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## DISCLOSURE OF SOCIAL OPERATIONS, INNOVATION, AND FIRM PERFORMANCE OF COMPANIES LISTED IN THE STOCK EXCHANGE OF THAILAND

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### Abstract

Sustainability development is a way to create business opportunity. It is crucial for business operations. Social corporate responsibility (CSR) and innovation investment are key elements for sustainability development and reflect financial performances. The purpose of this study was to examine the relationship and effect between disclosure of social operations, innovation investment, and firm performance of companies in the Stock Exchange of Thailand. The data were collected from companies with sustainable firm performance listed in SET (Stock Exchange of Thailand) 104 the list of companies during the years (2015 -2018). Data were analyzed using AMOS statistical software by employing Structural Equation Modeling (SEM), path analysis and maximum likelihood method (ML) to estimate the absolute path.

The study found that disclosure of social operations had no relationship with the firm performance of companies in the stock exchange of Thailand. The innovation investment had no relationship with the firm performance of companies in the stock exchange of Thailand. On the contrary, disclosure of social operations had a relationship and an effect on innovation investment.

**Keywords:** disclosure of social operations, Innovation Investment, firm performance.

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## Introduction

Globalization brings changes to the fast-changing economies and technological advancement in communication, transportation, and information technology. Governments, businesses, and local communities are now able to connect to one another faster. Changes in competitive environment in market share, customer extension, product and service differentiation, and creating new technology and innovation (OECD, 2005) pose more risk to businesses. As a result, they need to constantly adapt themselves maintain competitiveness and lay out the operating strategies for survival. The changing social trend of stakeholders, including shareholders, investors, regulatory agencies, employees, customers, and general public, demand businesses to take more responsibility. Disclosing financial data promote the corporate's transparency and credibility among the target groups (Farooque and Ahlu, 2015). Therefore, making a report for sustainability is a key tool to inform internal and external stakeholders about CSR activities and the approaches taken to minimize social impacts. Apart from expressing their stand points in term of CSR, including the concept in the business has positive effects on reputation and positive image to the business. In addition, it also improves management efficiency and reduce costs (Hart and Dowell, 2011; McWilliams and Siegel, 2011). Innovation investment is a driver of economic systems. Businesses should, therefore, have good innovation management to complete in a highly fluctuating business environment (Dooley and Sullivan, 2003). All corporates should place emphasis on the body of knowledge, technology, innovation, and creativity to operate their business.

This study aims to investigate the relationship between corporate social responsibility, innovation investment, and performance of companies listed in the Stock Exchange of Thailand. This research measures Return on Asset (ROA) and business value (Tobin's Q) as the indicators of business performance. The disclosure of CSR data include environment, community, and employment data from 2015 – 2018 because Thailand has published the rating of economic, social, and environmental performance since 2015.

## Objectives

1. To investigate the relationship and impact of disclosure social operations on performance of companies listed in SET
2. To investigate the relationship and impact of innovation investment on performance of companies listed in SET
3. To investigate the effect of disclosure social operations on innovation investment through performance of companies listed in SET

## Review of literatures

The concept of Corporate Social Responsibility (CSR) has been discussed and applied in business corporations in order to get acceptance by the society and develop sustainability. CSR has attracted the

interest of researchers and practitioners who conduct many empirical studies that focus on how CSR establishes business competitiveness. Disclosing information can promote transparency, credibility, positive image, and trust among the target groups (Farooque and Ahulu, 2015). Many organizations are aware that disclosing only financial data in the financial statement is not enough to satisfy shareholders, customers, community, and other stakeholders (Hughen, Lulseged and Upton, 2014). Innovation investment is about applying new product, new process, new marketing or organizational method to achieve financial benefit, wellbeing, and efficiency. The Organisation for Economic Cooperation and Development (OECD) categorizes four types of innovation, namely product innovation, process innovation, marketing innovation, and organizational innovation. Ho and Chang (2015) discover that innovation capability and service capability have positive effects on performance of logistic operators. Also, innovation capability also improves service capability. Keskin (2006) find that innovation capability has positive impact on business performance. Corporate performance can be analyzed by several indicators, partly because sustainable development is the basis for business possibility and opportunity. It is an important element for planning and managing CSR activity. It is an indicator to measure corporate performance (Love and Phetchoetchu, 2019). Therefore, the researcher decides to use accounting and financial indicators to establish the in-depth understanding and thorough analysis. Return on Assets (ROA) is the indicator of the total asset that causes profit and market value based on Tobin's Q measuring method.

