

**MODERN HUMAN RESORCE ACCOUNTING IMPLEMENTATION
AND FIRM SURVIVAL: AN EMPIRICAL RESEARCH
OF INFORMATION AND COMMUNICATION
TECHNOLOGY BUSINESSES
IN THAILAND**

**BY
PATTARASIRI THIPTANAMANEE**

**A dissertation submitted in partial fulfillment of the requirements for
the degree of Doctor of Philosophy in Accounting
at Maharakham University**

April 2018

All rights reserved by Maharakham University



**MODERN HUMAN RESORCE ACCOUNTING IMPLEMENTATION
AND FIRM SURVIVAL: AN EMPIRICAL RESEARCH
OF INFORMATION AND COMMUNICATION
TECHNOLOGY BUSINESSES
IN THAILAND**

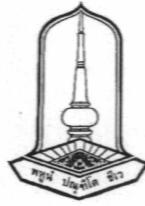
**BY
PATTARASIRI THIPTANAMANEE**

**A dissertation submitted in partial fulfillment of the requirements for
the degree of Doctor of Philosophy in Accounting
at Maharakham University**

April 2018

All rights reserved by Maharakham University





The examining committee has unanimously approved this dissertation, submitted by Miss Pattarasiri Thiptanamane, as a partial fulfillment of the requirements for the degree of the Doctor of Philosophy in Accounting at Maharakham University.

Examining Committee

..... *Glo Kittipon* Chairman
(Dr. Muttanachaj Suttipun) (External expert)

..... *M* Committee
(Assoc. Prof. Dr. Kornchai Phornlaphatrachakorn) (Advisor)

..... *Pornlapas Suwannarat* Committee
(Asst. Prof. Dr. Pornlapas Suwannarat) (Co-advisor)

..... *N. Songsrirote* Committee
(Asst. Prof. Dr. Nitiphong Songsrirote) (Faculty graduate committee)

..... *Suwan Wangcharoendate* Committee
(Assoc. Prof. Dr. Suwan Wangcharoendate) (Faculty graduate committee)

Maharakham University has granted approval to accept this dissertation as a partial fulfillment of the requirements for the degree of the Doctor of Philosophy in Accounting.

..... *N. Songsrirote*
(Asst. Prof. Dr. Nitiphong Songsrirote)
Dean of Maharakham Business School

..... *Krit*
(Asst. Prof. Dr. Krit Chaimoon)
Dean of Graduate School
..... April 28, 2018



**This dissertation was funded by Maharakham Business School,
Maharakham University,
Academic Year 2018.**



ACKNOWLEDGMENTS

This dissertation would not have been accomplished without the support, guidance, encouragement, suggestions, patience and inspiration from several faithful people and institutions. I would like to acknowledge and enunciate my heartfelt gratitude to those who have contributed in many ways to the completion of this dissertation.

First of all, I would like to express my deepest gratitude to my advisor, Assoc. Prof. Dr. Kornchai Phornlaphatrachakorn, for his excellent inspiration, guidance, encouragement, caring, and providing me with great education and an atmosphere for doing research. There is no words to explain the magnitude of his contributions. In addition, my true appreciation goes to my co-advisor, Assist. Prof. Dr. Pornlapas Suwannarat who has been the greatest mentor and constantly supports my Ph.D. program. Besides, I would like to thank Mr. John C. Davies for his correction, comments and suggestions on my dissertation writing. Furthermore, I would like to thank all of my dissertation committees who gave me valuable comments, and for their perseverance with my inquisitive mind.

My sincere gratefulness goes to Mahasarakham Business School, Mahasarakham University, for the opportunities and funding throughout my Ph.D. program. Definitely, I thank my fellow Ph.D. 10 classmates for the stimulating discussions, for the sleepless nights we were working together before deadlines, and for all the fun we have had since last four years.

Finally, and most importantly, I have greatly gratitude to my family: to my parents for inspiring, directing and funding me through all of my life, and to my brothers who always spiritually supported me throughout the writing of this dissertation and in my life in general. Thank you.

Pattarasiri Thiptanamanee



TITLE Modern Human Resource Accounting Implementation and Firm Survival: An Empirical Research of Informational and Communication Technology Businesses in Thailand

AUTHOR Miss Pattarasiri Thiptanamanee

ADVISORS Assoc. Prof. Dr. Kornchai Phornlaphatrachakorn and Asst. Prof. Dr. Pornlapas Suwannarat

DEGREE Ph.D. **MAJOR** Accounting

UNIVERSITY Mahasarakham University **DATE** 2018

ABSTRACT

In the current global market, companies attempt to develop competitive advantage over their competitors. Thus, it is important that firms truly benefit on the workforce as a competitive weapon. A strategy for improving workforce productivity to drive higher firm value has become an important focus. Human resource development program is needed not only to achieve business goals, but also most importantly it is for a long term survival and sustainability. Therefore, having human resource accounting enhance decision making in development programs for human resource more efficiently. The objective of this research is to investigate the relationships among the dimensions of modern human resource accounting implementation which consist of human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring, its antecedents which consist of sustainability vision, executive learning, transformational leadership, technology change, and environmental uncertainty, and consequences include long-term employee commitment, human resource management efficiency, human capital value, and firm survival and the moderating effects of governance culture and growth mindset. The stakeholder theory, human capital theory and contingency theory are applied to explain the relationship among these variables. The population and sample are the information and communication technology businesses in Thailand, totally 222 firms. The data that were collected by a mail survey, and questionnaires were sent directly to the accounting executives of each firm. Regression analysis was used for hypothesis testing.



The findings indicate that human resource identification and human resource monitoring which are dimensions of modern human resource accounting implementation have an influence on all of the consequences include long-term employee commitment, human resource management efficiency, human capital value, and firm survival, whereas human resource reporting does not. Moreover, human resource investment has a positive relationship with human resource management efficiency, human capital value, and firm survival except long-term employee commitment. Interestingly, human resource measurement has a negative result with long-term employee commitment, human resource management efficiency, and firm survival.

In terms of the relationships among the antecedents and modern human resource accounting implementation, the findings illustrated that sustainability vision and environmental uncertainty have a significant positive effect on all of modern human resource accounting implementation dimensions whereas executive learning does not. In addition, transformational leadership shows a significant positive effect on human resource measurement and human resource monitoring. Interestingly, technology change has a significant positive effect only on human resource measurement.

Moreover, the moderating role of growth mindset has shown a significant moderating effect on the relationships between sustainability vision and all of modern human resource accounting implementation dimensions. On the other hand, the moderating role of growth mindset show non-significant effect on the relationship of executive learning, transformational learning, and environmental uncertainty to all of modern human resource accounting implementation dimensions. For technology change, the moderating of growth mindset shows a positive significant enhancing only on the relationship between technology change and human resource monitoring.



TABLE OF CONTENTS

Chapter	Page
I INTRODUCTION	1
Overview	1
Purposes of the Research	6
Research Questions	6
Scope of the Research	7
Organization of the Dissertation	9
II LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK	10
Theoretical Foundations	10
Relevant Literature Review and Research Hypotheses	
Development	18
The Effects of Each Dimension of Modern Human Resource	
Accounting Implementation on Its Consequences	26
The Consequences of Modern Human Resource Accounting	
Implementation	41
The Effects of the Antecedent Variables on Each Dimension	
of Modern Human Resource Accounting Implementation	49
Moderating Variables	61
Summary	69
III RESEARCH METHODS	73
Sample Selection and Data Collection Procedure	73
Measurements	78
Methods	83
Statistical Techniques	86
Summary	91



Chapter	Page
IV RESULTS AND DISCUSSION	101
Respondents Characteristics and Descriptive Statistics	101
Hypothesis Testing and Results	105
Summary	135
V CONCLUSION	145
Summary of Results	145
Theoretical and Managerial Contributions	153
Limitations and Future Research Directions	156
BIBLIOGRAPHY	158
APPENDICES	185
APPENDIX A Key Participant Characteristics	186
APPENDIX B Demographic of Firm Characteristics	189
APPENDIX C Item Factor Loadings and Reliability Analyses in Pre-Test	192
APPENDIX D Test of Non-Response Bias	196
APPENDIX E Test the Assumption of Regression Analysis	198
APPENDIX F Cover Letter and Questionnaire (Thai Version)	207
APPENDIX G Cover Letter and Questionnaire (English Version)	220
APPENDIX H Letter to Experts	231
VITA	234



LIST OF TABLES

Table	Page
1	Summary of Definition of Human Resource Accounting 22
2	Summary of Key Literature Reviews on Modern Human Resource Accounting Implementation 24
3	Summary of Hypothesized Relationships 70
4	Details of Questionnaire Mailing 75
5	Results of Measure Validity of Pre-Test 86
6	Definitions and Operational Variables of Constructs 93
7	Descriptive Statistics and Correlation Matrix of Modern Human Resource Accounting Implementation and all constructions 104
8	Descriptive Statistics and Correlation Matrix of Each Dimension of Modern Human Resource Accounting Implantation, Its Consequences, and Governance culture 106
9	Results of Regression for the Effects of Each Dimension of Modern Human Resource Accounting Implementation on Its Consequences 108
10	Results of Regression Analysis for the Effects among Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, and Firm Survival 119
11	Descriptive Statistics and Correlation Matrix of Each Dimension of Modern Human Resource Accounting Implementation, Its Antecedents, and Growth Mindset 124
12	Results of Regression Analysis for the Effects of the Antecedent and Moderator on Modern Human Resource Accounting Implementation 126
13	Summary of the Results of Hypothesis Testing 136
14	Summary of the Results and Conclusions of All Hypotheses Testing 148



LIST OF FIGURES

Figures	Page
1 Conceptual Model of the Relationships between Modern Human Resource Accounting Implementation and Firm Survival	19
2 The Effects of Human Resource Identification on Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, Firm Survival	28
3 The Effects of Human Resource Measurement on Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, Firm Survival	32
4 The Effects of Human Resource Investment on Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, Firm Survival	35
5 The Effects of Human Resource Reporting on Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, Firm Survival	38
6 The Effects of Human Resource Monitoring on Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, Firm Survival	40
7 The Effects of Human Resource Management Efficiency on Long-Term Employee Commitment, Human Capital Value, Firm Survival	44
8 The Effects of Long-term Employee Commitment on Firm Survival	46
9 The Effects of Human Capital Value on Firm Survival	48
10 The Effects of Sustainability Vision on Modern Human Resource Accounting Implementation	50
11 The Effects of Executive Learning on Modern Human Resource Accounting Implementation	53
12 The Effects of Transformational Leadership on Modern Human Resource Accounting Implementation	55



Figures	Page
13 The Effects of Technology Change on Modern Human Resource Accounting Implementation	58
14 The Effects of Environmental Uncertainty on Modern Human Resource Accounting Implementation	60
15 The Role of Governance Culture as a Moderator	62
16 The Role of Growth Mindset as a Moderator	66
17 The relationships among each dimension of modern human resource accounting implementation, its consequences, and the moderating role of governance culture	105
18 The Relationships among Long-Term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, and Firm Survival	118
19 The Relationships among the Antecedents, Modern Human Resource Accounting Implementation, and Moderating Role of Growth Mindset	123
20 Summary of the Results in All Hypotheses Testing	152



CHAPTER I

INTRODUCTION

Overview

In the current global market, companies attempt to develop competitive advantage over their competitors. Thus, it is important that firms truly benefit on the workforce as a competitive weapon. A strategy for improving workforce productivity to drive higher value for the firms has become an important focus. Human resource development program is needed not only to achieve business goals, but also most importantly it is for a long term survival and sustainability. Therefore, firms need to invest resources to ensure that employees have the knowledge, skills, and competencies. They need to work effectively in a rapidly changing and complex environment. In response to the new era of globalization, where competitiveness and innovativeness are norms that go with greater performance, human resource has been noticed as a good competitive advantage that will enhance higher performance (Loshali and Krishnan, 2013). Hence, firms need to understand that enhancement of employee satisfaction would improve performance (Marimuthu, Arokiasamy and Ismail, 2009). The success of any organization depends on the quality and efficiency of its human resources apart from other critical factors (Sabarwal, 2014). Therefore, it is clear cut that the traditional style of human resource management is not enough in the era of quick (Filsaraei et al., 2016). The growing importance of human resource has been increasing constantly, therefore, accounting plays the crucial role serving accurate information to enhance decision making of organizational management (Nielsen, Mitchell, and Norreklit, 2015).

Human resource is embodied as intangible asset. Objective of human resource accounting is to facilitate the management to get information on the cost and value of human resources which enhance the quantity and quality of goods and services. It provides data to the interested persons about the cost of human resources and correspondingly comparing it with the benefit obtained out of its utilization (Danaei et al., 2014). The human resource accounting is used to furnish cost value information for



making proper and effective management decisions about acquiring, allocating, developing and maintaining human resources in order to achieve cost effective organizational objectives (Kashive, 2013). Apparently, the concept of presenting information on human resource accounting has become more interested and developed constantly from researchers as it has various usefulness for decision making. However, the field of accounting has had to confront the difficult territory of intangible asset recognition and measurement (Steen et al., 2011). Although accounting standard provides several of assets valuation including historical cost, net realizable value, and fair value (Thai financial reporting standard no.13, 2013), in practical, there are some arguments of error occurrence in the way of fair value measurement as the fair value is estimated by using the basic principles of revenue recognition. Thus, some users may question that whether can information in financial statements reflect the actual economic value of its asset (Theingtrakul, 2010), especially intangible assets. Moreover, the traditional accounting has been focused on numbers and not on people quality. Therefore, lack of comprehensive information for administration and inadequate for decision making maybe not remain solved properly in sphere of administrative dimension. The urgent requirement for more comprehensive information has increased from related sectors especially stakeholders. This is because the acquisition of more accurate information could be beneficial for supporting managerial decisions, such as intangible assets like human resource (Steen et al., 2011). In short, traditional management accounting could not provide essential information about human resource. Therefore, in the era of traditional human resource accounting treated human resource as a corporate expense which is affected and reduced income in financial statement (Flamholtz et al., 2002). Moreover, companies' outlook that salary is a kind of corporate burden as company policy is supposed to increase wage annually. So this may lead to layoffs and may affect mental wellbeing of employees, for fear of job security, as a result operational deficiency.

This shift has triggered the development of tools to measure these intangible assets. One accounting tool that is directly relevant to the measurement is human resource accounting. In traditional concept, measurement of human resource in monetary term is like a two-edged sword, if an employee with a comparatively low value may feel discouraged and develop a complex which in itself will affect their



competency. Therefore, modern human resource accounting concept has been arisen consequently to develop human resource accounting concept to reduce these limitations as well as to increase more efficiency of decision making in human resource management. This leads to human resource development in a suitable way to close up the actual goals of organization, as a result improve competitive advantage and firm survival ultimately.

In this research, modern human resource accounting implementation is defined as the process of database management for employees including identification, measuring, investment, reporting useful information of employees to interested parties, and monitoring. However, there has not been any clear-cut dimension of modern human resource accounting in empirical research based on prior literature. Therefore, this research examines five dimensions which generate from review literature integration in human resource accounting field, consisting of (1) human resource identification, (2) human resource measurement, (3) human resource investment, (4) human resource reporting, and (5) human resource monitoring. Human resource identification is defined as classifying information which relates employees in both financial and non-financial term. Human resource measurement is defined as evaluating the worth of human resource of an organization in a systematic manner as a whole to the organization. Human resource investment is defined as spending long-term cost and benefit implications on the process of people development. Human resource reporting is defined as recording transaction of people in organization for presenting the information in a significant manner and communicate their worth with changes over a period of time. Human resource monitoring is defined as supervising activities in progress to ensure that programs are on-course and on-schedule in meeting the objectives and performance targets.

Theoretically, this research applies three principal theoretical frameworks, including stakeholder theory, human capital theory and contingency theory. Stakeholder theory is implemented to explain the responsibility of executive directors to satisfy several sections which has affected on corporate activities. The survival of business depends on its ability to provide information to support decision making for all sections of stakeholders adequately. If the information firms provide can exceed mandatory information, this indicates that firms have more ability to present performance than



stakeholder expectation. In addition, this research uses the human capital theory to explain the important of knowledge and proficiency skill of human resource that are the most important factors for pushing the efficiency of performance. Because of these potential skills of human resource create valuable performance and drive organization to superior outcome. Therefore, cost evaluation and return on investment of human resource in accounting aspect will enhance organization planning benefits and increased the potential of human resource development for the competitive advantage under rapidly changing environment. In addition, it helps to manage the benefit from human resource information for investment decision making and create organizational growth systematically. To sum up, the company which focus on increase human resource skills constantly, meanwhile attempts to disclose voluntary information such as human resource accounting, will increase credibility of the firm and its survival. Therefore, the dimensions of modern human resource accounting implementation (human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring) and the moderator namely, governance culture is applied to clarify the fact the modern human resource accounting implementation is the crucial knowledge of the firm. The contingency theory, on the other hand, is applied to explain the antecedents of modern human resource accounting implementation. According to the concept of contingency theory, it is concerned with the survival of organization that fits with their environment. The contingency theory posits that there is no one best strategy related to performance (Robles, 2011). Therefore, sustainability vision, executive learning, transformational leadership, and the condition of technology change and environmental uncertainty have an effect on firm to generate the modern human resource accounting implementation in order to be consistent with exogenous and firm-internal factors based on the contingency theory.

This research focuses on software and hardware computer firms, and system consulting and computer service firms in information technology and communication industries in Thailand. The reason is software industry is one of the most important industries in enhancing the world competitiveness (Porter, 2003). Furthermore, Thailand is one of the fastest growing countries facing the challenges pertaining to becoming technology industry as Thailand is ranked one of the top five in region of Emerging and Developing Asian countries in terms of overall ICT readiness in 2015



(World Economic Forum, 2016). Moreover, the current economic environment and government support affects this industry. Therefore, to survive in information technology and communication business, firms would have to focus on how well human resource can be developed. In the same way, information regarding human resource is becoming more critical for accurate investment decision, particularly in knowledge-based firms. Knowledge-based firms, or firms that rely heavily on human resources, pose an interesting problem for investors (Flamholtz and Main, 1999). Recently, Thai Government announced Information and Communication Technology (ICT) project beyond 4G technology, as a big change in technology generation of Thailand. This case is an important point to drive competitive strategies development base on new technology capability within Thai information technology industry. Moreover, these businesses challenge to deal with technology change, which is a driver of greater productivity; it is a force to transform the industry, and it is a catalyst in the reconstruction through refocused value system.

This research generates the significant study of the literature on modern human resource accounting implementation. First, this research expands the theoretical contributions to previous knowledge and literature of human resource accounting implementation. Second, this research proposes new five dimensions of modern human resource accounting implementation, namely, human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring, whereas there are rarely included in prior research. Third, the two theories namely, stakeholder theory, and contingency theory are explained to back up the relationships of a conceptual model in this research. Finally, the antecedents and consequences of modern human resource accounting implementation are offered by this research in different ways. Moreover, this research tests these relationships. The significance of this research is acquiring the effects of modern human resource accounting implementation with the Information and Communication Technology (ICT) businesses to increase efficiency of organizations. Consequently, the results of this research are beneficial contributing to managerial practice concentrating on modern human resource accounting implementation and the usefulness of modern human resource accounting implementation to enhance competition advantages in Information and Communication Technology (ICT) businesses and leads to firm survival.



Purposes of the Research

The main objective is to examine the effect of modern human resource accounting implementation on firm survival, the specific objectives are as follows:

1. To investigate the effect of each dimension of the Modern human resource accounting implementation on long-term employee commitment, human resource management efficiency, human capital value, and firm survival.
2. To explore the human resource management efficiency on long-term employee commitment, human capital value, and firm survival.
3. To test the long-term employee commitment on firm survival.
4. To examine the human capital value on firm survival.
5. To investigate the effect of sustainability vision, executive learning, transformational leadership, technology change, and environmental uncertainty on modern human resource accounting implementation.
6. To explore the moderating effect of growth mindset that influences among sustainability vision, executive learning, transformational leadership, technology change, and environmental uncertainty and modern human resource accounting implementation.
7. To examine the moderating effect of governance culture that influences on each dimension of modern human resource accounting implementation, and long-term employee commitment, human resource management efficiency, human capital value, and firm survival.

Research Questions

The main research question of this research is framed as: How does the modern human resource accounting implementation affect firm survival? In addition, the specific research questions are presented as follows:

1. How does each dimension of modern human resource accounting implementation influence on long-term employee commitment, human resource management efficiency, human capital value, and firm survival?



2. How does human resource management efficiency influence on long-term employee commitment, human capital value, and firm survival?

3. How does long-term employee commitment impact on firm survival?

4. How does human capital value influence on firm survival?

5. How do sustainability vision, executive learning, transformational leadership, and technology change and environmental uncertainty affect each dimension of modern human resource accounting implementation?

6. How does growth mindset moderate the relationships among sustainability vision, executive learning, transformational leadership, and technology change and environmental uncertainty, and each dimension of modern human resource accounting implementation?

7. How does governance culture moderate the relationships among each dimension of modern human resource accounting implementation, long-term employee commitment, human resource management efficiency, and human capital value, and firm survival?

Scope of the Research

The stakeholder theory and the contingency theory are utilized to enhance our knowledge and emphasize the importance of this research. The stakeholder theory purposes to establish the characteristics of managerial strategy from managerial perspective relevant to the firm. A stakeholder-based perspective of value is the important from a managerial perspective because managers tend to focus attention on things that lead to higher performance based on what actually get measured (Sach and Rühli, 2011). Furthermore, stakeholder depends on both firm and its other stakeholders to satisfy their own interests. Therefore, the stakeholder-based perspective of performance can help managers determine where their attention is needed in order to facilitate the creation of more value for stakeholder's requirements (Harrison and Wicks, 2013). The contingency theory has been a popular theoretical framework. The well-established contingency theory is concerned with the relationships between endogenous and exogenous contextual factors, which in turn influence competitive strategy. Ultimately, this influences performance via the intervening variable of



organizational structure (Luther and Longden, 2001). There is no better way to organize a corporation, to lead a company, or to make decisions, so an organization that is effective in some situations may not be successful in others depending on the external and internal situation (Robles, 2011). All theories illustrate the relationships among the dimensions of modern human resource accounting implementation and its antecedents and consequences constructs in the next chapter. Moreover, this research proposes that the theory interaction describes the relationships of each variable throughout the attention to examine and to answer the research question and research objective.

Modern human resource accounting implementation comprises five dimensions namely, human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring. The consequences of modern human resource accounting implementation are composed of long-term employee commitment, human resource management efficiency, human capital value, and firm survival. Moreover, growth mindset is a moderator of the relationship among sustainability vision, executive learning, transformational leadership, and technology change and environmental uncertainty, and each dimension of modern human resource accounting implementation while governance culture is a moderator of the relationships among each dimension of modern human resource accounting implementation, long-term employee commitment, human resource management efficiency, and human capital value, and firm survival. This research aims to examine the effects of modern human resource accounting implementation on firm survival of the information and communication technology (ICT) businesses and factors such as sustainability vision, executive learning, transformational leadership, and technology change and environmental uncertainty are assumed to be the antecedents of the model.

Modern human resource accounting implementation is the independent variable and it is the suitable attribute to manage the strategy of the firm. Modern human resource accounting implementation is measured by human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring. These dimensions of modern human resource accounting implementation are hypothesized to be positively associated with long-term employee commitment, human resource management efficiency, and human capital value, and firm survival. Within the relationships, firm survival is the



dependent variable of the research, and firm survival is measured by the continual operational outcome that shows both the financial and non-financial performance of the firm over the long term. The information and communication technology (ICT) businesses are an appropriate population of this research because this industry offers the potential to simultaneously examine the five dimensions of modern human resource accounting implementation. In addition, from previous research found that the more complicated business transaction require, the more accounting information support decision-making needed (Dehghanzade et al., 2011). In view of this, modern human resource accounting implementation assists management in this environmental uncertainty by facilitating additional information and subsequence to enhance decision-making for information and communication technology (ICT) business in Thailand to build competitive advantages.

Organization of the Dissertation

This research is organized into five chapters. Chapter one presents an overview of the research, the purposes of the research, research questions, the scope of the research, and organization of the dissertation. Chapter two reviews the relevant literature on modern human resource accounting implementation, theoretical foundations, the relationships among the different variables, and develops the related hypotheses for testing. Chapter three explains the research methods, including the sample selection and the data collection procedure, the variable measurements of each construct, variable definitions, and the statistics' equations to test the hypotheses, the table of definitions, and the operational variables of the constructs. Chapter four demonstrates the results of the statistical analysis and discussion. Finally, chapter five details the conclusion, theoretical and practical contributions, limitations, and direction for further research.



CHAPTER II

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The previous chapter gives an overview of modern human resource accounting implementation with the research objectives, the research questions, and the scope of the research. This chapter is organized into three sections. The first section introduces theories underpinning the main of constructing modern human resource accounting implementation that is identified by the stakeholder theory, human capital theory and the contingency theory. The second section provides a literature review and hypotheses development which is used to formalize the theoretical arguments on the relationships among the constructs in the conceptual model. The final section presents the summary of hypotheses relationships and its description.

Theoretical Foundations

Generally, there are theories have been mentioned in previous research to explain the research in human resource accounting. Human capital theory have been used to explain the imparting useful knowledge and skills by training and education raises the productivity of workers and also serve as a means of corporate competitive advantage which reflects ultimately in organizational performance (Danaei et al., 2014). Some scholar have used human capital theory to explain how business performance is influenced by knowledge and skills through learning activities (Pena, 2002; Daeboug, 2009). In addition, resource based view theory (RBV theory), relate with valuable and rare resources which are possess by firms enable them to achieve competitive advantage, lead to superior long-term performance (Amber, 2016). Likewise Odhong et al., (2014) and Odhong et al., (2013) used RBV theory to explain firms' competitive advantage can be secured through valuable resources that cannot be substituted or imitated which gives a firm a competitive advantage over others. Next, stakeholder theory is also used widely to explain the relationship between business and its stakeholders which should be cordial, mutual, reciprocal and balanced at all times (Jimba and Awodiran, 2015), focus on maximizing the economic interests of



stakeholders (Orts and Schulder, 2002; Kaler, 2003) and that stakeholders have a right to be provided with information about how the organization's activities affect them (Deegan, 2000; Vergauwen and van Alem, 2005). On the other hand, signaling theory purports that an organization attempt to signal positive information to investors through the annual reporting mechanism (Oliveira et al., 2006) to signal to the market that their companies are more advanced in their management of risk than other companies (Shrives and Linsley, 2003). For example, Micah et al., (2012) found the positive correlation between return on equity (ROE) and human resource accounting disclosure (HRAD) that increase trustworthiness with stakeholders and enhance external reputation. Contingency theory is used to explain organizations achieve effectiveness by fitting the characteristics of the organization to contingencies that reflect the situation of the organization (Donaldson, 2001). Furthermore, different business strategies regarding voluntary disclosures (Leuz and Verrechia, 2000) include the level of voluntary human capital information employed by firms may affects performance (Fontana and Macagnan, 2013; Gerdin and Greve, 2004).

However, three theories, consist of stakeholder theory, human capital theory, and contingency theory, were used in this research to explain extensively the relationship of all variables in the model. The reason why these three theories applied because stakeholder theory was used to explain the responsibility of organization to satisfy several sections which has affected on corporate activities, especially shedding light on workforce which can help organizations succeed in implementing sustainable business practices and ultimately can satisfy the rest of stakeholders with generating long-term benefits (Ernst & Young, 2013). In addition, human capital theory is broadly used to explain the important of human capital development which is one of the fundamental solutions by adapting knowledge and skills of human resource to increase competitive advantage and eventually get a great impact on performance (Marimuthu et al., 2009; Danaei., 2014). Likewise, contingency theory is concerned with the relationships between endogenous and exogenous factors, which influence competitive strategy. Thus, it is necessary to manage the human resources (such as human resource planning, training and development, compensation, performance management and employee relations) to adapt with organizational strategy which, in turn, can positively impact organizational performance (Cania, 2014).



To clearly understand the relationships among all constructs, three theories; stakeholder theory, human capital theory, and contingency theory are applied to explain why firms should take modern human resource accounting implementation as a strategy tool of organization. The relationships among modern human resource accounting implementation, its consequences, and moderating role of governance culture are explained by the stakeholder theory and the human capital theory, whereas contingency theory are adapted to explain the connection between antecedences and its constructs. This research attempts to identify key components of modern human resource accounting implementation, and investigate the relationships between the antecedents and the consequences of modern human resource accounting implementation. An earlier overview of the literature on the role of the antecedents and the consequential factors of modern human resource accounting implementation is drawn, each of which is detailed as follows.

Stakeholder theory

The stakeholder theory is a theory of organizational management and business ethics that addresses morals and values in managing an organization. It looks at the relationships between an organization and others in its internal and external environment and also looks at how these connections influence how the business conducts its activities. Stakeholder theory provides an appropriate lens for considering a more complex perspective of the value which stakeholders seek as well as new ways to measure it (Harrison and Wicks, 2013). Firms diligently seek to serve the interests of a broad group of stakeholders will create more value over time (Freeman, Harrison, and Wicks, 2007). Think of a stakeholder as a person or group that can affect or be affected by an organization. Stakeholders can come from inside or outside of the business. Examples include customers, employees, stockholders, suppliers, non-profit groups, government, and the local community, among many others. Therefore, the stakeholders are presently the key persons to put pressure on a company, and require attention to respond to stakeholder expectations. However, the stakeholders have different needs, so the firm is requested to implement different activities that meet the diverse needs in order to attain firm success. In sum, the core idea of stakeholder theory is managing



their stakeholder relationships in the organization effectively will survive longer and perform better than organizations that don't.

Prior empirical studies have found that there is a positive relationship between stakeholder management and firm performance (Berrone, Surroca, and Tribo, 2007; Moore, 2001). Besides, stakeholder theory has managerial implications and intrinsic value (Law, 2011). An organization's existence depends on the ability to collect stakeholders' expectations into their business strategy because stakeholders provide essential resources and returns for an organization's successful functioning and survival (Roeck and Delobbe, 2012). In addition, the main stakeholders are identified based on their economic relationship with the firm. Stakeholder theory is one of the important approaches for analyzing the duties of those engaged in business. Further, stakeholder theory is simply the interaction with the responsibility principle (Hasnas, 2013). According to the business context, business is essential for the development and well-being of a society. Although business does not exist in a vacuum, but it is simultaneously dependent on a number of stakeholders be it employees, customers, investors, interest groups, community, or the government. Thus, it is essential to consider that the practices of corporations are first and foremost resulting from decisions and behaviors of human beings (Jimba and Awodiran, 2015). Today, companies permanently need to implement solutions aimed at generating competitive advantage that allow them to survive and be successful in ever-changing and demanding markets (Smith, 2006). Freeman, the father of stakeholder theory, suggests that organizations should develop certain stakeholder competencies. These include: making a commitment to monitor stakeholder interests, developing strategies to effectively deal with stakeholders and their concerns, dividing and categorizing interests into manageable segments, ensuring that organizational functions address the needs of stakeholders. In his book *Strategic Management: A Stakeholder Approach*. Primarily, stakeholders were defined as any group or individuals who affect the achievement of the organization's objectives by Freeman (Crane and Ruebottom, 2011). Therefore, the organization needs to understand the demands and concerns of each group of stakeholders because the stakeholder is necessary for business practices.

In this research, the stakeholder theory is implemented to explain the phenomenon of modern human resource accounting implementation that has an impact on its



consequences and firm survival. It is applied to illustrate the importance of modern human resource accounting implementation which serve additional information for more accuracy decision to broad stakeholders. Since everyone have the same expectation of firm growth and good performance to obtain higher expected return in the future, thus organization have to be able to respond the needs of stakeholders in order to satisfy them. For example, increase firm performance to reach their satisfied level. According to prior research, Ljubojevic (2011) revealed that stakeholder's satisfaction is a fundamental condition for successful organizations. Harrison and Wicks (2013) studied stakeholder theory, value, and firm performance, found that firm value increased significantly when firms focused on economic returns. However, the company's interests are based on the needs, interests, and effects of policies and firm performance as firm survival and sustainability development are imperative outcomes of the expected level of stakeholder needs.

Human Capital Theory

Nelson and Phelps (1966) and Schultz (1967) presented that human capital is a critical factor of the workforce for driving forward to new and more productive technologies. Ployhart and Moliterno (2011) proposed that the human capital theory predicts that the persons or groups who possess higher levels of knowledge, skills, and other competencies will achieve greater performance outcomes than those who possess lower levels. Schultz (1961) addressed human capital theory that is mentioned as changing wages arising because of differences of human capital. In addition, human capital theory covers compensation, investment and development of people that affect jobs. These systematic investments in human capital not only affect employees to become increasingly highly qualified and consequently produce work of a higher quality, but also enhance intellectual capital. Meanwhile, as this is viewed as part of a company's capital, the market value of a company also grows (Friederichs and Labes, 2006). Their requirement involves greater human capital (general, firm-specific, or both), and should be supplementary with higher initial compensation than jobs which require less human capital. In this line, the individual's human capital is viewed as current value of earnings that is based on the skills, abilities, knowledge, and experience possessed by a person. Becker (1962) argues that human capital can be turned into



income through exchanges in the labor market. Therefore, the investment in individuals is the most valuable of all capital (Becker, 1993).

Human capital theory generally discriminated into two main skills of human resources; general and specific skills (Baney and Wright, 1997). General skills are skills which can be used to various firms (such as literacy), whereas specific skills are skills which useful for a unique employer or industry. The concept of human capital initially was designed to reward employees based on their human capital (Unger et al., 2011). The individuals with highly specific skills are less likely to quit their jobs and are more highly paid (Becker, 1993). This is because the persons or groups who possess higher levels of knowledge, skills, and other competencies will achieve greater performance outcomes than those who possess lower levels (Ployhart and Moliterno, 2011). Thus, it can be said that the concept of human capital is based on knowledge and skills obtained through learning activities (Daeboug, 2009). The relevance of this theory is that it considered the cost of education, training, development and even workers medical treatment as investments which are expected to reflect in increased or improved productivity of individual workers. Swanson (2001) points to three assumptions as the main relationship of human capital theory: first, investment in education and training increase learning. Second, learning and increased productivity are the relationships of human capital that encompass increased learning. Last, the relationships among human capital include increased productivity, increased wages and business earnings, as greater productivity results and are directed to upper wages for individuals and profit gain for business.

In the context of human resource accounting, human capital theory helps to explain the relationship between learning enlargement and increased employee productivity. It means once productivity increase, the employee compensation will also increase. Because of higher employee productivity will leads to increased productivity and firm performance. Thus, human capital theory is the consideration of employee productivity compare with what you have invested in the form of training and education, in other words it is cost-effectiveness analysis and cost-benefit analysis based on return on investment (ROI). These activities of human resource development are essential for taking into account the added value of human being as an employee in organization through education, training, and development programs which lead to meet firm



requirement. In addition, the concept of human capital theory has a direct impact on the corporate management, because creating a good working environment is needed to motivate people working instead of losing talented people to the other companies (Marimuthu, Arokiasamy, and Ismail, 2009). Motivation people in a sense is not just about compensation offering like an old idea, but also means providing opportunities for learning, skills developments, and confidence in the advancement of working life, which ultimately become long-term commitment of employee. Perry-Smith and Blum (2000) proposed that an employee's affective commitment can be developed by enabling employees to receive support. When employees feel supported by their organization, they believe that the organization cares about them and their welfare and, consequently, strengthen their commitment to the organization (Rhoades and Eisenberger, 2002). Grant et al, (2008) agreed with this idea and stated that employees develop their commitment to an organization when they feel that their work organizations value their well-being. Consequently, employees reciprocate by developing affective commitment to these organizations. In addition, Massingham and Tam (2015) examined the relationship between human capital and value creation and employee reward. This paper addresses the need for critical analysis of intellectual capital practices in action. The major finding is that employee capability and employee satisfaction had a direct positive relationship with the importance of work activity. The second finding was that only human capital has a direct positive relationship with the pay. This implies that focusing on human resource investment could enhance qualified employee retention as they perceive the importance that organization offer, and that bring to increase human capital value.

The contingency theory

The contingency theory was presented in its most complete form in Ayman et al., (1995) explaining that organizational effectiveness is achieved by matching organizational characteristics and environment (Morton and Hu, 2008). There is no the best way to organize a corporation or to make decisions, thus the strategy which applies with a company may not be suit with others so an organization, conversely depends on the external and internal situation (Robles, 2011). The well-established contingency theory is concerned with the relation between endogenous and exogenous contextual factors, which in turn influence competitive strategy, which in the end, this influences



performance via the intervening variable of organizational structure (Luther and Longden, 2001). Consistent with Abdel-Kader and Luther, 2008 suggested that contingency theory explains the effectiveness of managerial accounting practice on its ability to adapt, to changes in internal factor and external circumstances. Furthermore, in the context of management accounting, contingency theory aims to explain how particular circumstances shape the form of an organization's management control system (Otley, 1980). Therefore, the most appropriate management control system is contingent upon the circumstances faced by the organization in which the implementation has to take place (Huang, 2010). In addition, the availability of intellectual capital information adapts to fit contextual factors which are affected by contingencies arising (Huang, 2010). Consistent with Wang and Chang (2005) and Claycomb et al., (2001) evidenced that intellectual capital has a positive influence on firm's value and financial performance. Hence, in this research, external factors consist of environmental uncertainty and technology change, whereas endogenous factors are the organizational factors consist of sustainability vision, executive learning, and transformational leadership. The contingency theory has been implemented for theoretical framework in variety of accounting researches (Cinquini and Tenucci, 2010), such as auditing, accounting information systems and managerial accounting including new concept of accounting research like human resource accounting. In this research, contingency theory is applied to explain the antecedent effects of the exogenous factor (environmental uncertainty and technology change) and the endogenous factors (sustainability vision, executive learning, and transformational leadership) on modern human resource accounting implementation.

In conclusion, stakeholder theory and human capital theory are applied to explain the dimensions of modern human resource accounting implementation (human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring), its consequences (human resource management efficiency, long-term employee commitment, human capital value, and firm survival) and its moderator (governance culture) while the contingency theory it describes the antecedents of modern human resource accounting implementation (sustainability vision, executive learning, transformational leadership, environmental uncertainty and technology change), its moderator (growth mindset), and modern human resource accounting implementation. These theories illustrate the relationships



of modern human resource accounting implementation and its antecedents and consequences as shown in Figure 1. The next section elaborates on the literature review and the hypotheses of modern human resource accounting implementation which is discussed below.

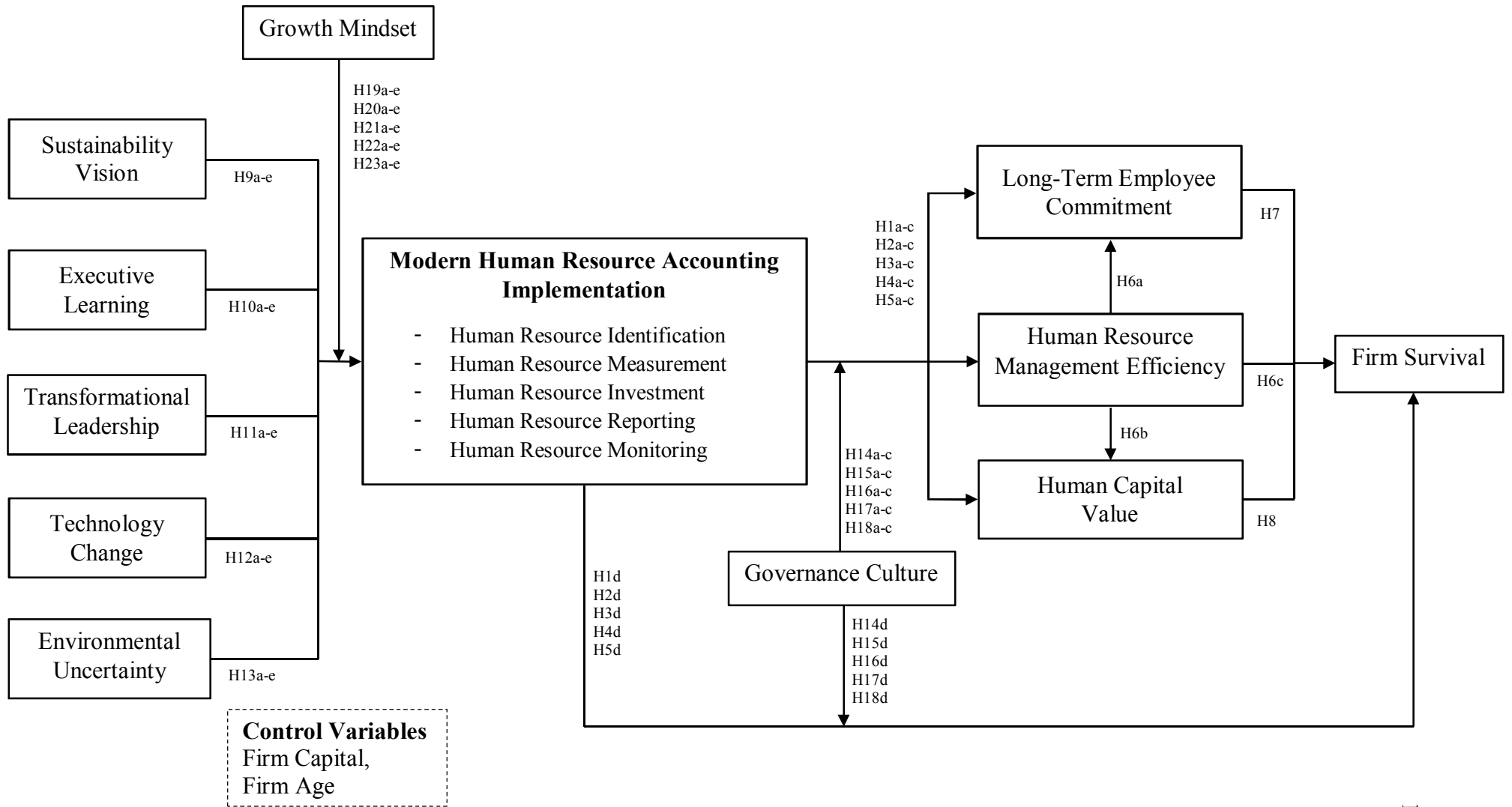
Relevant Literature Review and Research Hypotheses Development

According to the theoretical framework, the probable relationships among several constructs are visible. This research proposes a conceptual model for empirically investigating the topic “The conceptual model of modern human resource accounting implementation and firm survival: an empirical assessment of information and communication technology businesses in Thailand” as shown in the Figure 1. This conceptual model posits modern human resource accounting implementation is the independent variable, while firm survival is the dependent variable. In addition, there are five antecedents of modern human resource accounting implementation, which comprise sustainability vision, executive learning, transformational leadership, environmental uncertainty and technology change. Long-term employee commitment, human resource management efficiency, human capital value, and firm survival act as the consequences of modern human resource accounting implementation, whereas the moderating variable is governance culture which has a positive effect on each dimension of modern human resource accounting implementation and long-term employee commitment, human resource management efficiency, human capital value, and firm survival. In addition, growth mindset is the moderating variable which has positive effect among sustainability vision, executive learning, transformational leadership, environmental uncertainty and technology change on modern human resource accounting implementation.

According to the literature, this research attempts to conceptually link the relationship among the antecedents, the consequences and moderating variables of modern human resource accounting implementation, as shown in Figure 1



Figure 1: Conceptual model of the Relationships between Modern Human Resource Accounting Implementation and Firm Survival



Modern human resource accounting implementation

The literature provides a wide range of human resource accounting definitions. Human resource accounting is the activity of knowing the cost invested for employees towards their recruitment, training them, payment of salaries and other benefits paid and in return knowing their contribution to organization towards its profitability. Generally, there are two original definitions that have been cited in human resource accounting research since this concept has created included the American Accounting Association's Committee and Flamholtz, influential researchers in human resource accounting. However, this concept has evolved continuously, it has got more interested since 1990 especially in private sectors. Currently, human resource accounting is focusing on development of concepts, models, approaches, disclosure, accounting standards and treatment and generating soft information (Arkan, 2016). This is because human is an important mechanism for driving organization, thus employee-related issues are matter for organization to be able to lead organizational survive.

Human resource accounting is a new branch of accounting. It is based on the traditional concept that all expenditure of human capital formation is treated as a charge against the revenue of the period as it does not create any physical asset. But now a day this concept has changed and the cost incurred on any asset (as human resources) should be capitalized as it yields benefits measurable in monetary terms. In addition, human resource accounting can help in identifying how much an organization can earn from an individual, as the intellectual assets of a company are often worth three or four times the tangible book value (Singh, 2010). Therefore, human resource accounting means accounting for people as the organizational resources. It is the measurement of the cost and value of people to organizations. It involves measuring costs incurred by private firms and public sectors to recruit, select, hire, train and develop employees and judge their economic value to the organization.

In this research, modern human resource accounting implementation defined as an ability of firms to adapt accounting process for employee-related database management and practices for identifying, measuring, reporting useful information of employees in monetary term, investing, and monitoring staff members-related issues. Human resource accounting is very much needed to provide effective and efficient management within the organization. It continues to be the one of the most interesting issues for both



managerial and research implementation since the 1960s. So far, human resource accounting implementation is challenging as there are remain gaps are needed to fulfill. Several theoretical studies about human resource accounting have attempted to explore its effect on work outcomes; for instance, turnover and financial performance (Okpako, Atube, and Olufawoye, 2014). If there is any change in the structure of manpower, it is human resource accounting which provides information on it to the management. It also provides qualitative information and also assesses the cost incurred in personnel. It gives a platform to the management by providing factors in better decision making for future investment. Much of the work on accounting for human resources focused primarily on development or validation of human resource accounting concepts. Thus, human resource accounting is the art of valuing, recording and presenting systematically the work of human resources in the books of accounts of an organization. It is primarily an information system, which informs the management about the changes that are taking place in the human resource of an organization.

Nowadays, a number of companies adopted the concept of human resources accounting on external reporting included the profile of human assets, the compensation pattern, training and development, human asset productivity, human asset value and the total wealth of the organization. Moreover, realizing the immense benefits associated with human resource accounting many companies world-over is making the concept a necessary element in their balance sheet (Jasrotia, 2004). One of the best examples is of the Denmark Government. The Danish Ministry of Business and Industry has issued a directive that with effect from the trading year 2005, all companies registered in Denmark are required to include in their annual reports information on human capital, among others. This means that figures for investment in intellectual capital must be shown and compared with the previous two years in annual reports (Obara, 2004). Other countries like the United Kingdom, Australia and the Netherlands also have taken very significant steps towards a wider application of human resource accounting. The result showed that effective practices of human resources in the accounting statement can ensure long-term benefits to the employees of the corporations and it also increases quality, performance, values, and commitment to future need (Hossain, Akhter, and Sadia, 2014). The information is important for the company as its success depended solely on the knowledge of the employees. The study shows that growth of the company



depends on its presence and value of human resource working in the organization (Singh, 2010). It necessarily means that if more is the value of human resource, greater will be the revenue of the company. Furthermore, it can be concluded that the total value added component of the company depends a lot upon the human resource value of the technically skilled staff. So company must remain focused upon maintaining, developing, retaining and increasing their value. Information of human resource accounting can also be used by the company to compare the performance and productivity of employees in various departments and retaining valuable employees. This is because the effort of quantify human resources enhance company's investors and other client's true insights into the organization and its future potential, so that faith would be restored amongst shareholders.

Therefore, it can be clearly seen that the effect of human resource accounting implementation on organizational effectiveness will be improved when an organization has organized a human resource accounting system containing practices that are constant with each other and work to stimulate those outcomes from the organization's human resources, essential for the achievement of organizational goals and objectives. Likewise, an organization implement, via combined sets of human resource management practices and accounting information that develop, retain, and motivate the organization's human resources to reveal those behaviors which produce those outcomes (Burma, 2014).

The following section indicates the summary of definitions and dimensions of human resource accounting presented in Tables1

Table 1: Summary of Definition of Human Resource Accounting

Author(s)	Definitions of Human Resource Accounting
Likert (1960)	The estimation of the value of a firm's human organization. He stressed the account for changes in the value of human organization over time.



