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THE INFLUENCE OF INTELLECTUAL CAPITAL EFFICIENCY AFFECTING CORPORATE GOVERNANCE COMPETITIVE ADVANTAGE AND PERFORMANCE OF THE LISTED COMPANIES OF THE STOCK EXCHANGE OF THAILAND

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ABSTRACT

The objective of this research was to study the influence of intellectual capital efficiency affecting corporate governance, competitive advantages, and performance of the companies listed on the Stock Exchange of Thailand. The data was collected from the Annual Data Statement (Form 56-1), annual report, and financial statements of 409 companies listed on the Stock Exchange of Thailand in 5 years (2015-2019). The analysis was on the structural equation model using Multiple Indicators and Multiple Causes Model to study the influence of intellectual capital efficiency affecting corporate governance, competitive advantages, and performance. The research results revealed that the intellectual capital efficiency had direct influence on corporate governance at the statistically significant level of 0.05. The intellectual capital efficiency had direct influence on competitive advantage at the statistically significant level of 0.01. Meanwhile, the intellectual capital efficiency had direct influence on the performance at the statistically significant level of 0.01.

Keywords: Intellectual Capital Efficiency, Corporate Governance, Competitive Advantage, Performance

INTRODUCTION

Over the past 2 decades, the Intellectual Capital played an important role in measuring the economic performance of an organization symbolizing the economic growth which leads to the business achievement (Huang & Liu, 2005; Chen, Cheng & Hwang, 2005). Therefore, it can be considered that intellectual capital is essential to the development of the organization in creating innovation and competitive advantages. The organization uses intellectual capital to review the production process, corporate governance and performance appraisals to make the organization more successful (Martin-Alcazar, Romero-Fernandez & Sanchez-Gardey, 2005). Intellectual capital also plays an important role in the process of creating value for the organization. This is regarded as an important factor in creating competitive advantages that will lead to the increased performance (Muttakin et al., 2015). If an organization uses intellectual capital appropriately in its corporate governance system, the competitiveness will also be increased (Safieddine et al., 2009). In order to be competitive, every organization therefore brings the intellectual capital generated from the knowledge to create added value for the organization or knowledge that enables organizations to compete in the market (Madininos, et al., 2011). This includes using knowledge to develop work and solve problems for the organization effectively. Thus, the intellectual capital has become essential knowledge of any organization that enables efficient and effective work (Hirota & Ikujiro, 2004). The

organization is led to achieve the goals and objectives in the operation as part of creating added value for the organization to be successful and have increased performance.

RESEARCH OBJECTIVE

To study the influence of intellectual capital efficiency affecting corporate governance, competitive advantages, and performance of the companies listed on the Stock Exchange of Thailand.

LITERATURE REVIEW

Concept of Intellectual Capital

The intellectual capital is a body of knowledge which is an invisible resource existing within an organization. These are the key elements in creating value for an organization that are abstract in nature, such as knowledge, ideas, abilities that cannot be physically measured or estimated, etc. These things take time or effort to create and can add value to the organization. It can also increase capacity and can generate income into valuable assets. This will result in the organization achievement of its goals (Rungruengwichakul, 2013; Chaikongkiat, 2008; Sharabati, Jawad & Bontis, 2010; Huu & Fang, 2008).

The development of concept on the intellectual capital is the sum of human capital and structural capital including the experience in the organization's technological application. Customer relations and professional skills give organizations the competitive advantage in two components; 1) human capital and 2) structured capital. Edvinsson (2001) said that structured capital allows employees to be more productive. This demonstrates the true value of the organization (Pablos, 2004). From the literature review on intellectual capital efficiency, the researchers therefore concluded that intellectual capital efficiency (Nimtrakoon, 2015; Purohit & Tandon, 2015; Shatrevich, Sceulovs & Gaite-Sarkane, 2015; Imam & Agus (2014) consisted of human capital, structural capital, relationship capital and assets invested in the business. It is an important element in driving the operational processes within the organization. As a result, the organization can achieve its objectives and goals.