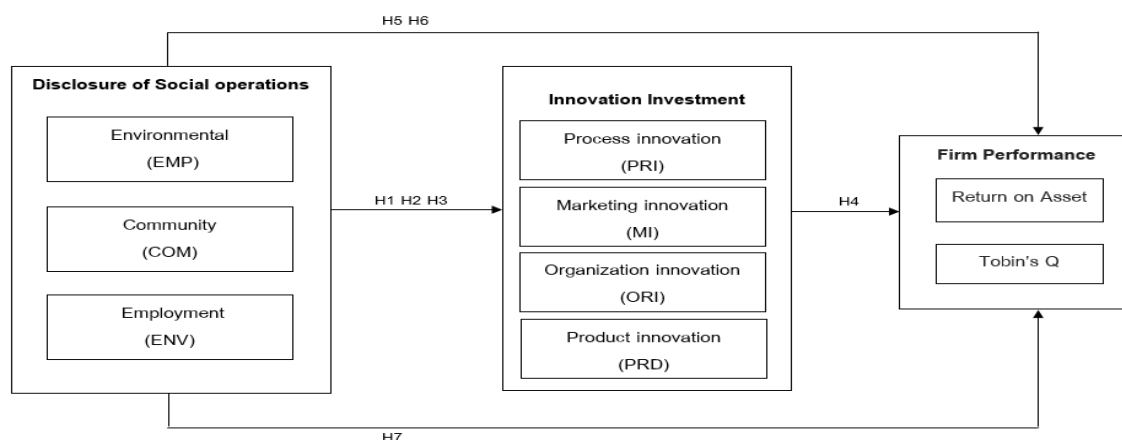


Figure1: Educational conceptual framework

## Research methodology

The study investigates the effects of CSR activities and innovation investment on corporate performance. The sample includes companies listed in SET as Thailand Sustainability (THSI). The reason for choosing these companies is because they have passed economic, social, and environmental criteria which reflect innovation better. The total of 233 THSI companies between 2015 – 2018 were chosen, of which 38 companies from 2015,

51 from 2016, 65 from 2017, and 79 from 2018. Other listed companies passing the criteria for 4 consecutive years included 104 companies. Therefore, the total number of companies in this research was 416. The secondary data were collected from the database of annual report from SET.

Content analysis of disclosing CSR and innovation investment involves the content and indicators of data found in print media, television broadcasts, and written reports in different forms. Content analysis covers manifest content and latent. The data were either presented with the classification, tabulation, and evaluation in symbols and topics. Content analysis also investigates the clear definition and possible impact (Krippendorff, 2004). The forms of study are as follows: 1) Form of Disclosure (FD) includes text disclosure (words) and visuals (charts and pictures). 2) Nature of Disclosure (ND) includes declarative, numerical, and fiscal values. 3) Location of Disclosure (LD) includes cover page, financial highlight, general information, risk factors, nature of business operation, capital structure and management, related transactions, management discussion and analysis (MD&A), business operation of each product line, assets used for legal conflict business, and internal control. To collect the data about disclosing information on CSR and innovation investment, the researcher has developed a data collection form for the forms of disclosure, nature of disclosure, and location of disclosure, and also a data collection form for collecting ROA and business value.

## Results and discussion

The results of this study can be divided into 3 parts: 1) disclosure of CSR and innovation investment, 2) the relationship between disclosure of CSR, innovation investment, and corporate performance, and 3) causal model analysis of corporate performance.

Disclosure of CSR and innovation investment includes the presentation of social activities, namely environment, community, and labor employment both in the overall and by specific attributes. The form and location of disclosure for CSR are as shown in Table 1 below.

**Table1** Disclosure of social operations

| Disclosure of social operations | Form of Disclosure |            | Nature of Disclosure |            | Location of Disclosure |            |
|---------------------------------|--------------------|------------|----------------------|------------|------------------------|------------|
|                                 | Degree             | Percentage | Degree               | Percentage | Degree                 | Percentage |
| Environmental                   | level3             | 40.66      | level2               | 24.89      | level4                 | 62.10      |
| Community                       | level2             | 21.13      | level1               | 18.92      | level1                 | 17.78      |
| Employment                      | level1             | 38.21      | level3               | 56.19      | level2                 | 20.12      |
| Total                           | 100                |            | 100                  |            | 100                    |            |

