terms of their objectives and preferences for influencing the performance of firms. Corporate social responsibility also significantly influence the performance of firms so the industry is recommended to adopt CSR policies and fulfill required and demanded environmental factors in order to gain success and enhance performance. The study has limitations in determining the relationships of proposed framework; the future studies may consider financial and non-financial indicators to determine the firms' performance.

## References

- Andrews R., Boyne G.A., Meier K.J., O'Toole Jr.L.J., Walker R.M., 2012, *Vertical strategic alignment and public service performance*, Public Administration, 90(1).
- Arafah W., Nugroho L., Takaya R., Soekapdjo S., 2018, *Marketing Strategy for Renewable Energy Development In Indonesia Context Today*, "International Journal of Energy Economics and Policy", 8(5).
- Bazmi N.A., Javed N., 2018, *Under-Utilization of Female Capital: A Quantitative Study in Pakistani Perspective*, "International Journal of Business, Economics and Management", 5(4).
- Bokhtiar M., Delowar M., Wahid A.N., 2018, *Application of Forward Contract and Crop Insurance as Risk Management Tools of Agriculture: A Case Study in Bangladesh*, Asian Economic and Financial Review, 8(12).
- Brown E.D., Ibekwe E.E., 2018, *Effect of Institutional Factors on Foreign Direct Investment in Nigeria*, The Economics and Finance Letters, 5(1).
- Chi Y.N., 2018, *Scenario Economic Impact Analysis of Offshore Fishing Tournaments in Ocean City*, "International Journal of Business, Economics and Management", 5(5).
- Chima P., Kasim U., 2018, *Public-private partnership as a strategy for e-governance funding in Africa: The gains and the pains*, "International Journal of Public Policy and Administration Research", 5(2).



- Efendioglu A.M., Karabulut A.T., 2010, *Impact of strategic planning on financial performance of companies in Turkey*, "International Journal of business and Management", 5(4).
- Fang S.R., Huang C.Y., Huang S.W.L., 2010, *Corporate social responsibility strategies, dynamic capability and organizational performance: Cases of top Taiwan-selected benchmark enterprises*, "African journal of Business management", 4(1).
- Hosseini S.E., Wahid M.A., 2016, *Hydrogen production from renewable and sustainable energy resources: promising green energy carrier for clean development*, Renewable and Sustainable Energy Reviews, 57.
- Haseeb M., Hussain H.I., Ślusarczyk B., Jermisittiparsert K., 2019, *Industry 4.0: A Solution towards Technology Challenges of Sustainable Business Performance*, Social Sciences, 8(5).
- Kohles J.C., Bligh M.C., Carsten M.K., 2012, *A follower-centric approach to the vision integration process*, The leadership quarterly, 23(3).
- Muafi M., 2016, *Analyzing fit in CSR strategy research in state-owned enterprises: Indonesia context*, "Journal of Industrial Engineering and Management", 9(1).
- Nason R.S., Wiklund J., 2018, *An assessment of resource-based theorizing on firm growth and suggestions for the future*, "Journal of Management", 44(1).
- Nugroho L., Utami W., Akbar T., Arafah W., 2017, *The challenges of microfinance institutions in empowering micro and small entrepreneur to implementating green activity*, "International Journal of Energy Economics and Policy", 7(3).
- Otelea M.N., 2018, *Organisational Culture: An Essential Factor for Increasing the Competitiveness of Companies Organizational Culture and Behavioral Shifts in the Green Economy*, IGI Global.
- Parand A., Burnett S., Benn J., Pinto A., Iskander S., Vincent C., 2011, *The disparity of frontline clinical staff and managers' perceptions of a quality and patient safety initiative*, "Journal of evaluation in clinical practice", 17(6).
- Permana D., 2017, *Toward the Best Model of Strategy Implementation in Indonesian Islamic Banking from the Lens of Strategic Clarity*, European Research Studies, 20(4B).
- Pittman J.K., Dean A.P., Osundeko O., 2011, *The potential of sustainable algal biofuel production using wastewater resources*, Bioresource technology, 102(1).
- Saenz J.D., 2010, *Strategic planning and implementation processes impacting small business success in México: A correlational study*, University of Phoenix.
- Stam D., van Knippenberg D., Wisse B., 2010, *Focusing on followers: The role of regulatory focus and possible selves in visionary leadership*, The leadership quarterly, 21(3).
- Suprpto B., 2006, *The Effect of Fit Between Natural Environmental Approach and Business Strategy on Performance*, "KINERJA: Journal of Business and Economics", 10(2).
- Taticchi P., Tonelli F., Cagnazzo L., 2010, *Performance measurement and management: a literature review and a research agenda*, Measuring business excellence, 14(1).
- Yuliansyah Y., Rammal H.G., Rose E., 2016, *Business strategy and performance in Indonesia's service sector*, "Journal of Asia Business Studies", 10(2).

## OKREŚLENIE WYDAJNOŚCI FIRMY: MODEROWANIE ROLI CSR W SEKTORZE ENERGII ODNAWIALNEJ INDONEZJI

**Streszczenie:** Energia odgrywa kluczową rolę w rozwoju gospodarczym kraju, przyczyniając się do rozwoju działalności gospodarczej w ważnych sektorach. Dostępność energii pomaga spełnić wymagania rozwojowe i inicjatywy polityki rządu. Energia jest wymagana w każdym sektorze kraju do prowadzenia działalności gospodarczej i rozwoju infrastruktury w Indonezji. Strategiczne zarządzanie firmami umożliwia im opracowanie długoterminowych celów i uzyskanie przewagi konkurencyjnej w wysoce burzliwym i szybko zmieniającym się środowisku. Niniejsze badanie empirycznie określiło wpływ praktyk zarządzania strategicznego i przejrzystości strategicznej na wydajność sektora energetycznego Indonezji. Wykazano również umiarkowaną rolę społecznej odpowiedzialności biznesu. Wyniki pokazują, że zmienne niezależne wpływają znacząco na wydajność firm, ale CSR nie łagodzi dysonansu między przejrzystością strategiczną a wynikami firm. Dane zebrano od menedżerów związanych z przemysłem i zbadano za pomocą SMART-PLS (techniki MM i SEM).

**Słowa kluczowe:** praktyki zarządzania strategicznego (SMP), społeczna odpowiedzialność biznesu (SCR), przejrzystość strategiczna (SC), wydajność firmy (FP), energia odnawialna.

### 确定企业绩效:调整企业社会责任在印度尼西亚可再生能源领域的作用

**摘要:** 能源在国家经济发展中起着至关重要的作用, 为大部门的商业活动做出贡献。能源的可用性有助于满足政府政策的发展需求和举措。国家的任何部门都需要能源来开展业务活动并在印度尼西亚发展基础设施部门。企业的战略管理使他们能够在高度动荡和快速变化的环境中制定长期目标并获得竞争优势。本研究通过实证检验了战略管理实践和战略明确性对印度尼西亚能源部门绩效的影响。还在构造之间检查了企业社会责任的调节作用。结果表明, 自变量会影响企业的绩效, 但企业社会责任并不会在战略清晰度和企业绩效之间产生影响。数据来自行业相关管理人员, 并使用SMART-PLS (MM和SEM技术) 进行检查

**关键词:** 战略管理实践 (SMP), 企业社会责任 (SCR), 战略清晰度 (SC), 企业绩效 (FP), 可再生能源