Table 1: Summary of Definition of Human Resource Accounting (Continued)

Author(s)	Definitions of Human Resource Accounting
American Accounting Association (1973)	The process of identifying and measuring data concerning human resource and communicating this information to interest parties.
Flamholtz (1974)	Accounting for people as organization resource. It involves measuring the costs incurred by the business firm and other organizations to recruit select, hire, train and develop human assets. It also involves measuring the economic values of people to organization.
Bhat (2000)	Depicting the human resources potential in money terms while casting the organization's financial statements.
Jasrotia (2004)	A measurement and reporting of the cost and value of people as organizational resources.
Baker (2006)	The term applied by the accountancy profession to quantify the cost and value of employees to their employing organization
Sasirekha (2009)	The process of recognizing, measuring, and communicating useful information relating to human resources.
Kalpana and Gopinath (2013)	A process of accounting which identifies, quantifies and measures human resources for the use of management to cope up with the changes in its quantum and quality so that equilibrium could be achieved in between the required resources and the provided human resources.



Table 2: Summary of Key Literature Reviews on Modern Human Resource Accounting Implementation

Author(s)	Title	Results
Flamholtz et al., (2002)	Human Resource accounting: A Historical Perspective and Future Implications	It was revealed that human resource accounting (HRA) suggests a vehicle for improvement of management as well as measurement of human resource. If HRA can demonstrate that improvement in human resource management enhances profits, then managers will integrate human capital implications in their decision making to an enhanced degree.
Bullen and Eyler (2010)	Human Resource Accounting and International Developments: Implications for Measurement of Human Capital	It was concluded that HRA gained positive effect overseas assignment on personal development. It was suggested to follow the international trends emerging in intangible reporting, capitalized human resource information, so that HRA can become more prevalent.
Avazzadehfath (2011)	Decision Making based on Human Resource Accounting Information and Its Evaluation Method	It was revealed that human resource accounting (HRA) information disclosures in financial statements were relevant and effect on the optimal investment decision.
Badiyani (2012)	Human Resource Accounting: Brief History and Popular Models.	It was found essential for an organization to consider its human resources as an asset. The gradual developments have been observed in the field of human resource accounting and new approaches and models were given.

Table 2: Summary of Key Literature Reviews on Modern Human Resource Accounting Implementation (continued)

Author(s)	Title	Results
Bloom and Kamm (2014)	Human Resources: Assets that Should Be Capitalized.	The study concluded that superior performing companies recognized and reward their best employees to highlight the value of human capital.
Kaur et al., (2014)	Human Resource Accounting Disclosure Practices in Indian Companies.	It was revealed that measurements and reporting are highly subjective and the companies are trying to fit available model for the valuation of HR as per their own requirement.
Sharma and Kumar (2014)	A Comparative Study of Human Resource Discloser and Reporting Practices of Selected Public and Private Sector Banks.	It revealed that public sector banks were disclosed more information related to the human resource practices than the private sector banks. Public sector banks were found disclosing some quality information of human capital related information.

However, this research proposes a more detailed discussion of the five distinctive dimensions of modern human resource accounting implementation which are based on stakeholder theory and the contingency theory. The five dimensions comprise human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring. The following is a more detailed discussion of the constructs in this research is provided below.

The Effects of Each Dimension of Modern Human Resource Accounting Implementation on Its Consequences

This section investigates the effects of five dimensions of modern human resource accounting implementation that consist of human resource identification, human resource measurement, human resource investment, human resource reporting, human resource monitoring on four consequences comprising human resource management efficiency, long-term employee commitment, human capital value, and firm survival.

Human resource identification

In general terms of identification is the act of recognizing of something or proofs the identity of subjects. In accounting field, identification is one of the processing of accounting system to identify transaction and analyze into monetary term. Accounting refers to the art of collecting, classifying, and summarizing information on economic events in the form of money to provide financial information interests parties. In addition, accounting is the logical and comprehensive documentation of financial transactions of a business, organization or a group. It is the process of storing, sorting, retrieving, summarizing, analyzing and reporting details of these transactions. The American Accounting Association defines accounting as the process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of the information. Basically, identification in accounting refers to business transactions: only financial transactions are recorded. A financial transaction is an event which can be expressed in terms of money and which brings change in the financial position of a business enterprise (Garg, 2016).



In human resource context, accounting has responsibility to identify activities which relates human resource, value those items and report in monetary term whereas human resource management involves the system for attracting, identifying, and developing, retaining and utilizing individuals with high potential and aptitude to succeed in an organization (Swapna and Raja, 2012). Management uses systematic processes to identify employees who have high performance, related-work skills, knowledge and abilities to fill the demand. Thus, human resource identification in this research is defined as firm's ability to classify, recognize, and characterize financial information related human resource accurately and reliantly from business operation activities. There are three main human resource activities which relate accounting responsibility includes; hiring, developing and training, and pension policies as these activities need accounting information based on determining and decision making which have both direct and indirect affect to firm performance.

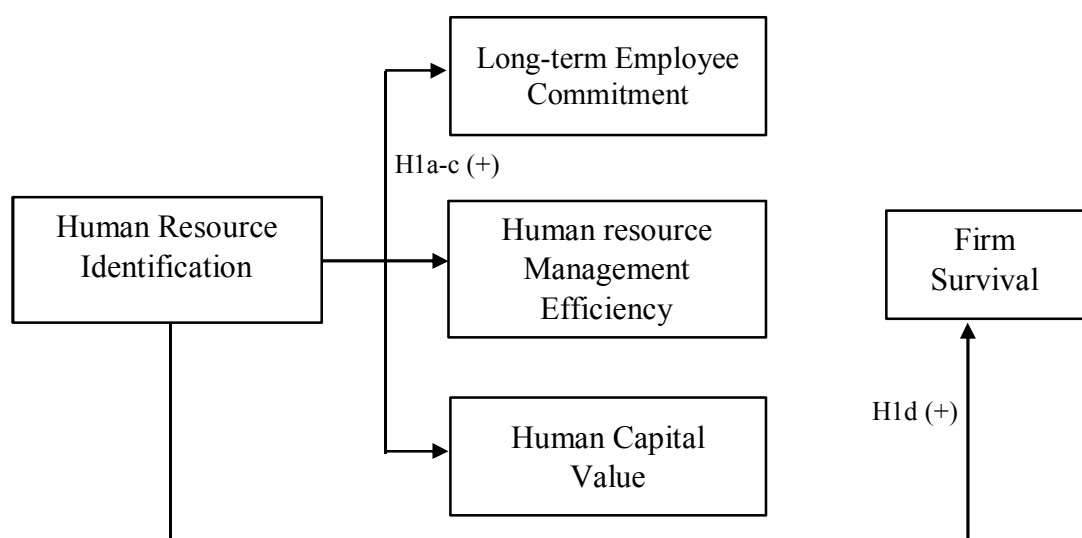
Although identifying and demonstrating the link between human resource and financial returns is very difficult, employees are the primary resource for goal alignment as intellectual capital value creation is an important component to gain sustainable competitive advantage. Therefore, human resources activities need to be integrated with the corporate strategy, and that human resource specialists help organization controllers to meet both management efficiency and equity objectives (Bacon and Berry, 2005). Interestingly, there was a research examined the relationships between human resource policies, management accounting and organizational performance in Canada, Japan and the UK. The results showed the important communication links between human resource managers and management accountants are budgets, strategic plans, performance-related bonus scheme and decision making (Kouhy et al., 2009).

In addition, employee recruitment decisions, training, performance-related bonus scheme, and a good pension scheme all had an impact on long-term employee commitment and leads to organizational performance ultimately. Furthermore, employees may be involved and participated in areas not directly covered by the employment contract thus ensuring suitable work life (Osibanjo and Adeniji, 2012). Moreover, Ulrich et al., (1984) found positive relationships between specific human resource practices and firm performance. Likewise, Schuler and Macmillan (1984) suggested that "effective management of human resources gives benefits which include



greater profitability”. The Institute of Chartered Accountants in England and Wales (ICAEW) (2003) identify that people management practices related to business outcomes such as increase employee commitment, efficiency of human resource management. Furthermore, Claver-Cortés et al., (2015) showed identifying efficiently of human capital intangibles in family firms can help managers become aware of their importance, and this will consequently help them improve their management. Thus, emphasizing on identification of human resource activities accurately will enhance firms recognize important issues to develop workforce capability more efficiently, leads to increase human capital value and higher performance. Therefore, it can be seen clearly that human resource integrated with accounting need to be able to identify good information of employees in monetary term for considering worthiness in every activities of people lead to budget planning and decision making effectively. Thus, the effectiveness of human resource identification, long-term employee commitment, human resource management efficiency, human capital value, and firm survival are its consequences as presented in Figure 2.

Figure 2: The Effects of Human Resource Identification on Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, Firm Survival



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 1a: Human resource identification will have a positive influence on long-term employee commitment.

Hypothesis 1b: Human resource identification will have a positive influence on human resource management efficiency.

Hypothesis 1c: Human resource identification will have a positive influence on human capital value.

Hypothesis 1d: Human resource identification will have a positive influence on firm survival.

Human resource measurement

Measurement is a performance standard or rule in performance evaluation determined by a manager, supervisor, or committee of performance evaluation responsible for performance evaluation system procedures. It is a measurement and evaluation tool of individual properties, which consist of visible competence, behavior-outcome capabilities of the employee, working behavior and financial outcome, which are specified in the performance standard (Chen and Kuo, 2004). These measurements are used in performance evaluation ranking and feedback suggestions for employees to improve their performance, promotion, or reward. A performance standard or rule is an important part of performance evaluation system. It is used by the performance evaluation committee, who is guided for the comparison with an employee's actual performance.

According to Lau and Sholihin (2005) noted that the type of performance measurement or performance standard are used as essential aspects of the performance evaluation process. It is likely to affect the employee's satisfaction and be chosen under the consideration on the diversity or completeness of performance measurement generally available to suit the subordinates' operating environment meaningfully and



accordingly. Financial performance measurement is one type of performance measurement used in performance evaluation process, which is derived from the underlying financial statements and budgets such as net earnings, return-on-assets (ROA), return-on-investment (ROI) and budget variances (Banker, Potter and Srinivasan, 2000). Financial performance measurement specify only past organizational performance which cannot be used to guide future performance improvement indicated by Ittner and Larcker (2000). Likewise, many researchers suggest that many companies believe that financial performance measures are historical in nature, lack of predictive ability to explain future performance, narrow in focus and give inadequate consideration to make it difficult to quantify “intangible” assets such as intellectual capital and in many cases, are incomplete (Stede, Chow, and Lin, 2006). Therefore, nonfinancial measurements are necessary to overcome the inadequacies of traditional financial measurement, which comprise four perspectives, including financial measures perspective, customer’s perspectives, internal business processes perspective and learning and growth perspective (Lau and Moser, 2008). This is considered broader, forward-looking and benefit for long-term competitive advantages and can reflect the drive of future financial performance (Banker, Potter and Srinivasan, 2000). Moreover, it affects organizational performance through employee role clarity due to the employee’s awareness of what their roles and responsibilities are and what their superiors expect from them. It is also a means by which organizations can communicate their objectives, plans and strategies to employees (Lau, 2011). Without the above, the human resource field indicates that measurement is divided into three common aspects/criteria by which performance is appraised of individual or group. The trait-based evaluation is an assessment of abilities or other personal characteristics of an employee. However, behavior-based evaluation is a behavior measurement of employees while they are on the job; and task outcome based evaluation is a measurement for the employee’s output performance (Siaguru, 2011). The nature of the job, the purposes of the assessment and the size of the firm may be some determinants of the types of criteria to be used.

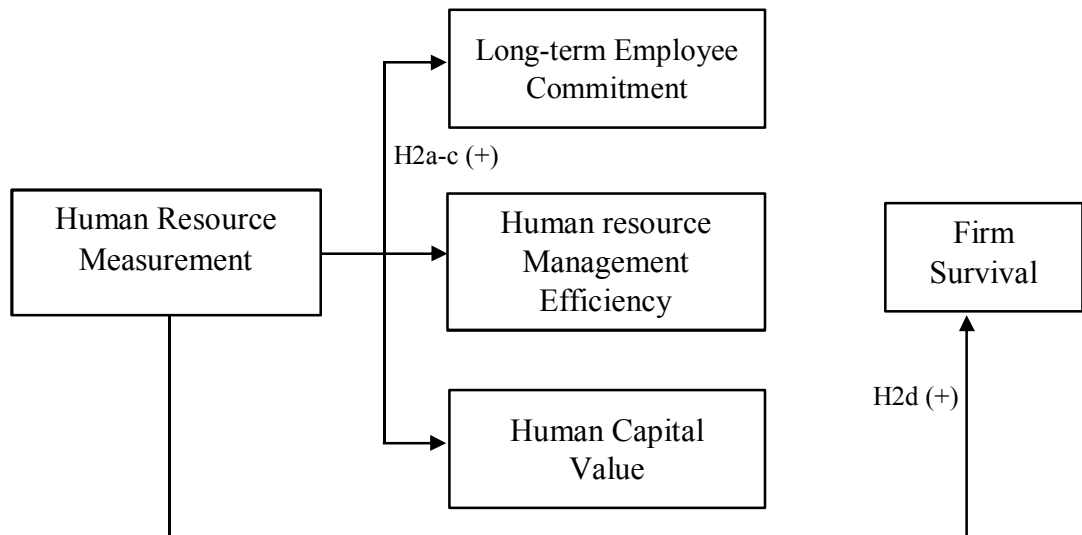
Efficiency of performance evaluation system is obtained from appropriate performance standards consistent to the purposes of evaluation (Sabeen and Mehboob, 2008). Also, it poses a positive impact on job satisfaction when employees believe that the superiors evaluate with suitable criteria or performance standard (Sudin, 2011).



According to Warokka, Gallato and Moorthy (2012) showed the efficiency of performance evaluation system is relevant-performance measurement, which includes necessary information representing the level or merit of a person's job performance understood and accepted by appraises (Caruth and Humphreys, 2008). From previous research, it is found that this manner is reliable (Artz, Homburg and Rajab, 2012; Maines and Wahlen, 2006; Prempre, Ussahawanitchakit and Boonlua, 2013). Artz, Homburg and Rajab (2012) stated that the reliability in performance measurement refers to the amount of noise in performance indicators or the quality of information of which its manner is free of errors and bias and faithfully represents (Maines and Wahlen, 2006) correctness, completeness and neutrality, including validity (Prempre, Ussahawanitchakit, and Boonlua, 2013; Sabeen and Mehboob, 2008). Therefore, this research defines human resource measurement as the ability of firm to analyze investment cost and be able to calculate the operational activities which involve employee in term of money efficiently. Earlier research suggests that the performance evaluation process, especially, the evaluation criteria is likely to have a significant effect on employees' attitudes towards their organizations and their jobs (Lau and Moser, 2008). Corresponding with Tan and Lau (2012) stated that performance standard is completeness that affects job satisfaction and organizational commitment, which helps improve employees' future performance. Additionally, performance standard validity is consistent with company's strategic goals, which affect employee reactions toward performance evaluation such as system satisfaction and efficacy of an employee's incentive to provide effort (Sabeen and Mehboob, 2008). In addition, measurement is one of component in performance evaluation system competency caused by employee satisfaction (Koys, 2001). Thus, the effectiveness of the human resource measurement, long-term employee commitment, human resource management efficiency, human capital value, and firm survival are its consequences as presented in Figure 3



Figure 3: The Effects of Human Resource Measurement on Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, Firm Survival



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 2a: Human resource measurement will have a positive influence on long-term employee commitment.

Hypothesis 2b: Human resource measurement will have a positive influence on human resource management efficiency.

Hypothesis 2c: Human resource measurement will have a positive influence on human capital value.

Hypothesis 2d: Human resource measurement will have a positive influence on firm survival.



Human resource investment

Human resource concepts concern the aspects of human development in organization. Human resources development is also called investment in human capital (McLean, 2006). Human resources investments is defined as any activity that influences future real income through the embedding of resources in people by Krasniqi (2016) whereas other research proposed that human resource investment is any activity which improves the quality (productivity) of the worker (Marimuthu, Arokiasamy, and Ismail 2009). In addition, investing in employee development is a central view of maintaining and developing the skills, knowledge and abilities of both individual employees and the organization as a whole (Lee and Bruvold, 2003). Human resources investment can be viewed as developing the most important section of any business, its human resource, by attaining or upgrading employee skills and attitudes at all levels to maximize enterprise effectiveness (Ukenna, 2010). The necessity to spend money on development of human resource especially in the form of training, transferring, and retention costs, human capital should be regarded as the most valuable asset to improve efficiency and productivity that should not be seen and reported as a cost, but as investment (Petty and Guthrie, 2000).

In this research, human resource investment refers to firm's ability of investment in human resource activities systemically and substantially, include adequate budgets allocation, continually research and develop employee knowledge, set substantial system in training courses to build more capability of people in work. Here, education and training are an important component of human capital investment. Thus, education and training provide the acquisition of knowledge, skills, and competencies as a result of the teaching of vocational or practical skills and knowledge that relate to specific useful competencies (European commission, 2012). Firms will invest extensively in firm specific type training initiatives and also developmental exercises so as to build the employees idiosyncratic knowledge. Most of the firms, by applying long term planning, invest in the building new skills by workforce, enabling employee to cope with the uncertain conditions that may face in future, thus, improving the employee performance through superior level of motivation and commitment. When employees recognize their organization interest in them through offering training programs, they in turn apply their best efforts to achieve organizational goals, and show high performance on job (Elnaga

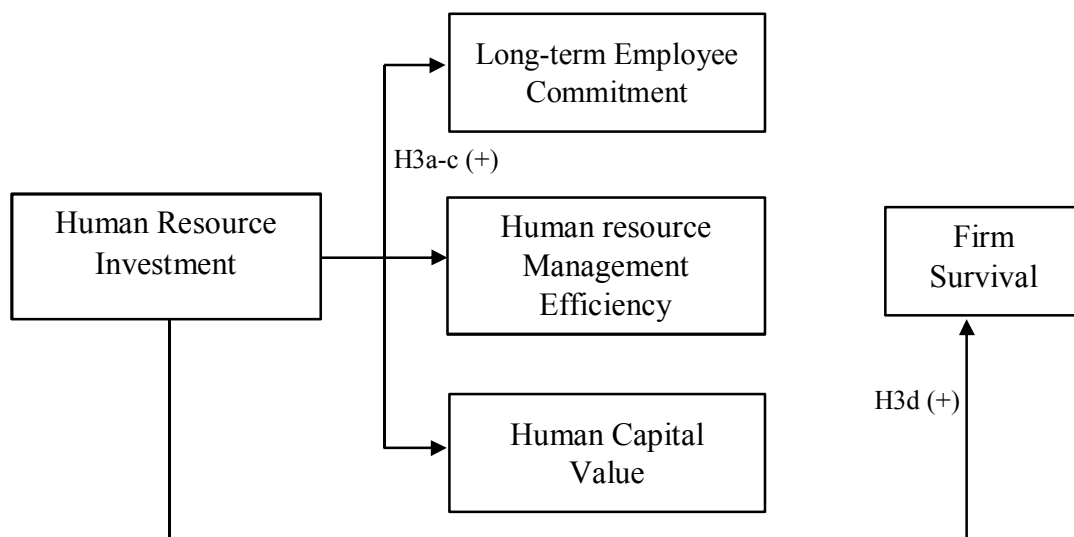


and Imran, 2013). Likewise, human capital stock is associated with greater productivity and high salaries (Selvarajan et al., 2007). Moreover, education and training are linked to a greater tendency to business and economic growth (Contractor and Mudambi, 2008), to organizational value and human behavior (i.e. job satisfaction, commitment and citizenship) (Lee and Bruvold, 2003; Ussahawanitchakit and Pongpearchan, 2010). Besides, the more the investment in human resource is profitable, the more postponing means lowering their present value. Increasing employee skills and abilities are expected to create future returns through increased productivity and business performance (Shih 2006; Katou, 2011).

Furthermore, previous studies suggest that to create new or better products, firm must create new knowledge or a novel recombination of exiting knowledge (Santos-Rodrigues et al., 2010). Thus, knowledge investments seem to gain the willingness, support and value of the creativity of the employee that improve innovativeness. The degree of investment in human resource practices intended to improve the knowledge, skills and abilities of the companies' employees (Wright and Kehoe, 2007). Another empirical research found that when organizations invest in general training and reciprocity grows there is an increase in employee commitment (Brum, 2007). More-highly-educated and more highly- skilled workers have been found not only to be able to adapt more rapidly and efficiently to new tasks and technologies, but also to be a direct source of innovation. In fact, education and even previous informal training have been found to increase substantially a worker's ability to be innovative on the job. In addition, the effect of investment in human resource development on organizational performance, a key finding is that the four variables have an impact on human capital effectiveness leading to organizational performance (Ukenna, 2010). Furthermore, investments in human knowledge had a significant impact on learning and sustained firm performance (Hatch and Dyer, 2004). Similarly, firms with higher investment in R&D and human resources have a stronger strategic orientation and increased sustained competitive advantage (Lau and Moser, 2008). Furthermore, investment in human capital is intrinsically linked to the success of a business suggested by Wyatt and Frick (2010). Therefore, the effectiveness of human resource investment, long-term employee commitment, human resource management efficiency, human capital value and firm survival are its consequences as presented in Figure 4



Figure 4: The Effects of Human Resource Investment on Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, Firm Survival



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 3a: Human resource investment will have a positive influence on long-term employee commitment.

Hypothesis 3b: Human resource investment will have a positive influence on human resource management efficiency.

Hypothesis 3c: Human resource investment will have a positive influence on human capital value.

Hypothesis 3d: Human resource investment will have a positive influence on firm survival.



Human resource reporting

Report is the result used to formally communicate to multiple stakeholders including boards, creditors, investors, and the government (Duréndez, 2003). It enables usefulness to all users who explicitly understand that business performs better. There are the two types of reports prepared for management; external reports and internal reports (Mishra, 2016). External report is the reports prepared for external users or for the persons outside the business are known as external reports. External reports are generally known as compulsory legitimacy reports or financial reports such as income statement and balance sheet. On the other hand, internal reports refer to those reports which are meant for different level of management. Internal reports are not public documents as well as are not expected to conform to any standards. Internal reports may call routine reports which are submitted before management at periodic intervals. For example; production report, sales report, production cost report, direct labor hours report, direct labor cost report, operating report, research and development report, working capital changes report etc. These reports are prepared by keeping in view the needs of disposal for scanning work outputs. However, human resource information is essential for several phases of management's planning and control functions. The need for firms to be able to effectively manage report on intangible assets has led to the development of a number of measurement tools such as content analysis. In the past decade, firms have incorporated the measurement of human resource into their strategic management and internal and external reports (Abeysekera and Guthrie, 2004); such as the Skandia Group, the Canadian Imperial Bank of Commerce, Hughes Space and Communications, Dow Chemicals Firm.

In this research, human resource reporting is defined as the presenting of organization's information about employee benefits clearly, including report of employee's performance, and show budget analysis report of budget allocation based on actual activities in annual reports or other media publicly. The human resources report provides transparency on the firm's employee metrics and how organization is translating strategic priorities into action. It gives examples of what organization achieved in annual year in organizational culture; diversity and inclusion; talent and development; talent acquisition; compensation and benefits; managing change; and collaboration with social partners. Human resource or resources reporting can be

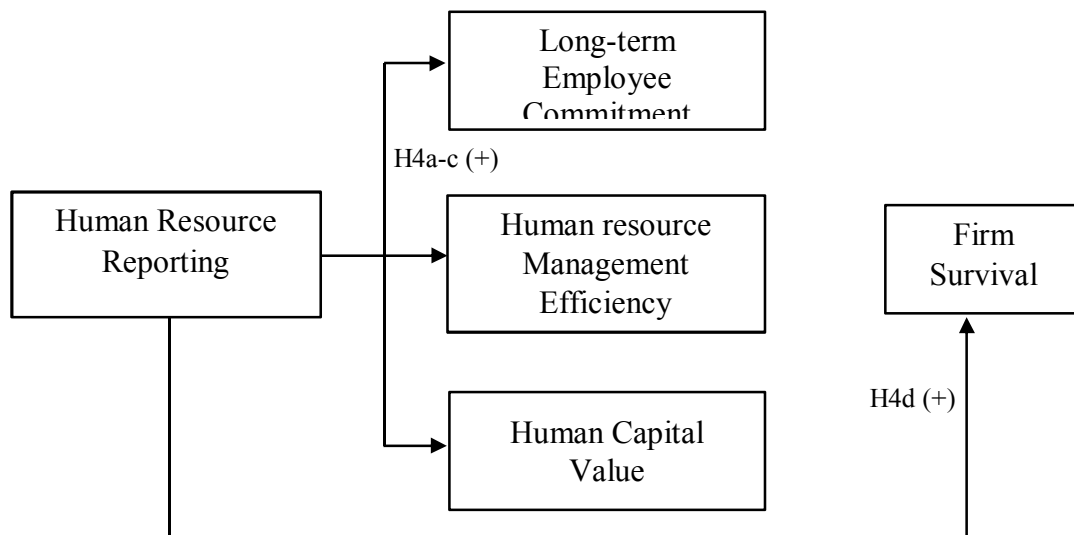


included 1) employee's personal details, 2) payroll detail, and 3) leaves report, retirement benefits, and different contributions in employee's welfare funds. Most empirical studies of intellectual capital disclosures have focused on annual reports (Bozzolan et al., 2003; Guthrie et al., 2006; Oliveira et al., 2006). Sustainability reports have become an increasingly important for company disclosure as it is a communication channel to their stakeholders including employees. In addition, human capital reporting can be an important means of ensuring that all stakeholders are fully informed of the value creation potential of the business (Cuganesan, 2006). Furthermore, greater extent of voluntary disclosure of relevant corporate information implies greater transparency, facilitate investment decision making and well management in human resource (Yau et al., 2009). However, disclosure of human capital information in the context of developing countries identifies the inadequacy of current human capital disclosure practices in company annual reports cause companies pay relatively more attention to figureheads than value creators (Huang et al., 2013). Consistent with Oliveira et al., 2010 stated that the important of intellectual capital reporting is not popular in Portugal. Another issue is in fact, there is no accounting standard on treatment of human resource accounting either from the International Accounting Standards Board or the Financial Reporting Council (Badiyani, 2012). In addition, the use of human resource accounting is limited by lack of universal approach to its reporting and low level of awareness and acceptance of the technique (Rajeshwari and MariGowda, 2016).

Therefore, although there are no disclosure requirements in relation to human resource and firms that do not have strong incentives to disclose information voluntarily (Bassi et al., 2000), recent trends show that the accounting profession has recognized the importance of human resource reporting for strategic positioning by providing information to enhance the firm's competitive advantage. This competitive advantage flows from creating, owning, protecting, and making it difficult to imitate, commercial and industrial knowledge assets (Teece, 2000). Finally, the disclosure of human resource information would also make managers more accountable and transparent to the stakeholders (Bassi et al., 2000). Therefore, the effectiveness of human resource reporting, long-term employee commitment, human resource management efficiency, human capital value and firm survival are its consequences as presented in Figure 5



Figure 5: The Effects of Human Resource Reporting on Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, Firm Survival



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 4a: Human resource reporting will have a positive influence on long-term employee commitment.

Hypothesis 4b: Human resource reporting will have a positive influence on human resource management efficiency.

Hypothesis 4c: Human resource reporting will have a positive influence on human capital value.

Hypothesis 4d: Human resource reporting will have a positive influence on firm survival.

Human resource monitoring

Monitoring refers to ability to continuously detect and identify ineffective and inefficient business processes, and frequently provides recommendations for improving business processes to ensure the achievement of the firm's objectives. Monitoring could



be able to react to timely changes. In addition, changes are caused by pressure from stakeholders and changes of technology, the internal monitoring process is essential to ensure that the controls are operating effectively and the risk decreases. The developed technology and the economic pressures in the competitive environment force the organizations to change attitudes in helping the organization achieve its goals through certain rules and procedures (Giriuniene and Giriunas, 2012). These all reasons lead to internal control monitoring (Coderre, 2006). The monitoring procedures enhance the management of the annual assessment leads to effectiveness of reducing costs and time (Avellanett, 2009). Thus, in this study, human resource monitoring refers to the ability of an organization to review ongoing operations, control development and training processes commonly, and evaluate employee skills development for improving human resource processes to make sure that knowledge from training is utilized for increasing work performance.

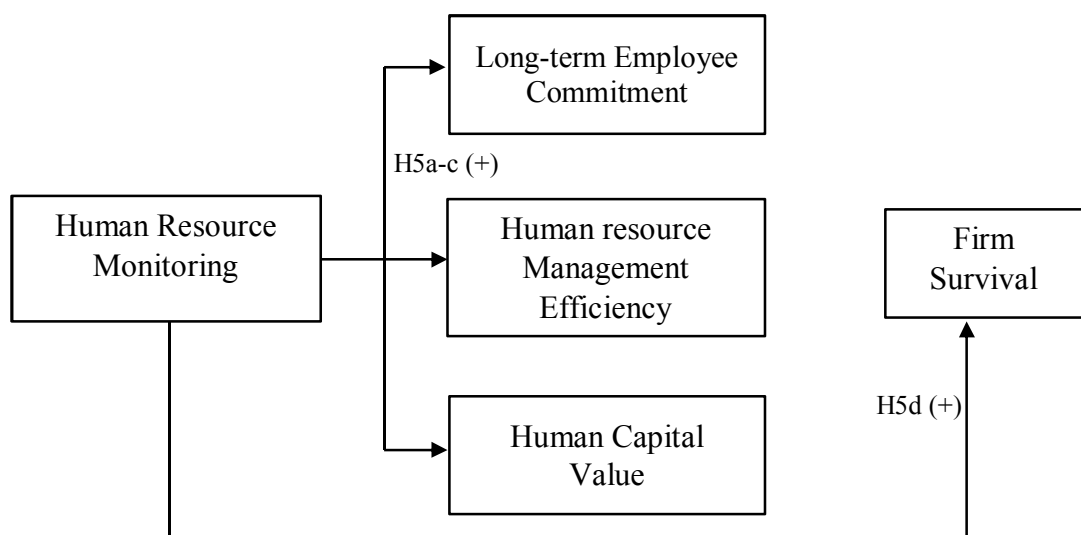
Monitoring is an essential component of internal control in the organizational structure that is used for the activities management in the organization to ensure the basis of successful implementation, and to achieve goal of organization (Morrill, Morrill and Kopp, 2012; Vijayakumar and Nagaraja, 2012). The effectiveness of monitoring must evaluate evidence collected on the strengths and weaknesses of working system lead to the preparation of plan for good practice and organizational objectives' achievement (Sawalqa and Qtish, 2012). Effectiveness of monitoring reduces the impact some of the risks that lead to improve the financial statement's reliability, effectiveness of implementation (Wittayapoom and Limsuwan, 2012). The organizational objectives are the efficiency and effectiveness of implementation, reliability of financial reporting, and compliance with the related laws and regulations (Amudo and Inanga, 2009). Monitoring is activity that focuses on detecting and prevention of disorders in working process that can reduce weaknesses and strengthen of systems (Sawalqa and Qtish, 2012), solve problems found and manage those deficiency activities (Yao and Xue-meng, 2012). Likewise, operational monitoring refers to the process designed to ensure appropriate assurance regarding the achievement of objectives (Changchit, Holsapple, and Viator, 2001). In addition, the operational in internal controls monitoring reduce the opportunities and behavioral fraud (Limmroth, 2012). Furthermore, monitoring system is important as an adequate assessment. The preservation of monitoring effectiveness



makes quality verification (Gramling and Vandervelde, 2006). In the same way, monitoring improvement affects the benefit of an organization the defects that may be the result of poor design of control procedures (Tan and Michelle, 2011). The preservation internal monitoring effectiveness makes verification quality (Gramling and Vandervelde, 2006), internal control monitoring make to increase effectiveness and efficiency of internal operation to be decency for the organization (Feng and Jinke, 2011). However, it is the dimension of the internal control function or activities that focus on detection and prevention of aberration in the process.

Monitoring is a major task that reduces or eliminates internal control weakness and strengthens the internal control systems (Sawalqa and Qtish, 2012). However, the inadequate segregation of duties and inherent limitations is the element of human error such as misunderstandings, fatigue, and stress, thus monitoring of human resource performance would make people have more awareness and cautiousness to work lead to increasing human resource management. This may be because the monitoring internal control does not affect sufficient effectiveness. Therefore, the effectiveness of human resource monitoring, long-term employee commitment, human resource management efficiency, human capital value and firm survival are its consequences as presented in Figure 6

Figure 6: The Effects of Human Resource Monitoring on Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, Firm Survival



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 5a: Human resource monitoring will have a positive influence on long-term employee commitment.

Hypothesis 5b: Human resource monitoring will have a positive influence on human resource management efficiency.

Hypothesis 5c: Human resource monitoring will have a positive influence on human capital value.

Hypothesis 5d: Human resource monitoring will have a positive influence on firm survival.

The Consequences of Modern Human Resource Accounting Implementation

Human Resource Management Efficiency

Human Resource Management can be described as a strategic, integrated and coherent approach to the employment, development and well-being of the people working in organizations. It has a strong conceptual basis drawn from the behavioral sciences and from strategic management, human capital and industrial relations theories (Armstrong et al., 2010). Human resource management is the policies, practices, and systems that influence employees' behavior, attitudes, and performance. Many companies refer to human resource management as involving "people practices". There are several important human resource management practices that should support the organization's business strategy: analyzing work and designing jobs, determining how many employees with specific knowledge and skills are needed (human resource planning), attracting potential employees (recruiting), choosing the right employees (selection) to the right job, teaching employees how to perform their jobs and preparing them for the future (training and development) increase their ability value, evaluating their performance (performance management), rewarding employees (compensation), and creating a positive work environment (employee relations) so that employees have positively



attitude to work in organization for longer period of time. An organization performs best when all of these practices are managed efficiency.

According to previous research indicated that the human elements of the organization are those that are capable of learning, changing, innovating and providing the creative trust which if properly motivated can ensure the long-term survival of the organization (Bontis, 2001). Human resource management is critical to the success of organizations because human capital has certain qualities that make it valuable (Noe et al., 2011). In terms of business strategy, an organization can succeed if it has a sustainable competitive advantage. Thus, human resource management efficiency can be a reflection of employee's productivity in organization. Employees are one of the most important assets of an organization as they contribute to its growth and success (Danish and Usman, 2010). Malik et al., (2010) concluded that in the era characterized by rapid and continuous change, knowledge capital must be retained in order for organizations to be productive and responsive to the needs of their stakeholders. However, an organization survives based on the efficiency of management. Efficiency is the use of financial, human, physical and information resources such that output is maximized for any given set of resource inputs, or input is minimized for any given quantity and quality of output. Thus, in this research, human resource management efficiency defined as the process of business operating to recruit people systematically, increasing the right man on the right job, and be able to retain high qualified employee to work with organization in the long run.

Firm Survival

Firm survival is the organization status that has gained a satisfaction performance continuously since the past, in the present and to the future. Noticeably, this variable is an important key of firm to improve organizational and is measured for sustainability. The organizational survival has long been an attraction for researchers, which is used as dependent variable like with this model. It also requires maintaining a balance between flexibility and stability upon the external environment (Boal and Schultz, 2007). Likewise, many studies describe survival as the approaches or strategies that firms must integrate their organizational capabilities and business innovation to ensure corporate survival in a long run operation. Performance evaluation system is a management tool and is driven toward competitive advantage through continuous

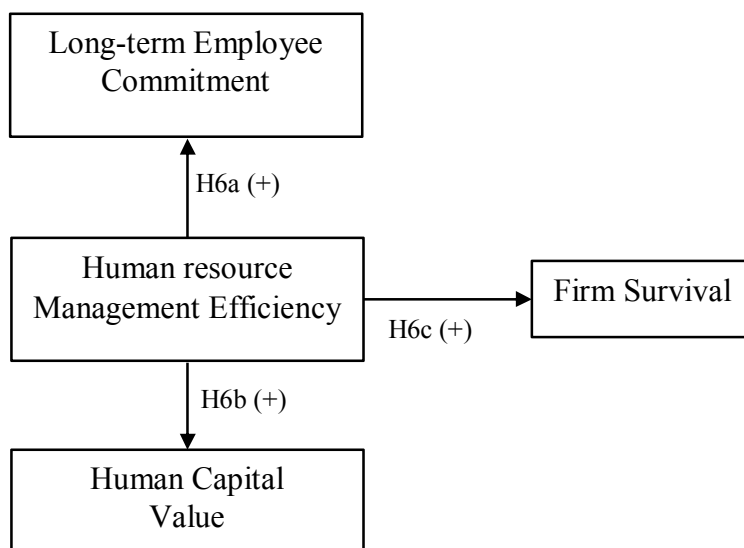


performance improvement that comes up with capability of the organization (Agbola, Hemans and Abena, 2011) to ongoing sustainability performance. In addition, firm survival is expected to extend to be better in the future. Therefore, potential in producing useful information which related decision making exceeds the expectations of stakeholders and executives who want to get more comprehensive information and clearly report indicated for the major ineffectiveness in the organization that is managed effectively. In this research, firm survival is defined as the organizational achievement to business operation stably, steady of financial position in the business from the past continuing to the present, as well as increasing growth rate of profits and market share progressively. (Kittikunchotiwut, Ussahawanitchakit, and Pratoom, 2013).

With increasing competition and economic environmental uncertainty, many service organizations require their employees to work creatively to improve service quality and speed, enhance organizational effectiveness, and ensure their long-term profitability and growth, which in turn, means survival (Hon, 2013). Most researchers and managers highlight the importance of having creative employees to sustain a competitive advantage and respond to a rapidly changing and manage in an uncertain competitive environment during a period of time (Persson, 2004). The previous research supports this argument such as Arribas and Vila (2007) found that the survival time of a new firm is gained by both general and special human capital which is accumulative, and it lengthens its survival time. They also found that the specific aspects of human capital that are the determinants of firm survival time are gender and previous work experience. Therefore, when defining firm survival it is important to consider a wide variety of potential organizational survival measures. In sum, the majority describes survival as approached, or strategies that organizations must use to integrate their organizational capabilities and business innovation, to ensure corporate survival in long run operation. Organizational survival requires maintaining a balance between flexibility and stability depending upon the external environment (Boal and Schultz, 2007). Thus, the effectiveness of long-term employee commitment, human resource management efficiency, human capital value and firm survival are its consequences as presented in Figure 7



Figure 7: The Effects of Human Resource Management Efficiency on Long-Term Employee Commitment, Human Capital Value, Firm Survival



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 6a: Human resource management efficiency will have a positive influence on long-term employee commitment.

Hypothesis 6b: Human resource management efficiency will have a positive influence on human capital value.

Hypothesis 6c: Human resource management efficiency will have a positive influence on firm survival.

Long-Term Employee Commitment

Today, organizations are faced with tough competition due to violent stream of awareness. So, in order to increase the competitive advantage from highly committed employees is essential for the organization that has changed increasing (Lok and Crawford, 2001). Also, nowadays, an organization is facing tough competition because



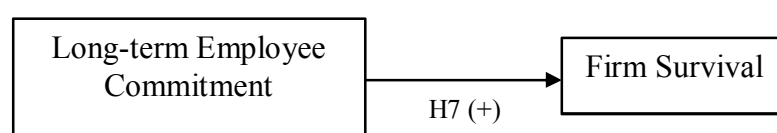
of intense stream of awareness. Therefore, in order to strengthen the competitive advantage that highly committed by employees, it is necessary for the organization to increase change and should enhance employee commitment (Stallworth, 2003). Commitment is a force that binds an individual to a course of action that relevance to a particular target (Meyer, Stanley, and Herscovitch, 2002). Commitment will encourage discretionary behaviors that will lead to positive goal outcomes and hence reinforce employee commitment to the organization. Work on commitment over the last decade has established (a) that commitment can take various forms, and (b) that is it can be directed towards various focused such as tasks, teams, customers. (Meyer, Becker, and Vandenberghe, 2004). Employee commitment can be characterized into three factors; (1) a strong belief and acceptance of the organization's goals and values; (2) a willingness to exert considerable effort on behalf of the organization; (3) a strong desire to maintain membership in the organization (Asmawi, 2012). Hence, employee commitment comes from employees who believe their future is tied to that of the organization and their willingness to make personal sacrifices for the organization. Employee behavior who has committed to an organization tends to identify with the objectives, goals, and wishes to remain in the organization which in turn, reduces turnover (Meyer, Becker, and Vandenberghe, 2004). In other words, an employee who has a sense of commitment will have greater willingness to follow the values and goals of the organization and willing to work to achieve organizational goals (Peng and Chiu, 2010). Moreover, employees who committed to organizations with different knowledge, skills, and capabilities as a diverse workforce tend to better create new ideas and innovation for the organization, which in turn, provides for the performance of a firm by enhancing its satisfaction. In addition, long-term employees save businesses money by reducing recruiting, training and lost productivity costs, and keeping institutional memory within organization. Keeping staff morale high will help organization retain workers longer, especially if workers feel part of a team so that firm could reduce staff turnover in the long run.

In previous research showed that employees who behave with considerable trust toward goals and values, have a willingness to work hard and a willingness to continue to be a member of the organization in the long run (Robinson, Perryman, and Hayday, 2004). Likewise, long-term employee commitment is the willingness to



dedicate to the organization, willingness to exert extra effort on behalf of organization and desire to be attached to, and sacrifice (Kataria, Garg and Rastog, 2013). People with commitment are deeply engaged with the organization; such people show better performance, come out with new and innovative ideas and suggestions and always strive to improve the performance of the business (Jafri, 2010). Therefore, in this research long-term employee commitment is defined as employee intention and dedication in working, use all capability for working, always ready to cooperate and sacrifice, working with happiness, always willing to adapt with any assigned tasks includes a sense of being a part of organization in long-term development. Clearly, employee commitment or engagement can potentially translate into valuable business results for an organization; gain the benefits of committed workforce at your organization (Vance, 2006). Everyday human resource practices such as recruitment, training, performance management and workforce surveys can provide powerful levers for enhancing engagement. Now all employees must contribute value by what they know and by the information they can provide. Investing in managing and exploiting the knowledge of every employee has become critical to the success of information age companies. Employee skills and education, employee commitment, positive employee attitudes and behavior, and employee motivation are considered to contribute to value creation the most (Beattie and Smith, 2010). In sum, the greater an employee's commitment, the more likely they deliver excellent on-the-job performance (Vance, 2006). So, it implies that the more a company is dedicated to taking care of its employees, the more likely that employees will take care of the organization. Therefore, the effectiveness of long-term employee commitment and firm survival are its consequences as presented in Figure 8

Figure 8: The Effects of Long-term Employee Commitment on Firm Survival



Taking all the aforementioned into account, this research formulates the following hypotheses:



Hypothesis 7: Long-term employee commitment will have a positive influence on firm survival.

Human Capital Value

The concept of value has essentially two different meanings. Value states the utility of a particular resource (i.e. the future use of a capital asset) and the purchasing power of the resource (i.e. money, securities). Moreover, values are the driver of the individual's behavior and an individual's propensity to hold the "right" values is an important part of the individual's value to the organization (Serenko and Bontis, 2004). Wright and Snell (2005) argued that value creation can be achieved by giving attention to the skills, knowledge, capability and commitment to workforce. Prior study concludes that human capital is a valuable asset in a firm. For example, Roos, Bainbridge, and Jacobsen (2001) stated that the value of human capital assesses from competence, attitude and intellectual agility of employees. Competence generates value through knowledge, skills, talent and know-how; attitude included in value generated by behavior of the employee in workplace and intellectual ability is the ability to innovate and change practices, reflecting on problems and reaching innovative solutions (Diez et al., 2010). Thus, in this study, human capital value refers to greater knowledge skills and outstanding expertise than others include unique capabilities creative employees who are able to increase firm value and adapt their knowledge fit along with situation.

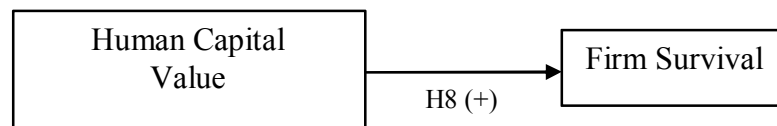
In attempting to increase human capital value, firm needs to concentrate on input of the firm's human capital such as searching for attracting employees, developing and implementing schemes to retain and incentive talent staffing (Wyatt and Frick, 2010). Competition is very widespread, firm needs to search activities for the best talent to become a competitive battleground (Huang, 2002). Recruitment and selection process for executive and professional position achieve an organization's mission playing a critical role as a core competitive advantage. As other researcher pointed out, either managerial talent or the quality of the management practices can contribute to productivity (Syverson, 2010). The talent of workforce is a strategic asset for the firm to acquire, cultivate, retain and organize for business strategy to ensure that an organization has the right people with the right skills and expertise available at the right time and place to achieve goals both the short and long term (Ballout, 2007). In addition, there are



statistically significant linkages between human resource practices, talent retention and firm performance (Zheng, 2009).

Furthermore, benefits and reward system play the critical role for maintaining its human capital value. Not only do they desire higher pay, better benefits and promotional opportunities, but they also value responsibility, personal growth, and autonomy (Huang et al., 2002). Special financial incentives such as bonuses, stock options or profit sharing and non-financial incentives such as career development and promotion can help to motivate employees and contribute towards attracting and retaining employees who have high capability (Collings and Mellahi, 2009). In addition, the value of intangible assets, such as human capital, provides an important source of competitive advantage. The value of human capital is greater than ever, thus, acquiring, maintaining and sustaining human capital which is the source of sustainable competitive advantage that leads to superior performance (Lawler, 2009). Therefore, the effectiveness of human capital value and firm survival are its consequences as presented in Figure 9

Figure 9: The Effects of Human Capital Value on Firm Survival



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 8: Human capital value will have a positive influence on firm survival.



The Effects of the Antecedent Variables on Each Dimension of Modern Human Resource Accounting Implementation

This section describes the association of five antecedents that consist of sustainability vision, executive learning, transformational leadership, technology change, and environmental uncertainty on five dimensions of modern human resource accounting implementation which includes human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring.

Sustainability Vision

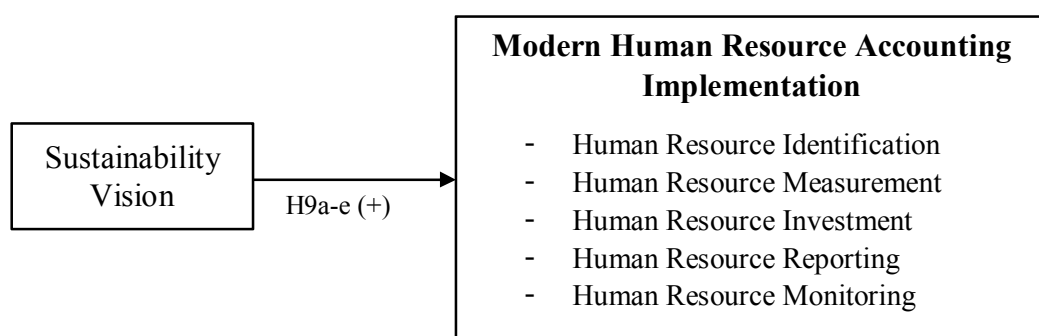
The change in goals of the organization caused by the business environment change requires balancing among maximizing wealth and going concern (Cairns and Saier, 2010). As a result, many firms need to look forward a guideline for the future and see where the company is headed in order to survive and grow through these business environment changes. A primary factor of corporate management is vision. Vision is a mental picture of the future. It is an idea of what the future can hold, but has not yet happened. A vision provides direction and road map into the future, it describes the type of organizations that what company wants to become and how it's unique, it creates purpose and identity. In business context, vision is very important for organizations because it provides guidance for decision-making, shapes the organization's strategy, guides the types of people company hire and promote, defines what company will and what company will not do, helps set priorities and guides planning, aligns people and activities across the organization, reflects an organization's core values and beliefs, empowers people and helps focus their efforts, brings change and hope for the future. Collectively, vision embodies desires and possibility of ideal thoughts to make judgment challenge for growing business in unpredictable change (Posavac, Kardes, and Brakus, 2010).