Concept of Corporate Governance

The Corporate Governance is the management system used to manage the operational processes to achieve the goals and objectives as well as ensuring of fairness and transparency in the organization taking into account the interests of the stakeholders (Khanthong & Kiratiangkoon, 2017; The Stock Exchange of Thailand, 2017; Srijanphet, 2012; Chatchawanchanchanakij, Arpornpisal & Jermisittiparsert, 2019).

For Good Corporate Governance of Listed Companies in 2017

The good corporate governance principles are the approaches for listed companies. In March 2017, the Office of the Securities and Exchange Commission issued the good corporate governance principles for listed companies of the year 2017 to replace the good corporate governance principles for listed companies of the year 2012. This new edition of the principles of good corporate governance for listed companies of the year 2017 will serve as the approaches for the Board of Directors in corporate governance to create sustainable business values (Kulaya Chantadet, 2018). The objective of the good corporate governance principles of 2017 is to build investor confidence, relationship structure and guidelines for transparency. It is an important factor for companies with people as shareholders. Building confidence alone is not enough to be a good listed company because businesses and investors want a good performance of the

business. The business can adapt to the changing business conditions and has good relationship with the people around it so that the company can grow and survive in the long term. The corporate governance is a demonstration of the relationship in terms of governance and is the mechanisms measure for directing people's decision-making to achieve objectives, including (1) determination of objectives and key goals; (2) formulation of strategies, policies, and approval of plans and budgets; and (3) monitoring, evaluation, and supervision on reporting the operational performance as in Table 1.

Business process	Code of Conduct
1) Define the objectives	1 st Code of Conduct: Recognize the roles and responsibilities of the Board as the leader in a value-creating organization for sustainable business operation
	2 nd Code of Conduct: Define the main objectives and goals of sustainable business operation
2) Perform the operation following the specified objectives	3 rd Code of Conduct: Strengthen the effective Board of Directors
	4 th Code of Conduct: Recruit and develop the top executives and personnel management
	5 th Code of Conduct: Promote innovation and efficient business operations with responsibility
3) Monitoring, evaluation and disclosure of information	6 th Code of Conduct: Ensure there is a risk management system and appropriate internal control
	7 th Code of Conduct: Maintain credibility in financial affairs and disclosure of information
	8 th Code of Conduct: Encourage participation and communication with shareholders.