\*\*\*Measurement criteria level percentile: level1least= 00.00-20.00 level2 little= 20.01-40.00 level3 moderate= 40.01-60.00 level4 many= 60.01-80.00 level5 most= 80.01-100.00

According to Table 1, disclosure of environmental actions was at a high level (40.66%), followed by employment (38.21), and community work (21.13). Disclosure about community work and labor employment were at low levels. Regarding the nature of disclosure, disclosure about labor employment was at a high level (56.19%), followed by environmental actions (24.89%), and community works (18.92%). Regarding the location of disclosure, disclosure about environmental actions was at a high level (62.10%), followed by labor employment (20.12%), and community works (17.78%). In addition, the nature of disclosure and position of disclosure for community works and labor employment were at the low level while the disclosure of environmental actions was at a high level.

Regarding disclosure of CSR activities, the form of disclosure was high for texts, especially words and visuals along with narration. This could be said that CSR was presented by describing or explaining data and showing meaningful visuals along with narration. Disclosure of CSR is measured by CSR indicators such as counting the sentences and scoring based on a predetermined set of criteria (Razalli et al. 2013).

Innovation investment includes the report on process innovation, product innovation, marketing innovation, and organizational innovation in general and sorted by specific attributes, namely the form and location of disclosure as shown in Table 2.

**Table 2** Innovation investment

| Innovation investment   | Form of Disclosure |            | Nature of Disclosure |        | Location of Disclosure |            |
|-------------------------|--------------------|------------|----------------------|--------|------------------------|------------|
|                         | Level              | Percentage | Degree               | ร้อยละ | Degree                 | Percentage |
| Process innovation      | level2             | 21.62      | level1               | 10.40  | level2                 | 27.50      |
| Product innovation      | level2             | 38.12      | level3               | 41.12  | level2                 | 29.13      |
| Marketing innovation    | level2             | 22.15      | level2               | 36.43  | level2                 | 24.65      |
| Organization innovation | level1             | 18.11      | level1               | 12.05  | level1                 | 18.72      |
| Total                   | 100                |            | 100                  |        | 100                    |            |

\*\*\*Measurement criteria level percentile: level1least= 00.00-20.00level2 little= 20.01-40.00

level3moderate= 40.01-60.00 level4 many= 60.01-80.00 level5most= 80.01-100.00

Table 2, innovation investment sorted by the form of report was found to have product innovation the most (38.12%) disclosed, followed by marketing innovation (22.15%), process innovation (21.13%), and organizational innovation (18.11%), respectively. In addition, it was found that process innovation, product innovation, marketing innovation, and organization were present at the low level. Analyzed based on innovation investment, product innovation dominated the data (41.12%), followed by marketing innovation (36.43%) and organizational innovation (12.05%), respectively. Furthermore, innovation investment sorted by

location of disclosure was found to have product innovation the most (29.13%), followed by process innovation (27.50%), marketing innovation (24.64%), and organization innovation (18.72%), respectively.

Regarding innovation investment, the most disclosed data were the data of product innovation and marketing innovation. The form of disclosure was visuals and texts. The method of disclosure was mostly narration. The findings were in line with the studies by Bozzolan, Favotto and Rcceri (2003) and Schneider (2006).

**Table 3** The analysis result of the relationship between disclosure of social operations, innovation investment, and corporate performance

| Variable | ENV    | COM    | EMP    | PRD   | ORI   | MI     | PRI   | Tobin | ROA   |
|----------|--------|--------|--------|-------|-------|--------|-------|-------|-------|
| ENV      | 1.000  |        |        |       |       |        |       |       |       |
| COM      | .700** | 1.000  |        |       |       |        |       |       |       |
| EMP      | .891** | .858** | 1.000  |       |       |        |       |       |       |
| PRD      | .115   | .269   | .160   | 1.000 |       |        |       |       |       |
| ORI      | .359** | .371** | .375** | .086  | 1.000 |        |       |       |       |
| MI       | .846** | .611** | .644** | .139  | .308  | 1.000  |       |       |       |
| PRI      | .691** | .577** | .725** | .246  | .341  | .768** | 1.000 |       |       |
| Tobin    | .016   | .030   | .031   | -.003 | .182  | -.005  | .014  | 1.000 |       |
| ROA      | -.102  | -.093  | -.089  | -.201 | -.169 | -.108  | -.089 | -.025 | 1.000 |

\*\* Significant at the level of 0.05

Considering the correlation coefficients between 9 variables, according to Table 3, most correlation coefficients were positive and significant, showing 26 positive correlations, while there are 9 negative correlations. The observed variables have the correlation coefficients between 0.03 – 0.891.