However, now the situation is radically different, an older vision of business, in which financial performance is seen as the only way to evaluate your actions, is being exposed as inadequate to the demands of an interdependent world and, in the long run, self-defeating. Thus, business leaders increasingly refer to sustainability as one of the



lynchpins of competition within their sector, and a significant source of both opportunity for, and risk to, long term competitive advantage. Many executives now acknowledge that the way they respond to the challenge of sustainability will affect their business competitiveness and the future of their company (Lubin and Esty, 2010). The first step in building a sustainability vision is to understand the company's current business goals, its vision for the future, and how your organization helps support and achieve these business objectives, both in the short and long term. Furthermore, vision has relationship with the strategic planning and the organization structure, which guides management leading to organization value and affect best organizational image and sustainable. In addition, it supports organization function (strategy planning and appropriate design for course action) and if vision of a firm consists with society and environment, it will lead to societal acceptance, creditability and effect on the firm survival (Bonn and Fisher, 2011). Also, it exerts expectations of stakeholders (Ferreira and Otley, 2009). Thus, vision is important for the organizational process or activity which affects all the functions of management and improves the future business performance (Prasertsang et al., 2012). In this research, sustainability vision is defined as an organizational perspective of operational direction and long-term strategic clarity include modern technology adaptation, encouraging staff to learn new operations, and participate in the direction of co-operations (Waranantakul et al., 2013). Based on the literature reviewed above, this research expects that sustainability vision would be an endogenous factor which can be positively relates to each dimension of modern human resource accounting implementation as presented in Figure 10

Figure 10: The Effects of Sustainability Vision on Modern Human Resource Accounting Implementation



Taking all previously mentioned into account, this research formulates the following hypotheses:

Hypothesis 9a: Sustainability vision will have a positive influence on human resource identification.

Hypothesis 9b: Sustainability vision will have a positive influence on human resource measurement.

Hypothesis 9c: Sustainability vision will have a positive influence on human resource investment.

Hypothesis 9d: Sustainability vision will have a positive influence on human resource reporting.

Hypothesis 9e: Sustainability vision will have a positive influence on human resource monitoring.

Executive Learning

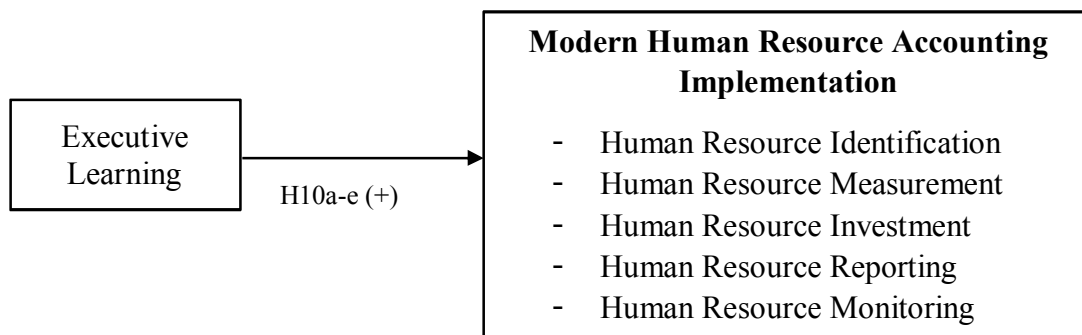
In the current economic climate, there is a growing imperative for executives to develop a greater sense of personal accountability in terms of identifying and closing any gaps in competencies that might prevent them continuously and effectively discharging their duties. To buttress this point, succeed in current business environment, executives have to be more innovative, aggressive and proactive in developing their careers (Fuller-Love, 2006). The term of executive refers broadly to senior managers (heads of divisions, profit centers, business units and their direct reports) (Goldsmith et al., 2010). Executives in organizational management are defined as a person or a group appointed and given the responsibility to manage the affairs of an organization and the authority to make decisions within specified boundaries. A leadership assessment and observed that dimensions related to learning were significantly related to leadership competencies and ratings of executive potential (Winiarski, 2014). Apparently, executives cannot shirk the responsibility of expanding their personal capabilities and may need to assume a much greater degree of learning requirements.



Learning and skill development plays an important role in an individual's long-term effectiveness and career success (Silzer and Church, 2009). During the past decade, learning has been used increasingly as an assessment for high potential talent (De Meuse et al., 2010). Learning generally refers to the activity or process of gaining knowledge or skill by studying, practicing, being taught, or experiencing something. Likewise, learning is the ability and willingness to learn from experience and subsequently apply those lessons to perform successfully in new or first-time situations defined by Lombardo and Eichinger (2000). Therefore, in this study defined executive learning as the potential of executive to learn and use the process of improving new knowledge, including knowledge sharing, and experience adaptation in current management to be more effective. A desire is to improve performance, morale, explore human potential, attract, develop and retain talent, create learning for executive and drive innovation for better performance. Dragoni et al., (2009) reported that managers with stronger learning orientations were more likely to be in developmental assignments and achieve higher levels of managerial competencies from the developmental experiences than those with weaker learning orientations. Dries et al., (2012) compared supervisory ratings of learning and job performance for a sample of employees who had been identified as high potentials by their organizations with a carefully matched control group of non-high potential employees. The study found that high performers were three times more likely to be identified as high potentials than employees with low performance. In summary, the above studies all found that learning agility was a better predictor of individuals being identified as high potentials than job performance. Based on the literature reviewed above, this research expects that executive learning would be an endogenous factor which can be positively related to each dimension of modern human resource accounting implementation as presented in Figure 11



Figure 11: The Effects of Executive Learning on Modern Human Resource Accounting Implementation



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 10a: Executive learning will have a positive influence on human resource identification.

Hypothesis 10b: Executive learning will have a positive influence on human resource measurement.

Hypothesis 10c: Executive learning will have a positive influence on human resource investment.

Hypothesis 10d: Executive learning will have positive influence on human resource reporting.

Hypothesis 10e: Executive learning will have a positive influence on human resource monitoring.

Transformational Leadership

The most valuable and indispensable resource that any organization needs in order to be effective and efficient is human resource. In addition, the organizational achievement depends on the hard working, loyal and involved managers and employees.



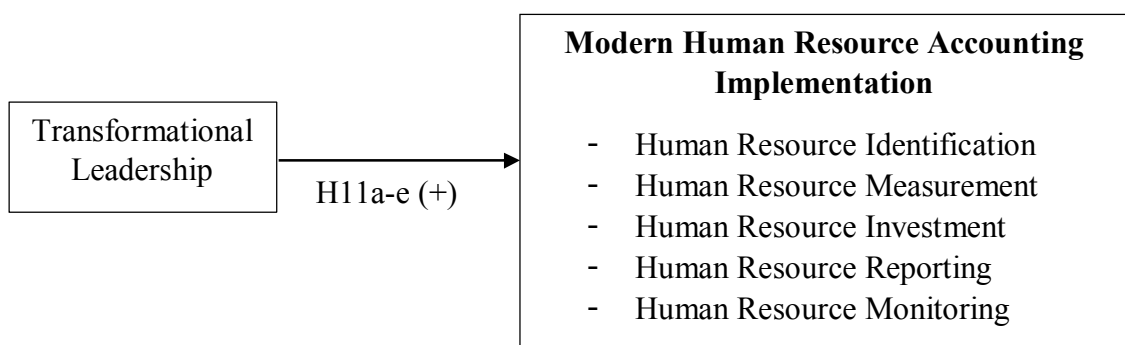
Leadership is a bond which makes people to work together (Gathungu, Iravo, and Namusonge, 2015). One crucial factor that may have a significant influence on task performance is leadership. Hence, it can be said that leadership is an encompassing the ability of an individual or organization to "lead" or guide other individuals, teams, or entire organizations. Leadership is of much importance when it comes to activating the followers, benefiting from the resources, organizational innovation, adaptation and performance in accordance with the mission of the organization (Antonakis and House, 2014). In the same way, leaders should use different strategies to manage followers individually and groups as a whole (Nielsen and Daniels, 2011). In the organizational literature, transformational leadership is a universally positive management practice, and transformational leaders influence employee work behaviors in beneficial ways across many organizational settings. Over the last 30 years, transformational leadership has become one of the most prominent theories of organizational behavior (Wright, Moynihan, and Pandey, 2012).

Transformational leadership has been defined as influencing followers by broadening and elevating followers' goals and providing them with confidence to perform beyond the expectations specified in the implicit or explicit exchange agreement (Shin and Zhou, 2003). Also, transformational leadership is defined as what leaders do in order to transform the values, needs, aspirations, followers' priorities and motivates their followers to exceed expectations by Thamrin (2012). Apparently, there has been research conducting about usefulness of transformational leadership. For example, leader had been found that have positive impact on followers' development and performance by Dvir, Avolio and Shamir (2002). Another research showed the positive relationship between transformational leadership and task performance is supported by a great deal of research (Piccolo and Colquitt, 2006). However, when transformational leadership is enhanced by training, the human resource development and performance will have positive relationship in a variety of organization contexts. There is general support for strong and positive relationships between transformational leadership and subjective performance outcomes (Zacher and Jimmieson, 2011). As transformational leaders provide constructive feedback to their followers, convince their followers to exhibit extra effort, and encourage followers to think creatively about complex problems so, followers tend to behave in ways that facilitate high levels of task



performance (Fok-Yew, 2015). Therefore, in this study, transformational leadership is defined as managerial ability in motivating organizational employees to make a change in operation and develop new strategy accord with situation efficiently (Rui, Emerson and Luis, 2010). Hence, managers are encouraged to consistently exhibit transformational leadership. This is because there is no doubt that an employee who works with a good leader will feel more satisfied, leading to an increase in his/her affective commitment to the corporation. Stronger affective commitment will lead to better performance and bring success to corporation (Gulluce et al., 2016). However, leaders played a significant role in monitoring the amount of control individuals have over their role (Ilknur, Pinar , and Uzay , 2017). Based on the literature reviewed above, this research expects that transformational leadership would be an endogenous factor which can be positively relates to each dimension of modern human resource accounting implementation., above as presented in Figure 12

Figure 12: The Effects of Transformational Leadership on Modern Human Resource Accounting Implementation



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 11a: Transformational leadership will have a positive influence on human resource identification.

Hypothesis 11b: Transformational leadership will have a positive influence on human resource measurement.



Hypothesis 11c: Transformational leadership will have a positive influence on human resource investment.

Hypothesis 11d: Transformational leadership will have a positive influence on human resource reporting.

Hypothesis 11e: Transformational leadership will have a positive influence on human resource monitoring.

Technology Change

In a rapidly changing environment, firms must develop and use new technologies in order to adapt to new environmental opportunities (Karim and Mitchell, 2000). It is important to assist business operation to response to internal and external users and working of employees, which can create competitive advantage and enhance firm performance. Technology is considered to invest and develop accordingly and rapidly as the existing of environment change (Karim and Mitchell, 2000). To deal with this rapid growth, firms need to continuously modify their processing systems and develop workforce to support new work procedure. Technological changes continuously generate new challenges and chances for investment in employee development, these chances need to occupy and change into value through effective and dynamic technology management (Rudez and Mihalic, 2007). Therefore, in this research, technology change is defined as technology growth in both diversity and higher competency of technology which impact on firm operation procedures effectively. Nowadays, firms need to acquire new idea to choose new technology from learning partnership to support the impact of changing on business process and cultural development. Therefore, firms must have technology changes in the growth of technology enterprise from external organizations continuously (Allred and Swan, 2004). Firms can focus production advantages through both the integration of new technology and the development of employee expertise. Similarly, the organizational technology process is a learning process through which a stream of new technological knowledge is originated. Shorter product life and the consequent need for workers to be able to absorb new skills quickly impact on education and training needs. The company offers on and off-site classroom education, training, laboratory training, and structured training in the workplace for

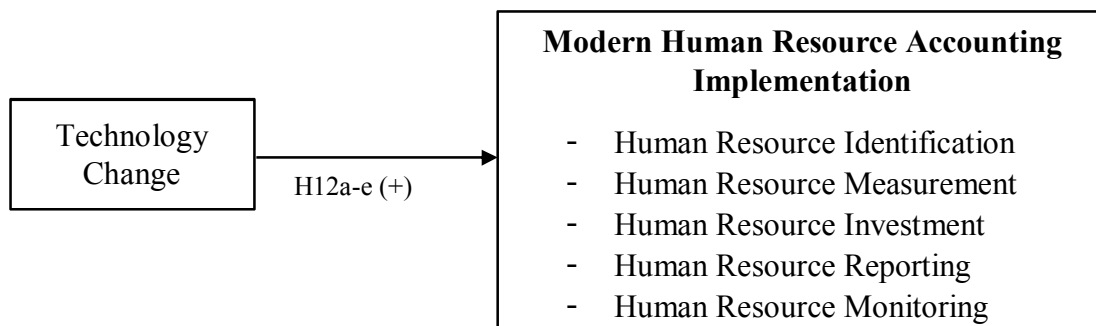


employees at all levels of the organization. Hence, firms must be a set of technological resource, both hardware and software utilizations, which support different application characteristics of learning activities such as technologies for distributing knowledge, knowledge discovery, knowledge creation and storage (Jitnom and Ussahawanitchakit, 2010).

In addition, the adoption of technically complex manufacturing equipment may require the adoption of new types of work practices, such as enhanced training in the new technologies and teamwork to solve technical problems (Bresnahan, Brynolfsson, and Hitt, 2002). Thus, the adoption of new technologies coincides with changes in human resource management practices. Once firms make a new investment in more technologically advanced versions, it is also more likely to institute technical training programs, problem solving teams, and adopt new work practices that support these skills. Investments in human capital through higher education and professional training can enhance their ability to generate and manage new technologies (Yussof and Ismail, 2002). Then, firms should invest on human resource development as well as on technology investment. The higher the continuous technology growth is, the more likely the firms will have strategic learning capability that leads to firm performance (Jitnom and Ussahawanitchakit, 2010). The information technology agenda in most companies reflects an operational and technical that focus due to the firm performance enhancement. For example, technology is used to improve business performance such as increasing revenues, reducing costs, or both (Porter, 2001). Furthermore, it has created information and financial services on web sites to allow the bank to differentiate their products and services. This is derived from information technology that helps facilitate users to link information more efficiently, comfortably and faster especially for workflow management (Tan and Teo, 2000). Thus, it can be seen that technology change has impacted on business development. Based on the literature reviewed above, this research expects that sustainability vision would be an endogenous factor which can be positively related to each dimension of modern human resource accounting implementation., above as presented in Figure 13



Figure 13: The Effects of Technology Change on Modern Human Resource Accounting Implementation



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 12a: Technology change will have a positive influence on human resource identification.

Hypothesis 12b: Technology change will have a positive influence on human resource measurement.

Hypothesis 12c: Technology change will have a positive influence on human resource investment.

Hypothesis 12d: Technology change will have a positive influence on human resource reporting.

Hypothesis 12e: Technology change will have a positive influence on human resource monitoring.

Environmental Uncertainty

The last antecedent is environmental uncertainty to which the firm should rapidly respond for solving and adapting the organization to appropriate conditions. It is an external factor that causes changing policy, goals, processes and the means of



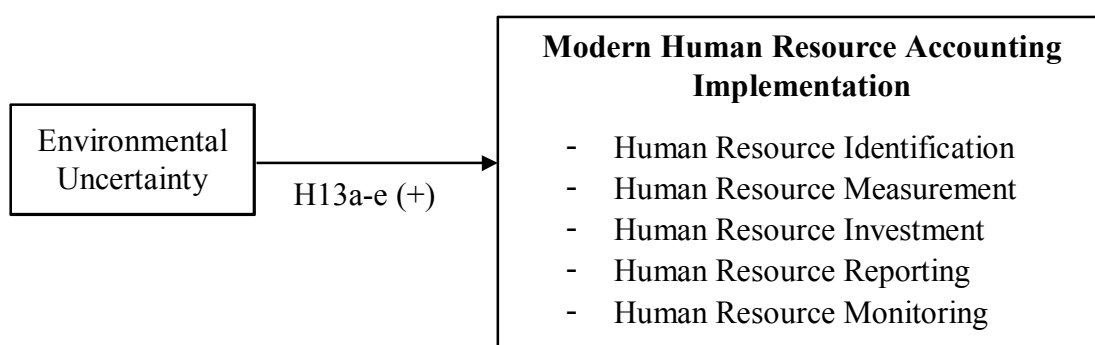
operation of the firm. In addition, the ability of a firm to evaluate an environmental uncertainty makes the firm concern more with how to change its behavior, which is crucial for the firm to operate in a rapidly changing environment. Environmental uncertainty can influence firm performance. In the same way, perceived firm environmental uncertainty is positively related to strategy and the firms' performances (Jusoh, 2010). In the previous research, environmental uncertainty is described as the rate and unpredictability of changes a firm's external environment (Brown, 2008). Likewise, the external environment is referred as conditions, entities, and factors surrounding an organization which influences its activities and choices, and determines its opportunities and risk (Ooncharoen and Ussahawanitchakit, 2009). Environmental uncertainty is referred to the external threat or instability of various aspects of the external surroundings, including available materials, economics, technology, and competitiveness proposed by Prempre and Ussahawanitchakit (2012). Finally, environmental uncertainty is defined as the organizational activities within the unstable, rapid and continual changing of the external environment, which affect the organizational operation by Sookaneknun, Ussahawanitchakit, and Boonlua (2013). Therefore, in this research, environmental uncertainty is defined as the change in the firm's surroundings which are unstable in increasing competitors, a variety of products and service, and law enforcement related organization to increase superior competition. (Sookaneknun, Ussahawanitchakit, and Boonlua, 2013).

In the absence of environmental demand for change, firm survival is often simply a reflection of how firms take the best advantage of their existing knowledge of assets, routines, experience, and capabilities (Wang and Li, 2008). Previously, developed capabilities may have not been able to keep up with the frequent changes from external environmental situations, leading to a higher possibility to unfit between a firm's existing capabilities and the environment (Sirmon, Hitt, and Ireland, 2007), which in turn, diminish firms' competitive advantage, performance, and sustainability (Ussahawanitchakit, 2012). The firm needs to learn about environmental uncertainty to understand, improve or develop organizational operations suggested by Prempre and Ussahawanitchakit (2012). Likewise, firm performance is affected by environmental uncertainty (Agle, Sonnenfeld, and Srinivasan, 2006). However, some events of these variables are not correlated. In addition, the external environment is correlated with



perceptions of external environmental uncertainty and the quality of financial and non-financial information. It includes a broad information scope that has usefulness for decision-making (Al-Mawali, 2015). Thus, it could be said that environmental uncertainty can enhance better firm performance. Those are pointed out so that environmental uncertainty is related to effective resource management, quality controlling and monitoring of operation activities in order to build better survival and performance of the firm. To prepare for rapid changes, organizations tend to be concerned with ability in the employees' skills, knowledge, abilities, and other characteristics such as behavior, motivation, personality, willingness, and interest by gaining information and the employees' ability to adapt through incremental improvements of flexibility and continual seeking of new methods and mechanisms. Based on the literature reviewed above, this research expects that environmental uncertainty would be an endogenous factor which can be positively related to each dimension of modern human resource accounting implementation., above as presented in Figure 14

Figure 14: The Effects of Environmental Uncertainty on Modern Human Resource Accounting Implementation



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 13a: Environmental uncertainty will have a positive influence on human resource identification.



Hypothesis 13b: Environmental uncertainty will have a positive influence on human resource measurement.

Hypothesis 13c: Environmental uncertainty will have a positive influence on human resource investment.

Hypothesis 13d: Environmental uncertainty will have a positive influence on human resource reporting.

Hypothesis 13e: Environmental uncertainty will have a positive influence on human resource monitoring.

Moderating Variables

This section explains the influences of the moderating effect which consists of two variables: governance culture and growth mindset. Governance culture is a moderating between effects of five dimensions of modern human resource accounting implementation on its consequences. Growth mindset is a moderating between antecedent variables on each dimension of modern human resource accounting implementation.

Governance Culture

Culture is defined as a set of attitudes, beliefs, customs, values and practices which are common to a group (Alvesson, 2002). Moreover, culture includes a set of social norms that describe what shows as suitable or unsuitable behaviors within the borders of the organization (Cabrera et al., 2001). There are researches having suggested that organizational performance depends on the degree of culture values (Shahzad et al., 2012; Uddin et al., 2013). Moreover, different cultures deliver different outcomes for the firms (Tseng and Lee, 2009). Indeed, the culture of the firm affects organizational member's expectations of each other.

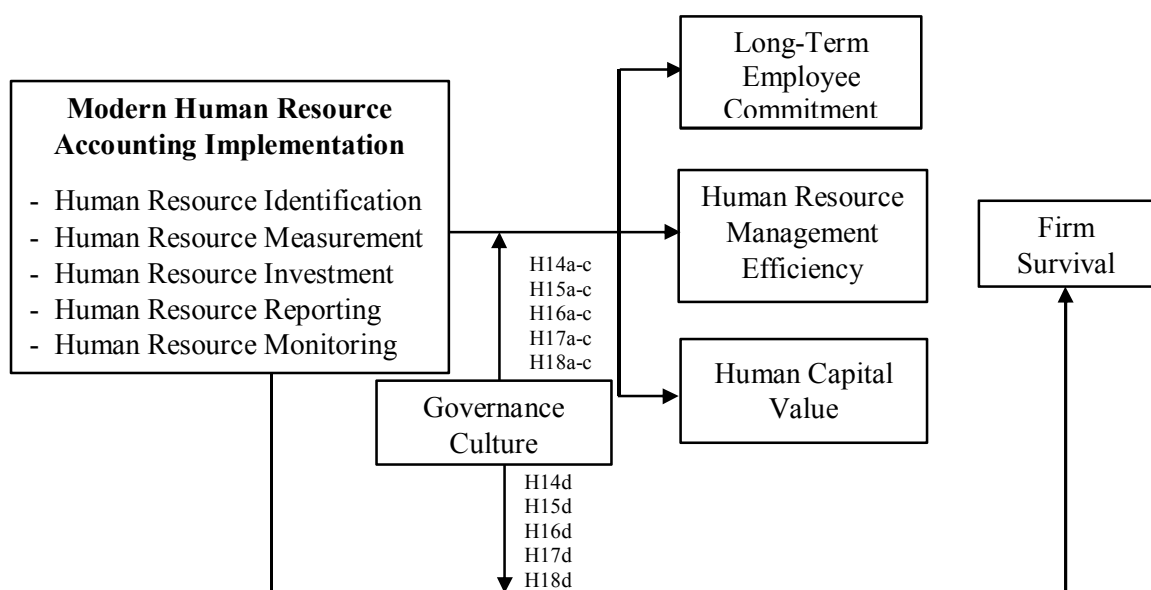
In the last twenty years, the concepts of "governance" have become widely used in business operations. The generic understanding of governance is the



management of resources and policy-making by means of exercising authority (power). Thus, it entails all instruments through which different policy stakeholders exercise legal rights with the aim to achieve political, economic, cultural and social objectives. However, there has been research on the meaning of corporate governance such as O'Donovan (2003) defined corporate governance as an internal system encompassing policies, processes and people, which serve the needs of stakeholders by directing and controlling management activities with good business savvy, objectivity, accountability and integrity. These rules relate to principles such as responsibility, accountability, honesty, information transparency and fairness (Cadbury, 2000).

In this research, governance culture can be considered as operational guideline that are generally accepted throughout the organization in respect of each other's rights, duties, and responsibilities including compliance of organizational regulations. In other words, governance culture is organization's culture motivation to do their work with the highest ethical standards. Hence, a company which is well governed is the one that is accountable and transparent to its shareholders such as employees, creditors, customers, and society at large. Thus, governance culture moderates the support of the relationships between the five dimensions of modern human resource accounting implementation and its outcomes as presented in Figure 15

Figure 15: The Role of Governance Culture as a Moderator



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 14a: Governance culture positively moderates the relationship between human resource identification and long-term employee commitment will be by.

Hypothesis 14b: Governance culture positively moderates the relationship between human resource identification and human resource management efficiency.

Hypothesis 14c: Governance culture positively moderates the relationship between human resource identification and human capital value.

Hypothesis 14d: Governance culture positively moderates the relationship between human resource identification and firm survival.

Hypothesis 15a: Governance culture positively moderates the relationship between human resource measurement and long-term employee commitment.

Hypothesis 15b: Governance culture positively moderates the relationship between human resource measurement and human resource management efficiency.

Hypothesis 15c: Governance culture positively moderates the relationship between human resource measurement and human capital value.

Hypothesis 15d: Governance culture positively moderates the relationship between human resource measurement and firm survival.

Hypothesis 16a: Governance culture positively moderates the relationship between human resource investment and long-term employee commitment.

Hypothesis 16b: Governance culture positively moderates the relationship between human resource investment and human resource management efficiency.



Hypothesis 16c: Governance culture positively moderates the relationship between human resource investment and human capital value.

Hypothesis 16d: Governance culture positively moderates the relationship between human resource investment and firm survival.

Hypothesis 17a: Governance culture positively moderates the relationship between human resource reporting and long-term employee commitment.

Hypothesis 17b: Governance culture positively moderates the relationship between human resource reporting and human resource management efficiency.

Hypothesis 17c: Governance culture positively moderates the relationship between human resource reporting and human capital value.

Hypothesis 17d: Governance culture positively moderates the relationship between human resource reporting and firm survival.

Hypothesis 18a: Governance culture positively moderates the relationship between human resource monitoring and long-term employee commitment.

Hypothesis 18b: Governance culture positively moderates the relationship between human resource monitoring and human resource management efficiency.

Hypothesis 18c: Governance culture positively moderates the relationship between human resource monitoring and human capital value.

Hypothesis 18d: Governance culture positively moderates the relationship between human resource monitoring and firm survival.



Growth Mindset

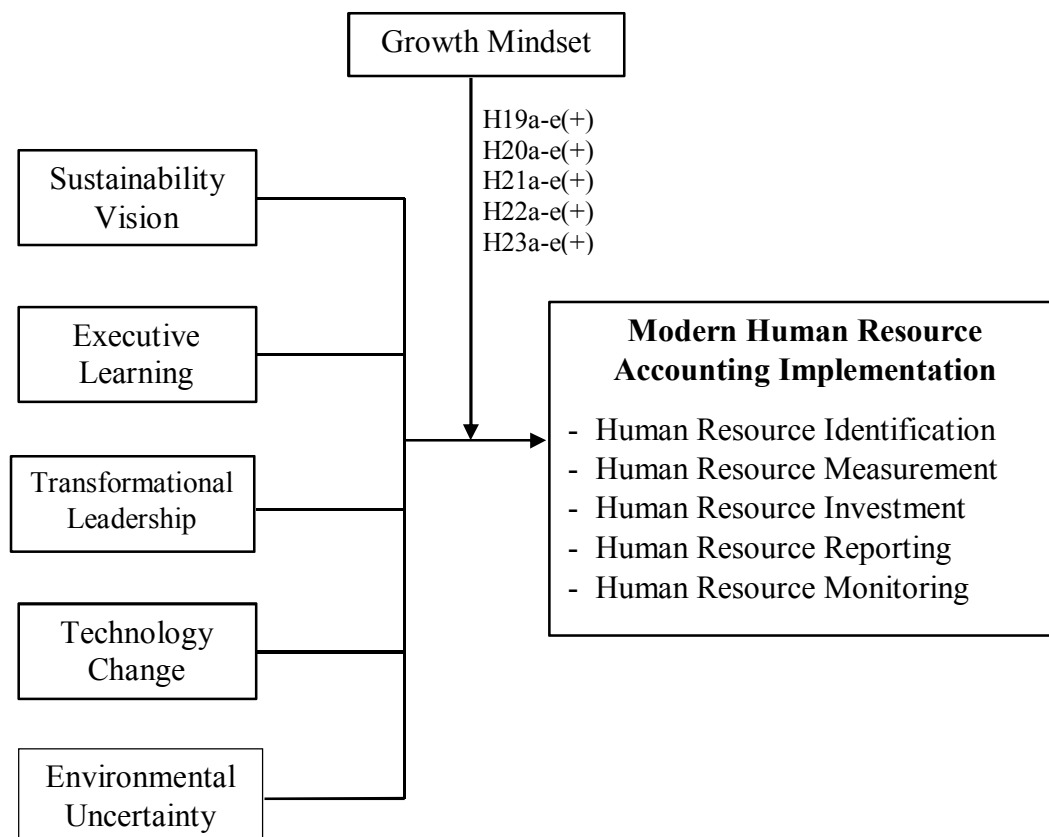
A growth mindset is a belief that employees can get smarter through hard work and practice. Growth mindset is all about trying hard, using good strategies, and getting the help workers need. A person with a “Growth Mindset” is the one who is willing to face challenges, and able to accept with making mistakes, and chooses to learn from those mistakes to keep going. Growth mindset was developed by psychologist Carol Dweck and popularized in her book, *Mindset: The New Psychology of Success*. It has become a buzzword in many major companies, even working its way into their mission statements. Having a growth mindset means understanding that intelligence can be developed. The organizations who foster a growth mindset “culture of development”, asserts that people can grow and improve with effort, good strategies, and good mentoring. Culture-of-development organizations foster growth mindset, actively seeking to stretch their employees and promote new skills. When entire companies embrace a growth mindset, their employees report feeling far more empowered and committed; these employees also receive far greater organizational support for collaboration and innovation (Murphy and Dweck, 2016). In organization, growth mindset leads firm to success because the behavior of people in organizations have more willingness to open new opportunities, takes reasonable risks, tolerates ambiguity, and implements an aggressive strategy (Gurel, Altinay and Daniele, 2010). Therefore, the key of increase mindset is based on the characteristics of the individuals in the organization who are ready to open new opportunities and to create value for the organization in terms of knowledge and innovation (Hitt, Ireland and Lee, 2000). Likewise, the correlation between a ‘growth mindset’ culture of development and positive behaviors in organizations’ findings point to the importance of cultivating a growth mindset culture of development is a key factor in creating greater agility and innovation and developing an engaged, collaborative, highly committed and trusting workforce (Delaney, 2015).

From the foregoing, growth mindset in this research is defined as attitude change or beliefs in development for firm progress, innovation and utilizes technology in line with the operational approach that will lead to a well-accepted practice. It includes open-minded new ideas leading to new knowledge that benefits the organization. It refers to the acceptance of risks by the management of the organization,



and acceptance in using resources that will lead to opportunities or failure for investment (Bekefi, Epstein, and Yuthas, 2008). In order to success, entrepreneurs need to open new opportunities, ready to face risks, being highly committed, or having a thirst for success, so there must be a way that can lead to successful organizations (Seth, 2016). Similarly, fear of failure will lead to an analysis and business solutions for inventing new knowledge, ideas and imagination to create benefit for continued business opportunities. A review of the past literature demonstrates a significant trend that, if the organization is able to cultivate the people to an entrepreneurial mindset, then it has the potential to raise awareness and to take advantage of the learning experience and information of the firm, to effectively achieve the objectives of the organization (Felicio, Caldeirinha, Ribeiro-Navarrete, 2015). Thus, growth mindset moderates the support of the relationships between the five dimensions of modern human resource accounting implementation and its outcomes as presented in Figure 16

Figure 16: The Role of Growth Mindset as a Moderator



Taking all the aforementioned into account, this research formulates the following hypotheses:

Hypothesis 19a: Growth mindset positively moderates the relationship between sustainability vision and human resource.

Hypothesis 19b: Growth mindset positively moderates the relationship between sustainability vision and human resource measurement.

Hypothesis 19c: Growth mindset positively moderates the relationship between sustainability vision and human resource investment.

Hypothesis 19d: Growth mindset positively moderates the relationship between sustainability vision and human resource reporting.

Hypothesis 19e: Growth mindset positively moderates the relationship between sustainability vision and human resource monitoring.

Hypothesis 20a: Growth mindset positively moderates the relationship between executive learning and human resource identification.

Hypothesis 20b: Growth mindset positively moderates the relationship between executive learning and human resource measurement.

Hypothesis 20c: Growth mindset positively moderates the relationship between executive learning and human resource investment.

Hypothesis 20d: Growth mindset positively moderates the relationship between executive learning and human resource reporting.

Hypothesis 20e: Growth mindset positively moderates the relationship between executive learning and human resource monitoring.



Hypothesis 21a: Growth mindset positively moderates the relationship between transformational leadership and human resource identification.

Hypothesis 21b: Growth mindset positively moderates the relationship between transformational leadership and human resource measurement.

Hypothesis 21c: Growth mindset positively moderates the relationship between transformational leadership and human resource investment.

Hypothesis 21d: Growth mindset positively moderates the relationship between transformational leadership and human resource reporting.

Hypothesis 21e: Growth mindset positively moderates the relationship between transformational leadership and human resource monitoring.

Hypothesis 22a: Growth mindset positively moderates the relationship between technology change and human resource identification.

Hypothesis 22b: Growth mindset positively moderates the relationship between technology change and human resource measurement.

Hypothesis 22c: Growth mindset positively moderates the relationship between technology change and human resource investment.

Hypothesis 22d: Growth mindset positively moderates the relationship between technology change and human resource reporting.

Hypothesis 22e: Growth mindset positively moderates the relationship between technology change and human resource monitoring.

Hypothesis 23a: Growth mindset positively moderates the relationship between environmental uncertainty and human resource identification.



Hypothesis 23b: Growth mindset positively moderates the relationship between environmental uncertainty and human resource measurement.

Hypothesis 23c: Growth mindset positively moderates the relationship between environmental uncertainty and human resource investment.

Hypothesis 23d: Growth mindset positively moderates the relationship between environmental uncertainty and human resource reporting.

Hypothesis 23e: Growth mindset positively moderates the relationship between environmental uncertainty and human resource monitoring.

Summary

This chapter contains the conceptual model of modern human resource accounting implementation drawn from the contingency theory, the stakeholder theory, human capital theory and the 23 hypotheses developed to test the relationships between its five antecedents (sustainability vision, executive learning, transformational leadership, technology change, environmental uncertainty) and its consequences (long-term employee commitment, human resource management efficiency, human capital value, and firm survival) of modern human resource accounting implementation. Furthermore, this research also examines the moderating effects of growth mindset and governance culture. Table 2 includes the summary of the hypothesized relationships.

The next chapter shows how the research methods are conducted. It provides an insight into the sampling method used, the data collection techniques, and the various techniques that were used to analyze the data.



Table 3: Summary of Hypothesized Relationships

Hypothesis	Description of Hypothesized Relationships
H1 a-d	Human resource identification will have a positive influence on (a) long-term employee commitment, (b) human resource management efficiency, (c) human capital value, and (d) firm survival.
H2 a-d	Human resource measurement will have a positive influence on (a) long-term employee commitment, (b) human resource management efficiency, (c) human capital value, and (d) firm survival.
H3 a-d	Human resource investment will have a positive influence on (a) long-term employee commitment, (b) human resource management efficiency, (c) human capital value, and (d) firm survival.
H4 a-d	Human resource reporting will have a positive influence on (a) long-term employee commitment, (b) human resource management efficiency, (c) human capital value, and (d) firm survival.
H5 a-d	Human resource monitoring will have a positive influence on (a) long-term employee commitment, (b) human resource management efficiency, (c) human capital value, and (d) firm survival.
H6 a-c	Human resource management efficiency will have a positive influence on (a) long-term employee commitment, (b) human capital value, and (c) firm survival.
H7	Long-term employee commitment will have a positive influence on firm survival.
H8	Human capital value will have a positive influence on firm survival.
H9 a-e	Sustainability vision will have a positive influence on (a) human resource identification, (b) human resource measurement, (c) human resource investment, (d) human resource reporting, and (e) human resource monitoring.



Table 3: Summary of Hypothesized Relationships (Continued)

Hypothesis	Description of Hypothesized Relationships
H10 a-e	Executive learning will have a positive influence on (a) human resource identification, (b) human resource measurement, (c) human resource investment, (d) human resource reporting, and (e) human resource monitoring.
H11 a-e	Transformational leadership will have a positive influence on (a) human resource identification, (b) human resource measurement, (c) human resource investment, (d) human resource reporting, and (e) human resource monitoring.
H12 a-e	Technology change will have a positive influence on (a) human resource identification, (b) human resource measurement, (c) human resource investment, (d) human resource reporting, and (e) human resource monitoring.
H13 a-e	Environmental uncertainty will have a positive influence on (a) human resource identification, (b) human resource measurement, (c) human resource investment, (d) human resource reporting, and (e) human resource monitoring.
H14 a-d	Governance culture positively moderates the relationship between human resource identification and (a) long-term employee commitment, (b) human resource management efficiency, (c) human capital value, and (d) firm survival.
H15 a-d	Governance culture positively moderates the relationship between human resource measurement and (a) long-term employee commitment, (b) human resource management efficiency, (c) human capital value and (d) firm survival.
H16 a-d	Governance culture positively moderates the relationship between human resource investment and (a) long-term employee commitment, (b) human resource management efficiency, (c) human capital value and (d) firm survival.



Table 3: Summary of Hypothesized Relationships (Continued)

Hypothesis	Description of Hypothesized Relationships
H17 a-d	Governance culture positively moderates the relationship between human resource reporting and (a) long-term employee commitment, (b) human resource management efficiency, (c) human capital value and (d) firm survival.
H18 a-d	Governance culture positively moderates the relationship between human resource monitoring and (a) long-term employee commitment, (b) human resource management efficiency, (c) human capital value and (d) firm survival.
H19 a-e	Growth mindset positively moderates the relationship between sustainability vision and (a) human resource identification, (b) human resource measurement, (c) human resource investment, (d) human resource reporting, and (e) human resource monitoring.
H20 a-e	Growth mindset positively moderates the relationship between executive learning (a) human resource identification, (b) human resource measurement, (c) human resource investment, (d) human resource reporting, and (e) human resource monitoring.
H21 a-e	Growth mindset positively moderates the relationship between transformational leadership and (a) human resource identification, (b) human resource measurement, (c) human resource investment, (d) human resource reporting, and (e) human resource monitoring.
H22 a-e	Growth mindset positively moderates the relationship between technology change and (a) human resource identification, (b) human resource measurement, (c) human resource investment, (d) human resource reporting, and (e) human resource monitoring.
H23 a-e	Growth mindset positively moderates the relationship between environmental uncertainty and (a) human resource identification, (b) human resource measurement, (c) human resource investment, (d) human resource reporting, and (e) human resource monitoring.



CHAPTER III

RESEARCH METHODS

The previous chapter describes the concept of modern human resource accounting implementation including a theoretical foundation, a literature review, the conceptual framework, and hypotheses development, while this chapter describes the research methods which are organized as follows. Firstly, the sample selection and data collection procedure section including the population and sample, the data collection, and the test of non-response bias are detailed. Secondly, the variable measurements are developed. Thirdly, the instrumental verifications including the test of validity and reliability and the statistical analysis including the regression equations are presented. Finally, the table that presents the summary of definitions and the operational definitions of the constructs are included.

Sample Selection and Data Collection Procedure

Population and Sample

The population of this research is companies in Information and Communication Technology (ICT) business in Thailand. There are four main sub-sectors of ICT business; Computer Hardware, Computer Software, Computer Services, and Communication. The reason why ICT business is appropriate with this research because the features of this business has involved innovation technology and new creation which require human knowledge development for work as well as new ways of working to drive a greater productivity, thus providing a true picture about the human resources with their strengths and weaknesses in the enterprise are needed so that the recruitment or retrenchment policies can be framed keeping the impact on the long-run profitability in mind. In macro level, increasing in the economic use of knowledge (Haelermans and Borghans, 2012) has led to a major change in the conditions and characteristics of the labor market (Carnoy, 2004) especially in this digital era. In addition, ICT not only contributes directly to a firm's production as a part of its capital stock, it also affects a firm's innovative capacity and its flexibility to adjust to economic



shocks. Moreover, there is mounting evidence of the need to complement ICT investment with organizational changes and appropriate skills (Tjin-A-Tsoi, 2015).

For more than decade, The Government of Thailand has considered ICT and important enabler for economic and social development and for enhancing the competitiveness of domestic business (United Nations Conference on Trade and Development, 2008). Currently, Thailand's national ICT policy framework is based on the ICT Master Plan 2011-2020, which is conducted by Ministry of Information and Communication Technology (MICT) and the Ninth National Economics and Social Development Plan. Government agencies, representatives of the private sector, civil society and academia participated in the debate leading to the adoption of the ICT Master Plan. Since 2002, the Ministry of ICT has been in charge of pursuing and implementing the objectives and strategies set out in the Master Plan (MICT, 2011). The Master Plan had the general goal of fostering Thailand's development through ICT and focused on four main objectives: to increase the country's economic competitiveness; to develop a knowledge-based society; to foster sustainable development through equitable access for all; and to develop the ICT industry (National Electronics and Computer Technology Center, 2003). The Ministry of ICT is in the process of preparing the second National ICT Master Plan for the next ten years (2011-2020). Therefore, it cannot be denied that ICT business is a crucial driving force for Thailand economic growth in the 21st century.

In this research, the ICT businesses in Thailand consist of 1,054 firms. The database in this research is drawn from Thailand ICT's Industry Directory 2015 under the Ministry of Information and Communication Technology on their website: <http://www.mict.go.th> as of March 11, 2017. According to Krejcie and Morgan (1970), the required sample size to be a representative of the ICT industry in this research is 282, which is a minimum required sample size. However, previous research suggests that the average response rate of the mailed questionnaire survey is in a range between 15 and 20 percent (Menon et al., 1999; Aaker, Kumar and Day, 2001). Therefore, oversampling is needed to ensure a minimum sample size (Bartlett II, Kotrlik and Higgins, 2001). Thus, all 1,054 ICT firms were chosen from the database list, and they were all subsequently selected as the sample size. Accounting executives are chosen as an appropriate key informant for a distributed mail survey because this position is



considered as the most knowledge and understanding of accounting practice, accounting information, accounting policy, accounting standards, corporate vision, corporate reports, exclusive summary and others. Therefore, the questionnaires are directly mailed to all 1,054 ICT firms.

With respect to the questionnaires mailed to respondents, 72 mails were undelivered because these companies may be moved to unknown locations. The undeliverable mails were deducted from the original 1,054 mails. As a result, 982 mails were valid and 225 of them were received. However, three mails were found incomplete so discarded. Thus, 222 mails were the final amount of complete questionnaires for further analysis. The effective response rate was approximately 22.60 percent. The acceptance criterion for the minimum sample size should not fall below five observations for each interdependent variable (Hair et al., 2010). For this research, a total of 16 variables, was $16 \times 5 = 80$. Thus, 22 accountants are an acceptable sample size for employing multiple regression analysis. The details of questionnaire mailing are shown in Table 4.

Table 4 Details of Questionnaire Mailing

Details	Numbers
Numbers of questionnaires mailed	1,054
Numbers of undelivered questionnaires	72
Numbers of successful questionnaires mailed	982
Non-response questionnaires	757
Received questionnaires	225
Number of questionnaires with missing data or incomplete questionnaires	3
Useable questionnaires	222
Response rate ((222*100)/982)	22.60%

Data Collection

This research focuses on a study design in which the variables are measured at one time (Malhotra and Peterson, 2006). Therefore, this research employs a mailed questionnaire as the instrument for collecting data. The questionnaire is appropriately used to collect data in this research for three reasons. Firstly, a mailed questionnaire is a



widely-used method for large-scale data collection in behavioral accounting because a representative sample can be collected from the chosen population in a variety of locations at a low cost (Kwok and Sharp, 1998). Secondly, mail questionnaires are more frequently deployed for business and social research because of the ease of implementation (Dillman, 1991). Finally, the mail questioner puts less pressure for an immediate response on the potential informant than telephone or face-to-face interviews. Hence, a mail questionnaire gives respondents a greater feeling of comfort and autonomy. In addition, to reduce a possible bias, the researcher emphasizes that all responses kept completely confidential. All information are not disclosed or shared with any third party without an informant's written permission.

In collecting data from the general public, it is difficult to achieve a high response rate. To achieve a sufficient response rate, an appropriate follow-up procedure must be performed. According to Dillman (1972; 1991), follow-up procedures should start with a postcard designed as a thank you within one week after the questionnaires are distributed. Subsequently, follow-up letters were sent for informing each non respondent within three weeks after a follow-up postcard. Finally, a seven-week follow up letter containing a replacement questionnaire was distributed within four weeks after the follow-up letter.

The mail questionnaire is employed as the core instrument for collecting data. It consists of seven parts. Part one asks for the personal information of the key informant including gender, age, marital status, education level, working experience, average revenue, and current position. Part two asks for general information of company include type of entity, business characteristics, number of employees, operational capital, average revenue, and periods of time in business. Part three through five requests to measure each construct base on variables in the conceptual model. These items are adapted from previous literature and are designed for a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). According to Nunnally (1970), for the number of choices, it is usually better to use four to eight categories. Beyond this, it is not meaningful and it will become confusing. Therefore, using five categories is appropriate for creating a refined measure. All constructs are developed for measuring from the definition of each, as well as from previous literature reviews.



Part three requests for the five dimensions of modern human resource accounting implementation which include human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring. Next, part four asks for the perceptions of the operational outcomes and firm performance consisting of human resource management efficiency, long-term employee commitment, human capital value, and firm survival. Respectively, part five and six inquire the perceptions of the antecedents of modern human resource accounting implementation which comprising sustainability vision, executive learning, transformational leadership, technology change, environmental uncertainty. Also, the perception of growth mindset, and governance culture are assigned as the moderators. Finally, part seven includes an open-ended question for the informant's suggestions and opinions. This questionnaire is attached in the Appendix (questionnaire in the Thai version).

Test of Non-Response Bias

The test of non-response bias is a way to protect possible response bias problems between respondents and non-respondents. The non-response bias was tested by comparing the pattern of answers received within the first and last week of the return mail (Armstrong and Overton, 1977). The respondents were divided into two groups: early and late respondents (Oppenheim, 1996). Thus, to protect possible response bias problems between respondents and non-respondents, a non-response bias test must be done to confirm that non-respondents are not different from respondents (Hardy and Snaith, 2013). Non-response bias was used as a t-test comparison of the demographics between early and late respondents. Then, responses from the first group mailing were used to compare with those received from the second group mailing on the basic information of company such as type of entity, business characteristics, and number of employee to test the non-response bias.

In this research, all 222 received questionnaires are split into two groups. The 111 early respondents are in the first group and another 111 late respondents are in the second. To test the non-response bias, both groups of respondents are compared with basic information of company consists type of identity ($t = 0.579$, $p > 0.05$), business characteristics ($t = 0.176$, $p > 0.05$), and number of employee ($t = 0.109$,



$p > 0.05$). The results shown in appendix C provide the evidence that there were no significant differences between the two groups at a 95% confidence level. Therefore, the results indicated that there are no significant differences between early and late responses, and there is no response bias between respondents and non-respondents in terms of basic information of company. It implies that the non-response bias is not significant. As a result, non-response bias is not a key problem in this research (Armstrong and Overton, 1977).

Measurements

In measuring each construct in the conceptual model, multiple item measurement processes were developed. Since, constructs are the abstractions that cannot be directly measured or observed and should be measured by multiple items (Churchill, 1979). Moreover, using multiple items provide a wider range of the content of conceptual definition and improvement of reliability (Neuman, 2006). Therefore, in this research, multi-item scales are utilized to develop the measurement procedures. All constructs in this research should be measured by multiple items because (1) individual items usually cannot capture the attributes of the constructs; (2) single items tend to categorize samples in small groups, whereas multiple item scales enable a fine distinction between subjects' and (3) multiple items increase the reliability and lower the measurement error (Churchill, 1979). Thus, all constructs are transformed to the operational variables to gain more accuracy in measuring research constructs. All variables are derived from the definition and previous literature, by a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). In summary, all operational definitions of each construct which are comprised of the dependent variable, the independent variables, the moderating variables, and the controlled variables, are presented in Table 6.

Dependent Variable

Firm survival. Firm survival is determined by the level of organizational achievement to business operation stably, steady of financial position in the business from the past continuing to the present, as well as increasing growth rate of profits and



market share progressively. This variable was measured by four items adapted from Kittikunchotiwut et al., (2013).