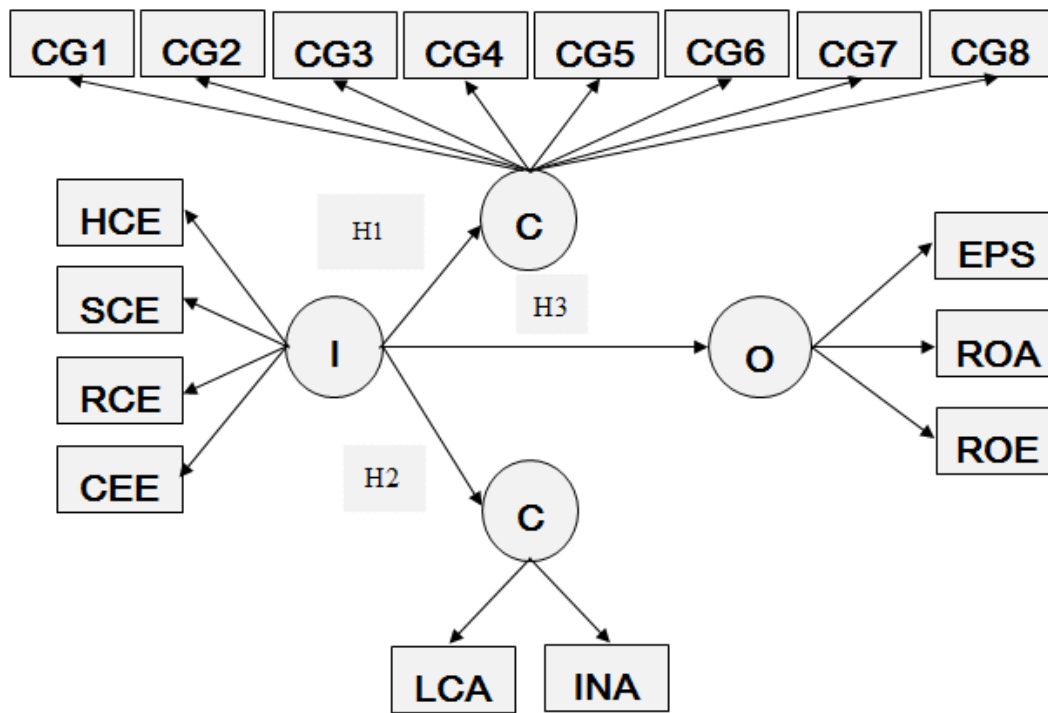
Concept of Competitive Advantage

The competitive advantage is the ability of business to develop the competitiveness over its competitors by improving quality and creating new innovations to promote political stability, economic, social and cultural progress and for the successful operation of the business. From the literature review on competitive advantage, it can be concluded that competitive advantage (Nimsith, Rifas & Cader, 2016; Janet, Gerald & Masaaki, 2011; Daoud, Mustafa & Atilla, 2011) in the measurement of corporate operations consists of lower cost advantage and innovation advantages. This will result in the organization being able to use competitive advantages as a management strategy for the organization to have a better performance (Chetthamrongchai & Jernsittiparsert, 2019; Somjai, Vasuvanich, Laosillapacharoen & Jernsittiparsert, 2020).

Concept of the Operational Performance

The operational performance is the result of an organization's operational processes arising from the operational activities of groups of people working altogether within the organization. This enables the organization to achieve its goals and objectives. From a literature review on competitive advantage, it can be concluded that the components used to measure the performance of an organization include the earnings per share ratio, Return on Total Assets and return on equity (Nimtrakoon, 2015; Peter, 2015; Mahdi, Gholamreza & Parisa, 2014; Hong, David & Phil, 2007).

Research Conceptual Framework



**FIGURE 1
RESEARCH CONCEPTUAL FRAMEWORK**

Figure 1 Conceptual framework of the structural equation model of intellectual capital efficiency that affects corporate governance, competitive advantage, and performance of companies listed on the Stock Exchange of Thailand

RESEARCH HYPOTHESES

- H₁ Intellectual capital efficiency has direct influence on the corporate governance.*
- H₂ Intellectual capital efficiency has direct influence on the competitive advantage.*
- H₃ Intellectual capital efficiency has the direct influence on the performance.*

RESEARCH METHODOLOGY

This is the Quantitative Research. The researchers conducted the research as follows:

- 1) The population and the samples used in the research are companies listed on the Stock Exchange of Thailand with accurate and complete information disclosure. The data was collected from the Annual Data Statement (Form 56-1), annual report, and financial statements for the year 2015-2019 which contain criteria for the acquisition of samples that provide data for processing appropriately and comparably (Titaporn Sinjarunsak, 2010; Julsuchada Sirisom, 2003) totaling 409 companies (SET, 2019, online) over a period of 5 years (2015-2019) as shown in Table 2.

Table 2 SAMPLE GROUPS USED IN THE RESEARCH	
Conditions for the selection of population	Number of companies
Companies listed on the Stock Exchange of Thailand of 2019	616
Financial business group	61

Fund group		65
Total population		490
Deducted	Companies whose information could not be entirely collected	81
Remaining population		409

2) The collection of information from financial statements and the notes to the financial statements of companies listed on the Stock Exchange of Thailand with complete information such as earnings per share, Return on Total Assets, and the rate of return on equity includes other information related to the research such as total assets, intangible assets, total revenues, total costs, selling expenses, employee expenses, and other expenses in a period of 5 years (2015-2019).