The relationship between every pair has the correlation level not more than the standard of 0.90, resulting in no multicollinearity (Kline, 2011). Therefore, it can be concluded that the analyzed variables do not have any problem of exceeding correlation. Causal model analysis of corporate performance shows that the hypothesized model is consistent with the empirical data.

The study found that the models were combined with empirical data because the CMIN-pwas .839, CMIN/dfwas 0.606, GFI was 0.985, CFI was 1.00, AGFI was 0.943 and RMSEA was 0.000 (Kelloway (2015)

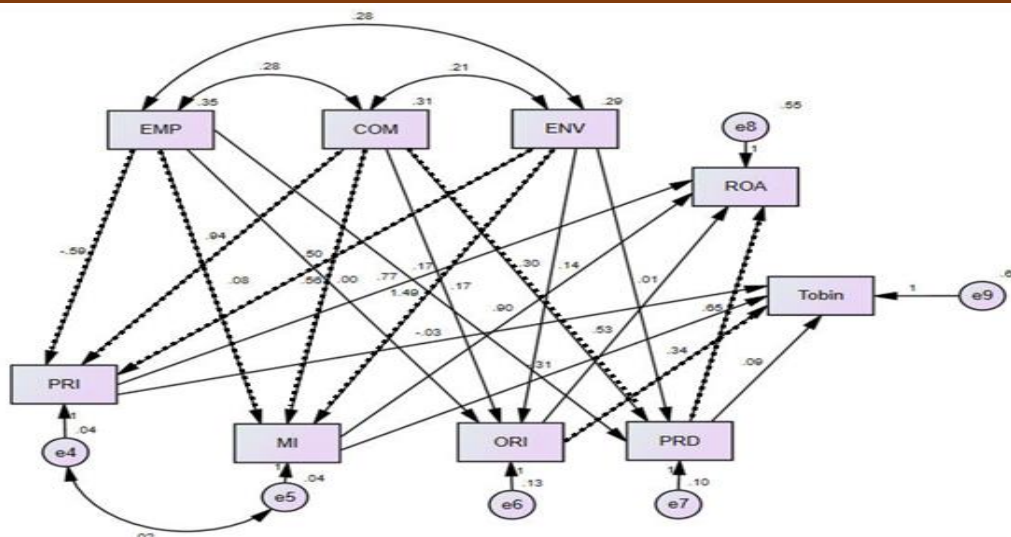


Figure2 Show the relationship path of an influential and unaffected model.

No Effects    Effects     $\longrightarrow$      $\dashrightarrow$

Community (COM), Employment (ENV), Employment, (EMP) Process innovation, (PRI) Marketing innovation (MI) Product innovation (PRD) Organization innovation (ORI) Return on assets (ROA) and Tobin's Q

The environmental action has positive impact on process innovation and marketing innovation. The environmental action does not have positive impact on organizational innovation and product innovation. The statistical significance level was 0.05 (Hypotheses 1, 2, 3, and 4). The community work has positive direct impact on process innovation and marketing innovation. The community work does not have positive impact on process innovation and product innovation. The statistical significance level was 0.05 (Hypotheses 5, 6, 7, and 8). The labor employment has positive direct impact on process innovation, marketing innovation, product innovation and organizational innovation. The statistical significance level was 0.05 (Hypotheses 9, 10, 11, and 12).

Business value does not have positive direct impact on process innovation, marketing innovation. Business value does not have positive direct impact on organizational innovation and product innovation. The statistical significance level was 0.05 (Hypotheses 13, 14, 15, and 16). ROA has positive direct impact on process innovation. ROA does not have positive direct impact on marketing innovation, organizational innovation and product innovation. The statistical significance level was 0.05 (Hypotheses 17, 18, 19, and 20). Disclosing data about environmental action does not directly affect innovation investment (the impact on product innovation, on the marketing innovation, the marketing innovation and the process innovation). It does not indirectly affect innovation investment (the impact on product innovation on the marketing innovation, the

marketing innovation, and the process innovation). Also, it does not directly affect innovation investment (process innovation, marketing innovation, organizational innovation, and product innovation) through the corporate performance, namely ROA and business value (Hypotheses 21 – 28).