Independent Variables

This research consists of 12 independent variables which are separated into three categories; core construct, consequential variables, and antecedent variable. Firstly, modern human resource accounting implementation is the center and core construct of this research. It can be measured through five distinctive attribute dimensions: human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring. These attributes reflect the good characteristics of modern human resource accounting implementation. The measure of each attribute depends on its definition which is detailed below.

Human resource identification. Human resource identification is measured by the level of firm's ability to classify, recognize, and characterize financial information related human resource accurately and reliantly from business operation activities. Items include ability to classify employee activities which can calculate in monetary term. This construct is developed as a new scale from the definition and literature including a four-item scale.

Human resource measurement. Human resource measurement is evaluated by the degree of firm's ability to analyze investment cost and able to calculate the operational activities which involve employee in term of money efficiently. This construct is developed as a new scale from the definition and literature including four-item scales.

Human resource investment. Human resource investment is measured by the degree of firm's ability to invest in human resource activities systemically and substantially, include adequate budgets allocation, continually research and develop employee knowledge, set substantial system in training courses to build more capability of people in work. This construct is developed as a new scale from the definition and literature including a four-item scale.



Human resource reporting. Human resource reporting is measured by using four-item scale concerning about the level of organization's information presenting about employee benefits clearly, including report of employee's performance, and show budget analysis report of budget allocation based on actual activities in annual reports or other media publicly. This construct is developed as a new scale from definition and prior literature review.

Human resource monitoring. Human resource monitoring is assessed by the level of an organizational ability to review ongoing operations, control development and training processes commonly, and evaluate employee skills development for improving human resource processes to make sure that knowledge from training is utilized for increasing work performance. This construct is developed as a new scale from definition and prior literature review.

Consequential Variables

The second category is the consequences of modern human resource accounting implementation, namely, long-term employee commitment, human resource management efficiency, and human capital value. The measure of each consequential variable conforms to its definition and relative literatures, discussed as follows.

Human resource management efficiency. Human resource management efficiency is evaluated by the degree of business operating's process to recruit people systematically, increasing the right man on the right job, and be able to retain high qualified employee to work with organization in the long run. This construct is developed as a new scale from definition and prior literature review.

Long-term employee commitment. Long-term employee commitment is determined by the level of employee intention and dedication in working, uses all capability for working, always ready to cooperate and sacrifice, working with happiness, is always willing to adapt with any assigned tasks includes a sense of being a part of organization in long-term development. This variable is measured by three-item scale adapted from Kataria, Garg, and Rastog (2013).



Human capital value. Human capital value is measured by the level of greater knowledge skills and outstanding expertise than others include unique capabilities creative employees that are able to increase firm value and adapt their knowledge fit along with situation. This construct is developed as a new scale from definition and literature including four-item scale.

Antecedent Variables

Lastly, the third category is the five antecedents of modern human resource accounting implementation comprised of sustainability vision, executive learning, transformation leadership, technology change, and environmental uncertainty. All antecedent variables align to their definitions and prior literature. The measure of each variable is discussed as follows.

Sustainability vision. Sustainability vision is evaluated by the degree of organizational perspective of operational direction and long-term strategic clarity include modern technology adaptation, encouraging staff to learn new operations, and participate in the direction of co-operations. The measurement scale is adapted from Waranantakul et al., (2013).

Executive learning. Executive learning is developed by the degree of the executive's potentiality to learn and use the process of improving new knowledge, include knowledge sharing, and experience adaptation in current management to be more effective. The items question for perceptions of new knowledge from working and training. This construct measurement is developed from the definition and literature review which includes four-item scale.

Transformational leadership. Drawing on the theoretical and literature reviews, transformational leadership is evaluated by the level of managerial ability in motivating organizational employees to make a change in operation and develop new strategy accord with situation efficiently (Rui et al., 2010).

Technology change. Technology change is measured by the level of technology growth in both diversity and higher competency of technology which impact on firm



operation procedures effectively. This four-item scale is developed based on its definition and relevant literature reviews.

Environmental uncertainty. Environmental uncertainty is determined by the degree of change in the firm's surroundings which are unstable in increasing competitors, variety of products and service, and law enforcement related organization to increase superior competition. The measurement scale is adapted from Sookaneknun et al., (2013), including four-item scale.

Moderating Variables

Drawing on the contingency theory, there are two purposed moderators in this research. One is governance culture on the external point of view which moderates the relationships among modern human resource accounting implementation and its consequences. Growth mindset on the internal perspective purpose enhances the influence between modern human resource accounting implementation and its antecedents. These two moderators are grounded on their definitions and previous literature. The measure of each moderating variable is discussed as follows.

Governance culture. Governance culture is evaluated by using four-item scale concerning about the level of operational guideline that are generally accepted throughout the organization in respect of each other's rights, duties, and responsibilities including compliance of organizational regulations. This construct is developed as a new scale from definition and literature including four-item scale.

Growth mindset. Growth mindset is determined by the level of attitude change or beliefs in development for firm progress, innovation and utilize technology in line with the operational approach that will lead to a well-accepted practice. This construct is adapted from Murphy and Dweck (2016).

Control Variables

Two control variables are included in this research. Firm age and firm capital are the characteristics that may influence the hypothesized relationships. The measurement of each control variable is detailed as follows;



Firm age. Firm age is a control variable that has been noted to be an advantages associated with increased time for the experience, evolution and adoption of high effective human resource practices as well as learning ability advantages in productivity (Delmotte and Sels, 2008). In addition, Firm age is normally associated with better resource ability and higher competitiveness (Lau, Wong and Eggleton, 2008). A firm operating for a long time has the ability to allocate and manage organizational resources more effectively than later entrants (Lau, Wong and Eggleton, 2008). Therefore, Firm age is defined as the number of years that a firm has been in operation, which is measured by the number of years that the firm has been in business. In the questionnaire, the number of operational years was divided into four groups: less than 5 years, 5-10 years, 11-15 years, and more than 15 years. Firm age was represented by dummy variable including 0 (less than or equal 10 years), and 1 (more than 10 years).

Firm capital. Firm capital is a determinant of the organizational success and explains the value of firm performance (Serrano-Cinca, Fuertes-Callen and Mar-Molinero, 2005). Thipsri and Ussahawanitchakit (2009) pointed out that firm capital may affect strategic decisions and firm competitiveness. Consistently, larger firms often have superior financial status (Leiblein, Reuer and Dalsace, 2002; Richard and Johnson, 2001). So, a firm's wealth is reflected by firm capital, especially if a firm has a large sum of money in that it represents employment ability and investment of human resources. According to Leiblein, Reuer and Dalsace (2002) indicated that larger firms often have superior financial status. In this research, firm capital is represented by a dummy variable including 0 means firm has operational capital lower than 25,000,000 baht, and 1 means a firm has total assets equal or more than 25,000,000 baht (Sriprom, 2016; Phokha and Ussahawanitchakit, 2011).

Methods

In this research, constructs in the conceptual model are developed as new scales and modified from prior research. This research was collected, using a questionnaire which was built from the definition adopted from a wide review of the literature, in order to establish truthfulness and credibility. It was sent to two academic experts who reviewed the instrument and adjusted it to be a possible scale measure



before sending it to the respondents to the questionnaire. Moreover, following this further, the pre-test method was appropriately conducted to assert the validity and reliability of the questionnaire. Afterward, all questionnaires were checked for accuracy before being forwarded to the respondents by a mailed survey. Then, the researcher waited for a reply for a test data analysis of hypotheses and assumption-testing of multiple regression analysis.

Validity and Reliability

Validity reflects the accuracy of the measurement that evinces the concept of consideration (Hair et al., 2010). In order to verify the research instrument accuracy and validity, this research examines content and constructs validity of the questionnaire.

Firstly, Content validity is extent to which the items of the scales are sufficiently reflected the interrelated theoretical domains. It refers to the degree to which the essence of the scale represents the construct being measured (Thoumrungroje, 2013). With regarding to relevant theory and literature review, each of the items in a questionnaire will be subjectively assessed by a specialist and related academic expert. Hence, this research requested two academic experts who have experience in this area to review the instrument in order to ensure that the questionnaires used appropriate wordings and all constructs are sufficient to cover the content of the variables. Based on their feedback, some questions were deleted or adjusted accordingly to attain the best measurement.

Secondly, construct validity is referred to a set of measured item that actually reflects the theoretical latent construct that those items are designed to measure (Hair et al., 2006). If the scale really reflects and indicates its designated construct then convergent validity and discriminant validities should be established. Convergent validity demonstrates items that indicators of a specific construct converge or share a high proportion of variance in common (Hair et al., 2010). It is the accuracy of a scale in correlating with other scales that are designed to measure the same construct (Thoumrungroje, 2013). Moreover, to ensure the construct validity, the size of the factor loading must be greater than the 0.40 cut-off and are statistically significant (Nunnally and Bernstein, 1994). In this research, all factor loadings are greater than 0.40 cut-offs and are statistically significant (see Table 5) according to the rule-of-thumb (Nunnally and Bernstein, 1994).



Reliability. Reliability is the degree to which the measurement is trustiness and error-free (Hair et al., 2010). In this research, the Cronbach's alpha coefficient will be used to test the internal consistency of each construct. Internal consistency is an approach to evaluate the consistency or reliability within a collection of multiple items that represent the scale (Thoumrungroje, 2013). Coefficient alpha or Cronbach's alpha will be employed to estimate the reliability. Cronbach's alpha is utilized in this research to test the validity and reliability of the questionnaire and should be greater than 0.70 to ensure the internal consistency (Hair et al., 2010). The instruments are conducted from the pre-test of thirty accountants by factor analysis and Cronbach's alpha, respectively, and are used to revise the questionnaire to ensure validity and reliability.

In this research, a pre-test was performed in order to determine the validity and reliability of a questionnaire as qualities of a good instrument. The pre-test was conducted from the test of the first thirty accountants. This was tested by the Confirmatory Factor Analysis (CFA) which is analyzed by structural equation modeling and Cronbach's alpha, respectively, to improve the questionnaire so as to ensure validity and reliability.

Table 5 shows the results for both factor loadings and Cronbach's Alpha for multiple-item scales used in this research. The results reveal that each item of all variables is loaded on only one factor. Also, the factor loadings of each item are expressed as 0.653-0.933, it is greater than the 0.40 cut-off, and statistically is significant indicating that there is construct validity (Nunnally and Bernstein, 1994). Moreover, Cronbach's alpha coefficients for all variables are presented as 0.767 - 0.915, which are greater than 0.70 as recommended by Hair et al., (2010). As a result, all constructs of this research have internal consistency reliability and the reliability of all variables is adopted.



Table 5: Results of Measure Validity of Pre-Test

	Variables	n	Factor Loadings	Cronbach's Alpha
1	Human Resource Identification (HID)	30	0.757 – 0.882	0.876
2	Human Resource Measurement (HRM)	30	0.700 – 0.892	0.809
3	Human Resource Investment (HIN)	30	0.653 – 0.930	0.831
4	Human Resource Reporting (HRR)	30	0.716 – 0.783	0.767
5	Human Resource Monitoring (HMO)	30	0.799 – 0.883	0.866
6	Human Resource Management Efficiency (HME)	30	0.688 – 0.814	0.769
7	Long-term Employee Commitment (LEC)	30	0.870 – 0.914	0.915
8	Human Capital Value (HCV)	30	0.881 – 0.902	0.914
9	Firm Survival (FSV)	30	0.823 – 0.922	0.903
10	Sustainability Vision (STV)	30	0.786 – 0.885	0.876
11	Executive Learning (EXL)	30	0.696 – 0.874	0.794
12	Transformation Leadership (TFL)	30	0.769 – 0.933	0.863
13	Growth Mindset (GMS)	30	0.724 – 0.845	0.809
14	Governance Culture (GVC)	30	0.720 – 0.891	0.846
15	Technology Change (TNC)	30	0.779 – 0.907	0.858
16	Environmental Uncertainty (EVU)	30	0.704 – 0.922	0.883

Statistical Techniques

Before hypotheses testing, all of raw data were checked, encoded, and recorded in a data file. Then, the basic assumptions of regression analysis were tested. This process involved checking outlier, heteroscedasticity, normality, and linearity.

This research employed both descriptive and inferential statistical techniques, including variance inflation factors (VIFs) that were applied to test for multicollinearity among the independent variables, correlation analysis was determined to test the primary correlations between two variables, and the Ordinary Least Squares method (OLS) were operated to statistically estimate the coefficient of hypothesis testing.



Variance inflation factor (VIF) quantifies the severity of multicollinearity in an ordinary least squares regression analysis. It provides an index that measures how much the variance of an estimated regression coefficient is increased as a result of collinearity. Large VIF values indicate a high degree of multicollinearity among independent variables. All VIF values should be smaller than 10 to be considered that the associations among independent variables are not problematic (Neter, Wasserman, and Kutner, 1985; Hair et al., 2010).

Correlation analysis. Correlation analysis is the basis to measure the strength of the linear dependence between two variables. This familiar technique is called Pearson's correlation. It is obtained by dividing the covariance of the two variables by the product of their standard deviations, giving a value between +1 and -1 inclusive (Cohen et al., 2003). Correlation analysis is applied for testing the two assumptions of regression analysis. Firstly, correlation analysis is used for testing the relationship between independent variables and dependent variables. The coefficient values between independent variables and dependent variables should be significantly associated. Secondly, a correlation coefficient is used as an indicator of the multicollinearity assumptions, that the coefficient values between independent variables should be smaller than 0.80 and should not be significantly associated (Berry and Feldman, 1985). However, if the coefficient values between independent variables are greater than 0.80, the multicollinearity problem is identified by the variance inflation factor (VIF).

Multiple regression analysis. The Ordinary Least Squares (OLS) regression analysis is used to test all hypotheses following the conceptual model. The main assumptions of the regression model are (1) linearity of the phenomenon measured, (2) independence of the error terms, (3) constant variance of the error terms (homoscedasticity), (4) normality of the error term distribution, and details of each assumption that are summarized. The regression equation is a linear combination of the independent variables that best explains and predicts the dependent variable (Aulakh, Kotabe, and Teegen, 2000). Therefore, OLS regression is appropriate for examining the relationships between the dependent variables and independent variables because both dependent and independent variables in this research are categorical and interval data (Hair et al., 2010). Thus, all hypotheses in this research are transformed into twenty one equations. Each equation consists of the main variables related to the hypothesis testing



as described in the previous chapter. Moreover, two control variables, firm capital and firm age, are included in all of those equations for hypothesis testing. The detail of each equation is presented as the following.

The first section contains statistical equations examining the relationship among modern human resource accounting Implementation (including human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring), long-term employee commitment, human resource management efficiency, human capital value, and firm survival as presented in equations 1-4 below.

$$\text{Equation 1: } LEC = \alpha_1 + \beta_1 HID + \beta_2 HRM + \beta_3 HIN + \beta_4 HRR + \beta_5 HMO + \beta_6 FCP + \beta_7 FAG + \varepsilon_1$$

$$\text{Equation 2: } HME = \alpha_2 + \beta_8 HID + \beta_9 HRM + \beta_{10} HIN + \beta_{11} HRR + \beta_{12} HMO + \beta_{13} FCP + \beta_{14} FAG + \varepsilon_2$$

$$\text{Equation 3: } HCV = \alpha_3 + \beta_{15} HID + \beta_{16} HRM + \beta_{17} HIN + \beta_{18} HRR + \beta_{19} HMO + \beta_{20} FCP + \beta_{21} FAG + \varepsilon_3$$

$$\text{Equation 4: } FSV = \alpha_4 + \beta_{22} HID + \beta_{23} HRM + \beta_{24} HIN + \beta_{25} HRR + \beta_{26} HMO + \beta_{27} FCP + \beta_{28} FAG + \varepsilon_4$$

The second sub-model equation used to examine the relationships among long-term employee commitment, human resource management efficiency, human capital value, and firm survival are presented in equations 5-7 below:

$$\text{Equation 5: } LEC = \alpha_5 + \beta_{28} HME + \beta_{29} FCP + \beta_{30} FAG + \varepsilon_5$$

$$\text{Equation 6: } HCV = \alpha_6 + \beta_{31} HME + \beta_{32} FCP + \beta_{33} FAG + \varepsilon_6$$

$$\text{Equation 7: } FSV = \alpha_7 + \beta_{34} LEC + \beta_{35} HME + \beta_{36} HCV + \beta_{37} FCP + \beta_{38} FAG + \varepsilon_7$$

The third sub-model examination of the role of the moderator, namely, governance culture, which moderate five dimension of modern human resource Accounting Implementation and long-term employee commitment, human resource management efficiency, human capital value, and firm survival are presented in equations 8-11 below:



$$\begin{aligned}
 \text{Equation 8: } LEC &= \alpha_8 + \beta_{39}HID + \beta_{40}HRM + \beta_{41}HIN + \beta_{42}HRR + \\
 &\beta_{43}HMO + \beta_{44}GVC + \beta_{45}(HID * GVC) + \beta_{46}(HRM * GVC) \\
 &+ \beta_{47}(HIN * GVC) + \beta_{48}(HRR * GVC) + \beta_{49}(HMO * GVC) \\
 &+ \beta_{50}FCP + \beta_{51}FAG + \varepsilon_8
 \end{aligned}$$

$$\begin{aligned}
 \text{Equation 9: } HME &= \alpha_9 + \beta_{52}HID + \beta_{53}HRM + \beta_{54}HIN + \beta_{55}HRR + \\
 &\beta_{56}HMO + \beta_{57}GVC + \beta_{58}(HID * GVC) + \beta_{59}(HRM * GVC) + \\
 &\beta_{60}(HIN * GVC) + \beta_{61}(HRR * GVC) + \beta_{62}(HMO * GVC) \\
 &+ \beta_{63}FCP + \beta_{64}FAG + \varepsilon_9
 \end{aligned}$$

$$\begin{aligned}
 \text{Equation 10: } HCV &= \alpha_{10} + \beta_{65}HID + \beta_{66}HRM + \beta_{67}HIN + \beta_{68}HRR + \\
 &\beta_{69}HMO + \beta_{70}GVC + \beta_{71}(HID * GVC) + \beta_{72}(HRM * GVC) + \\
 &\beta_{73}(HIN * GVC) + \beta_{74}(HRR * GVC) + \beta_{75}(HMO * GVC) \\
 &+ \beta_{76}FCP + \beta_{77}FAG + \varepsilon_{10}
 \end{aligned}$$

$$\begin{aligned}
 \text{Equation 11: } FSV &= \alpha_{11} + \beta_{78}HID + \beta_{79}HRM + \beta_{80}HIN + \beta_{81}HRR + \beta_{82}HMO + \\
 &\beta_{83}GVC + \beta_{84}(HID * GVC) + \beta_{85}(HRM * GVC) + \beta_{86}(HID * \\
 &GVC) + \beta_{87}(HRR * GC) + \beta_{88}(HMO * GVC) + \beta_{89}FCP \\
 &+ \beta_{90}FAG + \varepsilon_{11}
 \end{aligned}$$

The fourth sub-model equation used to examine the relationships among five antecedents namely, sustainability vision, executive learning, transformation leadership, technology change, environmental uncertainty are presented in equations 12-16 below

$$\begin{aligned}
 \text{Equation 12: } HID &= \alpha_{12} + \beta_{91}STV + \beta_{92}EXL + \beta_{93}TFL + \beta_{94}TNC + \beta_{95}EVU \\
 &+ \beta_{96}FC + \beta_{97}FA + \varepsilon_{12}
 \end{aligned}$$

$$\begin{aligned}
 \text{Equation 13: } HRM &= \alpha_{13} + \beta_{98}STV + \beta_{99}EXL + \beta_{100}TFL + \beta_{101}TNC + \beta_{102}EVU \\
 &+ \beta_{103}FC + \beta_{104}FA + \varepsilon_{13}
 \end{aligned}$$

$$\begin{aligned}
 \text{Equation 14: } HIN &= \alpha_{14} + \beta_{105}STV + \beta_{106}EXL + \beta_{107}TFL + \beta_{108}TNC + \beta_{109}EVU \\
 &+ \beta_{110}FC + \beta_{111}FA + \varepsilon_{14}
 \end{aligned}$$

$$\begin{aligned}
 \text{Equation 15: } HRR &= \alpha_{15} + \beta_{112}STV + \beta_{113}EXL + \beta_{114}TFL + \beta_{115}TNC + \beta_{116}EVU \\
 &+ \beta_{117}FC + \beta_{118}FA + \varepsilon_{15}
 \end{aligned}$$

$$\begin{aligned}
 \text{Equation 16: } HMO &= \alpha_{16} + \beta_{119}STV + \beta_{120}EXL + \beta_{121}TFL + \beta_{122}TNC + \beta_{123}EVU \\
 &+ \beta_{124}FC + \beta_{125}FA + \varepsilon_{16}
 \end{aligned}$$



The fifth sub-model examination of the role of the moderator, namely, growth mindset, which moderate among sustainability vision, executive learning, transformation leadership, technology change, environmental uncertainty and five dimension of modern human resource accounting implementation are presented in equations 17-11 below:

$$\begin{aligned} \text{Equation 17: } \mathbf{HID} &= \alpha_{17} + \beta_{126}STV + \beta_{127}EXL + \beta_{128}TFL + \beta_{129}TNC + \beta_{130}EVU \\ &+ \beta_{131}GMS + \beta_{132}(STV * GMS) + \beta_{133}(EXL * GMS) + \\ &\beta_{134}(TFL * GMS) + \beta_{135}(TNC * GMS) + \beta_{136}(EVU * GMS) + \\ &\beta_{137}FCP + \beta_{138}FAG + \varepsilon_{17} \end{aligned}$$

$$\begin{aligned} \text{Equation 18: } \mathbf{HRM} &= \alpha_{18} + \beta_{139}STV + \beta_{140}EXL + \beta_{141}TFL + \beta_{142}TNC + \beta_{143}EVU \\ &+ \beta_{144}GMS + \beta_{145}(STV * GM) + \beta_{146}(EXL * GMS) + \\ &\beta_{147}(TFL * GMS) + \beta_{148}(TNC * GMS) + \beta_{149}(EVU * GMS) + \\ &\beta_{150}FCP + \beta_{151}FAG + \varepsilon_{18} \end{aligned}$$

$$\begin{aligned} \text{Equation 19: } \mathbf{HIN} &= \alpha_{19} + \beta_{152}STV + \beta_{153}EXL + \beta_{154}TFL + \beta_{155}TNC + \beta_{156}EVU \\ &+ \beta_{157}GMS + \beta_{158}(STV * GMS) + \beta_{159}(EXL * GMS) + \\ &\beta_{160}(TFL * GMS) + \beta_{161}(NTC * GMS) + \beta_{162}(EVU * GMS) + \\ &\beta_{163}FCP + \beta_{164}FAG + \varepsilon_{19} \end{aligned}$$

$$\begin{aligned} \text{Equation 20: } \mathbf{HRR} &= \alpha_{20} + \beta_{165}STV + \beta_{166}EXL + \beta_{167}TFL + \beta_{168}TNC + \beta_{169}EVU \\ &+ \beta_{170}GMS + \beta_{171}(STV * GMS) + \beta_{172}(EXL * GMS) + \\ &\beta_{173}(TFL * GMS) + \beta_{174}(TNC * GMS) + \beta_{175}(EVU * GMS) + \\ &\beta_{176}FCP + \beta_{177}FAG + \varepsilon_{20} \end{aligned}$$

$$\begin{aligned} \text{Equation 21: } \mathbf{HMO} &= \alpha_{21} + \beta_{178}STV + \beta_{179}EXL + \beta_{180}TFL + \beta_{181}TNC + \beta_{182}EVU + \\ &\beta_{183}GMS + \beta_{184}(STV * GMS) + \beta_{185}(EXL * GMS) + \beta_{186}(TFL \\ &* GMS) + \beta_{187}(TNC * GMS) + \beta_{188}(EVU * GMS) + \beta_{189}FCP \\ &+ \beta_{190}FAG + \varepsilon_{21} \end{aligned}$$



Where;

LEC	=	Long-term Employee Commitment
HME	=	Human resource Management Efficiency
HCV	=	Human Capital Value
FSV	=	Firm Survival
HID	=	Human Resource Identification
HRM	=	Human Resource Measurement
HIN	=	Human Resource Investment
HRR	=	Human Resource Reporting
HMO	=	Human Resource Monitoring
STV	=	Sustainability Vision
EXL	=	Executive Learning
TFL	=	Transformational Leadership
TNC	=	Technology Change
EVU	=	Environmental Uncertainty
GMS	=	Growth Mindset
GVC	=	Governance Culture
FAG	=	Firm Age
FCP	=	Firm Capital
α	=	Constant
β	=	Regression Coefficient
ε	=	Error Term

Summary

This chapter describes the research methods used in this investigation for collecting the data and for examining the relationships among the constructs in the conceptual model, in order to answer the research questions. The population is 1,054 ICT firms which provided by Thailand ICT's Industry Directory 2015 under the Ministry of Information and Communication Technology in Thailand. The key informants completing questionnaire is the accounting executives. The whole population is used as the sample in this study. Non-response bias is tested as well as the validity and reliability of the measurements. In addition, this chapter presents the



variable measurements of each construct and summarizes them in Table 5. It also proposes that the VIF, the correlation analysis, and the OLS regression analysis are operated as statistical analyses. Moreover, the statistical equations for hypothesis testing are also included.



Table 6: Definitions and Operational Variables of Constructs

Construct	Definition	Operational Variables	Scale Source
<i>Dependent variable</i>			
<i>Firm survival (FSV)</i>	Organizational achievement to business operation stably, steady of financial position in the business from the past continuing to the present, as well as increasing growth rate of profits and market share progressively.	The level of organizational achievement to business operation stably, steady of financial position in the business from the past continuing to the present, as well as increasing growth rate of profits and market share progressively.	Kittikunchotiwut, Ussahawanitchakit, and Pratoom, (2013)
<i>Independent variables</i>			
<i>Human resource identification (HID)</i>	Firm's ability to classify, recognize, and characterize financial information related human resource accurately and reliantly from business operation activities.	The level of firm's ability to classify, recognize, and characterize financial information related human resource accurately and reliantly from business operation activities.	New scale

Table 6: Definitions and Operational Variables of Constructs (Continued)

Construct	Definition	Operational Variables	Scale Source
<i>Independent variables (Con.)</i>			
<i>Human resource measurement (HRM)</i>	Firm's ability to analyze investment cost and is able to calculate the operational activities which involve employee in term of money efficiently.	The degree of firm's ability to analyze investment cost and able to calculate the operational activities which involve employee in term of money efficiently.	New scale
<i>Human resource investment (HIN)</i>	Firm's ability to invest in human resource activities systemically and substantially, include adequate budgets allocation, continually research and develop employee knowledge, set substantial system in training courses to build more capability of people in work.	The degree of firm's ability to invest in human resource activities systemically and substantially, include adequate budgets allocation, continually research and develop employee knowledge, set substantial system in training courses to build more capability of people in work.	New scale

Table 6: Definitions and Operational Variables of Constructs (Continued)

Construct	Definition	Operational Variables	Scale Source
<i>Independent variables (Con.)</i>			
<i>Human resource reporting (HRR)</i>	Organization's information presenting about employee benefits clearly, including report of employee's performance, and show budget analysis report of budget allocation based on actual activities in annual reports or other media publicly.	The level of organization's information presenting about employee benefits clearly, including report of employee's performance, and show budget analysis report of budget allocation based on actual activities in annual reports or other media publicly.	New scale
<i>Human resource monitoring (HMO)</i>	An organizational ability to review ongoing operations, control development and training processes commonly, and evaluate employee skills development for improving human resource processes.	The level of an organizational ability to review ongoing operations, control development and training processes commonly, and evaluate employee skills development for improving human resource processes.	New scale

Table 6: Definitions and Operational Variables of Constructs (Continued)

Construct	Definition	Operational Variables	Scale Source
<i>Mediating variables</i>			
<i>Long-term employee commitment (LEC)</i>	Employee intention and dedication in working, uses all capability for working, is always ready to cooperate and sacrifice, working with happiness, always willing to adapt with any assigned tasks includes a sense of being a part of organization in long-term development.	The level of employee intention and dedication in working, uses all capability for working, is always ready to cooperate and sacrifice, working with happiness, always willing to adapt with any assigned tasks includes a sense of being a part of organization in long-term development.	Kataria, Garg, and Rastog (2013)
<i>Human resource management efficiency (HME)</i>	The process of business operating to recruit people, put the right man on the right job, and retain high qualified employee to work with organization in the long run.	The degree of business operating's process to recruit people systematically, increasing the right man on the right job, and be able to retain high qualified employee to work with organization in the long run.	New Scale

Table 6: Definitions and Operational Variables of Constructs (Continued)

Construct	Definition	Operational Variables	Scale Source
<i>Mediating variables (Cont)</i>			
<i>Human capital value (HCV)</i>	The greater knowledge skills and outstanding expertise than others, unique capabilities, creativity and knowledge utilization appropriate with circumstance.	The level of greater knowledge skills and outstanding expertise than others include unique capabilities creative employees that be able to increase firm value and adapt their knowledge fit along with situation.	New Scale
<i>Antecedent variables</i>			
<i>Sustainability vision (STV)</i>	An organizational perspective of operational direction and long-term strategic clarity include modern technology adaptation, encouraging staff to learn new operations, and participate in the direction of co-operations.	The degree of organizational perspective of operational direction and long-term strategic clarity include modern technology adaptation, encouraging staff to learn new operations, and participate in the direction of co-operations.	Waranantakul, Ussahawanichakit, and Jhundra-indra (2013)

Table 6: Definitions and Operational Variables of Constructs (Continued)

Construct	Definition	Operational Variables	Scale Source
<i>Antecedent variable (Cont)</i>			
<i>Executive learning (EXL)</i>	The potential of executive to learn and use the process of improving new knowledge, include knowledge sharing, and experience adaptation in current management to be more effective.	The degree of the executive's potentiality to learn and use the process of improving new knowledge, include knowledge sharing, and experience adaptation in current management to be more effective.	New scale
<i>Transformational leadership (FTL)</i>	Managerial ability in motivating organizational employees to make a change in operation and develop new strategy accord with situation efficiently.	The level of managerial ability in motivating organizational employees to make a change in operation and develop new strategy accord with situation efficiently	Rui, Emerson, and Luis (2010)
<i>Technology change (TNC)</i>	Technology growth in both diversity and higher competency of technology which impact on firm operation procedures effectively.	The level of technology growth in both diversity and higher competency of technology which impact on firm operation procedures effectively.	New scale

Table 6: Definitions and Operational Variables of Constructs (Continued)

Construct	Definition	Operational Variables	Scale Source
<i>Antecedent variable (Cont)</i>			
<i>Environmental uncertainty (EVU)</i>	The change in the firm's surroundings which is unstable in increasing competitors, variety of products and service, and law enforcement related organization to increase superior competition.	The degree of change in the firm's surroundings which are unstable in increasing competitors, variety of products and service, and law enforcement related organization to increase superior competition.	Sookaneknun, Ussahawanitchakit, and Boonlua (2013)
<i>Governance culture (GVC)</i>	An operational pattern that is generally accepted throughout the organization in respect of each other's rights, duties, responsibilities, and firm regulations compliance.	The level of operational guideline that is generally accepted throughout the organization in respect of each other's rights, duties, and responsibilities including compliance of organizational regulations.	New scale
<i>Growth mindset (GMS)</i>	Attitude change or beliefs in development of firm progression, innovation, and utilizes technology in line with the operational approach that leads to a well-accepted practice.	The degree of attitude change or beliefs in development of firm progression, innovation and utilizes technology in line with the operational approach that leads to a well-accepted practice.	Murphy and Dweck (2016)

Table 6: Definitions and Operational Variables of Constructs (Continued)

Construct	Definition	Operational Variables	Scale Source
<i>Control variables</i>			
<i>Firm age (FAG)</i>	Numbers of years that firm operates in business.	Dummy variable 0 = below and equal to 10 years, 1 = higher than 10 years	Delmotte and Sels (2008)
<i>Firm capital (FCP)</i>	Amount value of firm capitals.	Dummy variable 0 = below and equal to 10,000,000 Baht, 1 = higher than 10,000,000 Baht	Rothaermel and Deeds (2006)

CHAPTER IV

RESULTS AND DISCUSSION

The previous chapter describes research methods which help to understand the methods are used in data collection, analysis, and hypothesis testing. This chapter illustrates the results of hypothesis testing, which are organized as follows. Firstly, the respondent's characteristics and descriptive statistics are expressed for increased understanding of sample characteristics. Secondly, the results of correlation analysis and hypothesis testing by using multiple regression analysis are detailed. Finally, the summary of all hypotheses testing is also provided.

Respondent Characteristics and Descriptive Statistics

This research uses a mail survey questionnaire with a cover letter. A pre-paid postage and self-addressed envelope are mailed to the accounting executives who work in ICT firms in Thailand. Certainly, descriptive statistics describe the mean, standard deviation, and correlation between variables, correlation coefficients, and direction in correlation matrix forms.

Respondent Characteristics

The respondents are accounting executive because this position is considered as the most knowledge and understanding of accounting practice, accounting information, accounting policy, accounting standards, corporate vision, corporate reports, exclusive summary and others. The response characteristics are described by the demographic characteristics of accountant, including gender, age, marital status, education levels, working experience, average revenue per month, and current working position.

The results of demographic characteristics of 222 key participants show that 23 percent of participants are male and 77 percent are female. The range of age of participants is between 30 - 40 years old (40%). Most participants are married (56%), and the percentage of participants who obtained bachelor degree is 63%. Most of the participants have working experience for more than 15 years (44%). In addition, most participants have received revenues on the average per month less than 75,000 baht



(59%). Finally, most participants are currently working in position of accounting manager (56%). For more details, see also Appendix E.

Firm Characteristics

The sample of 222 ICT firms can be illustrated as follows: the majority of ownership types was Thai companies (82 percent). In addition, information technology rent was the largest sector among nine different sectors of ICT business representing at 23 percent. The number of employees was less than 25 employees at 49 percent. Firm capital was found that the majority of ICT firms has a budget less than 25 million baht (59 percent). The average income of firms mostly was less than 50 million baht (70 percent). Finally, operational duration of firms mostly were more than 15 years (45 percent). Also, the elaboration of firm characteristics was shown in Appendix F.

Descriptive Statistics

The analysis of descriptive statistics describes the basic characteristics of variables including mean and standard deviation. In other words, descriptive statistics are used to analyze the basic features of the data in this research. The descriptive statistics of all variables of 222 usable respondents are demonstrated in Table 7. For this research, all of the variables are obtained from the survey and are measured by a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) according to chapter 3.

The descriptive statistics of modern human resource accounting implementation and its consequences are shown in Table 7. The results show that the mean scores for the measure of modern human resource accounting implementation are namely, human resource identification (4.13), human resource measurement (4.06), human resource investment (4.07), human resource reporting (3.96), and human resource monitoring (3.96). The results indicate that accounting executives of ICT business in Thailand recognize the significance of modern human resource accounting implementation in five dimensions. In addition, modern human resource accounting implementation has a standard deviation value of 0.50-0.55. Moreover, the results show that the mean score of modern human resource accounting implementation consequences consists of human resource management efficiency (4.01), long-term employee commitment (3.94), human capital value (3.86), and firm survival (3.84). The standard deviation value of consequences of modern human resource accounting implementation is 0.51-0.61.



Furthermore, the result of descriptive statistics reveals that the mean score of modern human resource accounting implementation antecedents consists of sustainability vision (4.07), executive learning (4.10), transformational learning (4.10), technology change (4.15), and environmental uncertainty (4.10). The standard deviation value of modern human resource accounting implementation antecedents is 0.48-0.52. Finally, the mean of the moderating effects consists of growth mindset (4.10), and governance culture (4.15). The standard deviation value of the moderating effects of modern human resource accounting implementation is 0.52.

Correlation Analysis

The Pearson correlation for bivariate analysis of each variable pair is conducted in this research. The correlation analysis results are displayed a multicollinearity problem and explored the relationships among the variables. Table 7 shows the results of the correlation analysis of all constructs. The bivariate correlation procedure is subject to a two-tailed test of statistical significance at two levels as $p < 0.05$, and $p < 0.01$.

Therefore, the correlation matrix proves the correlation between the two variables and verifies the multicollinearity problems by the intercorrelations among the independent variables. The results indicate that there is no multicollinearity problems in this research, and also lower than 0.80 (Hair et al., 2010). Accordingly, the evidence suggests that there is a significant relation between the five dimensions of modern human resource accounting implementation, between 0.494 and 0.749, $p < 0.01$. The correlation matrix reveals a correlation between the consequences of the dimensions of modern human resource accounting implementation. The result suggests that the dimension of modern human resource accounting implementation in relationship to human resource management efficiency, long-term employee commitment, human capital value, and firm survival are significantly and positively correlated as 0.244 - 0.521, $p < 0.01$. The antecedent constructs, including sustainability vision, executive learning, transformational learning, technology change, and environmental uncertainty are significantly related to the dimensions of audit renewal strategy as 0.332 - 0.557, $p < 0.01$. Finally, the moderating effect consists of growth mindset, and governance culture has correlations with all variables between 0.381 and 0.486, $p < 0.01$.



Table 7: Descriptive Statistics and Correlation Matrix of Modern Human Resource Accounting Implementation and all constructions

Correlations																		
Variables	FCP	FAG	HID	HRM	HIN	HRR	HMO	HME	LEC	HCV	FSV	STV	EXL	TNL	GMS	GVC	TNC	EVU
Mean	N/A	N/A	4.13	4.06	4.07	3.96	3.96	4.01	3.94	3.86	3.84	4.07	4.10	4.10	4.10	4.15	4.15	4.10
Std.	N/A	N/A	0.50	0.52	0.55	0.53	0.51	0.51	0.57	0.61	0.59	0.50	0.49	0.52	0.52	0.52	0.48	0.51
FCP	1																	
FAG	.185**	1																
HID	.002	.006	1															
HRM	-.008	-.044	.749**	1														
HIN	-.006	.000	.610**	.598**	1													
HRR	-.017	-.031	.637**	.604**	.601**	1												
HMO	-.003	.049	.494**	.574**	.536**	.679**	1											
HME	-.013	.151*	.459**	.279**	.429**	.409**	.521**	1										
LEC	-.101	.091	.340**	.244**	.356**	.393**	.451**	.675**	1									
HCV	-.093	.013	.368**	.343**	.405**	.359**	.491**	.640**	.705**	1								
FSV	-.038	-.002	.386**	.247**	.338**	.329**	.399**	.531**	.499**	.722**	1							
STV	-.001	-.056	.514**	.427**	.424**	.430**	.557**	.568**	.541**	.665**	.671**	1						
EXL	-.124	-.151*	.390**	.350**	.426**	.381**	.478**	.543**	.552**	.619**	.628**	.740**	1					
TNL	-.051	-.139*	.332**	.409**	.393**	.334**	.542**	.486**	.428**	.554**	.468**	.624**	.698**	1				
GMS	-.027	-.149*	.321**	.361**	.322**	.417**	.494**	.401**	.381**	.486**	.485**	.616**	.604**	.721**	1			
GVC	-.073	-.155*	.272**	.265**	.276**	.370**	.479**	.464**	.454**	.481**	.464**	.508**	.587**	.608**	.700**	1		
TNC	.050	-.039	.450**	.471**	.400**	.410**	.489**	.400**	.335**	.428**	.476**	.551**	.515**	.558**	.589**	.543**	1	
EVU	.015	-.100	.470**	.470**	.412**	.489**	.464**	.454**	.284**	.294**	.419**	.498**	.482**	.503**	.547**	.547**	.756**	1

** p < 0.01, * p < 0.05

Hypotheses Testing and Results

Multiple regressions by Ordinary Least Squares (OLS) regression were utilized to verify the hypotheses. In addition, two dummy variables of firm capital and firm age are also included in the equation. There are 21 equations in this research. The results of descriptive statistics and hypotheses testing are discussed according to regression equations as follows:

The relationships among each dimension of modern human resource accounting implementation, its consequences, and the moderating role of governance culture

Figure 17: The relationships among each dimension of modern human resource accounting implementation, its consequences, and the moderating role of governance culture

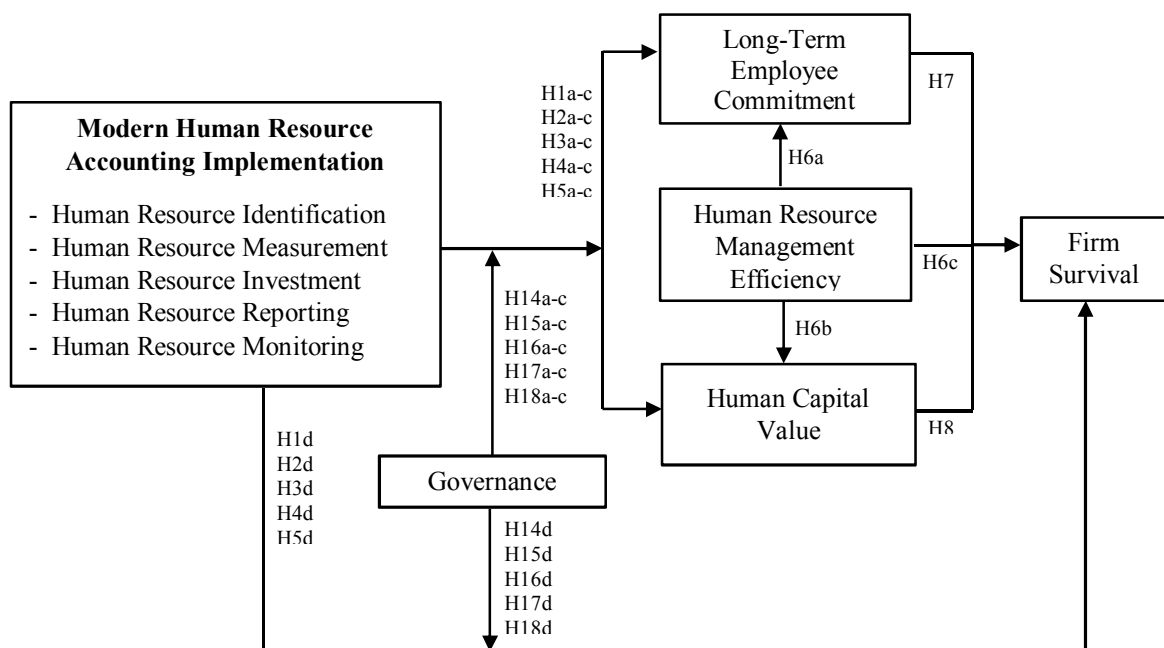


Figure 17 shows the relationships among modern human resource accounting implementation and its consequences which are proposed in Hypotheses 1(a-d) -5(a-d). The relationship in each hypothesis is proposed to be in a positive direction. These hypotheses can be transformed into the regression equation in Models 1-7. In addition,



the moderating role of governance culture is proposed to positively influence the relationships among each of five dimensions of modern human resource accounting implementation, which are presented in Hypotheses 14(a-d) - 18(a-d). According to these hypotheses, regression equations in Models 8 - 11 are developed.

Table 8: Descriptive Statistics and Correlation Matrix of Each Dimension of Modern Human Resource Accounting Implantation, Its Consequences, and Governance culture

Correlations

Variables	FCP	FAG	HID	HRM	HIN	HRR	HMO	HME	LEC	HCV	FSV	GVC
Mean	N/A	N/A	4.13	4.06	4.07	3.96	3.96	4.01	3.94	3.86	3.84	4.15
Std.	N/A	N/A	0.50	0.52	0.55	0.53	0.51	0.51	0.57	0.61	0.59	0.52
FCP	1											
FAG	.185**	1										
HID	.002	.006	1									
HRM	-.008	-.044	.749**	1								
HIN	-.006	.000	.610**	.598**	1							
HRR	-.017	-.031	.637**	.604**	.601**	1						
HMO	-.003	.049	.494**	.574**	.536**	.679**	1					
HME	-.013	.151*	.459**	.279**	.429**	.409**	.521**	1				
LEC	-.101	.091	.340**	.244**	.356**	.393**	.451**	.675**	1			
HCV	-.093	.013	.368**	.343**	.405**	.359**	.491**	.640**	.705**	1		
FSV	-.038	-.002	.386**	.247**	.338**	.329**	.399**	.531**	.499**	.722**	1	
GVC	-.073	-.155*	.272**	.265**	.276**	.370**	.479**	.464**	.454**	.481**	.464**	1

** p < 0.01, * p < 0.05

Table 8 indicates the correlations among each dimension of modern human resource accounting implementation and its consequences. In the first dimension, the results illustrate the positive correlation between human resource identification and human resource management efficiency ($r = 0.459$, $p < 0.01$), long-term employee commitment ($r = 0.340$, $p < 0.01$), human capital value ($r = 0.368$, $p < 0.01$), and firm survival ($r = 0.386$, $p < 0.01$). In the second dimension, human resource measurement is significantly and positively correlated to human resource management efficiency ($r = 0.279$, $p < 0.01$), long-term employee commitment ($r = 0.244$, $p < 0.01$), human capital value ($r = 0.343$, $p < 0.01$), and firm survival ($r = 0.247$, $p < 0.01$). For the third



dimension, human resource investment has a significant and positive correlation with human resource management efficiency ($r = 0.429, p < 0.01$), long-term employee commitment ($r = 0.356, p < 0.01$), human capital value ($r = 0.405, p < 0.01$), and firm survival ($r = 0.338, p < 0.01$). As to the fourth dimension, human resource reporting is significantly and positively correlated to human resource management efficiency ($r = 0.409, p < 0.01$), long-term employee commitment ($r = 0.393, p < 0.01$), human capital value ($r = 0.359, p < 0.01$), and firm survival ($r = 0.329, p < 0.01$). The last dimension, human resource monitoring has a significant and positive correlation with human resource management efficiency ($r = 0.409, p < 0.01$), long-term employee commitment ($r = 0.393, p < 0.01$), human capital value ($r = 0.359, p < 0.01$), and firm survival ($r = 0.329, p < 0.01$). The findings in Table 7 indicate that all correlations are less than 0.80 as recommended by Hair et al. (2010). Moreover, the variance inflation factors (VIF) in equation models 1 to 4 indicate the maximum value as 2.7, which are presented in Table 8. Also, the VIF in equation models 8 to 11 represented the maximum values as 5.9. As mentioned earlier, the VIF value was lower than 10 as recommended by Hair et al. (2010), meaning that the independent variables are not correlated with each other. Hence, multicollinearity is not a problem in this research.

Next, Table 6 exhibits the multiple regression analysis of the relationships among modern human resource accounting implementation (HID; human resource identification, HRM; human resource measurement, HIN; human resource investment, HRR; human resource reporting, and HMO; human resource monitoring), its consequence (LEC; long-term employee commitment, HME; human resource management efficiency, HCV; human capital value, and FSV; firm survival), and the moderating effect of Governance culture (GVC) as shown below.