3) For the data analysis, the researchers proceeded by analyzing the Structural Equation Model using Multiple Indicator and Multiple Causes (MIMIX) Model. The approaches for data analysis were determined. The correlation coefficient between the observed variables was in the structural equation model using the Pearson's correlation coefficient with a ready-made computer program to obtain basic information for analyzing structural equation models and analyzing the confirmatory elements of the latent variable measurement model. This includes corporate governance, competitive advantage, and examination on the concordance of variables in the theoretical structural equation model with empirical data. The statistical criteria were used to check the congruence of the hypothesis model with the empirical data as shown in Table 3.

IOC	Criteria for consideration
χ^2/df	< 2.00
P value of χ^2	> 0.05
CFI	≥ 0.90
GFI	≥ 0.90
AGFI	≥ 0.90
RMSEA	< 0.05
SRMR	< 0.05

Research Findings

The research findings revealed that the intellectual capital efficiency affected corporate governance, competitive advantages, and performance of the companies listed on the Stock Exchange of Thailand (Table 4).

Path Diagram	Path Coefficients	Standard Errors	t-value
GAMMA			
ICE → CG	0.114*	0.054	2.135
ICE → CA	0.481**	0.156	13.137
ICE → OP	0.502**	0.075	-2.354

Remark: Path Diagram is the path of diagram. Path Coefficients is the path of coefficients.

* means statistically significant at the 0.05 level

** means statistically significant at the 0.01 level

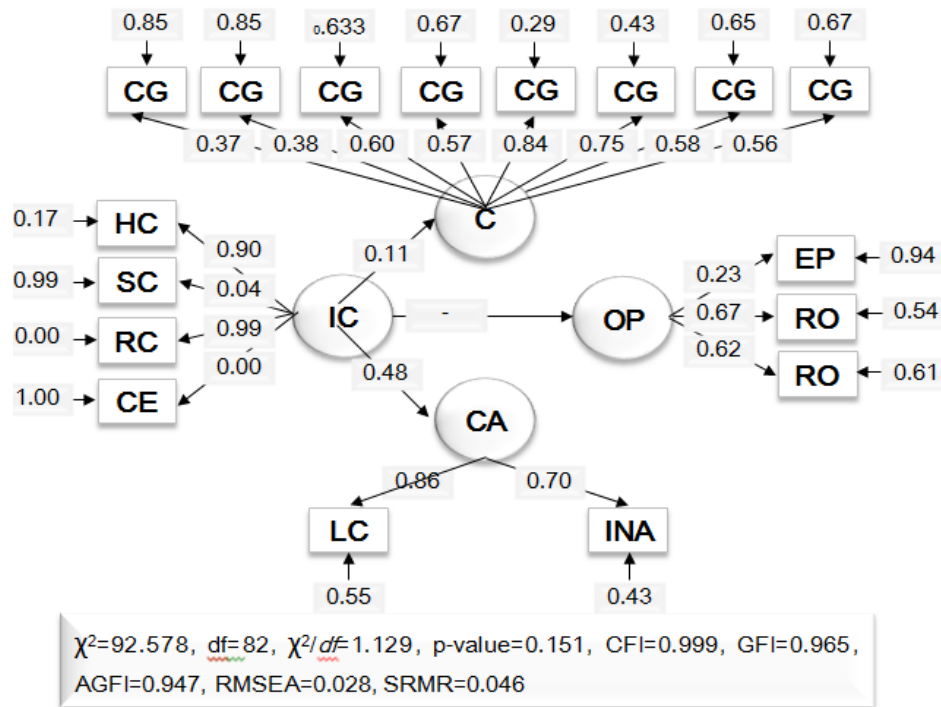


FIGURE 2
INFLUENCE STRUCTURAL EQUATION MODEL BASED

Figure 2 Influence Structural Equation Model Based on Research Hypothesis and Empirical Data Influence of Intellectual Capital Efficiency on Corporate Governance, Competitive Advantage and Performance