Disclosing data about community work does not directly affect innovation investment (the impact on product innovation, on the organizational innovation, the marketing innovation 0.591, and the process innovation). It does not indirectly affect innovation investment (the impact on product innovation on the marketing innovation, the marketing innovation, and the process innovation was 0.000). Also, it does not directly affect innovation investment (process innovation, marketing innovation, organizational innovation, and product innovation) through the corporate performance, namely ROA and business value (Hypotheses 29 – 36).

Disclosing data about labor employment does not directly affect innovation investment (the impact on product innovation, on the organizational innovation, the marketing innovation and the process innovation). It does not indirectly affect innovation investment (the impact on product innovation on the marketing innovation, the marketing innovation, and the process innovation). Also, it does not directly affect innovation investment (process innovation, marketing innovation, organizational innovation, and product innovation) through the corporate performance, namely ROA and business value (Hypotheses 37 – 44).

## Discussion

The direct relationship between disclosure social operations and innovation investment showed that disclosing data about environmental actions, community works, and labor employment has an impact on investment in process innovation, product innovation, marketing innovation, and organizational innovation. That is to say, it has direct causal relationship with performance of companies listed in SET. This agrees with the research conducted by Bocquet et al, (2017) who find that CSR is related to innovation as it promotes significant growth and CSR for developing innovation (Abdulai Mahmoud and Hinson, 2012). The result of this study agrees with the requirement of SET specifying that corporates need to disclose information that create credibility among stakeholders to purchase product and service or even invest in the corporate. Disclosure social operations has an impact on corporate performance because the element of CSR includes environmental actions, community works, and labor employment. These factors are related to innovation investment, including environmental activities, promoting the conservation of natural resources and energy. These findings are consistent with the study by Razalli et al. (2013) who found that disclosing CSR data has a positive relationship with corporate performance. Similarly, Qiu et al. (2014) disclosing environmental and social data has a positive impact on marketing of the company as it is estimated that the cash flow will grow higher. Innovation investment has an effect on corporate performance. Innovation investment refers to process



innovation, changing the method or way to improve or deliver the product, technique, tools, equipment, and software. Regarding marketing innovation, this involves changing a new marketing method e.g. new design of product, packaging, showcasing, and marketing promotion, and product and service pricing. Organizational innovation refers to changing the organizational direction toward a new one, including changing the business conduct, arranging the workplace or develop the relationship outside of the corporate. These findings are consistent with the study by Ho and Chang (2015) who found that innovation investment has a positive impact on corporate performance. Guan and Ma (2003) reveal that marketing and organizational innovation are related with corporate performance but have no relationship with product innovation and that higher productivity results in higher output.

Disclosure social operations has an impact on innovation investment through corporate performance in CSR to promote sustainability. It is a key process in organizational management, especially the corporate care for the stakeholders, economy, society, and environment. The findings on corporate performance agree with the study by Özçelik et al. (2014) who found that CSR has no impact on corporate performance. Similarly, Sujana (2015) disclosing environmental data has no relationship with corporate performance. Also, product innovation and process innovation have no impact on corporate performance (Zhang et al. 2017). Disclosure social operations does not have indirect impact on innovation investment, successful CSR activity. CSR and innovation will develop sustainability. Innovation investment will influence corporate performance by creating credibility and new product or service into the competitive economy. These findings are consistent with the study by Eltantawy Fox and Giunipero (2009) who revealed that CSR and corporate performance have no indirect relationship and that innovation investment functions only as by-pass factor. Saeidi et al. (2014) examine the influence of CSR on financial performance of corporates. They found that CSR results in competitive advantage, credibility. CSR has direct impact and has no indirect impact on corporate performance. Disclosing community work has indirect impact on innovation investment in product innovation.

### **Conclusion and suggestions**

Disclosure of social operations and innovation investment data on community work was at a low level while on environmental actions and labor employment at high levels. Disclosure of CSR data and innovation has statistically significant effect on corporate performance, probably because the disclosure of CSR focuses on the stakeholders and reflects long-term performance. Disclosing CSR data and presenting cash and noncash related data allow corporates to reveal more data. Disclosure of CSR and innovation investment and corporate performance has no influence on corporate performance. Looking deeper in detail, there might be financial

complications that take time to study because each industry has different context, resulting in different financial data. The suggestions from this study are as follows:

- 1) There are other financial ratios that can be used to measure profitability. Future studies can opt to use other financial ratios such as return on equity (ROE) and earning per share (EPS).
- 2) Future studies might expand time frame of the study to see further the consistency and difference of findings due to different time of study.
- 3) Future studies should cover more sample group e.g. all companies listed in the SET.

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