Table 9: Results of Regression for the Effects of Each Dimension of Modern Human Resource Accounting Implementation on Its Consequences

Independent Variables	Dependent Variables							
	LEC		HME		HCV		FSV	
	H1-5a	H14-18a	H1-5b	H14-18b	H1-5c	H14-18c	H1-5d	H14-18d
	Equation 1	Equation 8	Equation 2	Equation 9	Equation 3	Equation 10	Equation 4	Equation 11
HID	0.215** (0.097)	0.169* (0.092)	0.455*** (0.087)	0.427*** (0.082)	0.169* (0.095)	0.097 (0.090)	0.392*** (0.099)	0.334*** (0.094)
HRM	-0.250** (0.096)	-0.190** (0.092)	-0.389*** (0.087)	-0.332*** (0.082)	-0.072 (0.095)	-0.042 (0.090)	-0.281** (0.098)	-0.250*** (0.093)
HIN	0.131 (0.081)	0.117 (0.077)	0.172** (0.073)	0.133* (0.096)	0.179** (0.080)	0.204*** (0.076)	0.116 (0.083)	0.137* (0.078)
HRR	0.089 (0.092)	0.002 (0.091)	-0.061 (0.083)	-0.097 (0.082)	-0.099 (0.091)	-0.102 (0.089)	-0.056 (0.094)	-0.042 (0.093)
HMO	0.353*** (0.084)	0.228** (0.088)	0.463*** (0.076)	0.360*** (0.079)	0.420*** (0.083)	0.219** (0.086)	0.344*** (0.086)	0.120 (0.089)
GVC		0.339*** (0.066)		0.305*** (0.059)		0.348*** (0.065)		0.357*** (0.067)
HID*GVC		0.088 (0.104)		-0.162* (0.094)		0.027 (0.102)		0.136 (0.106)
HRM*GVC		-0.030 (0.116)		0.096 (0.104)		0.053 (0.114)		-0.097 (0.118)
HIN*GVC		-0.055 (0.076)		-0.142** (0.068)		0.039 (0.074)		0.050 (0.077)
HRR*GVC		-0.181** (0.083)		0.019 (0.074)		0.042 (0.081)		0.075 (0.084)
HMO*GVC		0.231*** (0.076)		0.102 (0.068)		0.040 (0.075)		0.002 (0.077)
FCP	-0.298* (0.153)	-0.295** (0.144)	-0.096 (0.138)	-0.084 (0.129)	-0.242 (0.151)	-0.223 (0.141)	-0.090 (0.156)	-0.056 (0.146)
FAG	0.201 (0.140)	0.337*** (0.137)	0.266** (0.126)	0.461*** (0.122)	0.007 (0.139)	0.108 (0.134)	-0.068 (0.143)	0.022 (0.139)
Adjust R ²	0.249	0.337	0.389	0.469	0.266	0.363	0.217	0.316
Maximum VIF	2.743	5.924	2.743	5.924	2.743	5.924	2.743	5.924

Beta coefficients with standard errors in parenthesis, *** p < 0.01, ** p < 0.05, * p < 0.10

Regarding Table 9, the results of OLS regression analysis illustrates that the first dimension, human resource identification (Hypotheses 1a-d) is significantly and positively related to all four of its consequences: long-term employee commitment ($\beta_{01}=0.215$, $p<0.05$; $\beta_{39}=0.169$, $p<0.10$), human resource management efficiency ($\beta_{08}=0.455$, $p<0.01$; $\beta_{32}=0.427$, $p<0.01$), human capital value ($\beta_{15} = 0.169$, $p < 0.10$; $\beta_{65} = 0.097$, $p > 0.10$), and firm survival ($\beta_{22} = 0.392$, $p < 0.01$; $\beta_{78}=0.334$, $p < 0.01$). This result illustrates that human resource identification has significant positively relation with long-term employee commitment. One reason can be possible that generally when classification standards of human resource has been made apparently to facilitate personnel benefits, sufficient budget, and fiscal purposes, then long-term employee commitment will be increased (Yahiaoui, Anser, and Lahouel, 2015) as it motivates employees more concentrated on working to meet the job criteria without losing direction. **Thus, hypothesis 1a is supported.** Furthermore, human resource management efficiency is one of matter consequence that is facilitated by characterize and providing financial information related human resource such as training programs (Saremi and Naghshbandi, 2012). Consistent with Verma and Dewe (2004) stated that human resources accounting with information providing needed by managers who can help them to make use of their human resources more effectively. **Hence, hypothesis 1b is supported.** Increasing human capital value is also influenced by recognition of human resource activities in a form of accounting. This can be explained that employee's participation in a management development program increased the value of the human resource to the firm by utilizing the human resource accounting information (Flamholtz et al., 2003). In addition, clearly human resource identification enhances activity programs for employees which consistent with company's needs as a result, greater knowledge skills of employee are increased. In fact, it has been demonstrated that recognition of human resources activities which are clearly aligned with business strategy can result in significant increases human capital value and organizational success in the long term (Islam and Sarker, 2016). **Therefore, hypotheses 1c and 1d are supported.**

Secondly, it is found that human resource measurement, the second dimension, also shows significant but negative effects on its outcomes: long-term employee commitment ($\beta_{02} = -0.250$, $p < 0.05$; $\beta_{40} = -0.190$, $p < 0.05$), human resource



management efficiency ($\beta_{09} = -0.389, p < 0.01$; $\beta_{53} = -0.332, p < 0.01$), and firm survival ($\beta_{23} = -0.281, p < 0.05$; $\beta_{79} = -0.250, p < 0.01$). The result shows negative significant influence among human resource measurement, long-term employee commitment, and firm survival. It maybe because some of the fact is ignored that performance appraisal has a broader function within the organization. In addition, performance appraisal tends to focus on short-term, primary consequences and ignores longer-term secondary consequences that are less apparent to the manager (Longenecker and Ludwing, 1990). Thus, it can be said that focusing on short-term appraisal maybe reduce efficiency of human resource management and leads to reduce firm performance in the long run. The ongoing, widespread use of intentionally inaccurate ratings can have a variety of long-term negative effects such as cynicism building up around the appraisal process, pay-for-performance programs becoming meaningless, and data for promotion and training decisions becoming inaccurate and suspect (Longenecker, 1989). Thus, reduce employee commitment, and human capital value. Ultimately, the notion of using such a process to enhance performance and productivity will be lost (Longenecker and Ludwing, 1990). Consistent with Barnes (2016) stated that the reality is most employees do not perceive annual appraisal ratings as valid. And thus the sense of rewards being unfair spreads and persists in workplaces since perception is reality when it comes to motivation, annual appraisals fail to improve performance. Thus, performance appraisals need to be realigned in today's environment and myths busted. Otherwise, these appraisals will have adverse effects on employers and employees. In a case study of Thailand, Chanprapaipat (2010) stated that even though there has been attempted pushing on human resource measurement in annual report of organization, but human resource appraisal has not remain been accepted from General Accepted Accounting Principles (GAAP), consequently this issue seems not get attention as expected. **Therefore, hypotheses 2a - 2d are not supported.**

Thirdly, human resource investment (the third dimension) is significantly and positively related to some of its consequences: human resource management efficiency ($\beta_{10} = 0.172, p < 0.05$; $\beta_{54} = 0.133, p < 0.10$), human capital value ($\beta_{17} = 0.179, p < 0.05$; $\beta_{67} = 0.204, p < 0.01$), and firm survival ($\beta_{24} = 0.116, p > 0.10$; $\beta_{80} = 0.137, p < 0.10$). According to the result, the significant relationship between human resource investment and human resource management efficiency can be explained that



investments on human resources in training and development programs enhance employee capacity especially specific training will facilitate job in their own hands, this can increase self-esteem in job responsibility and also demonstrate that organization gives hand to support workers. As a result, staffs are willing to work for company substantially as an effective management in human resource gives a chance to the employee who suits a job to contribute productively leads to increasing of human resource management efficiency to the overall company (Burma, 2014). In addition, it is simple for well-trained employees to evaluate through overall picture of workload and excellent operating as firm's requirements, for this reason human resource management efficiency improved that ultimately contributes towards high-organizational performance (Chaudhry and Roomi, 2010). Especially, firms with governance culture enhance transparency and accountability thorough operation levels and also brings new outlook, enhance performance and corporate responsiveness to shareholders and other stakeholders, leads to increase firm performance continuously (Omolade and Tony, 2014; Inyang, 2004; Armstrong, 2003). **Therefore, hypothesis 3b and 3d are supported.**

In addition, the result illustrates the positive significant between human resource investment and human capital value. In addition, the result shows the positive significant between human resource investment and human capital value. Consistent with previous research found there is a significant impact on training & development and human capital value added (Al-Ghazawi, 2012). It suggests that investment in human resource can ensure that employees have greater knowledge, skills, and competencies work effectively in a rapidly changing and ultimately achieve business goals for a long term survival and sustainability. (Marimuthu, Arokiasamy, and Ismail, 2009). **Thus, hypothesis3c is supported.**

However, for the relationship between long-term employee commitment and human resource investment, the finding reveals a non-significant result ($\beta_3 = 0.131$, $p > 0.10$; $\beta_{41} = 0.117$, $p > 0.10$). This maybe because of the power of stakeholders. As the power of stakeholders could be high or low depending on their involvement and what they are expected to contribute (Nash et al., 2010). In addition, Small firms are more likely to employ workers with more limited bargaining power and fewer employment opportunities, they can in fact achieve their objective of a co-operative



and reliable workforce with fewer concessions to workers over the labor process (Craig et al., 1985 cited by Rannie, 2016). Moreover, previous research shows formal training is less likely to be provided in small firms (Storey, 2004). Storey and Westhead (1997) provide two explanations for this: firstly, training is not provided because the benefit of training is underestimated by the small firm employer/manager; and secondly, the cost of training is too high for small firms. Thus, it seems hard to pressure company for investing in workforce development. Therefore, hypothesis 3a is not supported. **Hence, hypothesis 3a is not supported.**

Fourthly, the finding indicates none of human resource reporting consequence is positively significant effects; long-term employee commitment ($\beta_{04} = 0.089$, $p > 0.10$; $\beta_{42} = 0.002$, $p > 0.10$), human resource management efficiency ($\beta_{11} = -0.061$, $p > 0.10$; $\beta_{55} = -0.097$, $p > 0.10$), human capital value ($\beta_{18} = -0.099$, $p > 0.10$; $\beta_{68} = -0.102$, $p > 0.10$), and firm survival ($\beta_{25} = -0.056$, $p > 0.10$; $\beta_{81} = -0.042$, $p > 0.10$), Fourthly, the finding indicates none of human resource reporting consequence is positively significant effects; long-term employee commitment ($\beta_{04} = 0.089$, $p > 0.10$; $\beta_{42} = 0.002$, $p > 0.10$), human resource management efficiency ($\beta_{11} = -0.061$, $p > 0.10$; $\beta_{55} = -0.097$, $p > 0.10$), human capital value ($\beta_{18} = -0.099$, $p > 0.10$; $\beta_{68} = -0.102$, $p > 0.10$), and firm survival ($\beta_{25} = -0.056$, $p > 0.10$; $\beta_{81} = -0.042$, $p > 0.10$), The reason why human resource reporting is not significant with long-term employee commitment, human resource management efficiency, human capital value, and firm survival could be possible that in fact, there is no accounting standard on treatment of human resource accounting either from the International Accounting Standards Board or the Financial Reporting Council (Badiyani, 2012). In addition, the use of human resource accounting is limited by lack of universal approach to its reporting and low level of awareness and acceptance of the technique (Rajeshwari and MariGowda, 2016). Likewise, Thai Accounting Standard which reporting in human resource information is voluntary, currently listed firms in Stock Exchange of Thailand has increased emphasize on voluntary disclosure publicly in human resource reporting (Bowthum, 2007; Srimongkolpitak and Phadoongsitthi, 2012; Chanprapaipat, 2010) because voluntary disclosure increase corporate image on stakeholders perspective (Yusri and Amran, 2012; Dominguez, 2011). However, Thai Financial Reporting Standards for Non-Publicly Accountable Entities (TFRS for NPAEs) does not specify compulsory policy



of public disclosure especially research and development expense for Non-Publicly Accountable Entities (Federation of Accounting Professions, 2012), thus non-listed firms which are the consensus respondents in this research maybe not highlight on human resource reporting. In conclude, it can be claimed that human resource reporting is not an important factor for non-listed firms, thus not effect on long-term employee commitment, human resource management efficiency, human capital value, and firm survival. **Therefore, hypotheses 4a – 4d are not supported.**

Finally, the research reveals that human resource monitoring is significantly and positively associated with all its consequences; long-term employee commitment ($\beta_{05} = 0.353, p < 0.01$; $\beta_{43} = 0.228, p < 0.05$), human resource management efficiency ($\beta_{12} = 0.463, p < 0.01$; $\beta_{56} = 0.360, p < 0.01$), human capital value ($\beta_{19} = 0.420, p < 0.01$; $\beta_{69} = 0.219, p < 0.05$), and firm survival ($\beta_{26} = 0.344, p < 0.01$; $\beta_{82} = 0.120, p > 0.10$). The reasons why employers believe employee monitoring is necessary for the workplace, and the most advocated three justifications are protecting the organization from liability risks, protecting organizational assets, and ensuring employees' job performance (Smith and Tabak, 2009). Also, trust is an important indicator that reflects the relationship between employees and employers. The action of employers' breaching employees' privacy influences the level of trust in the workplace. Trust is also a stimulator of voluntary compliance and commitment to organizational authority and rules (Morrow et al., 2012). As a result, employees' compliance and commitment to the practice of employee monitoring were determined. So, it can be said that human resource monitoring is necessary to ensure that employee performance is evaluated, which in turn the surety of the appropriate training and development take place. In addition, employee monitoring can enhance harmonization among employee skills, motivation, and contented workforce and work/life balance to ensure that workers are able to be fully committed. An empirical research showed that employee monitoring policy had positive effects on employee commitment and compliance to employee monitoring (Chang, Liu, and Lin 2015). Noticeably, Holland et al. (2012) suggested that while employers are concerned about monitoring any illegal actions that may jeopardize security systems, employees need to know that their private information will remain private. **Therefore, hypothesis 5a is supported.**



In addition, monitoring in human resource is like rechecking both overall and individuals performance. The regular monitoring encourages error capture which might occur in management process to ensure that flaw processing has been improved along together with business strategic plan consecutively, leads to better human resource management efficiency as companies need to understand capacity of employees so that company can offer the right training to their workers. Prior research suggested that organizations that have evaluation training programs can be adapted effectively and continue those effective training programs to employees, while cut off the program which is not benefits for business strategy. Employees who attend workshop courses will not only enhance human resource management efficiency, but also improve employee skills as greater knowledge can be utilized to increase competitive advantage, leads to firm survival. For example. Fedorova and Ponomareva (2017) suggested that evaluating the different aspects will allow formulating the key objectives of operational activities aimed at increasing the efficiency of overall management of organization. Nevertheless, it should be noted that the effectiveness of managerial decision-making depends on the consistency in the implementation of the monitoring methodology. Consistent with Chang (2017) said that resource monitoring among project managers can serve as an effective management mechanism for effective resource conflict resolution within a program. In addition, employee monitoring has become increasingly important. Such monitoring involves the collecting data related to organizational performance and behavior of the workforce, and also improve productivity of employee (Kidwell and Sprague, 2009) leads to long-term performance. **Therefore, hypotheses 5b, 5c, and 5d are supported.**

For the control variables, firm capital has no significant relationship with human resource management efficiency ($\beta_{13} = -0.096, p > 0.10$), human capital value ($\beta_{20} = -0.242, p > 0.10$), and firm survival ($\beta_{27} = -0.090, p > 0.10$), except long-term employee commitment ($\beta_{06} = -0.298, p < 0.10$; $\beta_{50} = -0.295, p < 0.05$) has negative significant influence. In practical case study of Thailand, Thai companies generally do capital investment only once in company's life time especially non-listed firms, thus in this case it can be possible that firm capital has negative significant influence on long-term employee commitment. Therefore, the relationship among modern human resource accounting implementation's dimensions, human resource management efficiency,



human capital value, and firm survival, are not influenced by firm capital except long-term employee commitment.

Unlike, firm age illustrates there are three non-significant relationships with long-term employee commitment ($\beta_{07} = 0.201, p > 0.10$), human capital value ($\beta_{21} = 0.007, p > 0.10$), and firm survival ($\beta_{28} = -0.068, p > 0.10$). However, human resource management efficiency ($\beta_{14} = 0.266, p < 0.05$) is positive influenced by firm age.

In summary, the findings illustrate that among five dimensions of modern human resource accounting implementation, there are two dimensions which include human resource identification, and human resource monitoring have a positive relationship with all its consequences. On the other hand, human resource reporting has no significant effect with all its consequence. However, human resource measurement, and human resource investment have significant influences with some of its consequences. Next, there is the inclusion of governance culture in order to stimulate the moderating effect on the relationship between the modern human resource accounting implementation's dimensions and its consequences.

The Moderating Role of Governance Culture

From the findings in Table 9, the moderating effect of governance culture on the relationships among the five dimensions of modern human resource accounting implementation and its consequences are as follows. It can be seen that governance culture has no significant moderating effects on the relationship between human resource identification and long-term employee commitment ($\beta_{45} = 0.088, p > 0.10$), human resource management ($\beta_{58} = -0.162, p < 0.10$), human capital value ($\beta_{71} = 0.027, p > 0.10$), and firm survival ($\beta_{84} = 0.136, p > 0.10$). This indicates that the moderating role of governance culture with human resource identification may result decreasing of human resource management efficiency. Because of implementing organizational culture which emphasizes on common interest, meanwhile also requires identification of human resource in financial term accurately. This case may create the feeling of comparison among employees, so that try to give self-priority compensation. As a result, abandon a good practice of organizational governance culture leads to inefficiency of human resource management. Consistent with Peter Drucker was cited in Governance Culture and Leadership (2008) suggested that governance is good for organization, however to make employees feel confident and willing to work for organizations must



be inspired by value creations rather than being coerced by rules or motivated by dollars and cents. **Thus, hypothesis 14a - 14d are not supported.**

Secondly, the results also present the non-significant moderating effects of governance culture on the relationships among human resource measurement and long-term employee commitment ($\beta_{46} = -0.030$, $p > 0.10$), human resource management efficiency ($\beta_{59} = 0.096$, $p > 0.10$), human capital value ($\beta_{72} = 0.053$, $p > 0.10$), and firm survival ($\beta_{85} = -0.097$, $p > 0.10$). One main reason would be that the utilization of current governance culture may not support human resource measurement, because it could create additional expense or some people may consider as an unnecessary burden expense to firms. And also increasing workload burdens for workers, which turn into burnout and boredom in job assignments and ultimately reducing employee commitment. Especially, loss quality labor like accountants who have high working experiences, so that financial information in executive hands may be not useful for competition in business market, leads to decreasing of firm performance. Arguden (2010) stated that insufficient attention to the effectiveness of governance culture is likely to fail in output measurement such as error calculation in employee activities, profitability and value creation. **Therefore, hypotheses 15a - 15d are not supported.**

Thirdly, the result of the moderating effect of governance culture also has no significant positive effect on the relationships among human resource investment and long-term employee commitment ($\beta_{47} = -0.055$, $p > 0.10$), human resource management efficiency ($\beta_{60} = -0.142$, $p < 0.05$), human capital value ($\beta_{73} = 0.039$, $p > 0.10$), and firm survival ($\beta_{86} = 0.050$, $p > 0.10$). It can be possible that once company put money on human resource investment, it helps increasing knowledge and creativity to employees, and also enhancing think outside the box not too much in any rules and regulations. While governance culture focuses on regulatory compliance which some rules maybe out of date (Howlett, 2014), resulting in conflict ideas which brings to decreasing of employee commitment. In addition, educated human resources may be contradictory exist management systems due to requirement managerial guideline which is fit with their thought. As a result, this may lead to management efficiency and firm performance do not meet expected goal of organizations. **Therefore, hypothesis 16a - 16d are not supported.**



Fourthly, the results of the moderating effects of governance culture on the relationship between human resource reporting and human resource management efficiency ($\beta_{61} = 0.019$, $p > 0.10$), human capital value ($\beta_{74} = 0.042$, $p > 0.10$), and firm survival ($\beta_{87} = 0.075$, $p > 0.10$). However, long-term employee commitment ($\beta_{48} = -0.181$, $p < 0.05$) has negative significant influence. This might be because the fact that governance culture emphasizes on regulatory compliance, while human resource reporting has not had a fixed format. Furthermore, making a report of human resource may be just an option that the organization requests to choose whether or not to do it. This may result in confusion for employees and not clear on the job responsibilities. As a result, employees may not feel happy with the job leads to employee engagement reduced. In addition, human resource reports may not meet executive needs due to the format of the report has remained uncertain. Thus, the information in report may be used in poor decisions, leads to unexpected performance. **Thus, hypotheses 17a -17d are not supported.**

Finally, the result shows statistically significant moderating effects on the relationship between human resource monitoring and long-term employee commitment ($\beta_{49} = 0.231$, $p < 0.01$). It indicates that governance culture based on the equality of people in the organization. This encourages human resource monitoring, which could reduce disparity and also increase the sense of fairness, not exploited among employees. **Therefore, hypothesis 18a is supported.** Nevertheless, there are three non-significant results of the moderating effects; human resource management efficiency ($\beta_{62} = 0.102$, $p > 0.10$), human capital value ($\beta_{75} = 0.040$, $p > 0.10$), and firm survival ($\beta_{88} = 0.002$, $p > 0.10$). This might be implied that focusing on equality may encourage excessive re-check, resulting functional delays leading to inefficiency of human resources management. In addition, encouraging equality to different background employees entirely, but the potential of each level is not equal. This may affect to learning enhancement as well as different perceive of employees, leads to human capital value of some employees could not reach as expected. **Thus, hypothesis 18b, 18c, and 18d are not supported**

For the control variables, firm capital has no positive significant influences on the moderating effect of governance culture on the relationship among modern human resource accounting implementation's dimensions, long-term employee commitment

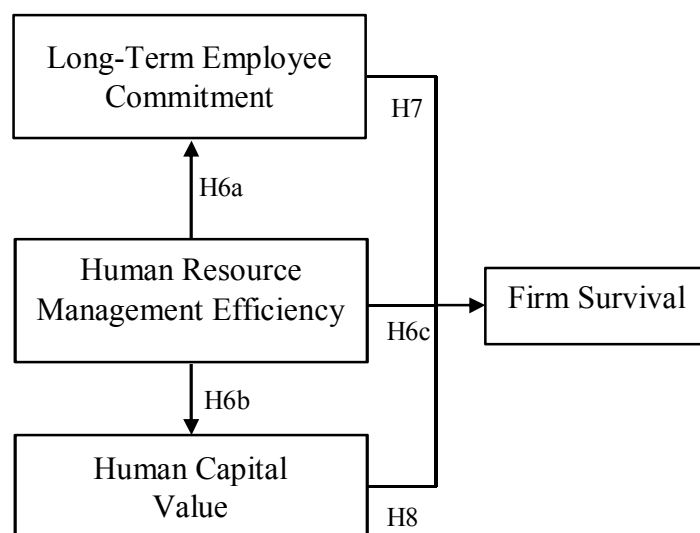


($\beta_{50} = -0.295$, $p < 0.05$), human resource management efficiency ($\beta_{63} = -0.084$, $p > 0.10$), human capital value ($\beta_{76} = -0.223$, $p > 0.10$), and firm survival ($\beta_{89} = -0.056$, $p > 0.10$). Thus, the moderating effect of governance culture on the relationship among modern human resource accounting implementation's dimensions and its consequences are not influenced by firm capital.

Furthermore, firm age also illustrates that there are two positively significant influences on the moderating effect of governance culture on the relationship among modern human resource accounting implementation's dimensions; long-term employee commitment ($\beta_{51} = 0.337$, $p < 0.01$), and human resource management efficiency ($\beta_{64} = 0.461$, $p < 0.01$), whereas human capital value ($\beta_{77} = 0.108$, $p > 0.10$), and firm survival ($\beta_{90} = 0.022$, $p > 0.10$) have no significant effect.

The Relationships among Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, and Firm Survival

Figure 18: The Relationships among Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, and Firm Survival



According to Figure 18 the relationship among long-term employee commitment, human resource management, human capital, and firm survival are shown. This research proposes the positive relationship among the aforementioned



relationships, in hypotheses 6(a-c) - 8. The relationship in each hypothesis is proposed to be in a positive direction. These hypotheses are transformed to regression equations 5 - 7. Moreover, the results of regression analyses are presented in Table 10 below.

Table 10: Results of Regression Analysis for the Effects among Long-term Employee Commitment, Human Resource Management Efficiency, Human Capital Value, and Firm Survival

Independent Variables	Dependent Variables		
	LEC (EQ5)	HCV (EQ6)	FSV (EQ7)
HME	0.673*** (0.050)	0.650*** (0.052)	0.154** (0.067)
LEC			-0.081 (0.072)
HCV			0.683*** (0.070)
FCP	-0.239* (0.130)	-0.183 (0.135)	0.066 (0.123)
FAG	0.016 (0.120)	-0.168 (0.124)	-0.075 (0.113)
Adjust R²	0.456	0.414	0.522
Maximum VIF	1.025	1.025	2.413

Beta coefficients with standard errors in parenthesis, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

For the hypothesis testing, the results of regression analysis are identified in Table 10. As expected, it was found that human resource management efficiency significantly affects long-term employee commitment ($\beta_{28} = 0.673$, $p < 0.01$), human capital value ($\beta_{31} = 0.650$, $p < 0.01$), and firm survival ($\beta_{35} = 0.154$, $p < 0.05$). Firstly, the reason why human resource management efficiency has positive significant with long-term employee commitment is that because cooperate working effectively with people of diverse background, company needs to implement effective human resource management. Therefore, understanding employee behavior from various levels will help



motivated workforce of human resource build their knowledge, skills, and expertise. It also affects to employee satisfaction, willing to work desperately which turns into greater outcome ultimately. An evidence is found that high levels of employee commitment have also been found to be related to the use of “appropriate” HRM practices (Guest, 2002). Managers are constantly seeking ways to generate greater employees’ commitment because of its association with desirable outcomes, such as reduced absenteeism, reduced turnover, improved job performance, and firm performance (Baptiste, 2008; Joiner and Bakalis, 2006). In addition, another regression results demonstrated that the Islamic approach in HRM was highly and significantly correlated to organizational commitment (Hashim, 2010). **Therefore, hypothesis 6a is supported.**

In addition, the result shows that human resource management efficiency has positive significant with human capital value. This indicates that improving employee knowledge needs to have effective management in human resource. Following Lepak and Snell (2002), it is appropriate that employees are selected based more on their potential to learn (e.g. their cognitive capacities, aptitudes, and motivation) than on their current knowledge, skills, and experience. When such a selection policy is applied, the company is more likely to incorporate into the organization individuals who are capable of learning the valuable and unique knowledge that is necessary for the firm’s competitiveness (Subramaniam and Youndt, 2005), which in turn means to company benefits greatly. Ridder and Henneke (2010) also agree on human resources management which is a part of corporate management and one of its most important tasks. Managers must provide the environment for human resource to contribute value of human knowledge and establish processes and structures to lead employees to success. As mentioned, it is clearly seen that respecting human asset as an equal business partner, will lead to increase human capital value, capable competition and firm achievement in the long run. **Therefore, hypotheses 6b and 6c are supported.**

However, the result of the relationship between long-term employee commitment and firm survival ($\beta_{34} = -0.081, p > 0.10$) are found non-significant influence. Based on the fact, although employees have long-term commitment to the organization, there are some other necessary factors to consider of leaving their current job, such as higher salary rates or, home distance with a new job. As consequence,



employees leave current job even though they are happy with their work. Balabanova et al., (2016) stated that currently in Russia the most tangible means of security for employees is likely to be their wages. For instance, Fey (2005) revealed that Russian middle managers are more interested in higher wages than their Swedish counterparts. Upchurch et al., (2000) also examined the motivation of employees in Russia have also found wage to be very important for job retention. This issue affects firm performance because they lose quality workforce, so the company has to pay for the new staffs training and may take some time to be ready for working potentially. Organization may lose a chance of competition advantage which leads to decreasing growth rate of profits. Twiname, Samujh and Rae (2011) found that generally new employees do not reach full productivity within their first year of employment. This highlights the importance for employers to retain new employees to maximize their returns on investment. **Therefore, hypothesis 7 is not supported.**

On the other hand, the relationship between human capital value and firm survival ($\beta_{36} = 0.683, p < 0.01$) are is found a positively significant result. Consistent with previous researches revealed that human capital enhancement will result in greater competitiveness and performance (Agarwala, 2003). Meantime, there is a significant relationship between innovativeness and firm performance under the human capital philosophy (Lumpkin and Dess, 2005). From an economic point of view, transaction-costs indicate that firm gains a competitive advantage when they own firm-specific resources that cannot be copied by rivals. Thus, as the uniqueness of human capital increases, firm has an incentives to invest resources into its management and the aim to reduce risks and capitalize on productive potentials. Hence, individuals need to enhance their competency skills in order to be competitive in their organizations (Marimuthu, Arokiasamy, Iamail, 2009). Another study by Seleim, Ashour, and Bontis (2007) analyzed on the relationship between human capital and organizational performance of software companies. They found that the human capital indicators had a positive association on organizational performances. It suggested that resources are valuable when they allow improving effectiveness, capitalizing on opportunities and neutralizing threats. In the context of effective management, value focuses on increasing profits in comparison with the associated costs. In this sense, firm's human capital can add value if it contributes to lower costs, provides increased performances. **Hence, hypotheses 8 is supported.**



For the control variables, firm capital has no positively significant relationship with long-term employee commitment ($\beta_{29} = -0.239$, $p < 0.10$), human capital value ($\beta_{32} = -0.183$, $p > 0.10$), and firm survival ($\beta_{37} = 0.066$, $p > 0.10$). Thus, the consequence relationships of modern human resource accounting implementation are not influenced by firm capital.

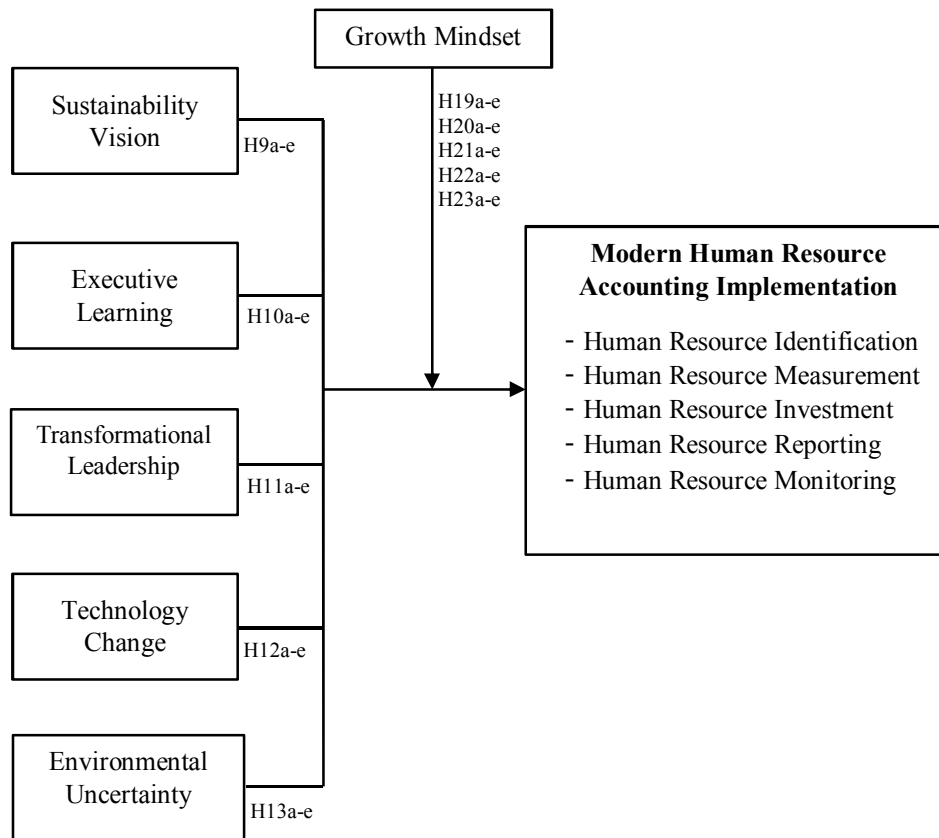
Likewise, firm age also illustrates no significant relationships with long-term employee commitment ($\beta_{30} = 0.016$, $p > 0.10$), human capital value ($\beta_{33} = -0.168$, $p > 0.10$), and firm survival ($\beta_{38} = -0.075$, $p > 0.10$). Therefore, the consequence relationships of modern human resource accounting implementation are not influenced by firm age.

The Relationships among the Antecedents, Modern Human Resource Accounting Implementation, and Moderating Role of Growth Mindset

Figure 19 illustrates the relationships among five antecedent constructs: sustainability vision, executive learning, transformational leadership, technology change, and environmental uncertainty which are proposed in hypotheses 9a-e to 13a-e. The relationships in each hypothesis are all proposed in a positive direction. These hypotheses can be transformed into the regression equations in models 12 – 16. Moreover, the moderating role of growth mindset is proposed to positively moderate the relationships among antecedents and each of five dimensions of modern human resource accounting implementation. The aforementioned relationships are presented in hypotheses 19a-e to 23a-e. According to these hypotheses, the regression equations in models 17 – 21 are developed.



Figure 19: The Relationships among the Antecedents, Modern Human Resource Accounting Implementation, and Moderating Role of Growth Mindset



The correlation among each dimension of modern human resource accounting implementation, its antecedents, and growth mindset, are shown in Table 11. The growth mindset and the antecedents were treated as independent variables which were concerned about the multicollinearity problem. The results illustrate that the relationship of growth mindset and the antecedents are comprised of sustainability vision, executive learning, transformational leadership, technology change, and environmental uncertainty which have a significant effect on independent variables. Accordingly, the result exhibits the correlation coefficient among variables as 0.321-0.756 ($p < 0.01$) which does not exceed the critical value of 0.8 (Hair et al., 2010).



Table 11: Descriptive Statistics and Correlation Matrix of Each Dimension of Modern Human Resource Accounting Implementation, Its Antecedents, and Growth Mindset

Correlations													
Variables	FCP	FAG	HID	HRM	HIN	HRR	HM O	STV	EXL	TFL	GMS	TNC	EVU
Mean	N/A	N/A	4.13	4.06	4.07	3.96	3.96	4.07	4.10	4.10	4.10	4.15	4.10
Std.	N/A	N/A	0.50	0.52	0.55	0.53	0.51	0.50	0.49	0.52	0.52	0.48	0.51
FCP	1												
FAG	.185**	1											
HID	.002	.006	1										
HRM	-.008	-.044	.749**	1									
HIN	-.006	.000	.610**	.598**	1								
HRR	-.017	-.031	.637**	.604**	.601**	1							
HMO	-.003	.049	.494**	.574**	.536**	.679**	1						
STV	-.001	-.056	.514**	.427**	.424**	.430**	.557**	1					
EXL	-.124	-.151*	.390**	.350**	.426**	.381**	.478**	.740**	1				
TFL	-.051	-.139*	.332**	.409**	.393**	.334**	.542**	.624**	.698**	1			
GMS	-.027	-.149*	.321**	.361**	.322**	.417**	.494**	.616**	.604**	.721**	1		
TNC	.050	-.039	.450**	.471**	.400**	.410**	.489**	.551**	.515**	.558**	.589**	1	
EVU	.015	-.100	.470**	.470**	.412**	.489**	.464**	.498**	.482**	.503**	.547**	.756**	1

** p < 0.01, * p < 0.05

In detail, firstly, sustainability vision is correlated with human resource identification ($r = 0.517$, $p < 0.01$), human resource measurement ($r = 0.427$, $p < 0.01$), human resource investment ($r = 0.424$, $p < 0.01$), human resource reporting ($r = 0.430$, $p < 0.01$), and human resource monitoring ($r = 0.557$, $p < 0.01$). Secondly, executive learning is correlated with human resource identification ($r = 0.390$, $p < 0.01$), human resource measurement ($r = 0.350$, $p < 0.01$), human resource investment ($r = 0.426$, $p < 0.01$), human resource reporting ($r = 0.381$, $p < 0.01$), and human resource monitoring ($r = 0.478$, $p < 0.01$). Thirdly, transformational leadership has a positive correlation with human resource identification ($r = 0.332$, $p < 0.01$), human resource measurement ($r = 0.409$, $p < 0.01$), human resource investment ($r = 0.393$, $p < 0.01$), human resource reporting ($r = 0.334$, $p < 0.01$), and human resource monitoring ($r = 0.542$, $p < 0.01$). Fourth, technology change has a positive correlation with human resource identification ($r = 0.450$, $p < 0.01$), human resource measurement ($r = 0.471$,



$p < 0.01$), human resource investment ($r = 0.400$, $p < 0.01$), human resource reporting ($r = 0.410$, $p < 0.01$), and human resource monitoring ($r = 0.489$, $p < 0.01$). Lastly, environmental uncertainty is correlated with human resource identification ($r = 0.470$, $p < 0.01$), human resource measurement ($r = 0.470$, $p < 0.01$), human resource investment ($r = 0.412$, $p < 0.01$), human resource reporting ($r = 0.489$, $p < 0.01$), and human resource monitoring ($r = 0.464$, $p < 0.01$). These mean that the relationship of those variables is independent of one another and without a multicollinearity problem of this research. Moreover, the variance inflation factors (VIF) in equations 12 to 21 (Table 12) indicate the maximum value of 4.701. Since the VIF values are not more than 10 (Hair et al., 2010; Stevens, 2002), therefore, the independent variables are not correlated with others and the findings confirm that there is no multicollinearity problem to analyze (Hair et al., 2010).



Table 12: Results of Regression Analysis for the Effects of the Antecedent and Moderator on Modern Human Resource Accounting Implementation

Independent Variables	Dependent Variables									
	HID		HRM		HIN		HRR		HMO	
	H9-13a	H19-23a	H9-13b	H19-23b	H9-13c	H19-23c	H9-13d	H19-23d	H9-13e	H19-23e
	Equation 12	Equation 17	Equation 13	Equation 18	Equation 14	Equation 19	Equation 15	Equation 20	Equation 16	Equation 21
STV	0.400*** (0.088)	0.420*** (0.089)	0.215** (0.091)	0.233** (0.093)	0.131 (0.093)	0.166* (0.096)	0.222** (0.091)	0.157* (0.092)	0.299*** (0.083)	0.272*** (0.085)
EXL	-0.015 (0.095)	-0.070 (0.096)	-0.101 (0.098)	-0.164 (0.101)	0.162 (0.100)	0.094 (0.105)	0.062 (0.098)	0.063 (0.100)	-0.031 (0.089)	-0.036 (0.092)
TFL	-0.081 (0.084)	-0.076 (0.090)	0.145* (0.086)	0.145 (0.94)	0.078 (0.088)	0.095 (0.098)	-0.027 (0.086)	-0.126 (0.094)	0.274*** (0.078)	0.208** (0.086)
TNC	0.093 (0.092)	0.091 (0.092)	0.159* (0.095)	0.110 (0.096)	0.058 (0.097)	0.032 (0.100)	-0.008 (0.095)	-0.080 (0.096)	0.089 (0.086)	0.097 (0.088)
EVU	0.253*** (0.087)	0.299*** (0.086)	0.220** (0.090)	0.270*** (0.089)	0.192** (0.092)	0.2327** (0.093)	0.371*** (0.090)	0.393*** (0.089)	0.138* (0.082)	0.157* (0.082)
GMS		-0.053 (0.088)		-0.002 (0.092)		-0.056 (0.095)		0.224** (0.091)		0.056 (0.084)
STV*GMS		0.314*** (0.087)		0.326*** (0.091)		0.250*** (0.094)		0.190** (0.091)		0.166** (0.083)
EXL*GMS		-0.087 (0.094)		-0.160 (0.098)		-0.222** (0.102)		0.087 (0.098)		-0.054 (0.090)
TFL*GMS		-0.103 (0.078)		0.035 (0.082)		0.080 (0.085)		-0.040 (0.081)		-0.066 (0.075)
TNC*GMS		0.017 (0.083)		-0.125 (0.086)		-0.021 (0.090)		-0.131 (0.086)		0.162** (0.079)
EVU*GMS		-0.144* (0.077)		-0.047 (0.081)		-0.094 (0.084)		-0.047 (0.080)		-0.124* (0.074)
FCP	-0.052 (0.148)	-0.120 (0.146)	-0.065 (0.153)	-0.419 (0.152)	0.003 (0.157)	-0.082 (0.158)	-0.053 (0.154)	-0.064 (0.152)	-0.054 (0.139)	-0.090 (0.140)
FAG	0.112 (0.135)	0.017 (0.135)	0.013 (0.139)	-0.061 (0.141)	0.150 (0.143)	0.086 (0.146)	0.064 (0.140)	0.055 (0.140)	0.281** (0.127)	0.295** (0.129)
Adjust R ²	0.312	0.367	0.271	0.305	0.233	0.249	0.264	0.309	0.394	0.414
Maximum VIF	2.898	4.701	2.898	4.701	2.898	4.701	2.898	4.701	2.898	4.701

Beta coefficients with standard errors in parenthesis, *** p < 0.01, ** p < 0.05, * p < 0.10

The results of regression analysis are explained in Table 12. Firstly, the results indicated that sustainability vision is playing a critical role in enhancing throughout all dimensions of modern human resource accounting implementation. The result illustrated significant positively relationships among sustainability vision, human resource identification ($\beta_{91} = 0.400$, $p < 0.01$; $\beta_{126} = 0.420$, $p < 0.01$), human resource measurement ($\beta_{98} = 0.215$, $p < 0.05$; $\beta_{139} = 0.233$, $p < 0.05$), human resource investment ($\beta_{105} = 0.131$, $p > 0.10$; $\beta_{152} = 0.166$, $p < 0.10$), human resource reporting ($\beta_{112} = 0.222$, $p < 0.05$; $\beta_{165} = 0.157$, $p < 0.10$), and human resource monitoring ($\beta_{119} = 0.299$, $p < 0.01$; $\beta_{178} = 0.272$, $p < 0.01$). This result illustrated that the higher vision take, the better overall picture see, also able to analyze business trend clearer, and increasing the capacity of firm strategic setting. So higher vision could see things which are benefit for business before others like adopting voluntary accounting which has been constantly interested to intellectual assets. An evidence research recently recommended that for Nigeria to achieve vision 2020 and be globally competitive, there is the need to value and incorporate human resources in financial statements of private and public sector organizations. All relevant and concerned authorities should also look into coming up with financial reporting standard(s) on human resource activities. In addition, reflecting human assets in finance is a reflection of the value placed on human assets, and could be viewed as a step in the right direction towards achieving vision 2020, since human capital is a critical success factor for vision in the future realization/actualization (Wahab, 2014). Furthermore, the collection of data and information to monitor progress, formulation of operational goals, which will break down the overall vision to working guide and the monitoring of implementation activities for delivery of this vision, are all largely dependent on carefully selected, qualified and motivated personnel (Michael, 2014). Human resource accounting reports the human resource management activities through finance. Financial statements are one of the media through which companies communicate performance to investors. Investors in taking decisions assess how a company is performing (Enofe et al, 2013). **Therefore, hypotheses 9a - 9e are supported.**

Unlike executive learning, the second antecedent of the model, the regression results show that executive learning has no significant relationship with all dimensions of modern human resource accounting implementation which include; human resource



identification ($\beta_{92} = -0.015, p > 0.10$; $\beta_{127} = -0.070, p > 0.10$), human resource measurement ($\beta_{99} = -0.101, p > 0.10$; $\beta_{140} = -0.164, p > 0.10$), human resource investment ($\beta_{106} = 0.162, p > 0.10$; $\beta_{153} = 0.094, p > 0.10$), human resource reporting ($\beta_{113} = 0.062, p > 0.10$; $\beta_{166} = 0.063, p > 0.10$), and human resource monitoring ($\beta_{120} = -0.031, p > 0.10$; $\beta_{179} = -0.036, p > 0.10$). Although implementing of modern human resource accounting is a good idea, but perhaps current accounting systems of organization may be not support to adopt modern human resource accounting or there is some limitations in accounting structure of organization which is not flexible for adopting human resource accounting. United Nation (2000) stated that an accounting systems that was inappropriately imposed would probably not be used for decision-making. Chamisa (2000) claims that in situations where differences exist in the social, cultural and economic practices among countries, the significance of accounting systems would adapt alignment with business strategy. **Therefore, hypotheses 10a - 10e are not supported.**

Thirdly, transformational leadership has a positive significant relationship with human resource measurement ($\beta_{100} = 0.145, p < 0.10$; $\beta_{141} = 0.145, p > 0.10$), and human resource monitoring ($\beta_{121} = 0.274, p < 0.01$; $\beta_{180} = 0.208, p < 0.05$). As HRA has been known since 1960, the initial concept of human resource accounting involves three dimensions consist of; identifying (AAA, 1970), measuring (Likert, 1960; Flamholtz, 1968), and investing (Gupta, 1991) of people in an organization. Later the development phase of reporting (Danaei et al., 2014) and monitoring (Hossain, Akhter, and Sadia, 2014) in people has been adapted in order to cover accounting aspects as monitoring in people is an essential procedure to make sure that flaw in working has been improved. Therefore, transformational leadership would stimulate organization to utilize monitoring in human resource because it is a new process which general leader maybe not emphasis on it. **Thus, hypothesis 11e is supported.** On the other hand, although measurement is not a new concept of human resource accounting, but this aspect of measurement in human resource has remained developing continuously. Recently, research of Arkan (2016) summarize the important models for measurement of human resource accounting from the past to present which can be divided into four models; historical cost model, replacement cost model, opportunity cost model, and government contribution model. This implies that measurement in human resource has



been utilized and developed continuously, thus transformational leadership will not refuse to motivate organizational employees adapt this updated concept accord with situation. **Thus, hypothesis 11b is supported.**

However, the finding also exhibited that transformational learning has no significant influence on human resource identification ($\beta_{93} = -0.081$, $p > 0.10$; $\beta_{128} = -0.074$, $p > 0.10$), human resource investment ($\beta_{107} = 0.078$, $p > 0.10$; $\beta_{154} = 0.095$, $p > 0.10$), and human resource reporting ($\beta_{114} = -0.027$, $p > 0.10$; $\beta_{167} = -0.126$, $p > 0.10$). It can be explained that as mention above, identifying (AAA, 1970) and investing (Gupta, 1991) in people of organization are an initial phases of human resource accounting which is a basic concept. So transformational leadership may be not need to highlight on the general style which may not make any new change for organization. **Thus hypotheses 11a, and 11c are not supported.** For reporting, it may be possible in a case of Thailand as generally registered companies follow standard of accounting principle. Because of human resource accounting which is voluntary accounting, the reporting platform has remained not cleared. Thus, the Thai company which has transformational leadership may be take carefulness in human resource reporting because either over or under disclosure may be leads to unexpected results for organization. Rahaman, Hossain, and Akter (2013) shows the main obstacle for reporting human capital externally is that the information reported could be sensitive to the reporting companies and regarded as something that should not be shared externally because of the information may give important insight to competitors or could lead to a negative interpretation on the part of the various stakeholders. **Thus, hypothesis 11d is not supported.**

Fourthly, technology change has no significant influence among human resource identification ($\beta_{94} = 0.093$, $p > 0.10$; $\beta_{129} = 0.091$, $p > 0.10$), human resource investment ($\beta_{108} = 0.058$, $p > 0.10$; $\beta_{155} = 0.032$, $p > 0.10$), human resource reporting ($\beta_{115} = -0.008$, $p > 0.10$; $\beta_{168} = -0.080$, $p > 0.10$), and human resource monitoring ($\beta_{122} = 0.089$, $p > 0.10$; $\beta_{181} = 0.097$, $p > 0.10$). However, there is no significant relationship among human resource identification, human resource investment, and human resource reporting, human resource monitoring. This can be explained that in Thailand context, technology implementing generally support for principal accounting standard such as accounting software, whereas voluntary accounting seems rarely be



served by technology. Thus, the procedures of accounting mainly rely on human determination. In addition, human resource accounting remains a new issue for organizations especially in Thailand context, thus technology utilization in voluntary accounting may not support efficiently, need to be considered by top manager teams in organization for investment and monitoring in human resource, lead to not effect on technology change. Duchdara (2013) revealed that accountants had opinion on accounting policies on conservatism at high level and emphasis on revenue recognition based on benefits occurred, and it shall be accurate and adequate which could be reliably measured. In addition, in technology aspect, the accountants considered personal roles for practice more than technology. This is because accounting practice needs to be considered with conservatism, rely on experienced people for decision making as human resource accounting has remained unclear of accounting regulations. **Therefore, hypotheses 12a, 12c, 12d and 12e are not supported.** On the contrary, the result shows the significant influence of technology change on human resource measurement ($\beta_{101} = 0.159, p < 0.10$; $\beta_{142} = 0.110, p > 0.10$). This is because generally the methods of measurement in human resource is calculated by mathematic formulas which quite complicate. Thus, technology could facilitate calculation in complicated methods to be easier understanding. Caudron (2003), has observed that technology can automate other routine tasks such as payroll processing, and transactional activities, so that human resource professionals are free to focus on more strategic matters such as boosting productivity. In addition, when there is technology changing, there always improving level of technology capacity, thus modern technology adaptation would enhance measurement methods for human resource, leads to value of human resource more accurate. Ngai and Wat (2006) stated that one of the technology benefit with human resource function is the improvement of accuracy. **Thus, hypothesis 12b is supported.**

Lastly, the finding of hypotheses 13a-13e demonstrates that environmental uncertainty has a positive significant relationship with all dimensions of modern human resource accounting implementation. This finding facilitates the notion that uncertainty in the environment affects information needs, thus the more consuming related-business information is, the more decision making is accurate. As these information used in making decisions, allocating resources, monitoring, evaluating, and rewarding



performance (Atkinson, et al., 2012). One critical role of management involves designing or selecting alternative approaches that reduce the adverse impact of environmental uncertainties on an organization's ability to survive and prosper. When faced with uncertainty about the supply of a key resource, such as labor, organizational managers may take steps to conserve existing supplies or seek substitutes that are in greater supply (Blum et al., 1994). Organizations must deal with an environment including such actors as suppliers, customers, competitors and the government (Pagell et al. 2000). In sum, environmental uncertainty is an imperative issue that strategy implementing is needed for ready responding with unpredictable change. **As a result, hypotheses 13a – 13e are supported.**

For the control variables, firm capital has no significant relationship among the antecedent variables with human resource identification ($\beta_{96} = -0.052, p > 0.10$), human resource measurement ($\beta_{103} = -0.065, p > 0.10$), human resource investment ($\beta_{110} = 0.003, p > 0.10$), human resource reporting ($\beta_{117} = -0.053, p > 0.10$), and human resource monitoring ($\beta_{124} = -0.054, p > 0.10$). So, the relationship among modern human resource accounting implementation's dimensions and its antecedents are not influenced by firm capital.