From Table 4 and Figure 2, the results of the structural model analysis and the results of the hypothesis testing, structural model revealed that the intellectual capital efficiency affected the corporate governance and competitive advantage. It was found that 1) intellectual capital efficiency had direct influence on corporate governance at a statistically significant level of 0.05 ($p<0.05$) with positive direct influence. The influence coefficient was 0.114. 2) Intellectual capital efficiency had direct influence on competitive advantage at a statistically significant level of 0.01 ($p<0.01$) with positive direct influence. The influence coefficient was 0.495. 3) Intellectual capital efficiency had direct influence on performance at a statistically significant level of 0.01 ($p<0.01$) with negative influence. The influence coefficient was -0.502.

Variables	CG			CA			OP		
	TE	DE	IE	TE	DE	IE	TE	DE	IE
Intellectual capital efficiency (ICE)	0.114*	0.114*	-	0.486**	0.481**	0.005**	-0.580**	-0.502**	-0.078**
Latent variables	CG	CA	OP						
R^2	0.013	0.234	0.020						
$\chi^2=92.578$, $df=82$, $\chi^2/df=1.29$, $p\text{-value}=0.151$, $CFI=0.999$, $GFI=0.965$, $AGFI=0.947$, $RMSEA=0.028$, $SRMR=0.046$									
* $p<0.05$, ** $p<0.01$, TE means total effect, DE means direct effect, IE means indirect effect									

From Table 5, it was found that intellectual capital efficiency had indirect positive influence on competitive advantage ($IE=0.005$) through corporate governance. The intellectual capital efficiency had negative indirect influence on the performance ($IE=-0.078$) through corporate governance and competitive advantage.

DISCUSSION OF RESULTS

The influence of intellectual capital efficiency affected corporate governance, competitive advantages, and performance of the companies listed on the Stock Exchange of Thailand. The results showed that the intellectual capital efficiency had direct positive influence on corporate governance. The statistically significant competitive advantage had statistically significant negative direct influence on the performance. It showed that in the management of every internal personnel organization, the knowledge of the intellectual capital that existed in the individual was used to build relationships. It is a relationship with a colleague or relationships with customers. In addition, in the management of executives, there should be supervision of operations along with promoting the adoption of innovations in the work and conducting business responsibly to all relevant stakeholders. This will bring about competitive advantage and will result in the organization's performance more efficiently and continuously. This is correspondent with the research of Muhammad Khalique & Nick Bontis (2015); Mei-Fen Wu, Yu-Je Lee & Gao-Liang Wang (2012) stating that the intellectual capital is related to the corporate governance and has positive impact on the organization's performance. Hardeep Chahal & Purnima Bakshi (2013); Carlos M. Jardon & Maria Susana Martos (2012) found that the intellectual capital had direct effect and was positively related to the competitive advantages. The competitive advantages had the impact on organizational performance resources while human capital affects structural capital. Chayanan Kerdpitak & Kittisak Jernsittiparsert (2019,) found that intellectual capital, consisting of human capital, structural capital and relational capital had direct positive influence on the Company's performance. The statistical significance of Thai pharmaceuticals Luminita Maria Gogan, Alin Artene, Ioana Sarca & Anca Draghici (2016); Sriranga Vishnu & Vijay Kumar Gupta (2013) found that intellectual capital was positively correlated with the organization's performance. For suggestion to the listed companies, the role of intellectual capital efficiency should be given to the relational capital efficiency, corporate governance, and promotion of innovation, responsible business operations, and competitive advantages in terms of lower cost advantages. These variables have high coefficients of influence. This is considered the variables resulting in an increase in the performance of the organization. In addition, the next study should be on the use of conceptual framework in this research with the sample group of limited companies to confirm the results of the study. For the data collection of intellectual capital efficiency, the annual registration statement (Form 56-1) and the annual report was modified to use a questionnaire in order to broaden the results and reflect the actual results of the study.

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