Likewise, firm age illustrates no significant relationships with human resource identification ($\beta_{97} = 0.112, p > 0.10$), human resource measurement ($\beta_{104} = 0.013, p > 0.10$), human resource investment ($\beta_{111} = 0.150, p > 0.10$), human resource reporting ($\beta_{118} = 0.064, p > 0.10$). So, the relationship among modern human resource accounting implementation's dimensions and its antecedents are not influenced by firm capital. However, firm age has a positive relationship with and human resource monitoring ($\beta_{125} = 0.281, p < 0.05$). Consequently, the relationship between the antecedents of modern human resource accounting implementation and human resource monitoring is influenced by firm age.

In summary, the finding illustrated that some of antecedents have a positive relationship among each dimension of modern human resource accounting implementation. Moreover, firm capital and firm age show no significant influences on all of the relationships between the antecedents and strategic innovation capability, except relationship between firm age and human resource monitoring. Next, there is included



the moderating role of growth mindset to stimulate the relationship between antecedent constructs and modern human resource accounting implementation.

The Moderating Role of growth mindset

The findings in Table 10 illustrate the moderating effects of growth mindset on the relationships among the five antecedents comprising sustainability vision, executive learning, transformational leadership, technology change, environmental uncertainty on modern human resource accounting implementation. The result and discussion on hypotheses testing are as follows.

Firstly, growth mindset shows positive significant influencing on the relationship between sustainability vision and all of five dimensions of modern human resource accounting implementation; human resource identification ($\beta_{132} = 0.314$, $p < 0.01$), human resource measurement ($\beta_{145} = 0.326$, $p < 0.01$), human resource investment ($\beta_{158} = 0.250$, $p < 0.01$), human resource reporting ($\beta_{171} = 0.190$, $p < 0.05$), and human resource monitoring ($\beta_{184} = 0.166$, $p < 0.05$). It is probably because growth mindset which is supported by long-term vision maybe considers that doing human resource accounting would be beneficial for organizations in the long run. Thus, doing human resource accounting for fully dimensions includes the classification of human resources in the monetary term, calculation of the operational activities accurately, allocation budgets adequacy, report of employee's performance, and controlling training processes commonly. These methods could help serving useful information related decision making of organizations. **Therefore, hypothesis 19a - 19e are supported.**

Secondly, the moderating of growth mindset shows inverse result on the relationship between executive learning and all of five dimensions of modern human resource accounting implementation; human resource identification ($\beta_{133} = -0.087$, $p > 0.10$), human resource measurement ($\beta_{146} = -0.160$, $p > 0.10$), human resource investment ($\beta_{159} = -0.222$, $p < 0.05$), human resource reporting ($\beta_{172} = 0.087$, $p > 0.05$), and human resource monitoring ($\beta_{185} = -0.054$, $p > 0.10$). It is possible that companies with good mindset want to make companies progress. However, if executives focus more on other issues such as producing high financial performance, marketing explanation, or increasing customer target group etc. As a result, the



importance of voluntary accounting like human resource accounting would be ignored.

Therefore, hypotheses 20a - 20e are not supported.

Thirdly, growth mindset also misfire to moderate the relationship between transformational leadership and all of five dimensions of modern human resource accounting implementation; human resource identification ($\beta_{134} = -0.103, p > 0.10$), human resource measurement ($\beta_{147} = 0.035, p > 0.10$), human resource investment ($\beta_{160} = 0.080, p > 0.10$), human resource reporting ($\beta_{173} = -0.040, p > 0.10$), and human resource monitoring ($\beta_{186} = -0.066, p > 0.10$). It can be explained that in Thailand context under intense market competition, manager who has transformational leadership style will try to improve organization in various dimensions. However, organization perceive that HRA is important tool, but HRA is not the main point to push company meet the growth of organization rapidly. Thus, manager who has transformational leadership style with growth mindset, may give priority to other action not HRA implementation such as increasing sale volume, expanding customer target group etc. **Therefore, hypotheses 21a - 21e are not supported.**

Fourthly, the insignificant results of growth mindset on the relationship among technology change, human resource identification ($\beta_{135} = 0.017, p > 0.10$), human resource measurement ($\beta_{148} = -0.125, p > 0.10$), human resource investment ($\beta_{161} = -0.021, p > 0.10$), and human resource reporting ($\beta_{174} = -0.131, p > 0.10$) This finding implies that growth mindset of organization focus on advancing enterprise development may consider that doing alternative accounting like a human resource accounting in multi dimensions result high cost for initial step. So the company which has limited funding like Small and medium size of business may require thoroughly consideration on cost and benefits of doing human resource accounting as well as waiting for the opportunity of technology to evolve till reach the confident level that can support a new concept of accounting. **For this reason, hypotheses 22a - 22d are not supported.** Nevertheless, the result shows the positive significant effect on human resource monitoring ($\beta_{187} = 0.162, p < 0.05$). However, the business will grow steadily, need to monitor on people to ensure that personnel have sufficient potential and ready for the development of the organization to move forward sustainably. Therefore, the growth mindset will help to support the technology deployed in tandem with human resource controlling. **Thus, hypotheses 22e is supported.**



Lastly, in hypotheses 23a – 23e, the non-significant moderating effect of growth mindset are also found on the positively significant relationship among environmental uncertainty, human resource measurement ($\beta_{149} = -0.047, p > 0.10$), human resource investment ($\beta_{162} = -0.094, p > 0.10$), and human resource reporting ($\beta_{197} = -0.047, p > 0.10$), whereas human resource identification ($\beta_{136} = -0.144, p < 0.10$), and human resource monitoring ($\beta_{188} = -0.124, p < 0.10$) are found negative significant outcome. It may be because environment is changing rapidly, some people who are likely to work dishonest way and use evasion methods result monitoring difficulty. In addition, the environmental uncertainty in business has increased intensely, so that the company struggled in order to survival. Therefore, firm mindset has focused more on survival rather than the focus on monitoring the work of the people in the organization, not even measuring and reporting on people. Mindset of organization may perceive as a worthless investment as comparing to benefits. In addition, environmental uncertainty may cause difficulty of identifying human resource in monetary term, especially with the accounting concept that standard has remained unclear. **Therefore, hypotheses 23a - 23e are not supported.**

For the control variables, firm capital has no significant influences on the moderating effect of growth mindset on the relationship among modern human resource accounting implementation's antecedents, human resource identification ($\beta_{137} = -0.120, p > 0.10$), human resource measurement ($\beta_{150} = -0.419, p > 0.10$), human resource investment ($\beta_{163} = -0.082, p > 0.10$), human resource reporting ($\beta_{176} = -0.064, p > 0.10$), and human resource monitoring ($\beta_{189} = -0.090, p > 0.10$). Thus, the moderating effect of growth mindset on the relationship among modern human resource accounting implementation's dimensions and its antecedent are not influenced by firm capital.

Moreover, firm age also illustrates no significant influences on the moderating effect of growth mindset on the relationship among modern human resource accounting implementation's antecedents, human resource identification ($\beta_{138} = 0.017, p > 0.10$), human resource measurement ($\beta_{151} = -0.061, p > 0.10$), human resource investment ($\beta_{164} = 0.086, p > 0.10$), and human resource reporting ($\beta_{177} = 0.055, p > 0.10$). However, firm age has a positive influenced on the relationship between modern human resource accounting implementation's antecedents and human resource monitoring ($\beta_{190} = 0.295, p < 0.05$). Therefore, the moderating effect of growth mindset on the



relationship between modern human resource accounting implementation's antecedents and human resource monitoring is affected by firm age.

Summary

This chapter presents ordinary regression analysis in this research which consisted of two main sections. The first section indicates the respondent and sample characteristics in frequency and percentage. The correlations among all variables are analyzed and are presented as a correlation matrix. The descriptive statistics, mean and standard deviation are exhibited in this section. Another section highlights the results and discussions of hypotheses testing. The results reveal that human resource identification, and human resource monitoring (dimensions 1 and 5 respectively) are essential determinants to yield superior result of long-term employee commitment, human resource management efficiency, human capital value, and firm survival. Interestingly, human resource measurement (dimension 2) on the outcomes is meaningful to four out of five consequences; long-term employee commitment, human resource management efficiency, and firm survival, except human value capital. Similarly, human resource investment (dimension 3) also shows no significant result on long-term employee commitment while other does. On the other hand, human resource reporting has no relationship with all the consequences. In addition, the moderating role of governance culture has a positive significant influence only on the relationship between human resource monitoring and long-term employee commitments.

As to antecedents, sustainability vision and environmental uncertainty are the top two most influential determinants of modern human resource accounting implementation. Furthermore, the moderating role of growth mindset shows positive significant influences on the relationships between sustainability vision and all five dimensions of modern human resource accounting implementation.

In conclusion, the results of 23 hypotheses testing showed seven fully supported hypotheses (hypotheses 1, 5, 6, 8, 9, 13, and 19), four partially-supported hypotheses (hypotheses 3, 11, 12, and 18) and twelve unsupported hypotheses (hypotheses 2, 4, 7, 10, 14, 15, 16, 17, 20, 21, 22, 23). The summary of the results of hypotheses testing are presented in Table 13 below.



Table 13: Summary of the Results of Hypothesis Testing

Hypotheses	Description of Hypothesized Relationships	Results
Hypothesis 1a:	Human resource identification will have a positive influence on long-term employee commitment.	Supported
Hypothesis 1b:	Human resource identification will have a positive influence on human resource management efficiency.	Supported
Hypothesis 1c:	Human resource identification will have a positive influence on human capital value.	Supported
Hypothesis 1d:	Human resource identification will have a positive influence on firm survival.	Supported
Hypothesis 2a:	Human resource measurement will have a positive influence on long-term employee commitment.	Supported
Hypothesis 2b:	Human resource measurement will have a positive influence on human resource management efficiency.	Supported
Hypothesis 2c:	Human resource measurement will have a positive influence on human capital value.	Not Supported
Hypothesis 2d:	Human resource measurement will have a positive influence on firm survival.	Supported
Hypothesis 3a:	Human resource investment will have a positive influence on long-term employee commitment.	Not Supported
Hypothesis 3b:	Human resource investment will have a positive influence on human resource management efficiency.	Supported
Hypothesis 3c:	Human resource investment will have a positive influence on human capital value.	Supported
Hypothesis 3d:	Human resource investment will have a positive influence on firm survival.	Not Supported



Table 13: Summary of the Results of Hypothesis Testing (Continued)

Hypotheses	Description of Hypothesized Relationships	Results
Hypothesis 4a:	Human resource reporting will have a positive influence on long-term employee commitment.	Not Supported
Hypothesis 4b:	Human resource reporting will have a positive influence on human resource management efficiency.	Not Supported
Hypothesis 4c:	Human resource reporting will have a positive influence on human capital value.	Not Supported
Hypothesis 4d:	Human resource reporting will have a positive influence on firm survival.	Not Supported
Hypothesis 5a:	Human resource monitoring will have a positive influence on long-term employee commitment.	Supported
Hypothesis 5b:	Human resource monitoring will have a positive influence on human resource management efficiency.	Supported
Hypothesis 5c:	Human resource monitoring will have a positive influence on human capital value.	Supported
Hypothesis 5d:	Human resource monitoring will have a positive influence on firm survival.	Supported
Hypothesis 6a:	Human resource management efficiency will have a positive influence on long-term employee commitment.	Supported
Hypothesis 6b:	Human resource management efficiency will have a positive influence on human capital value.	Supported
Hypothesis 6c:	Human resource management efficiency will have a positive influence on firm survival.	Supported
Hypothesis 7:	Long-term employee commitment will have a positive influence on firm survival.	Not Supported



Table 13: Summary of the Results of Hypothesis Testing (Continued)

Hypotheses	Description of Hypothesized Relationships	Results
Hypothesis 8:	Human capital value will have a positive influence on firm survival.	Supported
Hypothesis 9a:	Sustainability vision will have a positive influence on human resource identification.	Supported
Hypothesis 9b:	Sustainability vision will have a positive influence on human resource measurement.	Supported
Hypothesis 9c:	Sustainability vision will have a positive influence on human resource investment.	Not Supported
Hypothesis 9d:	Sustainability vision will have a positive influence on human resource reporting.	Supported
Hypothesis 9e:	Sustainability vision will have a positive influence on human resource monitoring.	Supported
Hypothesis 10a:	Executive learning will have a positive influence on human resource identification.	Not Supported
Hypothesis 10b:	Executive learning will have a positive influence on human resource measurement.	Not Supported
Hypothesis 10c:	Executive learning will have a positive influence on human resource investment.	Not Supported
Hypothesis 10d:	Executive learning will have positive influence on human resource reporting.	Not Supported
Hypothesis 10e:	Executive learning will have a positive influence on human resource monitoring.	Not Supported
Hypothesis 11a:	Transformational leadership will have a positive influence on human resource identification.	Not Supported
Hypothesis 11b:	Transformational leadership will have a positive influence on human resource measurement.	Supported
Hypothesis 11c:	Transformational leadership will have a positive influence on human resource investment.	Not Supported



Table 13: Summary of the Results of Hypothesis Testing (Continued)

Hypotheses	Description of Hypothesized Relationships	Results
Hypothesis 11d:	Transformational leadership will have a positive influence on human resource reporting.	Not Supported
Hypothesis 11e:	Transformational leadership will have a positive influence on human resource monitoring.	Supported
Hypothesis 12a:	Technology change will have a positive influence on human resource identification.	Not Supported
Hypothesis 12b:	Technology change will have a positive influence on human resource measurement.	Supported
Hypothesis 12c:	Technology change will have a positive influence on human resource investment.	Not Supported
Hypothesis 12d:	Technology change will have a positive influence on human resource reporting.	Not Supported
Hypothesis 12e:	Technology change will have a positive influence on human resource monitoring.	Not Supported
Hypothesis 13a:	Environmental uncertainty will have a positive influence on human resource identification.	Supported
Hypothesis 13b:	Environmental uncertainty will have a positive influence on human resource measurement.	Supported
Hypothesis 13c:	Environmental uncertainty will have a positive influence on human resource investment.	Supported
Hypothesis 13d:	Environmental uncertainty will have a positive influence on human resource reporting.	Supported
Hypothesis 13e:	Environmental uncertainty will have a positive influence on human resource monitoring.	Supported
Hypothesis 14a:	Governance culture positively moderates the relationship between human resource identification and long-term employee commitment will be by.	Not Supported
Hypothesis 14b:	Governance culture positively moderates the relationship between human resource identification and human resource management efficiency.	Not Supported



Table 13: Summary of the Results of Hypothesis Testing (Continued)

Hypotheses	Description of Hypothesized Relationships	Results
Hypothesis 14c:	Governance culture positively moderates the relationship between human resource identification and human capital value.	Not Supported
Hypothesis 14d:	Governance culture positively moderates the relationship between human resource identification and firm survival.	Not Supported
Hypothesis 15a:	Governance culture positively moderates the relationship between human resource measurement and long-term employee commitment.	Not Supported
Hypothesis 15b:	Governance culture positively moderates the relationship between human resource measurement and human resource management efficiency.	Not Supported
Hypothesis 15c:	Governance culture positively moderates the relationship between human resource measurement and human capital value.	Not Supported
Hypothesis 15d:	Governance culture positively moderates the relationship between human resource measurement and firm survival.	Not Supported
Hypothesis 16a:	Governance culture positively moderates the relationship between human resource investment and long-term employee commitment.	Not Supported
Hypothesis 16b:	Governance culture positively moderates the relationship between human resource investment and human resource management efficiency.	Not Supported
Hypothesis 16c:	Governance culture positively moderates the relationship between human resource investment and human capital value.	Not Supported



Table 13: Summary of the Results of Hypothesis Testing (Continued)

Hypotheses	Description of Hypothesized Relationships	Results
Hypothesis 16d:	Governance culture positively moderates the relationship between human resource investment and firm survival.	Not Supported
Hypothesis 17a:	Governance culture positively moderates the relationship between human resource reporting and long-term employee commitment.	Not Supported
Hypothesis 17b:	Governance culture positively moderates the relationship between human resource reporting and human resource management efficiency.	Not Supported
Hypothesis 17c:	Governance culture positively moderates the relationship between human resource reporting and human capital value.	Not Supported
Hypothesis 17d:	Governance culture positively moderates the relationship between human resource reporting and firm survival.	Not Supported
Hypothesis 18a:	Governance culture positively moderates the relationship between human resource monitoring and long-term employee commitment.	Supported
Hypothesis 18b:	Governance culture positively moderates the relationship between human resource monitoring and human resource management efficiency.	Not Supported
Hypothesis 18c:	Governance culture positively moderates the relationship between human resource monitoring and human capital value.	Not Supported
Hypothesis 18d:	Governance culture positively moderates the relationship between human resource monitoring and firm survival.	Not Supported



Table 13: Summary of the Results of Hypothesis Testing (Continued)

Hypotheses	Description of Hypothesized Relationships	Results
Hypothesis 19a:	Growth mindset positively moderates the relationship between sustainability vision and human resource.	Supported
Hypothesis 19b:	Growth mindset positively moderates the relationship between sustainability vision and human resource measurement.	Supported
Hypothesis 19c:	Growth mindset positively moderates the relationship between sustainability vision and human resource investment.	Supported
Hypothesis 19d:	Growth mindset positively moderates the relationship between sustainability vision and human resource reporting.	Supported
Hypothesis 19e:	Growth mindset positively moderates the relationship between sustainability vision and human resource monitoring.	Supported
Hypothesis 20a:	Growth mindset positively moderates the relationship between executive learning and human resource identification.	Not Supported
Hypothesis 20b:	Growth mindset positively moderates the relationship between executive learning and human resource measurement.	Not Supported
Hypothesis 20c:	Growth mindset positively moderates the relationship between executive learning and human resource investment.	Not Supported
Hypothesis 20d:	Growth mindset positively moderates the relationship between executive learning and human resource reporting.	Not Supported



Table 13: Summary of the Results of Hypothesis Testing (Continued)

Hypotheses	Description of Hypothesized Relationships	Results
Hypothesis 20e:	Growth mindset positively moderates the relationship between executive learning and human resource monitoring.	Not Supported
Hypothesis 21a:	Growth mindset positively moderates the relationship between transformational leadership and human resource identification.	Not Supported
Hypothesis 21b:	Growth mindset positively moderates the relationship between transformational leadership and human resource measurement.	Not Supported
Hypothesis 21c:	Growth mindset positively moderates the relationship between transformational leadership and human resource investment.	Not Supported
Hypothesis 21d:	Growth mindset positively moderates the relationship between transformational leadership and human resource reporting.	Not Supported
Hypothesis 21e:	Growth mindset positively moderates the relationship between transformational leadership and human resource monitoring.	Not Supported
Hypothesis 22a:	Growth mindset positively moderates the relationship between technology change and human resource identification.	Not Supported
Hypothesis 22b:	Growth mindset positively moderates the relationship between technology change and human resource measurement.	Not Supported
Hypothesis 22c:	Growth mindset positively moderates the relationship between technology change and human resource investment.	Not Supported



Table 13: Summary of the Results of Hypothesis Testing (Continued)

Hypotheses	Description of Hypothesized Relationships	Results
Hypothesis 22d:	Growth mindset positively moderates the relationship between technology change and human resource reporting.	Not Supported
Hypothesis 22e:	Growth mindset positively moderates the relationship between technology change and human resource monitoring.	Supported
Hypothesis 23a:	Growth mindset positively moderates the relationship between environmental uncertainty and human resource identification.	Not Supported
Hypothesis 23b:	Growth mindset positively moderates the relationship between environmental uncertainty and human resource measurement.	Not Supported
Hypothesis 23c:	Growth mindset positively moderates the relationship between environmental uncertainty and human resource investment.	Not Supported
Hypothesis 23d:	Growth mindset positively moderates the relationship between environmental uncertainty and human resource reporting.	Not Supported
Hypothesis 23e:	Growth mindset positively moderates the relationship between environmental uncertainty and human resource monitoring.	Not Supported



CHAPTER V

CONCLUSION

The previous chapter reveals the results and discussions that involve respondent characteristics and descriptive statistics, correlation analysis, and hypotheses testing and results. Therefore, this chapter aims to describe the over view of all findings, comprising the summary of the findings and hypothesis testing, theoretical and managerial contributions; and then concludes with a discussion of the research and directions for future research.

Summary of Results

This research investigates the relationships among modern human resource accounting implementation, long-term employee commitment, human resource management efficiency, human capital value, and firm survival in the ICT business in Thailand. The newly proposed dimensions of modern human resource accounting implementation are comprised of human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring. Through the mediating effect of long-term employee commitment, human resource management efficiency, and human capital value, these relationships were investigated alongside the moderating role of governance culture. Meanwhile, sustainability vision, executive learning, transformational learning, technology change, and environmental uncertainty are assigned as the antecedents of modern human resource accounting implementation. Moreover, growth mindset is designed to moderate the relationships among the antecedents and each of five dimensions of modern human resource accounting implementation.

The key research question of this research is “how does modern human resource accounting implementation influence firm survival?”. In details, there are seven specific research questions as follows: 1) How does each of five dimensions of modern human resource accounting implementation (human resource identification, human resource measurement, human resource investment, human resource reporting,



and human resource monitoring) relate to long-term employee commitment, human resource management efficiency, human capital value, and firm survival? 2) How do human resource management efficiency relate to long-term employee commitment, human capital, and value firm survival? 3) How does long-term employee commitment relate to firm survival? 4) How does human capital value relate to firm survival? 5) How does governance culture moderate the influence of each of five dimensions of modern human resource accounting implementation on long-term employee commitment, human resource management efficiency, human capital value, and firm survival? 6) How do sustainability vision, executive learning, transformational learning, technology change, and environmental uncertainty have an impact on each of five dimensions of modern human resource accounting implementation? and, 7) How does growth mindset moderate the influence of sustainability vision, executive learning, transformational learning, technology change, and environmental uncertainty on each of five dimensions of modern human resource accounting implementation?

In this research, three theories were integrated in explaining the relationship and phenomena that are found in the research; namely, the Contingency Theory, Stakeholder Theory, and Human Capital Theory. For the investigation, the ICT businesses in Thailand are selected as the population due to knowledge-based firms like ICT businesses need to focus on how well human resource can be developed. The population sample of this research is provided by Thailand ICT's Industry Directory 2015 under the Ministry of Information and Communication Technology, accessed on March 11, 2017. For the data collection, the self-administrated questionnaire was employed to gather the data. Thus, 1,054 questionnaires were sent to either accounting executives or accounting managers, the key informants of Thai ICT businesses. The mail survey resulted in 225 returned mailings with 222 usable; 22.60% response rate. Besides, the research instrument was developed from previous research and literature reviews. To evaluate, all measures of the scale are considered appropriate for further analysis and are accepted for validity and reliability via a pre-test. Statistics used in this research were applied to multiple regression analysis for hypothesis testing.

According to the specific research question, the findings indicate that human resource identification and human resource monitoring have positive relationships with all of its consequences (long-term employee commitment, human resource management



efficiency, human capital value, and firm survival), whereas human resource reporting does not. Moreover, human resource investment has a positive relationship with three out of four consequences except long-term employee commitment. Interestingly, human resource measurement has a negative result with long-term employee commitment, human resource management efficiency, and firm survival. Thus, the relationships among each dimension of modern human resource accounting implementation and its consequences.

The findings also illustrate that human resource management efficiency has a significant positive effect on all its consequences (long-term employee commitment, human capital value, and firm survival). Furthermore, human capital value has a significant, positive effect on firm survival, while long-term employee commitment does not. For the moderating effect of governance culture, the results reveal that governance culture plays a significant moderating role only on the relationships between human resource monitoring and long-term employee commitment.

In terms of the relationships among the antecedents and modern human resource accounting implementation, the findings illustrated that sustainability vision and environmental uncertainty have a significant positive effect on all of modern human resource accounting implementation dimensions whereas executive learning does not. However, transformational leadership shows a significant positive effect on human resource measurement and human resource monitoring. Interestingly, technology change has a significant positive effect only on human resource measurement.

In addition, the moderating role of growth mindset has shown a significant moderating effect on the relationships between sustainability vision and all of modern human resource accounting implementation dimensions. On the other hand, the moderating role of growth mindset fails to show a positive significant effect on the relationship of executive learning, transformational learning, and environmental uncertainty to all of modern human resource accounting implementation dimensions. For technology change, the moderating of growth mindset shows a positive significant enhancing only on the relationship between technology change and human resource monitoring.

In conclusion, it is clear that modern human resource accounting implementation is essential for survival of business. In particular, human resource



identification, human resource investment, and human resource monitoring seem to be the key components of modern human resource accounting implementation which lead to the increment in long-term employee commitment, human resource management efficiency, human capital value, and firm survival. In addition, sustainability vision and environmental uncertainty are two of the most important factors that determine modern human resource accounting implementation. Accordingly, the summary of all research questions and results is included in Table 14 and Figure 20 below.

Table 14: Summary of the Results and Conclusions of All Hypotheses Testing

Research Questions	Hypothesis	Results	Conclusions
(1) How does each of five dimensions of modern human resource accounting implementation relate to long-term employee commitment, human resource management efficiency, human capital value, and firm survival?	Hypotheses 1-5a 1-5b 1-5c and 1-5d	<ul style="list-style-type: none"> Human resource identification and human resource monitoring have the positive relationships with all of its consequences whereas, human resource reporting and human resource measurement do not. Human resource investment has the positive relationships with some of its consequences (human resource management efficiency, human capital value, and firm survival). 	Partially supported



Table 14: Summary of the Results and Conclusions of All Hypotheses Testing
(Continued)

Research Questions	Hypothesis	Results	Conclusions
2) How does human resource management efficiency relate to long-term employee commitment, human capital value, and firm survival?	Hypotheses 6a 6b and 6c	<ul style="list-style-type: none"> Human resource management efficiency has a significant positive effect on all of its consequences. 	Fully supported
3) How does long-term employee commitment relate to firm survival?	Hypothesis 7	<ul style="list-style-type: none"> Long-term employee commitment has no a significant positive effect on firm survival. 	Not supported
4) How does human capital value relate to firm survival?	Hypothesis 8	<ul style="list-style-type: none"> Human capital value has a significant positive effect on firm survival. 	Fully supported
5) How does governance culture moderate the influence of each of five dimensions of modern human resource accounting implementation on long-term employee commitment, human resource management efficiency, human capital value, and firm survival?	Hypotheses 14-18a 14-18b 14-18c and 14-18d	<ul style="list-style-type: none"> The moderating role of governance culture has a significant positive effect on the relationship between human resource monitoring and long-term employee commitment. 	Partially supported



Table 14: Summary of the Results and Conclusions of All Hypotheses Testing
(Continued)

Research Questions	Hypothesis	Results	Conclusions
6) How do sustainability vision, executive learning, transformational learning, technology change, and environmental uncertainty have an impact on each of five dimensions of modern human resource accounting implementation?	Hypotheses 9-13a 9-13b 9-13c 9-13d and 9-13e	<ul style="list-style-type: none"> • Sustainability vision and environmental uncertainty have a significant positive effect on all of modern human resource accounting implementation dimensions, while executive learning does not. • Transformational leadership has a significant positive effect on both human resource measurement and human resource monitoring. • Technology change has a significant positive effect on human resource measurement. 	Partially supported
7) How does growth mindset moderate the influence of sustainability vision, executive learning, transformational learning, technology change, and environmental uncertainty on each of	Hypotheses 19-23a 19-23b 19-23c 19-23d and 19-23e	<ul style="list-style-type: none"> • The moderating of growth mindset has a significant positive effect on the relationship between sustainability vision and all of modern human resource accounting implementation 	

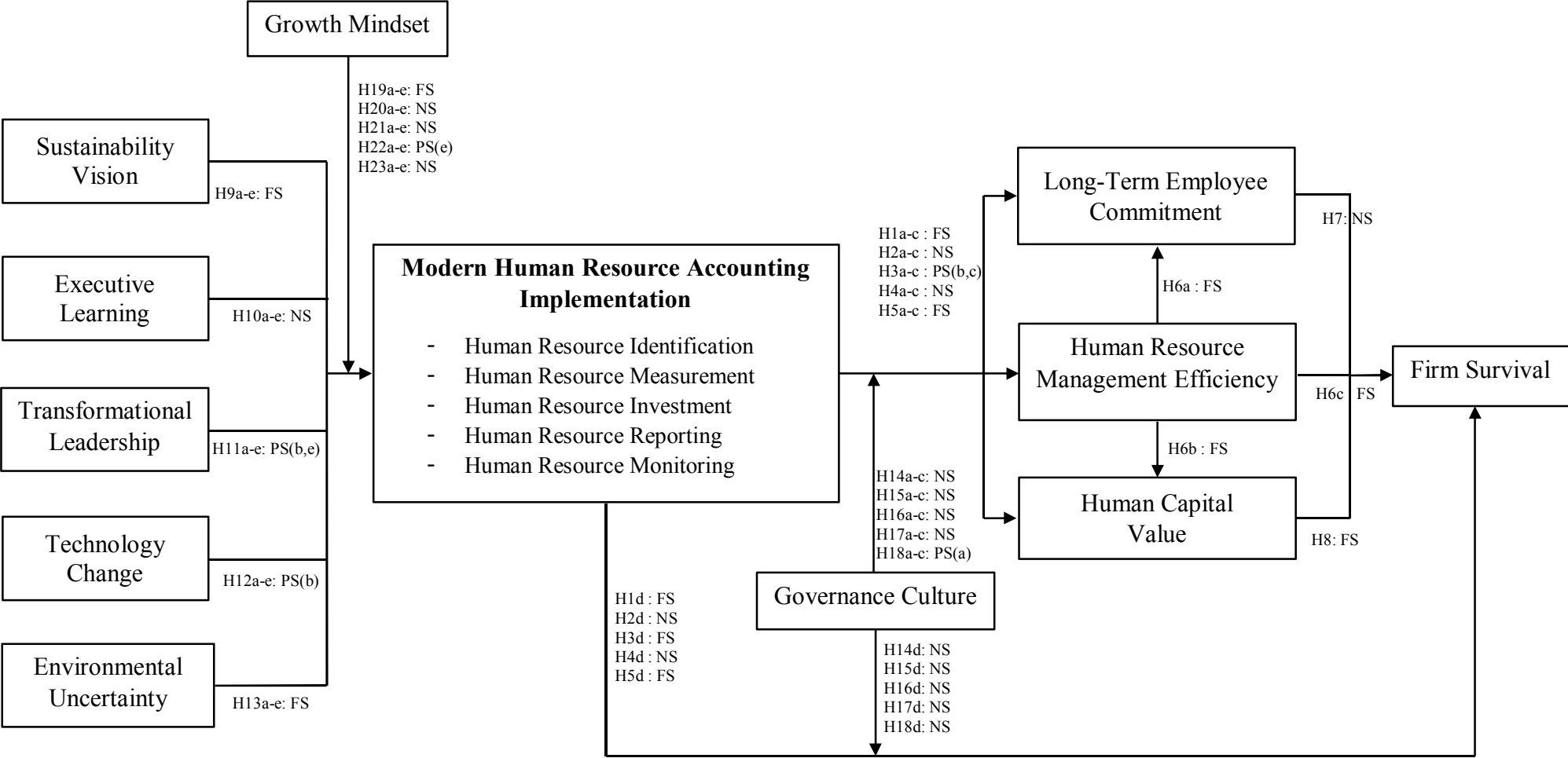


Table 14: Summary of the Results and Conclusions of All Hypotheses Testing
(Continued)

Research Questions	Hypothesis	Results	Conclusions
five dimensions of modern human resource accounting implementation?		dimensions but executive learning, transformational learning, and environmental uncertainty do not. <ul style="list-style-type: none"> • The moderating of growth mindset has a significant positive effect on the relationship between technology change and human resource monitoring. 	Partially supported



Figure 20: Summary of the Results in All Hypotheses Testing



Theoretical and Managerial Contributions

Theoretical Contribution

This research provides a comprehensive aspects to understand the relationships among modern HRA implementation, long-term employee commitment, human resource management efficiency, human capital value, and firm survival. Furthermore, this research provides insightful view of five influence factors (including sustainability vision, executive learning, transformational leadership, technology change, and environmental uncertainty) on each dimension of modern HRA implementation. Modern HRA implementation consist of five dimensions; human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring. In addition, three theories, namely; stakeholder theory, human capital theory, and contingency theory, are applied to explain the overall relationship of variables in the conceptual model.

Three contributions can be made in this research to expand the theoretical contributions and previous research of human resource accounting. Firstly, this research proposes clearly five dimensions (human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring) of modern HRA implementation whereas, could not be obviously seen dimensions in prior researches of accounting field. The results reveal that human resource identification and human resource monitoring are a key component of modern HRA implementation to encourage long-term employee commitment, human resource management efficiency, human capital value, and firm survival.

Secondly, this research develop the literatures by classifying five antecedent factors (sustainability vision, executive learning, transformational leadership, technology change, and environmental uncertainty) which could influence on modern HRA implementation, and also identify two moderating effects (growth mindset and governance culture). The finding illustrate that sustainability vision and environmental uncertainty are a key factors in implementing of modern human resource accounting in particular ICT businesses in Thailand.

Lastly, the results in this research conform to three theories, namely, stakeholder theory, human capital theory, and contingency theory, that support the



overall relationship of variables in this model. The concept of stakeholder theory is to focus on relationships between an organization and many groups of stakeholders. This theory suggests that organization has to meet stakeholder needs in difference views. This research highlight on the important of employees who are vital stakeholder in helping firm meet the diverse needs in order to attain firm success in the long run meanwhile, firm might provide a wage and benefits that satisfy employee expectation in return. Likewise, the result of this research illustrate the importance of modern human resource accounting implementation which serve additional information for more accuracy decision to broad stakeholders because firm survival is expected to satisfy by all stakeholders goal. To cover thoroughly in relationship of variables, human capital theory is utilized to highlight the important of knowledge and skills development in human resource can achieve greater performance outcomes. The results in this study illustrate that information implementing from modern human resource accounting enhance human resource management efficiency, increase human capital value, and ultimately firm survival. Therefore, employee development on knowledge and skills investment by using information from human resource accounting could produce superior competitive advantages cause having unique and rarely imitate resource leads to firm survival. On the other hand, contingency theory is concerned with the relation between endogenous and exogenous factors, which influence on adapting appropriate strategy with its current context. The results demonstrate that the concept of contingency theory appropriately explains the phenomenon among internal factors (consist of sustainability vision, executive learning, and transformational leadership), external factors (consist of technology change, and environmental uncertainty) and each dimension of modern HRA implementation, in particular Thailand circumstance.

Managerial Contribution

This research aspires to stimulate the important of modern human resource accounting implementation to related sectors (accounting executives, business owners, and managing partners) that have faced strong pressures of aggressive and volatile competition, especially in a high-tech industry like ICT businesses. According to the result, it implies that accounting for human resource can be optional strategic to provide useful information of human resource in a form of accounting aspect for more effective



decision making. In addition, the critical success factor for any knowledge-based company is its highly skilled and intellectual workforce. Therefore, it's time to realize the importance of people and started perceiving its employees as strategic assets which could bring to business success in the long run.

Firstly, this research supports the perspective of accounting executives to recognize and justify the key components of modern human resource accounting implementation that may be more critical in a competitive situation. The results of this research suggest five components of modern human resource accounting implementation (including human resource identification, human resource measurement, human resource investment, human resource reporting, and human resource monitoring) that are the important components for increasing the organizational outcomes (long-term employee commitment, human resource management efficiency, human capital value, and firm survival). Modern human resource accounting implementation plays a crucial role in business competitiveness and leads to firm survival. It is important for software businesses to pay attention to them. Especially, employee participation focus is the approach that the organization improves firm performance. Also, organizational justice orientation can enhance business competitiveness.

Secondly, Because of sample group in this research are non-listed firms, thus it assumes that identifying the intangible asset like human capital in SMEs entrepreneurs can help managers are more awareness of the importance issues, and consequently help to improve firm's management. This could be an interesting starting point to value these intangibles in the balance sheet as well as to draw comparisons between small and big organizations.

Thirdly, top management and accounting executives should focus on long-term employee commitment, human resource management efficiency, and human capital value because these variables are causes firm survival.

Fourthly, this research can facilitate understanding to stakeholders and related sectors how their firm can create organizational values, improve competitive advantage, and attain firm performance over their competitors. Therefore, modern human resource accounting implementation become an important issue for providing useful information for more comprehensive decision making which in turn to firm sustainability ultimately.



Fifthly, for gaining superior firm performance, top managers or accounting executives should generate modern human resource accounting implementation on their employees, which are the important resources. According to the results of this research, an organizational environment should be encouraged by accounting executives toward organizational management capability to support implementing human resource accounting to increase the outcomes of modern human resource accounting implementation.

Finally, the firms that have better accounting information will be able to make effective decision on activities which get maximize benefits to business performance. This research supports devise solutions to business problems which provide the basis for the survival and success of firms. Hence, accounting executives and related sectors should experiment with other resources to encourage effectiveness and create new opportunities in the high competitive environment to maximize the benefits of organizational strategy.

Limitations and Future Research Directions

In this research, some limitations and the suggestions for future research are provided as follows. Firstly, the single population in this research, the ICT businesses in Thailand, may limit the generalizability of the research. Therefore, future research may employ other sampling populations with differentiation in types and characteristics in order to compare the results and outcomes; and at the same time, to gain more research credibility and confirm the generalizability of the research.

Secondly, other research methodology may be employed to examine this conceptual framework of modern human resource accounting implementation. For example, quantitative in-depth interviews may help to explore the up-to-date and point of views of reality from top management and executives. This qualitative methodology stimulates the whole picture and the comprehensive understanding of strategic innovation capability. Moreover, other statistical techniques like the Structural Equation Modelling (SEM) may also highlights the hidden relationships among all constructs within the conceptual framework of modern human resource accounting implementation.



Thirdly, the newly-proposed dimensions of modern human resource accounting implementation can be also re-proposed to fit the variety of each industry environment and condition. As well as the antecedents, it would be fruitful to the literature to expand this research in future research.

Lastly, the non-significance of both the moderating role of governance culture and growth mindset has shed more light on the important influent roles of competitive intensity toward the sustainability of the firm. However, the explanation and understanding of the moderating variable and its effect are still limited. Therefore, future research may shed light on organizational flexibility, and government support as the alternative moderating variables of modern human resource accounting implementation.



BIBLIOGRAPHY



BIBLIOGRAPHY

- Abeysekera, I. and Guthrie, J. (2004). Human Capital Reporting in a Developing Nation. *The British Accounting Review*, 36, 251–268.
- Agbola, R.M., Hemans, S. and Abena, S. (2011). The effectiveness of performance appraisal as a tool for enhancing employee performance in the public health sector. *Global Management Journal*, 3(1/2), 81-96.
- Agle, B. R., Nagarajan, N. J., Sonnenfeld, J. A., and Srinivasan, D. (2006). Does CEO charisma matter? An empirical analysis of the relationships among organizational performance, environmental uncertainty, and top management teams' perceptions of CEO charisma. *Academy of Management Journal*, 49, 161-174.
- Allred, B. B. and Swan, K. S. (2004). Contextual Influences on International Subsidiaries' Product Technology Strategy. *Journal of International Management*, 10, 259-286.
- Al-Mawali, H. (2013). Performance consequences of management accounting system information usage in Jordan. *Business and Economic Horizons*, 9(1), 23-32.
- Al-Mawali, H. (2015). Strategic management accounting usage, environmental uncertainty and organizational performance. *European Journal of Business and Management*, 7(18), 219-226.
- Alvesson, M. (2002). *Understanding Organizational Culture*. London: Sage.
- American Accounting Association Committee of Accounting. (1973). Human Resources, Report of the Committee on Human Resource Accounting. *The Accounting Review Supplement*, XLVIII(3), 161-167.
- Amudo, A. and Inanga, E. L. (2009). Evaluation of internal control systems: a case study from Uganda. *International Research Journal of Finance and Economics*, 27, 125-144.
- Antonakis, J. and Robert J. House (2014). Instrumental leadership: Measurement and extension of transformational–transactional leadership theory. *The Leadership Quarterly*, 25(4), 746-771.



- Antonio Duréndez Gómez-Guillamón. (2003). The usefulness of the audit report in investment and financing decisions. *Managerial Auditing Journal*, 18(6/7), 549-559.
- Arkan, T. (2016). Human Resources Accounting: A Suggested Model for Measurement and Valuation. *Finanse, Rynki Finansowe, Ubezpieczenia*, 79, 173–193.
- Armstrong, C.E., Flood, P.C., Guthrie, J. P., Liu, W., Maccurtain, S. and Mkamwa, T. (2010). The impact of diversity and equality management on firm performance: Beyond high performance work system. *Human Resource Management*, 49(6), 977-998.
- Armstrong, J. S. and Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 14(3), 396-402.
- Arribas, I. and Vila, J. E. (2007). Human capital determinants of the survival of entrepreneurial service firms in Spain. *The International Entrepreneurship and Management Journal*, 3(3), 309–322.
- Asmawi, A. (2012). Appraising the Impact of Gender Differences on Organizational Commitment: Empirical Evidence from a Private SME in Iran. *International Journal of Business and Management*, 7(5), 100-110.
- Avazzadehfath, F. (2011). Decision-Making Based on Human Resource Accounting Information and Its Evaluation Method. *Asian Journal of Finance & Accounting*, 3(1), 1-13.
- Avellanet, A. W. (2009). The COSO guidance on monitoring internal control. *Internal Auditing*, 24(2), 3-4, 6-11.
- Ayman, R., Chemers. M. M., and Fiedler, F. (1995). The contingency model of leadership effectiveness: Its level of analysis. *The Leadership Quarterly*, 6(2), 147-167.
- Bacon, N. and Berry, R. (2005), *Pursuing Shareholder Value: Implications for Human Resource Management*. CIMA Research Executive Summaries Series, London.
- Badiyani, B. M. (2012). Human Resource Accounting: Brief History and Popular Models. *Quest International Multidisciplinary Research Journal*, I(II), 155-158.
- Baker, Goffrey M.N. (2006). *The Feasibility and Utility of Human Resource Accounting*, In: Harold Knootz & Cyril O'Donnel (eds.). *Management A Book of Readings*. USA: McGraw Hill Publishers.



- Ballout, H. I. (2007). Career Success: The Effects of Human Capital, Person-Environment Fit and Organizational Support. *Journal of Managerial Psychology*, 22(8), 741–765.
- Banker, R., Potter, G. and Schroeder, R. (2000). An empirical investigation of an incentive plan that includes nonfinancial performance measure. *The Accounting Review*, 75(1), 65-92.
- Banker, R., Potter, G. and Schroeder, R. (2000). An empirical investigation of an incentive plan that includes nonfinancial performance measure. *The Accounting Review*, 75(1), 65-92.
- Baptiste, N. (2008). Tightening the link between employee well-being at work and performance. *Management Decision*, 46(2), 284-309.
- Baron, N. (2001). Assessing knowledge assets: a review of the models used to measure intellectual capital. *International Journal of Management Reviews*, 3(1), 41-60.
- Bassey, B. E. and Tapang, A. T. (2012). Capitalized human resources cost and its influence on corporate productivity: A study of selected companies in Nigeria. *International Journal of Financial Research*, 3(2), 48-59.
- Bassi, L.J., Lev, B., Low, J., McMurrer, D.P. and Siesfeld, G.A. (2000). Measuring Corporate Investments in Human Capital. In: M.M. Blair & T.A. Kochan (eds.). *The New Relationship, Human Capital in the American corporation*. Washington, D.C.: Brookings Institution.
- Beattie, V. and Smith, S. J. (2010). Human capital, value creation and disclosure. *Journal of Human Resource Costing and Accounting*, 14(4), 262-285.
- Bekefi, T., Epstein, M. J., and Yuthas, K. (2008). Creating Growth: Using opportunity risk management effectively. *Journal of Accountancy*, 72-77.
- Bekefi, T., Epstein, M. J., and Yuthas, K. (2008). Management Accounting Guideline: Managing Opportunities and Risks. *Strategy Management*. 1-39.
- Benjamin E. and Goldsmith. (2010), Chapter 15 Economic factors in peace and war: A discussion, in Benjamin E. Goldsmith, Jurgen Brauer (ed.). *Economics of War and Peace: Economic, Legal, and Political Perspectives (Contributions to Conflict Management, Peace Economics and Development, 14, 263 – 282.*



- Berrone, P., Surroca, J. and Tribó, J.A. (2007). Corporate ethical identity as a determinant of firm performance: a test of the mediating role of stakeholder satisfaction. *Journal of Business Ethics*, 76, 35-53.
- Bhat, V.P. (2000). *Towards Transparency and Uniformity*. Chennai, India: Business line.
- Boal, K. B. and Schultz, P. L. (2007). Storytelling, time and evolution: the role of strategic leadership in complex adaptive systems. *Leadership Quarterly*, 18(4), 411-428.
- Boal, K. B. and Schultz, P. L. (2007). Storytelling, time and evolution: the role of strategic leadership in complex adaptive systems. *Leadership Quarterly*, 18(4), 411-428.
- Bonn, I. and Fisher, J. (2011). Sustainability: the missing ingredient in strategy. *Journal of Business Strategy*, 32(1), 5-14.
- Bontis, N. (2001). Assessing knowledge assets: a review of the models used to measure intellectual capital. *International Journal of Management Review*, 3(1), 41-60.
- Boom, R. and Kamm, J. (2014). *Human Resources: Assets That Should Be Capitalized*. [Online]. Available from: https://www.researchgate.net/publication/280208280_Human_Resources_Assets_That_Should_Be_Capitalized. [accessed March 2016].
- Bozzolan, S., Favotto, F. and Ricceri, F. (2003). Italian annual intellectual capital disclosure: an empirical analysis. *Journal Intellectual Capital*, 4(4), 543-58.
- Bresnahan, T. F., Brynjolfsson, E., and Hitt, L. M. (2000). Technology, Organization, and the Demand for Skilled Labor. In *The New Relationship: Human Capital in the American Corporation*, edited by Margaret M. Blair and Thomas A. Kochan. *Brookings International Journal of Business Strategy*, 10(4), 107-131.
- Brown, I. (2008). Investigating the impact of external environment on strategic information systems planning: A qualitative inquiry. *SAICSIT Wilderness*, 8-15.
- Brown, I. (2008). Investigating the impact of external environment on strategic information system planning: A qualitative inquiry. Proceedings SAICSIT-ACM conference. *Wilderness*, 8-15.



- Brummet, R.L., Flamholtz, E. G., and William, C. P. (1968). Human Resource Measurement-A Challenge for Accountants. *The Accounting Review*, XLIII(2), 217-224.
- Bullen, M. L. and Eyler, K. (2010). Human resource accounting and international developments: implications for measurement of human capital. *Journal of International Business and Cultural Studies Human Resource Accounting*, 1-16.
- Burma, Z. A. (2014). Human Resource Management and Its Importance for Today's Organizations. *International Journal of Education and Social Science*, 1(2), 85-94.
- Cabrera, A., Cabrera, E. F., and Barajas, S. (2001). The Key Role of Organizational Culture in a Multi-System View of Technology Driven Change. *International Journal of Information Management*, 21(3), 245-261.
- Cadbury, A. (2000). The Corporate Governance Agenda. *Corporate Governance*, 8(1), 7-15.
- Cairns, J. J. and Saier, M. J. (2010). *Real Sustainability*. Water Air Soil Pollution.
- Cania, L. (2014). The Impact of Strategic Human Resource Management on Organizational Performance. *Economia. Seria Management*, 17(2), 373-383.
- Carnoy, M. (2004). ICT in education: Possibilities and challenges. *Inaugural Lecture of the Academic Year 2004-2005 at the UOC*. [Online]. Available from: <http://www.uoc.edu/inaugural04/eng/index.html>. [accessed July 2, 2017].
- Caruth, D. and Humphreys, J.H. (2008). Performance appraisal: essential characteristics for strategic control. *Measuring Business Excellence*, 12(3), 24-32.
- Chang, S. E., Liu, A.Y. and Lin, S. (2015). Exploring privacy and trust for employee monitoring. *Industrial Management & Data Systems*, 115(1), 88-106.
- Changchit, C., Holsapple, C. W. and Viator, R. E. (2001). Transferring auditors' internal control evaluation knowledge to management. *Expert Systems with Applications*, 20, 275-291.
- Chaudhry, N. I. and Roomi, M. A. (2010). Accounting for the development of human capital in manufacturing organizations: A study of the Pakistani textile sector. *Journal of Human Resource Costing & Accounting*, 14(3), 178-195.



- Churchill, G. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16, 64-73.
- Cinquini, L. and Tenucci, A. (2010). Strategic management accounting and business strategy: a loose coupling?. *Journal of Accounting and Organizational Change*, 6(2), 228-259.
- Claver-Cortés, E., Zaragoza-Sáez, P. C., Molina-Manchón, H., Úbeda-García, M. (2015). Intellectual capital in family firms: human capital identification and measurement. *Journal of Intellectual Capital*, 16(1), 199-223.
- Coderre, D. (2006). A continuous view of accounts. *Internal Auditor*, 63(2), 25-31.
- Collings, D. G. and Mellahi, K. (2009). Strategic Talent Management: A Review and Research Agenda. *Human Resource Management Review*, 19(4), 304–313.
- Contractor, F. J and Mudambi, S. M. (2008). The Influence of Human Capital Investment on the Exports of Services and Goods: An analysis of the top 25 services outsourcing countries. *Management International Review*, 48(4), 433-445.
- Crane, A. and Ruebottom, T. (2011). Stakeholder theory and social identity; rethink stakeholder identification. *Journal of Business Ethics*, 102(supplements), 77-87.
- Cuganesan, S. (2006). Reporting organizational performance in managing human resources: Intellectual capital or stakeholder perspectives?. *Journal of Human Resource Costing & Accounting*, 10(3), 164-188.
- Daeboug, K. (2009). *Human Capital and its Measurement*. OECD World Forum.
- Danaei, A., Abdi, H., Mohagheghi, H., and Bajlan, M. (2014). Human Resource Accounting and Financial Reporting. *Indian Journal of Fundamental and Applied Life Sciences*, 4(1), 1565-1570.
- Danish, R. Q. and Usman, A. (2010). Impact of reward and recognition on job satisfaction and practices on productivity: A study on Steel Finishing Line. *The American Economic Review*, 87(3), 291-313.
- Deegan, C. (2000). *Financial Accounting Theory*. Sydney: McGraw-Hill.
- Dehghanzade, H., Moradi, M. A. and Raghbi, M. (2011). A Survey of Human Factors' Impacts on the Effectiveness of Accounting Information Systems. *International Journal of Business Administration*, 2(4), 166-174.



- Dejmal, A. (2016). *Business 306: Strategic Human Resources Management Study*. [Online]. Available from: <https://study.com/academy/course/business-306-strategic-human-resources-management.html> [accessed June 12, 2017].
- Delmotte, J. and Sels, L. (2008). HR outsourcing: threat or opportunity?. *Personnel Review*, 37(5), 543-563.
- Díez, J. M., Ochoa, M. L., Prieto, M. B., and Santidrián, A. (2010). Intellectual capital and value creation in Spanish firms. *Journal of Intellectual Capital*, 11(3), 348-367.
- Donaldson, L. (2001). *The Contingency Theory of Organizations*, Sage, Thousand Oaks.
- Dragoni, L., Tesluk, P. E., Russell, J. E. A. and Oh, I. (2009). Understanding managerial development: Integrating developmental assignments, learning orientation, and access to developmental opportunities in predicting managerial competencies. *Academy of Management Journal*, 52, 731–743.
- Dries, N., Vantilborgh, T. and Pepermans, R. (2012). The role of learning agility and career variety in the identification and development of high potential employees. *Personnel Review*, 41(3), 340-358.
- Dvir, Avolio, and Shamir. (2002). Impact of transformational leadership on follower development and performance a field experience. *Academic of Management Journal*, 45(4), 735-744.
- Edom, G. O., Inah, E. U., Adanma, E. S. (2015). The Impact of Human Resource Accounting on the Profitability of a Firm: Empirical Evidence from access Ban of Nigeria plc. *European Journal of Accounting, Auditing and Finance Research*, 3(7), 76-94.
- Elnaga, A. and Imran, A. (2013). The Effect of Training on Employee Performance. *European Journal of Business and Management*, 5(4), 137-147.
- Enofe A.O., Mgbame C., Otuya S. and Ovie C. (2013). Human Resources Accounting Disclosures in Nigeria Quoted Firms. *Research Journal of Finance and Accounting*, 4(13), 7-13.
- Ernst & Young. (2013). *Role of HR in Driving Sustainable Business Practices*. Ernst & Young LLP. Published in India.



- European Commission. (2012). *Education and Training 2020 Work Programme Thematic Working Group 'Assessment of Key Competences*. [Online]. Available from: http://ec.europa.eu/dgs/education_culture/repository/education/policy/school/doc/keyreview_en.pdf. (accessed March 2016).
- Federation of Accounting Professions Under the Royal Patronage of his Majesty the King. (2013). *TFRS 13*. [Online]. Available from: http://www.fap.or.th/images/column_1412565962/TFRS%2013-web.pdf. [accessed March 2016].
- Fedorova, A. and Ponomareva, O. (2017). Developing University HR Potential as the Basis for its Intellectual Capital. *Proceedings of the European Conference on Intellectual Capital*. 97-105.
- Felício, J. A., Caldeirinha V. R., Ribeiro-Navarrete, B. (2015). Corporate and individual global mind-set and internationalization of European SMEs. *Journal of Business Research*, 68, 797–802.
- Feng, W. and Jinke, L. (2011). Internal control evaluation under risk-based audit. *IEEE Conference on Management and Service Science (MASS)*, 12(14), 1-3.
- Ferreira, A. and Otley, D. (2009). The design and use of performance management systems: An extended framework for analysis. *Management Accounting Research*, 263-282.
- Fields, D., Chan, A., Akhtar, S., and Blum, T. C. (2006). Human resource management strategies under uncertainty: How do US and Hong Kong Chinese companies differ?. *Cross Cultural Management: An International Journal*, 13(2), 171-186.
- Filsaraeil, M., Khakbaz, E., Riazi, A., Binafar, Y. (2016). An Overview of Human Resource Accounting in the Manufacturing Companies. *American Journal of Marketing Research*, 2(4), 2016, 103-113.
- Flamholtz, E. G., Bullen, M. L., and Hua, W. (2002). Human resource accounting: a historical perspective and future implications. *Management Decision*, 40(10), 947-954.
- Flamholtz, E.G., Sullen, M.L. and Hua W. (2003). Measuring the ROI of management development: An application of the stochastic rewards valuation model. *Journal of Human Resource Costing and Accounting*, 7(1-2), 21-40.



- Flamholtz, E. G. (1974). *Human Resource Accounting*. California. United State of America: Dickenson Publications Co., Inc., California.
- Flamholtz, E. G. and Main, E. D. (1999). Current Issues, Recent Advancements, and Future Directions in Human Resource Accounting. *Journal of Human Resource Costing and Accounting*, 4(1), 11-20.
- Fok-Yew, O. (2015). The Relationship between Transformational Leadership and Followers' Work Characteristics and Task Performance. *International Journal of Academic Research in Business and Social Sciences*, 5(6), 366-377.
- Fontana, F. B. and Macagnan, C. B. (2013). Factors explaining the level of voluntary human capital disclosure in the Brazilian capital market. *Intangible Capital*, 9(1), 305-321.
- Freeman, R. E., Harrison, J. S., and Wicks, A. C. (2007). *Managing for Stakeholders: Survival, Reputation, and Success*. New Haven: Yale University Press. United State of America.
- Fuller-Love, N. (2006). Management development in small firms. *International Journal of Management Review*, 8(3), 175-190.
- Garg, M. C. (2016). *Financial Accounting: Meaning, Nature and Role of Accounting*. Guru Jambheshwar University, India.
- Gathungu, E., Iravo, M. A. and Namusonge, S. (2015). Transformational Leadership and Employee's Commitment: Empirical Review. *ReseachGate*. [Online]. Available from: https://www.researchgate.net/publication/280559528_Transformational_Leadership_and_Employee's_Commitment_Empirical_Review [accessed June 21, 2016].
- Gerdin, J. and Greve, J. (2004). Forms of contingency fit in management accounting research—a critical review. *Accounting, Organizations and Society*, 29, 303–326
- Ghosh. D. and Gurunathan. L. (2015). Do commitment based human resource practices influence job embeddedness and intention to quit?. *IIMB Management Review*, 24(4), 240-251.
- Giriuniene, G. and Giriunas, L. (2012). Assessment of internal control system in Lithuania. *Economics and Management*, 17(4), 1240-1244.
- Gramling, A. A. and Vandervelde, S. D. (2006). Assessing internal audit quality. *Internal Auditing*, 26-33.



- Guangrong, D., De Meuse, K. P., and Tang, K. Y. (2010). The role of Learning Agility in Executive Career Success: The Results of Two Field Studies. *Journal of Managerial Issues*. [Online]. Available from: <https://www.questia.com/library/journal/1G1-353319143/the-role-of-learning-agility-in-executive-career-success>. [accessed April 9, 2017].
- Guest, D. (2002). Human resource management, corporate performance and employee well-being: building the worker into HRM. *The Journal of Industrial Relations*, 44(3), 335-358.
- Gulluce, A.Ç., Kaygin, E., Bakadur Kafadar, S. and Atay, M. (2016). The Relationship between Transformational Leadership and Organizational Commitment: A Study on the Bank Employees. *Journal of Service Science and Management*, 9, 263-275.
- Gurel, E., Altinay, L. and Daniele, R. (2010). Tourism students' entrepreneurial intentions. *Annals of Tourism Research*, 37(3), 646–669.
- Guthrie, J., Petty, R. and Ricceri, F. (2006). The voluntary reporting of intellectual capital: comparing evidence from Hong Kong and Australia. *Journal of Intellectual Capital*, 7(2), 254-71.
- Haelermans, C. and Borghans, L. (2012). Wage effects of on-the-job training: A meta-analysis. *British Journal of Industrial Relations*, 50(3), 502–528.
- Hair, J., Black, W., Babin, B., Anderson, R., and Tatham, R. (2006). *Multivariate Data Analysis*. 6th ed. Uppersaddle River, N.J.: Pearson Prentice Hall.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010). *Multivariate Data Analysis. Seventh Edition*. New Jersey: Prentice Hall, Upper Saddle River.
- Harrison, J. S. and Andrew, W. (2013). Stakeholder theory, Value, and Firm performance. *Business Ethics Quarterly*, 23(1), 97-124.
- Hashim, J. (2010). Human resource management practices on organizational commitment: The Islamic perspective. *Personnel Review*, 39(6), 785-799.
- Hasnas, J. (2013). Whither stakeholder theory? A guide for the perplexed revisited. *Journal of Business Ethics*, 112, 47-57.
- Hatch, N. W. and Dyer, J. H. (2004). Human Capital and Learning as a Source of Sustainable Competitive Advantage. *Strategic Management Journal*, 25(12), 1155–1178.



- Hitt, M. A., Ireland, D.R. and Lee, H. (2000). Technological learning, knowledge management, firm growth and performance: An introductory essay. *Journal of Engineering and Technology Management*, 17, 231-246.
- Holland, P., Copper, B. and Hecker, R. (2012). *The Electronic Workplace Survey: Analysis of the First National Survey on Employee Attitudes to Electronic Monitoring and Surveillance in the Australian Workplace*. Monash University.
- Homburg, C., Artz, M. and Wieseke, J. (2012). Marketing performance measurement systems: Does comprehensiveness really improve performance?. *Journal of Marketing*, 76(3), 56-77.
- Hon, A. H. (2013). Does job creativity requirement improve service performance? A multilevel analysis of work stress and service environment. *International Journal of Hospitality Management*, 35, 161-170.
- Hossain, A., Akhter, N., and Sadia, N. (2014). An Empirical Analysis on Importance of Human Resource Accounting (HRA) Practices in the Organizations. *International Journal of Ethics in Social Sciences*, 2(2), 37-54.
- Huang, C. C., Luther, R., Tayles, M. and Haniffa, R. (2013). Human capital disclosures in developing countries: figureheads and value creators. *Journal of Applied Accounting Research*, 14(2), 180-196.
- Huang, G., Roy, M. H. and Armed, Z. U. (2002). Benchmarking the Human Capital Strategies of MNCs in Singapore. *Benchmarking: An International Journal*, 9(4), 357-373.
- Huang, H., Techatassanasoontorn, A. A., Juntiwarakij, S. and Trauth. E. M. (2007). *ICT and Economic Development: Analyzing Thailand's Path to the Information Economy*. s.l.: s.n.
- ICAEW. (2003), *Briefing Document on Human Capital Reporting*. London: Institute of Chartered Accountants in England and Wales.
- Ilknur, Ö. T., Pinar U. and Dural, U. (2017). The role of leadership perception as a mediator between managers' self-monitoring and subordinate attitudes. *Journal of Social Psychology*, 157(3), 295-307.
- Ilknur, O. T., Pinar, U., Dural, U. (2017). The role of leadership perception as a mediator between managers' self-monitoring and subordinate attitudes. *Journal of Social Psychology*, 157(3), 295-307.



- Ittner, C.D., Larcker, D.F. (2000, October 16). Non-financial Performance Measures: What Works and What Doesn't. *Financial Times' Mastering Management Series*. Pennsylvania: Wharton School, Pennsylvania.
- Jafri, M. H. (2010). Organizational commitment and employee's innovative behavior. *Journal of Management Research*, 10(1), 62-68.
- Jamie, Y. T. and Chang. (2017). Mutual Monitoring of Resources in an Enterprise Systems Program. *Project Management Journal*, 48(1), 100-115.
- Jasrotia, P. (2004). *The Need for Human Resource Accounting*. [Online]. Available from: <http://www.itpeopleindia.com/20021216/cover.shtml>. [accessed March 2016].
- Jimba, I. and Awodiran, M. (2015). Corporate Social Responsibility, Human Resource Accounting and the Socio-Economic Environment. *International Journal of Banking, Finance, Management & Development Studies*, 3(1), 61-84.
- Jimba, I. K. and Awodiran, M. A. (2015). Corporate Social Responsibility, Human Resource Accounting and the Socio-Economic Environment. *International Journal of Banking Finance Management and Development Studies*, 1(5), 62-84.
- Jitnom, S. and Ussahawanitchakit, P. (2010). Strategic Learning Capability, Firm Performance and Sustainable Growth: An Empirical Study of Auto Spare Part Manufacturing Businesses in Thailand. *International Journal of Business Strategy*, 10(4).
- Joiner, T. and Bakalis, S. (2006). The antecedents of organizational commitment: the case of Australian casual academics. *International Journal of Educational Management*, 20(6), 439-452.
- Jusoh, R. (2010). The influence of perceived environmental uncertainty, firm size, and strategy on multiple performance measures usage. *African Journal of Business Management*, 4(10), 1972-1984.
- Kaler, J. (2003). Differentiating Stakeholder Theory. *Journal of Business Ethics*, 46, 71-83.



- Kalpana, R. and Gopinath, R. (2013). Trends and Issues of Human Resource Accounting. *ResearchGate*. [Online]. Available from: https://www.researchgate.net/profile/Dr_Gopinath_R2/publication/264046976_TRENDS_AND_ISSUES_OF_HUMAN_RESOURCE_ACCOUNTING/links/00b4953cbdd5d0525a000000/TRENDS-AND-ISSUES-OF-HUMAN-RESOURCE-ACCOUNTING.pdf. [accessed March 2016].
- Karim, S. and Mitchell, W. (2000). Path-dependent and path-breaking change: Reconfiguring business resources following acquisitions in the US medical sector, 1978-1995. *Strategic Management Journal*, 21, 1061-1081.
- Kashive, N. (2013). Importance of Human Resource Accounting Practices and Implications of Measuring Value of Human Capital: Case study of Successful PSUs in India. *XIMB Journal of Case Research*, IV(2), 113-144.
- Kataria, A., Garg, P. and Rastogi, R. (2013). Psychological Climate and Organizational Effectiveness: Role of Work Engagement. *The IUP Journal of Organizational Behavior*, 7(3), 33-46.
- Katou, A. (2011). Test of a Causal Human Resource Management-Performance Linkage Model: Evidence from the Greek Manufacturing Sector. *International Journal of Business Science and Applied Management*, 6, 2-11.
- Kaur, S., Raman, A. V., and Singhania, M. (2014). Human Resource Accounting Disclosure Practices in Indian Companies. *The Journal of Business Perspective*. [Online]. Available from: <http://journals.sagepub.com/doi/abs/10.1177/0972262914540227>. [accessed March 2016].
- Kenna, S., Ijeoma, N., Anionwu, C., and Olise, M. C. (2010). Effect of Investment in Human Capital Development on Organizational Performance: Empirical Examination of the Perception of Small Business Owners in Nigeria. *European Journal of Economics, Finance and Administrative Sciences*, 26, 93-107.
- Kidwell, R. E. and Sprague, R. (2009). Electronic surveillance in the global workplace: laws, ethics, research and practice. *New Technology, Work, and Employment*, 24, 194-208.



- Kittikunchotiwut, P., Ussahawanitchakit, P. and Pratoom, K. (2013). Strategic management creativity and firm survival: An empirical investigation of the exporting fashion accessories business in Thailand. *Journal of Academy of Business and Economics*, 13(3), 87-114.
- Kouhy, R., Vedd, R., Yoshikawa, T., and Innes, J. (2009). Human resource policies, management accounting and organizational performance. *Journal of Human Resource Costing and Accounting*, 13(3), 245-263.
- Koys, D.J. (2001). The effects of employee satisfaction, organizational citizenship behavior and turnover on organizational effectiveness: A unit-level, longitudinal study. *Personnel Psychology*, 54, 101-114.
- Kramar, R., Bartram, T., Cieri, H., Noe, R.A., Hollenbeck, J.R., Gerhart, B., and Wright, P.M. (2011). *Human Resource Management in Australia*. 4th ed. Sydney: McGraw-Hill.
- Krasniqi, F. X. (2016). The Importance of Investment in Human Capital: Becker, Schultz and Heckman. *Journal of Knowledge Management, Economics and Information Technology*, 1(4), 1-18.
- Lau, C.M. (2011). Nonfinancial and financial performance measures: How do they affect employee role clarity and performance?. *Advance in Accounting, incorporating Advances in International Accounting*, 27, 286-293.
- Lau, C.M. and Moser, A. (2008). Behavioral effects of nonfinancial performance measures: The role of procedural fairness. *Behavioral Research in Accounting*, 20, 55-71.
- Lau, C.M. and Sholihin, M. (2005). Financial and nonfinancial performance measures: How do they affect job satisfaction?. *The British Accounting Review*, 37, 389-413.
- Law, P. (2011). Audit regulatory reform with a refined stakeholder model to enhance corporate governance: Hong Kong evidence. *Corporate Governance: The International Journal of Business in Society*, 11(2), 123-135.
- Lawler, E. (2009). Make Human Capital a Source of Competitive Advantage. *Organizational Dynamics*, 38, 1-7.
- Lee, C.H. and Bruvold, N. T. (2003). Creating value for employees: investment in employee development. *The International Journal of Human Resource Management*, 14(6), 981-1000.



- Leiblein, M. J. R. and Dalsace, F. (2002). Do Make or Buy Decision Matter? The Influence of Organization Governance of Technological Performance, *Strategic. Management Journal*, 23(9), 817-833.
- Lepak, D. and Snell, S. (2002). Examining the Human Resource Architecture: The Relationships Among Human Capital, Employment, and Human Resource Configurations. *Journal of Management*, 28(4), 517-543.
- Leuz, C. and Verrechia, R. (2000). The economic consequences of increased disclosure. *Journal of Accounting Research*, 38(3), 91-124.
- Lewis, E. F., Hardy, M. and Snaith, B. (2013). Estimating the effect of nonresponse bias in a survey of hospital organizations. *Evaluation and the Health Profession*, 36, 330–351.
- Limmroth, S. P. (2012). Internal audit and compliance as a combined function: lessons learned. *Journal of Health Care Compliance*, 27-32.
- Ljubojević, Č. and Ljubojević, G. (2015). Improving the stakeholders satisfaction by corporate governance quality. *Škola Biznisa*, 22-35.
- Lok, P. and Crawford, J. (2001). Antecedents of organizational commitment and the mediating role of job satisfaction. *Journal of Managerial Psychology*, 16(8), 594-613.
- Lombardo, M. M. and Eichinger, R. W. (2000). High potentials as high learners. *Human Resource Management*, 39(4), 321-329.
- Loshali, S. and Krishnan, V. R. (2013). Strategic human resource management and firm performance: Mediating role of transformational leadership. *Journal of Strategic Human Resource Management*, 2(1), 9-19.
- Lubin, D. C. and Esty, D. A. (2010). The Sustainability Imperative. *Harvard Business Review*, 42-50.
- Luther, R. and Longden, S. (2001). Management Accounting in Companies Adapting to Structural Change and Volatility in Transition Economies: a South African study. *Management Accounting Research*, 12(3), 299-320.
- Maines, L.A. and Wahlen, J.M. (2006). The nature of accounting information reliability: Inferences from archival and experimental research. *Accounting Horizons*, 20(4), 399-425.



- Malik, M. E., Nawab, S., Naeem, B. and Danish, R. Q. (2010). Job satisfaction and organizational commitment of University teachers in Public sectors of Pakistan. *International Journal of Business and Management*, 5(6), 17-26.
- Marimuthu, M., Arokiasamy, L. and Ismail, M. (2009). Human capital development and its impact on firm performance: Evidence from developmental economics. *The Journal of International Social Research*, 2(8), 265-272.
- Mclean, G. N. (2006). National Human Resource Development: A focused study in transitioning societies in the developing world. *Advances in Developing Human Resources*, 8(1), 3-11.
- Meyer, J. P., Becker, T. E., and Vandenberghe, C. (2004). Employee commitment and motivation: A conceptual analysis and integrative model. *Journal of Applied Psychology*, 89, 991–1007.
- Meyer, J. P., Stanley, D. J., Herscovitch, L. and Topolnytsky, L. (2002). Affective, Continuance and Normative Commitment to the Organization: A Meta-analysis of Antecedents, Correlates and Consequences. *Journal of Vocational Behavior*, 61, 20-52.
- Micah, L.C., Ofurum, C. O. and Ihendinihu, J. U. (2012). Firms Financial Performance and Human Resource Accounting Disclosure in Nigeria. *International Journal of Business and Management*, 7(14), 67-75.
- Michael, O. B., Samuel, F. O. and Samuel, F. A. (2014). Human Resource Management and Accounting as Strategies for Achieving Global Competitiveness and Vision 2020 in Nigeria. *Journal of South African Business Research*, 1-12.
- Ministry of Information and Communication Technology. (2011). *Executive Summary Thailand Information and Communication Technology Policy Framework, (2011-2020), ICT2020*.
- Mishra, S. (2016). *Top 4 Types of Reports Prepared for Management*. [Online]. Available from: <http://www.yourarticlelibrary.com/accounting/mis/top-4-types-of-reports-prepared-for-management-with-diagram/67554/>. [accessed March 2016].
- Moore, G. (2001). Corporate Social and Financial Performance: An Investigation in the U.K. Supermarket Industry. *Journal of Business Ethics*, 34, 299-315.



- Morrill, J. B., Morrill, C. K. J. and Kopp, L. S. (2012). Internal control assessment and interference effects. *Behavioral Research in Accounting*, 24(1), 73-90.
- Morrow J. L., Sirmon, D. G., Hitt, M. A., and Holcomb, T. R. (2007). Creating value in the face of declining performance: Firm strategies and organizational recovery. *Strategic Management Journal*, 28, 271-283.
- Morrow, P.C., McElroy, J.C. and Scheibe, K.P. (2012). Influencing organizational commitment through office redesign. *Journal of Vocational Behavior*, 81, 99–111.
- Morton, N. A., and Hu, Q. (2008). Implications of the fit between organizational structure and ERP: A structural contingency theory perspective. *International Journal of Information Management*, 28(5), 391-402.
- Murphy, M. C. and Dweck, C. S. (2016). Research Dialogue Mindsets shape consumer behavior. *Journal of Consumer Psychology*, 26(1), 127–136.
- Murthy, V. and Guthrie, J. (2012). Management control of work-life balance: A narrative study of an Australian financial institution. *Journal of Human Resource Costing and Accounting*, 16(4), 258-280.
- Neuman, W.L. (2006). *Social Research Methods: Qualitative and Quantitative Approaches*. Toronto: Pearson.
- Nielsen, K. and Daniels, K. (2011). Does shared and differentiated transformational leadership predict followers' working conditions and well-being? *The Leadership Quarter*, 1-15.
- Nielsen, L.B., Mitchell, F. and Norreklit, H. (2015). Management accounting and decision making: Two case studies of outsourcing. *Accounting Forum*, 39(1), 64-82.
- Nunnally, J. C. and Bernstein, I. H. (1994). *Psychometric Theory*. 3rd ed. New York, NY: McGraw-Hill, Inc.
- O'Donovan. G. (2003). *Change Management – A Board Culture of Corporate Governance*. Mondaq Business Briefing.
- Obara, L.C. (2004). Human Asset Accounting Treatment and Corporate Profitability Evaluation-A Litterary Reflection. *ReseachGate*. [Online]. Available from: <https://www.researchgate.net/.../02e7e53c5995d96c0d000000>. [accessed March 2016].



- Odhong E. A. and Were, S. (2013). Human Capital Management as a tool for value creation. *in proceedings of First SHRD Annual Research Conference*, 12th and 13th, Nairobi, Jomo Kenyatta University of Agriculture and Technology main campus.
- Odhong, A. E., Were, A. and Omolo, J. (2014). Effect of human capital management drivers on organizational performance in Kenya. A case of investment and mortgages bank ltd. *European Journal of Business Management*, 2(1), 341-356.
- Okpako, P.O., Atube, E.N. and Olufawoye, O.H. (2014). Human Resource Accounting and Firm Performance. *Global Journal of Commerce and Management Perspective*, 3(4), 232-237.
- Oliveira, L., Rodrigues, L.L. and Craig, R. (2006). Firm-specific determinants of intangibles reporting: evidence from Portuguese stock market. *Journal of Human Resource Costing and Accounting*, 10(1), 11-33.
- Oliveira, L., Rodrigues, L.L. and Craig, R. (2010). Intellectual capital reporting in sustainability reports. *Journal of Intellectual Capital*, 11(4), 575-594.
- Olsson, B. (2001). Annual reporting practices: information about human resources in corporate annual reports in major Swedish companies. *Journal of Human Resource Costing and Accounting*, 6(1), 39-52.
- Ooncharoen, N. and Ussahawanitchakit, P. (2009). New Service Development (NSD) Strategy, and its Antecedents and Consequences: An Empirical Examination of Hotel Business in Thailand. *Journal of International Business and Economics*, 9(4), 1-25.
- Orts, E. and Strudler, A. (2002). The ethical and environmental limits of stakeholder theory. *Business Ethics Quarterly*, 12(2), 215-33.
- Osibanjo. O. R. and Anthonia. A. A. (2012). *Human Resource Management: Theory and Practice*. First Edition, Pumark Nigeria Limited Publisher.
- Patel, P., Terjesen, S. and Li, D. (2012). Enhancing effects on manufacturing flexibility through operational absorptive capacity and operational ambidexterity. *Journal of Operations Management*, 30, 201-220.
- Pena, I. (2002). Intellectual capital and business start-up success. *Journal of Intellectual Capital*, 3(2), 180-198.



- Peng, J. C. and Chiu, S. F. (2010). An Integrative Model Linking Feedback Environment and Organization Citizenship Behavior. *The Journal of Social Psychology*, 150(6), 582-607.
- Persson, H. (2004). The Survival and Growth of New Establishments in Sweden 1987-1995. *Small Business Economics*, 23, 423-440.
- Petty, R. and Guthrie, J. (2000). Intellectual Capital Literature Review: Measurement, Reporting and Management. *Journal of Intellectual Capital*, 1(2), 155-176.
- Piccolo, R. F., and Colquitt, J. A. (2006). Transformational leadership and job behaviors: the mediating role of core job characteristics. *Academy of Management Journal*, 49(2), 327-340.
- Pongpearchan, P. and Ussahawanitchakit, P. (2011). Strategic Entrepreneurship Management Competency and Firm Success: A Comparative Study of SMEs in Auto and Electronic Parts in Thailand. *International Journal of Business Strategy*, 11(2), 1-31.
- Porter, M. (2001). Strategy and the Internet. *Harvard Business Review*. 79(3), 63–78.
- Porter, M. E. (2003). The Economic Performance of Regions. *Regional Studies*, 37(6&7), 549–578.
- Posavac, S. S., Kardes, F. R., and Brakus, J. J. (2010). Focus Induced Tunnel Vision in Managerial Judgment and Decision Making: The Peril and the Antidote. *Organizational Behavior and Human Decision Processes*, 113(2), 102–111.
- Prasertsang, S., Ussahawanitchakit, P. and Pratanporn, J. (2012). Corporate social responsibility effectiveness, firm competitiveness, business success and corporate sustainability: an empirical investigation of ISO 14000 businesses in Thailand. *International Journal of Business Strategy*, 12(4), 137-164.
- Prempee, K. and Ussahawanitchakit, P. (2012). Modern Cost Management Strategy Implementation and Firm Performance: Evidence from Chemical Manufacturing Businesses in Thailand. *International Journal of Strategic Management*, 12(3), 1-13.
- Prempee, K., Ussahawanitchakit, P. and Boonlua, S. (2013). Management Accounting Governance and Firm Value of Textile in Thailand. *International Journal of Strategic Management*, 12(3), 1-25.



- Robinson, D., Perryman, S. and Hayday, S. (2004). The Drivers of Employee Engagement. *IES Research Networks*, 1-87.
- Robles, F. (2011). Export channel integration strategy and performance: A contingency approach. *International Journal of Business and Management*, 6(12), 3-13.
- Roeck, R. D. and Delobbe, N. (2012). Do environmental CSR initiatives serve organizations' legitimacy in the oil industry? Exploring employees' reaction through organizational identification theory. *Journal of Business Ethics*, 110(4), 397-412.
- Rogelberg, S. G. and Stanton, J. M. (2007): Understanding and Dealing With Organization Survey Nonresponse. *Organization Research Methods*, 10(2), 195-209.
- Roos, G., Bainbridge, A. and Jacobsen, K. K. (2001). Intellectual Capital Analysis as a Strategic Tool. *Strategy Leadership*, 29, 21-28.
- Rost, K. and Weibel, A. (2013). CEO Pay from a Social Norm Perspective: The Infringement and Reestablishment of Fairness Norms. *Corporate Governance: An International Review*, 21(4), 351–372.
- Rothaermel, F. T. and Deeds, D. L. (2006). Alliance Type and Alliance Management Capability in High-Technology Ventures. *Journal of Business Venturing*, 21(4), 429-460.
- Rudez, H. N. and Mihalic, T. (2007) Intellectual capital in the hotel industry: A case study from Slovenia. *Hospitality Management*, 26(2), 188-199.
- Rui, C., Emerson, M., and Luis, L. (2010). Transformational leadership and TQM implementation. *Advances in Management*, 3(6), 7-18.
- Sabarwal, P.K. (2014). *An Analysis of How HR Policies and Procedures Impact on Employees' Performance in New Zealand Organizations*. Master Dissertation, Unitec Institute of Technology, New Zealand.
- Sabeen, Z. and Mehboob, S.A.A. (2008). Perceived Fairness of and Satisfaction with Employee Performance Appraisal and Its Impact on Overall Job Satisfaction. *The Business Review*, 10(2), 185-191.
- Sachs, S. and Rühli, E. (2011). *Stakeholders Matter: A New Paradigm for Strategy in Society*. United Kingdom: Cambridge University.



- Santos-Rodrigues, H., E. Gestao., S. Do Castelo I., P.F. Dorrego and U. Vigo. (2010). The Influence of Human Capital on the Innovativeness of Firms. *International Business and Economics Research Journal*, 9(9), 53-63.
- Sawalqa, F. A. and Qtish, A. (2012). Internal control and audit program effectiveness: empirical evidence from Jordan. *International Business Research*, 5(9), 128-137.
- Schuler, R.S. and Macmillan, I.C. (1984). Gaining competitive advantage through human resource practices. *Human Resource Management*. 23(3), 241-55.
- Selvarajan, T. T., Ramamoorthy, N., Flood, P. C., Guthrie, J. P., MacCurtain, S. and Liu, W. (2007). The role of human capital philosophy in promoting firm innovativeness and performance: Test of a causal model. *International Journal of Human Resource Management*, 18(8), 1456-1470.
- Senn Delaney staff (2015). Why fostering a growth mindset in organizations matters. *Senn Delaney*. [Online]. Available from: http://knowledge.senndelaney.com/docs/thought_papers/pdf/stanford_agilitystudy_hart.pdf. [accessed May 3, 2017].
- Serenko, S. A. and Bontis. N. (2004). Meta-review of Knowledge Management and Intellectual Capital Literature: Citation Impact and Research Productivity Rankings. *Knowledge and Process Management*, 11(3), 185–198.
- Seth, S. (2016). 10 Characteristics of Successful Entrepreneurs. *Investopedia*. [Online]. Available from: <http://www.investopedia.com/articles/personal-finance/101014/10-characteristics-successful-entrepreneurs.asp> [accessed May 3, 2017].
- Shaheen, I., Noor, A. and Sultana, A. (2016). A Study on HR Accounting Practices in Selected Companies. *International Journal of Innovative Research and Development*. 5(2), 15-21.
- Shahzad, F., Luqman, R. A., Khan, A. R., and Shabbir, L. (2012). Impact of Organizational Culture on Organizational Performance: An Overview. *Interdisciplinary Journal of Contemporary Research in Business*, 3(9), 975-985.
- Sharma, N. and Kumar, M. (2014). A comparative study of human resource disclosure and reporting practices of selected public and private sector banks. *Abhinav*, III, 78-86.



- Shih, H.A., Chiang, W. and Hsu, C. (2006). Can High Performance Work Systems Really Lead to Better Performance?. *International Journal of Manpower*, 27(8), 741-763.
- Shin, S. J. and Zhou, J. (2003). Transformational leadership, conservation and creativity: evidence from Korea. *Academy of Management Journal*, 46(6), 703–14.
- Shrives, P. and Linsley, P. (2003). Communicating risk management in annual reports. *International Accountant*, 20, 28-31
- Siaguru, F. (2011). Performance Appraisal Systems: Procedural and Implementation Issues in Papua New Guinea. *Journal of Management Policy and Practice*, 12(5), 116-127.
- Silzer, R. and Church, A. H. (2009). The pearls and perils of identifying potential. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 2, 377–412.
- Singh, A. (2010). *Human Resource Accounting at Infosys- A Case Study*. ResearchGate. [Online]. Available from: https://www.researchgate.net/publication/305723324_Human_Resource_Accounting_at_Infosys-_A_Case_Study. [accessed March 2016].
- Sluis, L. E. C. (2000). *Non-financial Performance Measures: What Works and What Doesn't*. Wharton, University of Pennsylvania. United State of America. [Online]. Available from: <http://knowledge.wharton.upenn.edu/article/non-financial-performance-measures-what-works-and-what-doesnt/>. [accessed March 2016].
- . (2007). Umbrella for Research into Human Resource Development (HRD). *Human Resource Development International*, 10(1), 99 – 106.
- Smith, E. (2006). Ethics in business: Is compliance the best we can expect?. *Journal of Management inquiry*, 10, 152-168.
- Smith, W.P. and Tabak, F. (2009). Monitoring Employee E-mails: Is There Any Room for Privacy?. *Academy of Management Perspectives*, 23(4), 33-48.
- Sookaneknun, S., Ussahawanitchakit, P. and Boonlua, S. (2013). Management Governance and Firm Value: Empirical Evidence from Electronics Businesses in Thailand. *International Journal of Business Research*, 13920, 137-164.



- Srivastava, N. (2014). Human Resource Accounting: a strategic approach to corporate excellence. *International Journal for Research in Applied Science and Engineering Technology*, 2(V), 423-428.
- Stallworth, H.L. (2003). Mentoring, organizational commitment and intentions to leave public accounting. *Managerial Auditing Journal*, 18(5), 405-418.
- Stede, W. A., Chow, C. and Lin, T. (2006). Strategy, Choice of Performance Measures, and Performance. *Behavioral Research in Accounting*, 18, 185-205.
- Steen, A. and Welch, D. (2011). Are Accounting Metrics Applicable to Human Resources? The Case of Return on Valuing Assignments. *Australasian Accounting Business and Finance Journal*, 5(3), 57-72.
- Steen, A., Welch, D., McCormack, D. (2011). Conflicting conceptualizations of human resource accounting. *Journal of Human Resource Costing and Accounting*, 15(4), 299-312.
- Subramaniam, M. and Youndt, M.A. (2005). The Influence of Intellectual Capital on the Types of Innovative Capabilities. *Academy of Management Journal*, 48, 450-463.
- Sudin, S. (2011). Fairness of and satisfaction with performance appraisal process. *Journal of Global Management*, 2(1), 66-83.
- Sun, L., Aryee, S. and Law, K. S. (2007). High-Performance Human Resource Practices, Citizenship Behavior, and Organizational Performance: A Relational Perspective. *The Academy of Management Journal*, 50(3), 558-577.
- Swapna, R. and Raja, K. G. (2012). Business Transformation Management: The Role of Talent Management with special reference to Service Sectors. *Adv. Manage*, 5(2), 61-63.
- Syverson, C. (2010). What Determines Productivity?. *Journal of Economic Literature*, 49(2), 326–365.
- Tan and Michelle. (2011). *SIAS's New Internal Audit Excellence Award*. s.l.: The Business Times.
- Tan, M., and Teo, T. S.H. (2000). Factors influencing the adoption of Internet banking. *Journal of the Association for Information Systems*, 1(5), 1-42.



- Tan, S.L.C. and Lau, C.M. (2012). The Impact of Performance Measure on Employee Fairness Perceptions, Job Satisfaction and Organizational Commitment. *Journal of Applied Management Accounting Research*, 10(2), 57-72.
- Teece, D. J. (2000). Strategies for Managing Knowledge Assets: the Role of Firm Structure and Industrial Context. *Long Range Planning*, 33, 35-54.
- Thamrin, H. M. (2012). The Influence of Transformational Leadership and Organizational Commitment on Job Satisfaction and Employee Performance. *International Journal of Innovation, Management and Technology*, 3(5), 566-572.
- Theingtrakul, A. (2010). The Concept of Fair Value for Assets and Liabilities. *Suthiparithat Journal*, 24(74), 107-126.
- Thipsri, N. and Ussahawanitchakit P. (2009). An Empirical of NPD Strategies of Thai Electronics Business: How do The Strategies Affect Market Outcomes?. *International Journal of Business Strategy*, 9(2).
- Thoumrungrroje, A. (2013). "Understanding of ASEAN Economic Community (AEC): Scale Development and Validation across Singapore, Thailand and Vietnam. *International Conference on Interdisciplinary Research and Development in ASEAN Proceedings*, Chiang Mai, Thailand
- Tjin-A-Tsoi, T.B.P.M. (2015). *ICT and Economic Growth. Statistics Netherlands*. [Online]. Available from: file:///C:/Users/MBS/Downloads/2015-ICT-and-economic-growth-pub%20(3).pdf. [accessed June 2017].
- Tseng, Y. F. and Lee, T. Z. (2009). Comparing appropriate decision support of human resource practices on organizational performance with DEA/AHP model. *Expert System with Application*, 36, 6548-6558.
- Uddin, M. J., Luva, R. H., and Hossian, S. M. (2013). Impact of Organizational Culture on Employee Performance and Productivity: A Case Study of Telecommunication Sector in Bangladesh. *International Journal of Business and Management*, 8(2), 63-77.
- Ulrich, D., Geller, A. and DeSouza, G. (1984). A strategy, structure, human resource database: OASIS. *Human Resource Management*, 23, 77-90.
- United Nation. (2008). *Measuring the Impact of ICT use in Business: the Case of Manufacturing in Thailand*. United Nations Conference on Trade and Development.



- Ussahavanitchakit, P and Pongpearchan. P. (2010). Human Capital Orientation: Effects on Organizational Effectiveness and Firm Success of Spa Businesses in Thailand. *International Academy of Business and Economics*, 10(3), 85-98.
- Ussahawanitchakit, P. (2007). Effects of Marketing Capability on Export Performance of Gift Businesses in Thailand. *International Journal of Business Research*, 7(3), 53-62.
- Ussahawanitchakit, P. (2012). Technology Acceptance, Internet Strategy and Marketing Effectiveness of E-Commerce Businesses in Thailand: Moderating Effects of Environmental Dynamism. *International Journal of Strategic Management*, 12(1), 17-26.
- Vance, R. J. (2006). *Employee Engagement and Commitment SHRM Foundation*. USA: Watson Wyatt Worldwide.
- Vergauwen, P.G. and Alem, F.J. (2005). Annual report IC disclosures in The Netherlands, France and Germany. *Journal of Intellectual Capital*, 6(1), 89-104.
- Verma, Sh. and Dewe, P.h. (2004). Measuring the Value of Human Resources. *Accounting & Business*, 46-48.
- Vijayakumar, A. N. and Nagaraja, N. (2012). Internal control systems: effectiveness of internal audit in risk management at public sector enterprises. *Management Edge*, 5(1), 1-8.
- Wang, H. and Li, J. (2008). Untangling the effects of over exploration and overexploitation on organizational performance: The moderating role of organizational dynamism. *Journal of Management*, 34, 925-951.
- Waranantakul, O., Ussahawanitchakit, P. and Jhundra-indra, P. (2013). Service innovation creation capability of spa businesses in Thailand: An empirical investigation of the antecedents and consequences. *Review of Business Research*, 13(4), 39-76.
- Warokka, A., Gallato, C.G. and Moorthy, T. (2012). Organizational justice in performance appraisal system and work performance: Evidence from an emerging market. *Journal of Human Resources Management Research*, 2012, 1-18.



- Winiarski, J. (2014). Advancing Leadership Pipeline through the Development of High-Potential Employees. *Journal of Intercultural Management*, 6(1), 17–25.
- Wittayapoom, K. and Limsuwan, S. (2012). How does internal control effectiveness create reliability of financial reporting? an empirical research of Thai-listed firms. *Journal of International Business and Economics*, 12(2), 80-96.
- Wright, B. E, Moynihan, D. P., and Pandey, S. K. (2012). Pulling the Levers: Leadership, Public Service Motivation and Mission Valence. *Public Administration Review*, 72, 206–15.
- Wright, P. and Snell, S. (2005). Partner or guardian? HR's Challenge in Balancing Value and Values. *Human Resource Management*, 44(2), 177-182.
- Wyatt, A. and Frick, H. (2010). Accounting for Investments in Human Capital: A Review. *Australian Accounting Review*, 20(3), 199-220.
- Yahiaoui, N., Anser, A. and Lahouel, S. (2015). Human Resource Management and Public Organizations. *Global Journal of Human Resource Management*, 3(2), 1-12.
- Yao, Z. and Xue-meng, G. (2012). Enterprise internal control assessment in risk management perspective. *International Conference on Management Science & Engineering*, 565-571.
- Yau, F. S., Chun, L. S. and Balaraman, R. (2009). Intellectual Capital Reporting and Corporate Characteristics of Public Listed Companies in Malaysia. *Journal of Financial Reporting and Accounting*, 7(1), 17-35.
- Yusoff, I. and Ismail, R. (2002). Human Resource Competitiveness and Inflows of Foreign Direct Investment to the ASEAN Region. *Asia-Pacific Development Journal*, 9(1), 89-107.
- Zacher, H. and Jimmieson, N. L. (2011). Leader-follower interactions: relations with OCB and sales productivity. *Journal of Managerial Psychology*, 28(1), 92-106.
- Zheng, C. (2009). Keeping Talents for Advancing Service Firms in Asia. *Journal of Service Management*, 20(5), 482–502.



APPENDICS



APPENDIX A
Key Participant Characteristics



Key Participant Characteristics

Characteristics	Frequencies	Percentage (%)
1. Gender		
Male	51	23
Female	171	77
Total	222	100
2. Age		
Less than 30 years old	22	10
30 – 40 years old	88	40
41 – 50 years old	63	28
More than 50 years old	49	22
Total	222	100
3. Marital status		
Single	87	39
Married	124	56
Divorced	11	5
Total	222	100
4. Education levels		
Bachelor's degree	139	63
Higher than bachelor's degree	83	37
Total	222	100
5. Working experience		
Less than 5 years	33	15
5 – 10 years	45	20
11 – 15 years	47	21
More than 15 years	97	44
Total	222	100
6. Average revenue per month		
Less than 75,000 Baht	130	59
75,000 – 100,000 Baht	53	24
100,001 – 125,000 Baht	19	8
More than 125,000 Baht	20	9
Total	222	100



Characteristics	Frequencies	Percentage (%)
7. Current working position		
Chief accounting officer	22	10
Accounting manager	125	56
Senior accountant	35	16
Others	40	18
Total	222	100



APPENDIX B
Demographic of Firm Characteristics



Table B: Demographic Characteristics of ICT Firms in Thailand

Descriptions	Categories	Frequencies	Percent
1. Type of entity	Company Limited	219	98
	Partnership	3	2
	Total	222	100
2. Sector of business	- Computer and accessory	32	15
	- Telecommunication and accessory	12	6
	- Electronic and electric device and game player	10	4
	- Software application and software game	44	20
	- Design and installation systems	11	5
	- Database management and data recovery	9	4
	- Information technology training	10	4
	- Information technology rent	51	23
	- Others	43	19
	Total	222	100
3. Types of ownership	Thai	183	82
	Foreign direct investment	39	18
	Total	222	100
4. Number of employee	Less than 25 people	108	49
	25 – 49 people	40	18
	50 – 74 people	24	11
	More than 74 people	50	22
	Total	222	100
5. Firm Capital	Less than 25,000,000 baht	130	59
	25,000,000 – 50,000,000 baht	27	12
	50,000,001 – 75,000,000 baht	19	9
	More than 100,000,000 baht	46	20
	Total	222	100
6. Average income per year	Less than 50,000,000 baht	155	70
	50,000,000 – 75,000,000 baht	26	12
	75,000,001 – 100,000,000 baht	11	5
	More than 100,000,000 baht	30	13
	Total	222	100



Table B: (Continued)

Descriptions	Categories	Frequencies	Percent
7. Operational duration	Less than 5 years	3	1
	5 - 10 years	50	23
	11 -15 years	68	31
	More than 15 years	101	45
	Total	222	100



APPENDIX C

Item Factor Loadings and Reliability Analyses in Pre-Test



Item Factor Loadings and Reliability Analyses in Pre-Test

Constructs	Items	Factor Loadings	Reliability (Alpha)
Human Resource Identification (HID)	HRId1	0.815	0.876
	HRId2	0.882	
	HRId3	0.845	
	HRId4	0.789	
	HRId5	0.757	
Human Resource Measurement (HRM)	HRMe1	0.700	0.809
	HRMe2	0.849	
	HRMe3	0.892	
	HRMe4	0.738	
Human Resource Investment (HIN)	HRIn1	0.653	0.831
	HRIn2	0.843	
	HRIn3	0.930	
	HRIn4	0.827	
Human Resource Reporting (HRR)	HRR1	0.783	0.767
	HRR2	0.716	
	HRR3	0.795	
	HRR4	0.779	
Human Resource Monitoring (HMO)	HRMo1	0.799	0.866
	HRMo2	0.813	
	HRMo3	0.883	
	HRMo4	0.881	
Human Resource Management Efficiency (HME)	HME1	0.688	0.769
	HME2	0.782	
	HME3	0.793	
	HME4	0.814	
Long-term Employee Commitment (LEC)	LEC1	0.904	0.915
	LEC2	0.914	
	LEC3	0.870	
	LEC4	0.884	



Constructs	Items	Factor Loadings	Reliability (Alpha)
Human Capital Value (HCV)	HCV1	0.893	0.914
	HCV2	0.881	
	HCV3	0.893	
	HCV4	0.902	
Firm Survival (FSV)	Fsur1	0.922	0.903
	Fsur2	0.823	
	Fsur3	0.899	
	Fsur4	0.880	
Sustainability Vision (STV)	SV1	0.868	0.876
	SV2	0.879	
	SV3	0.885	
	SV4	0.786	
Executive Learning (EXL)	EL1	0.874	0.794
	EL2	0.831	
	EL3	0.778	
	EL4	0.696	
Transformation Leadership (TFL)	TL1	0.797	0.863
	TL2	0.933	
	TL3	0.870	
	TL4	0.769	
Growth Mindset (GMS)	GM1	0.799	0.809
	GM2	0.845	
	GM3	0.832	
	GM4	0.724	
Governance Culture (GVC)	GC1	0.843	0.846
	GC2	0.883	
	GC3	0.891	
	GC4	0.720	



Constructs	Items	Factor Loadings	Reliability (Alpha)
Technology Change (TNC)	TC1	0.830	0.858
	TC2	0.907	
	TC3	0.779	
	TC4	0.842	
Environmental Uncertainty (EVU)	EU1	0.704	0.883
	EU2	0.901	
	EU3	0.899	
	EU4	0.922	



APPENDIX D
Test of Non-Response Bias



Test of Non-Response Bias

Comparison	N	Mean	S.D.	t	Sig
Business Entity:				0.579	0.247
- First Group	111	1.02	0.134		
- Second Group	111	1.01	0.095		
Operational Characteristics:				0.176	0.726
- First Group	111	1.18	0.386		
- Second Group	111	1.17	0.378		
Number of employee:				0.109	0.880
- First Group	111	1.90	1.222		
- Second Group	111	1.93	1.230		



APPENDIX E

Test the Assumption of Regression Analysis

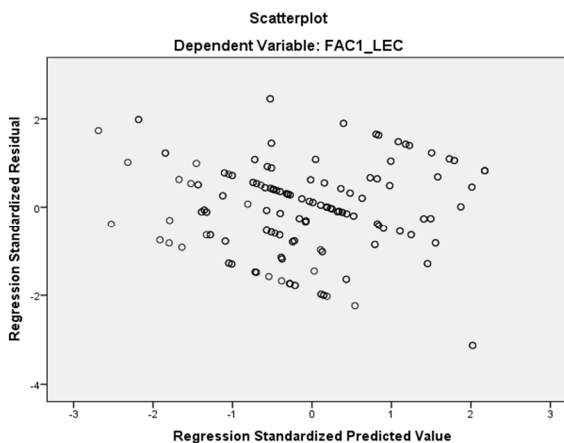


1. Test independence of the error terms (Test of Autocorrelation)

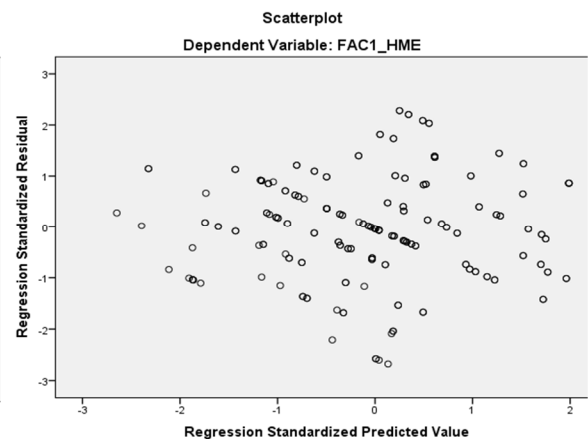
Equations	Durbin-Watson (D statistics)	Equations	Durbin-Watson (D statistics)
1	1.939	11	1.604
2	2.029	12	1.815
3	1.500	13	2.091
4	1.554	14	1.863
5	1.942	15	1.847
6	1.600	16	1.943
7	1.921	17	1.715
8	2.087	18	2.033
9	2.189	19	1.848
10	1.574	20	1.923
		21	1.987

2. Test of Homoscedasticity

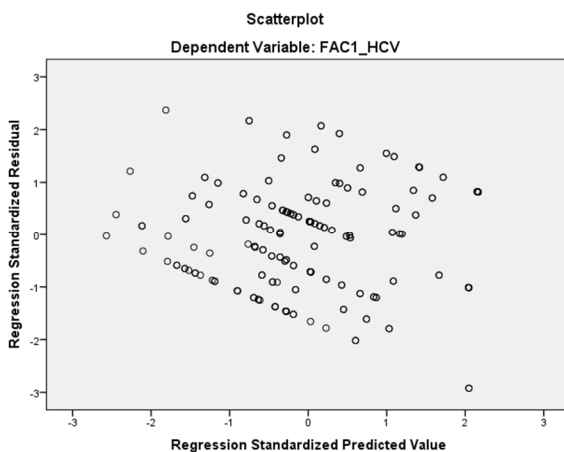
A residual plot against the independent variable (the fitted value) of equation 1



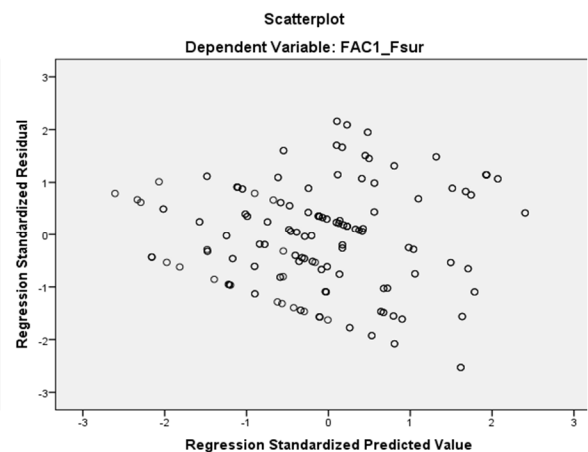
A residual plot against the independent variable (the fitted value) of equation 2



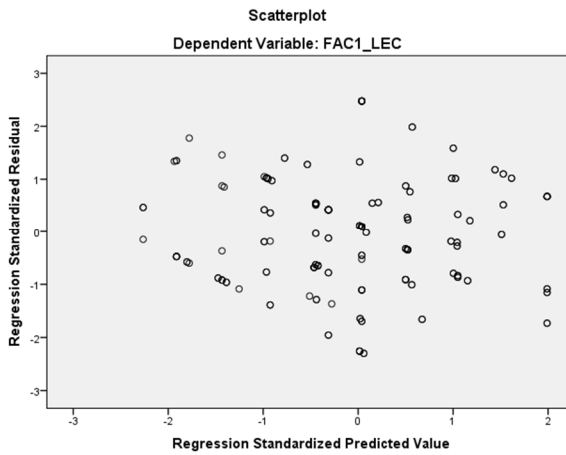
A residual plot against the independent variable (the fitted value) of equation 3



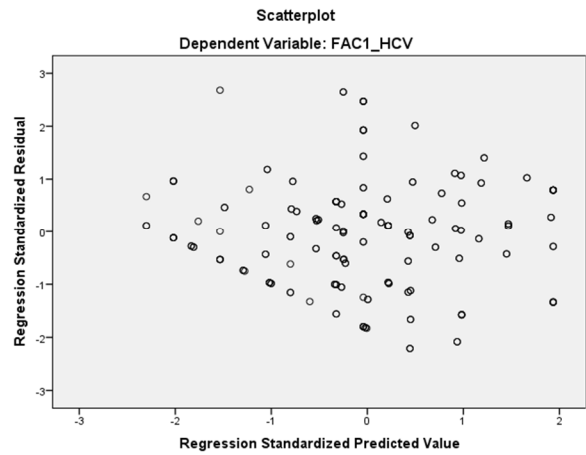
A residual plot against the independent variable (the fitted value) of equation 4



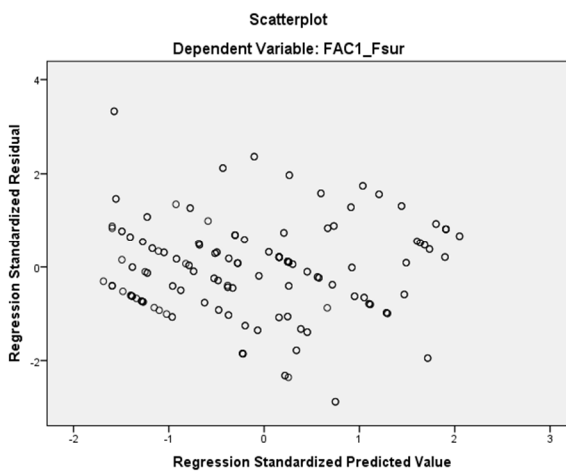
A residual plot against the independent variable (the fitted value) of equation 5



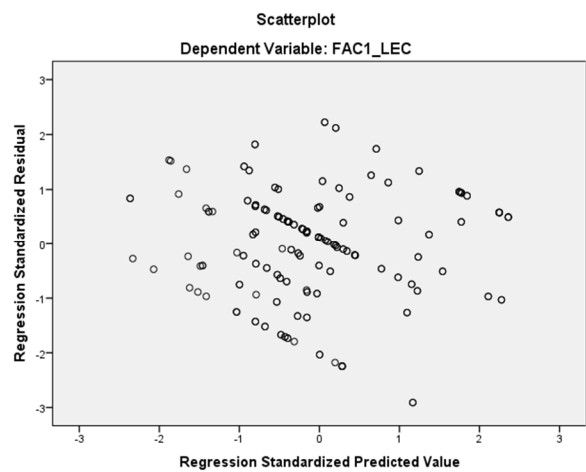
A residual plot against the independent variable (the fitted value) of equation 6



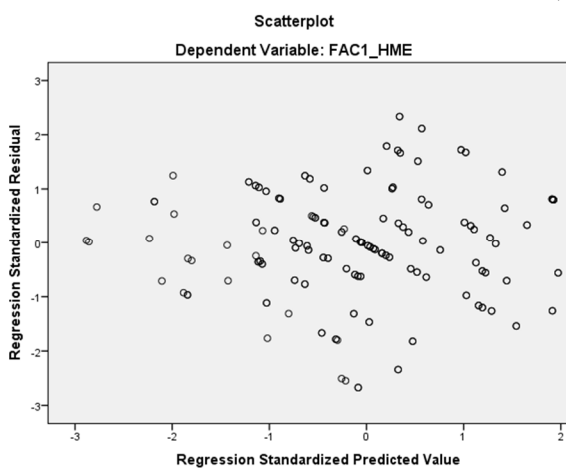
A residual plot against the independent variable (the fitted value) of equation 7



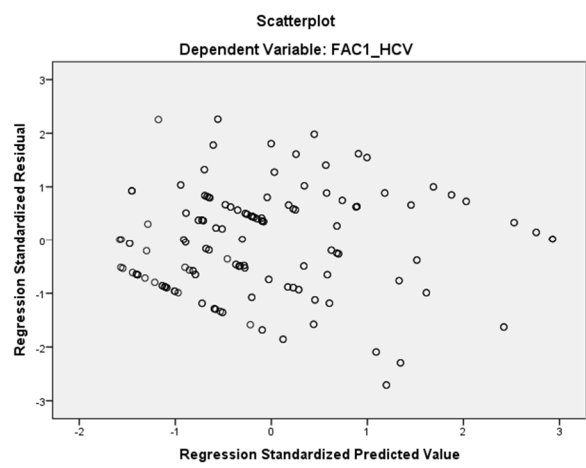
A residual plot against the independent variable (the fitted value) of equation 8



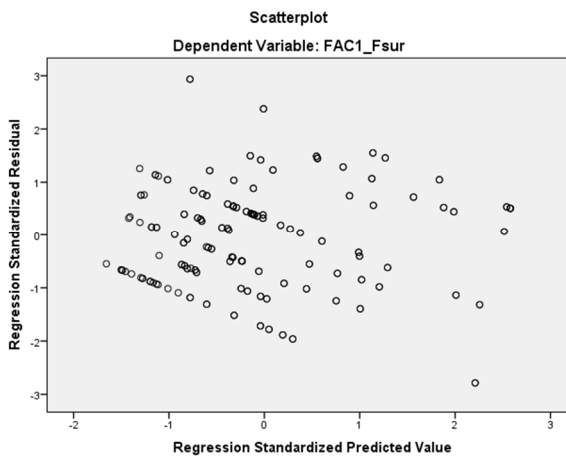
A residual plot against the independent variable (the fitted value) of equation 9



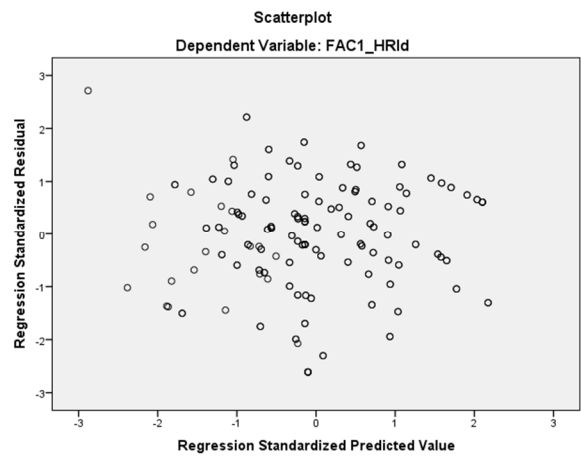
A residual plot against the independent variable (the fitted value) of equation 10



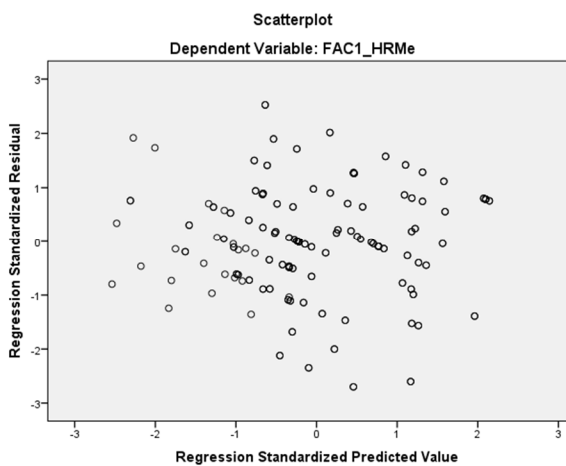
A residual plot against the independent variable (the fitted value) of equation 11



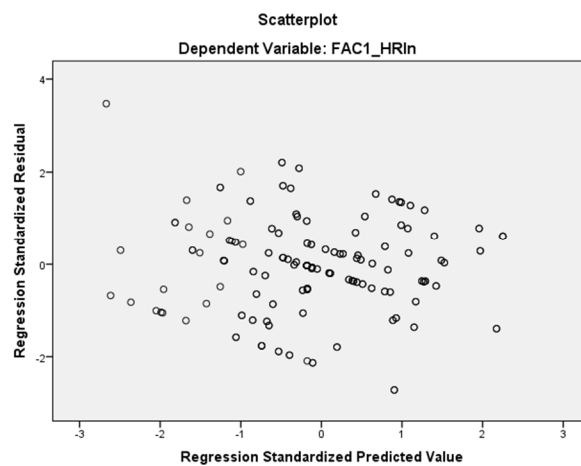
A residual plot against the independent variable (the fitted value) of equation 12



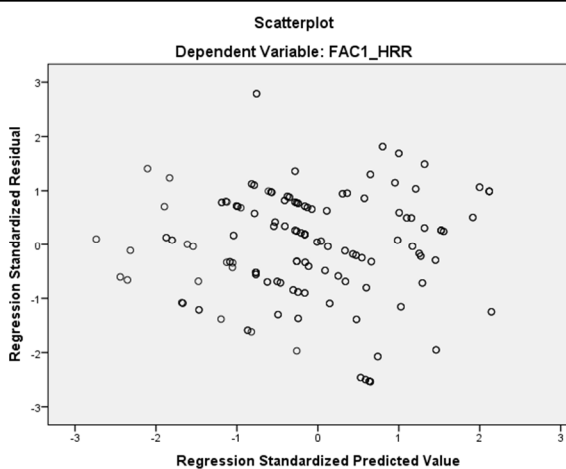
A residual plot against the independent variable (the fitted value) of equation 13



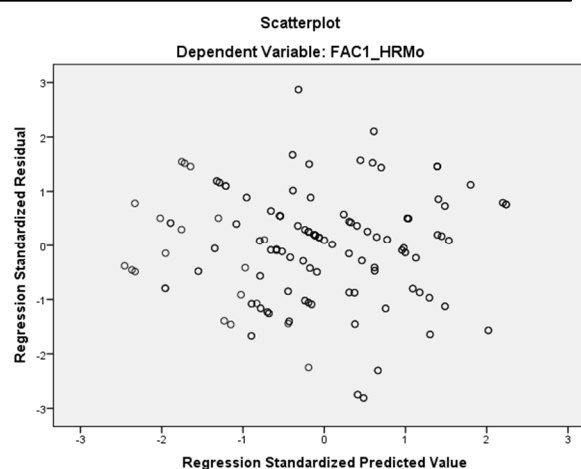
A residual plot against the independent variable (the fitted value) of equation 14



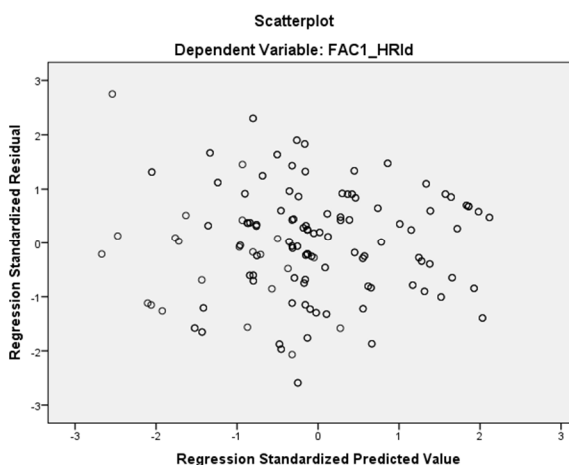
A residual plot against the independent variable (the fitted value) of equation 15



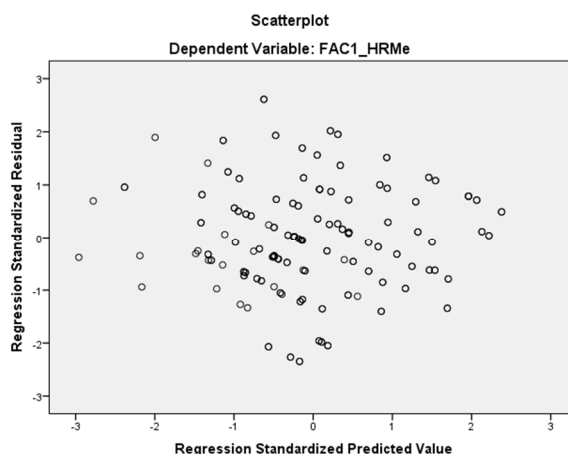
A residual plot against the independent variable (the fitted value) of equation 16



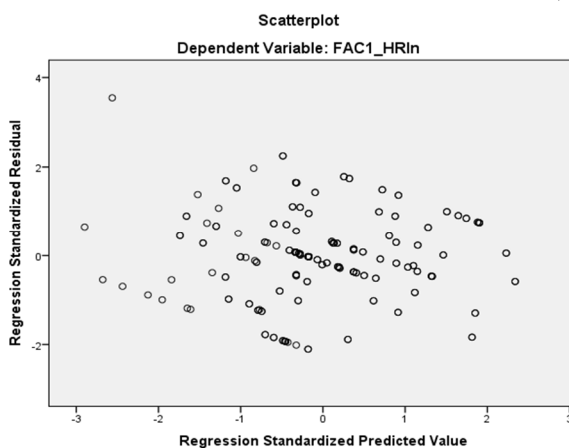
A residual plot against the independent variable (the fitted value) of equation 17



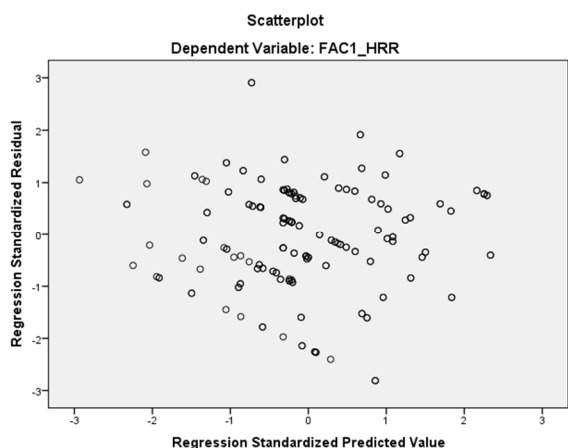
A residual plot against the independent variable (the fitted value) of equation 18



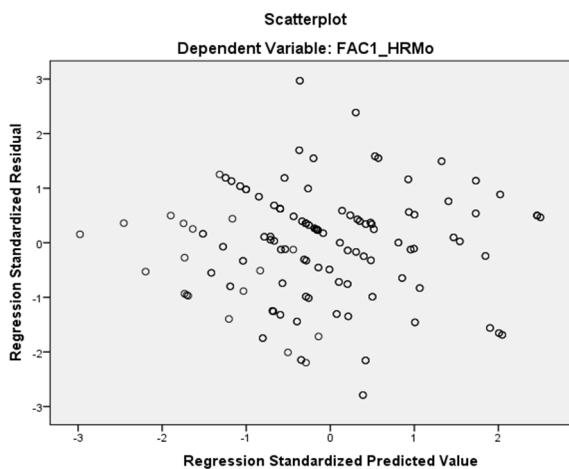
A residual plot against the independent variable (the fitted value) of equation 19



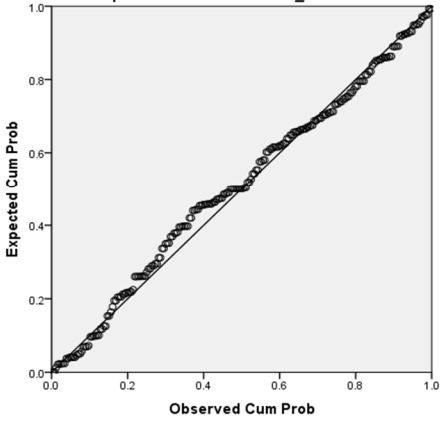
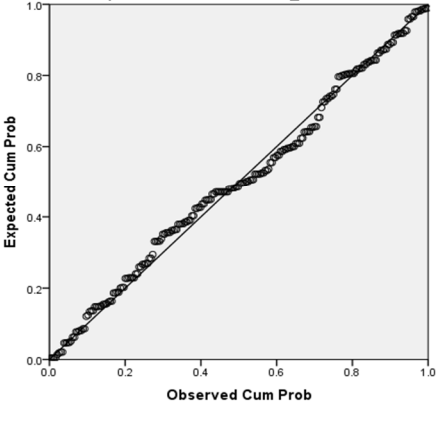
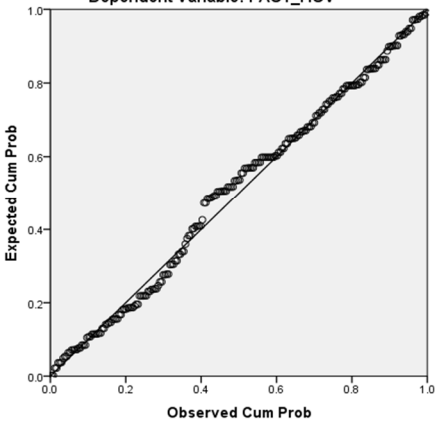
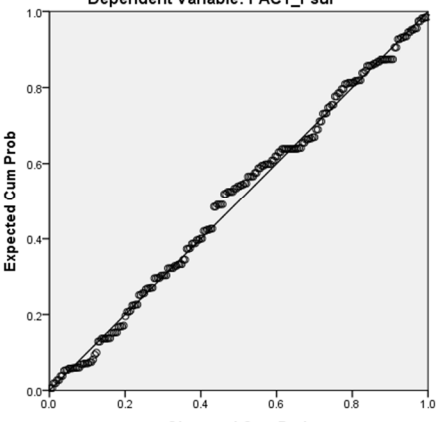
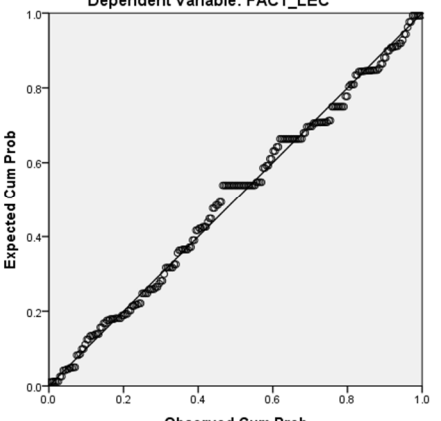
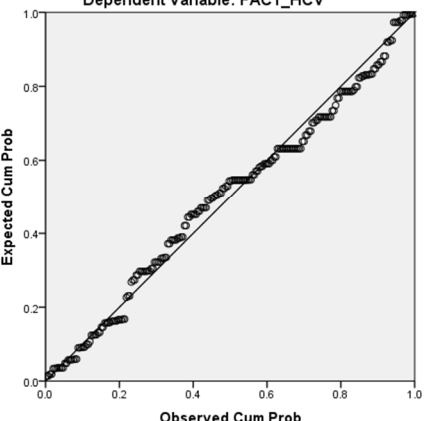
A residual plot against the independent variable (the fitted value) of equation 20



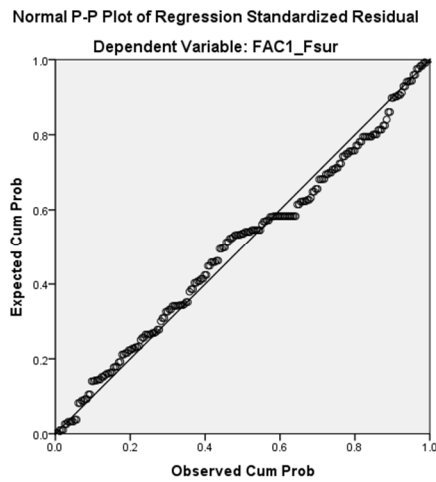
A residual plot against the independent variable (the fitted value) of equation 21



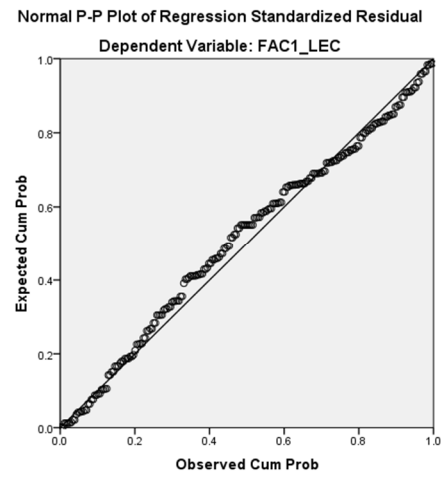
3. Normality of error term distribution

<p>Visual inspection of Normal P-P Plot for normality tests of equation 1</p>	<p>Visual inspection of Normal P-P Plot for normality tests of equation 2</p>
<p>Normal P-P Plot of Regression Standardized Residual Dependent Variable: FAC1_LEC</p>  <p>The plot shows the observed cumulative probability of standardized residuals against the expected cumulative probability for equation 1. The data points closely follow the diagonal line, indicating a normal distribution.</p>	<p>Normal P-P Plot of Regression Standardized Residual Dependent Variable: FAC1_HME</p>  <p>The plot shows the observed cumulative probability of standardized residuals against the expected cumulative probability for equation 2. The data points closely follow the diagonal line, indicating a normal distribution.</p>
<p>Visual inspection of Normal P-P Plot for normality tests of equation 3</p>	<p>Visual inspection of Normal P-P Plot for normality tests of equation 4</p>
<p>Normal P-P Plot of Regression Standardized Residual Dependent Variable: FAC1_HCV</p>  <p>The plot shows the observed cumulative probability of standardized residuals against the expected cumulative probability for equation 3. The data points closely follow the diagonal line, indicating a normal distribution.</p>	<p>Normal P-P Plot of Regression Standardized Residual Dependent Variable: FAC1_Fsur</p>  <p>The plot shows the observed cumulative probability of standardized residuals against the expected cumulative probability for equation 4. The data points closely follow the diagonal line, indicating a normal distribution.</p>
<p>Visual inspection of Normal P-P Plot for normality tests of equation 5</p>	<p>Visual inspection of Normal P-P Plot for normality tests of equation 6</p>
<p>Normal P-P Plot of Regression Standardized Residual Dependent Variable: FAC1_LEC</p>  <p>The plot shows the observed cumulative probability of standardized residuals against the expected cumulative probability for equation 5. The data points closely follow the diagonal line, indicating a normal distribution.</p>	<p>Normal P-P Plot of Regression Standardized Residual Dependent Variable: FAC1_HCV</p>  <p>The plot shows the observed cumulative probability of standardized residuals against the expected cumulative probability for equation 6. The data points closely follow the diagonal line, indicating a normal distribution.</p>

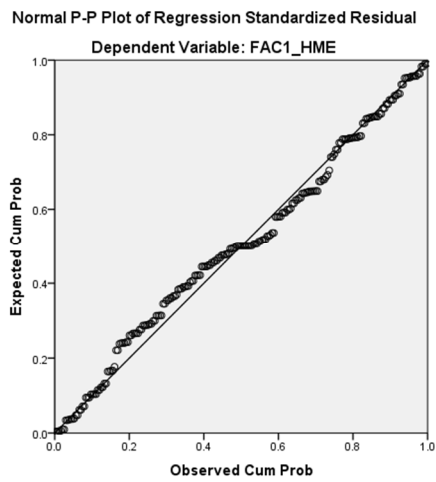
Visual inspection of Normal P-P Plot for normality tests of equation 7



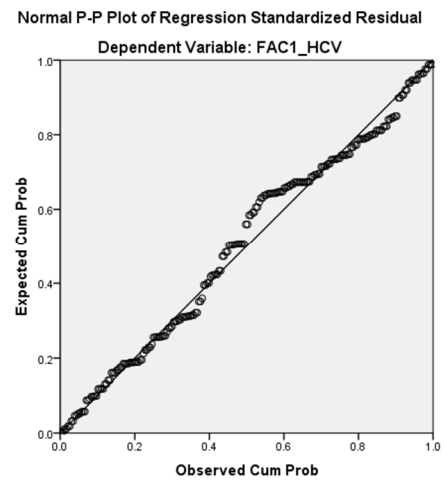
Visual inspection of Normal P-P Plot for normality tests of equation 8



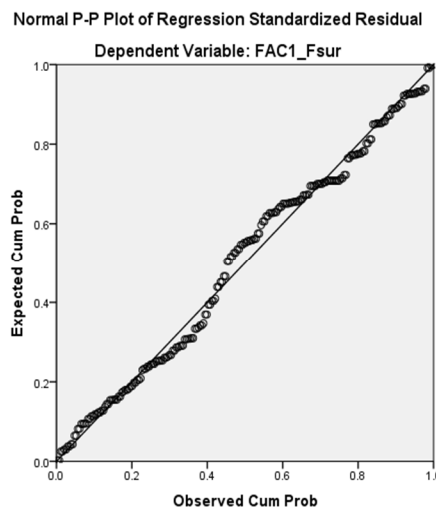
Visual inspection of Normal P-P Plot for normality tests of equation 9



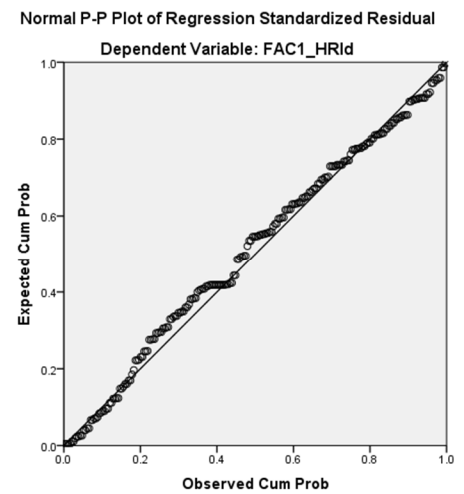
Visual inspection of Normal P-P Plot for normality tests of equation 10



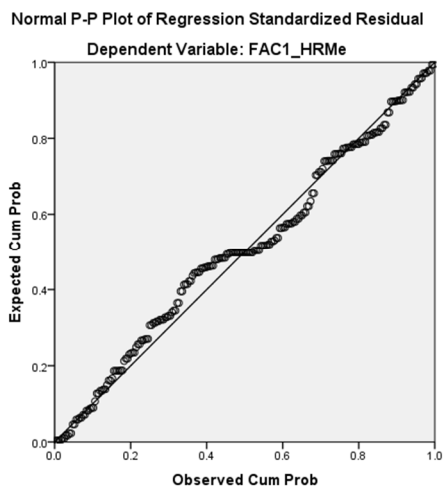
Visual inspection of Normal P-P Plot for normality tests of equation 11



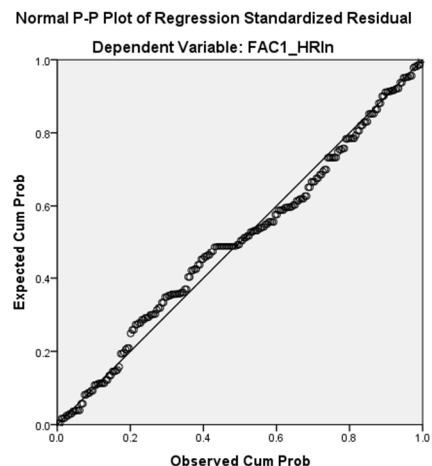
Visual inspection of Normal P-P Plot for normality tests of equation 12



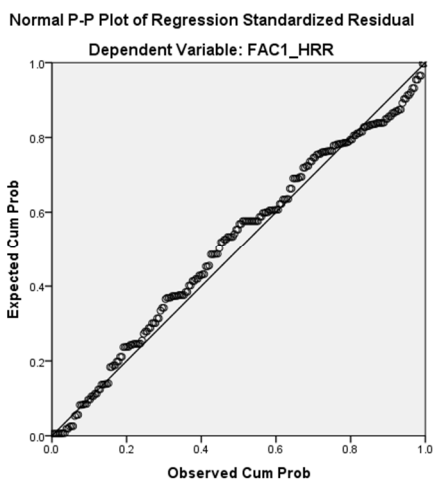
Visual inspection of Normal P-P Plot for normality tests of equation 13



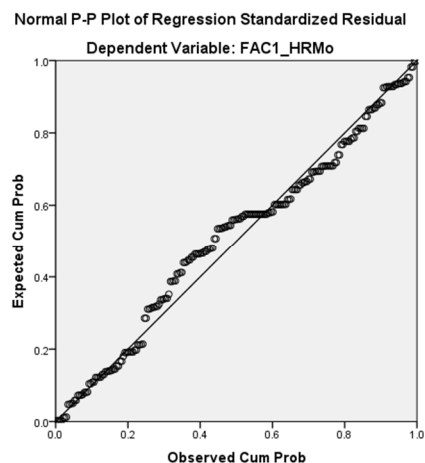
Visual inspection of Normal P-P Plot for normality tests of equation 14



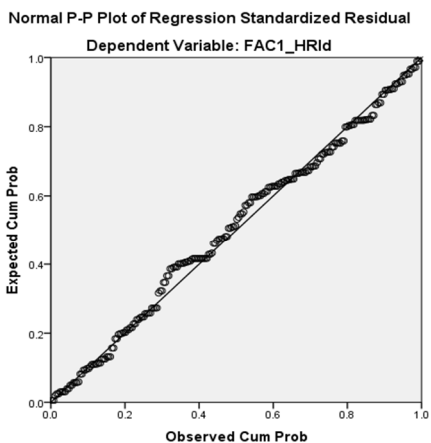
Visual inspection of Normal P-P Plot for normality tests of equation 15



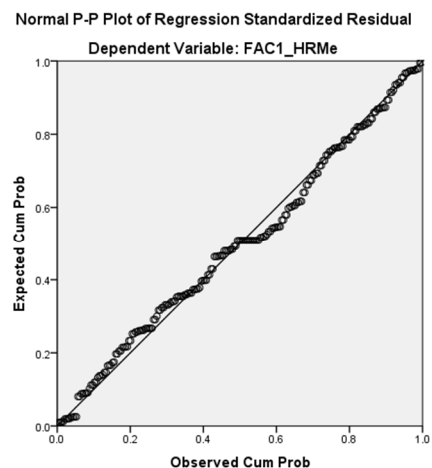
Visual inspection of Normal P-P Plot for normality tests of equation 16



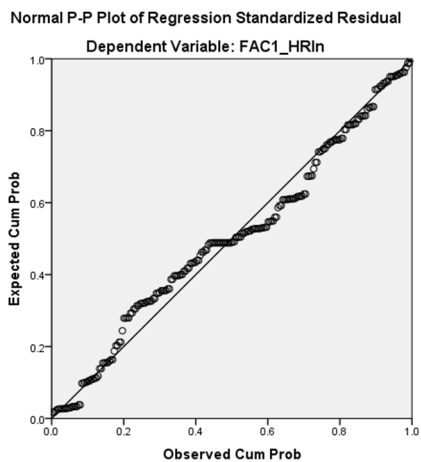
Visual inspection of Normal P-P Plot for normality tests of equation 17



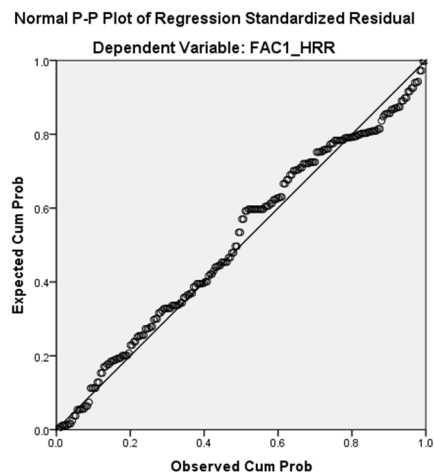
Visual inspection of Normal P-P Plot for normality tests of equation 18



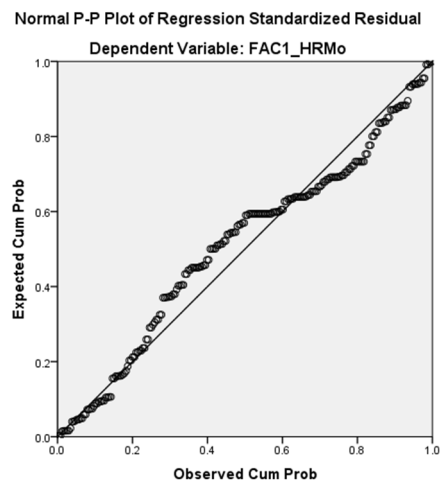
Visual inspection of Normal P-P Plot for normality tests of equation 19



Visual inspection of Normal P-P Plot for normality tests of equation 20



Visual inspection of Normal P-P Plot for normality tests of equation 21



APPENDIX F
Cover Letter and Questionnaire (Thai Version)



แบบสอบถามเพื่อการวิจัย
เรื่อง ผลกระทบของการประยุกต์ใช้การบัญชีทรัพยากรมนุษย์สมัยใหม่ที่มีต่อความอยู่รอดของกิจการ
ธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย

คำชี้แจง :

โครงการวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาวิจัยเรื่อง “ผลกระทบของการประยุกต์ใช้การบัญชีทรัพยากรมนุษย์สมัยใหม่ที่มีต่อความอยู่รอดของกิจการ ธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย” เพื่อใช้เป็นข้อมูลในการจัดทำวิทยานิพนธ์ในระดับปริญญาเอกของผู้วิจัย ในหลักสูตรปรัชญาดุษฎีบัณฑิต คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม โทรศัพท์ 043-754333

ข้าพเจ้าใคร่ขอความอนุเคราะห์จากท่านผู้ตอบแบบสอบถาม ได้โปรดตอบแบบสอบถามชุดนี้ โดยรายละเอียดของแบบสอบถามประกอบด้วยส่วนคำถาม 7 ตอน ดังนี้

- ตอนที่ 1 ข้อมูลทั่วไปเกี่ยวกับผู้บริหารฝ่ายบัญชีธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย
- ตอนที่ 2 ข้อมูลทั่วไปเกี่ยวกับธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย
- ตอนที่ 3 ความคิดเห็นเกี่ยวกับการประยุกต์ใช้การบัญชีทรัพยากรมนุษย์สมัยใหม่ของธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย
- ตอนที่ 4 ความคิดเห็นเกี่ยวกับผลการดำเนินงานของธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย
- ตอนที่ 5 ความคิดเห็นเกี่ยวกับปัจจัยภายในที่มีผลต่อการดำเนินงานของธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย
- ตอนที่ 6 ความคิดเห็นเกี่ยวกับปัจจัยภายนอกที่มีผลต่อการดำเนินงานของธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย
- ตอนที่ 7 ข้อคิดเห็นและข้อเสนอแนะเกี่ยวกับการบริหารจัดการของธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย

คำตอบของท่านจะถูกเก็บรักษาเป็นความลับ และจะไม่มีการใช้ข้อมูลใด ๆ ที่เปิดเผยเกี่ยวกับตัวท่านในการรายงานข้อมูล รวมทั้งจะไม่มีการร่วมใช้ข้อมูลดังกล่าวกับบุคคลภายนอกอื่นใดโดยไม่ได้รับอนุญาตจากท่าน

ท่านต้องการรายงานสรุปผลการวิจัยหรือไม่

ต้องการ E - mail _____ ไม่ต้องการ

หากท่านต้องการรายงานสรุปผลการวิจัย โปรดระบุ E-mail Address ของท่าน หรือแนบนามบัตรของท่านมา กับแบบสอบถามชุดนี้

ผู้วิจัยขอขอบพระคุณที่ท่านได้กรุณาเสียสละเวลาในการตอบแบบสอบถามชุดนี้ อย่างถูกต้องครบถ้วน และหวังเป็นอย่างยิ่งว่า ข้อมูลที่ได้รับจากท่านจะเป็นประโยชน์อย่างยิ่งต่อการวิจัยในครั้งนี้ และขอขอบพระคุณอย่างสูงมา ณ โอกาสนี้ หากท่านมีข้อสงสัยประการใดเกี่ยวกับแบบสอบถาม โปรดติดต่อ นางสาวภัทรสิริ ทิพย์ธนมณี ซึ่งเป็นผู้วิจัยในครั้งนี้ โทรศัพท์เคลื่อนที่ 086-8842233 หรือ E - mail : spider0365@hotmail.com

(นางสาวภัทรสิริ ทิพย์ธนมณี)

นิสิตระดับปริญญาเอก สาขาวิชาการบัญชี

คณะกรรมการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม



ตอนที่ 1 ข้อมูลทั่วไปเกี่ยวกับผู้บริหารฝ่ายบัญชีธุรกิจเทคโนโลยีสารสนเทศและการสื่อสาร
ในประเทศไทย

1. เพศ

ชาย

หญิง

2. อายุ

น้อยกว่า 30 ปี

30 – 40 ปี

41-50 ปี

มากกว่า 50 ปี

3. สถานภาพสมรส

โสด

สมรส

หม้าย/หย่าร้าง

4. ระดับการศึกษา

ปริญญาตรีหรือต่ำกว่า

สูงกว่าปริญญาตรี

5. ประสบการณ์การทำงานในกิจการ

น้อยกว่า 5 ปี

5 - 10 ปี

11 – 15 ปี

มากกว่า 15 ปี

6. รายได้เฉลี่ยต่อเดือน

ต่ำกว่า 75,000 บาท

75,000 – 100,000 บาท

100,001 – 125,000 บาท

มากกว่า 125,000 บาท

7. ตำแหน่งงานในปัจจุบัน

ผู้อำนวยการฝ่ายบัญชี

ผู้จัดการฝ่ายบัญชี

สมุหบัญชี

อื่น ๆ (โปรดระบุ).....



ตอนที่ 2 ข้อมูลทั่วไปเกี่ยวกับธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย

1. รูปแบบธุรกิจ

- บริษัทจำกัด ห้างหุ้นส่วน

2. ประเภทธุรกิจ

- คอมพิวเตอร์และอุปกรณ์คอมพิวเตอร์
 อุปกรณ์อิเล็กทรอนิกส์และเครื่องเล่นเกม
 ให้เช่าเกี่ยวกับเทคโนโลยีสารสนเทศ
 ซ่อมคอมพิวเตอร์และเครื่องมือสื่อสาร
 วางระบบและติดตั้งระบบสื่อสารและระบบงาน
 อื่น ๆ (โปรดระบุ).....

3. ลักษณะการดำเนินงาน

- กิจการคนไทย กิจการร่วมทุนกับต่างประเทศ

4. จำนวนพนักงาน

- น้อยกว่า 50 คน 50 – 100 คน
 101 – 200 คน มากกว่า 200 คน

5. ทุนในการดำเนินงาน

- ต่ำกว่า 25,000,000 บาท 25,000,000 – 50,000,000 บาท
 50,000,001 – 75,000,000 บาท มากกว่า 75,000,000 บาท

6. รายได้เฉลี่ยต่อปี

- ต่ำกว่า 50,000,000 บาท 50,000,000 – 75,000,000 บาท
 75,000,001 – 100,000,000 บาท มากกว่า 100,000,000 บาท

7. ระยะเวลาในการดำเนินงาน

- น้อยกว่า 5 ปี 5 - 10 ปี
 11 – 15 ปี มากกว่า 15 ปี



ตอนที่ 3 ความคิดเห็นเกี่ยวกับการประยุกต์ใช้การบัญชีทรัพยากรมนุษย์สมัยใหม่ของธุรกิจ
เทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย

การประยุกต์ใช้การบัญชีทรัพยากรมนุษย์สมัยใหม่	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
การแสดงข้อมูลด้านทรัพยากรมนุษย์ (Human Resource Identification) 1. กิจการเชื่อมั่นว่าการแสดงข้อมูลด้านทรัพยากรมนุษย์ที่ดี จะช่วยให้กิจการนำข้อมูลไปใช้ในการตัดสินใจเชิงเศรษฐกิจได้อย่างมีประสิทธิภาพสูงสุด 2. กิจการให้ความสำคัญกับการแสดงข้อมูลทางการเงินที่เกี่ยวข้องกับพนักงาน จะช่วยให้เกิดความโปร่งใสในการพิจารณาผลประโยชน์ของพนักงานได้อย่างเหมาะสม 3. กิจการตระหนักถึงการจำแนกประเภทรายการที่เกี่ยวข้องกับบุคลากรได้อย่างชัดเจน จะช่วยให้กิจการสามารถจัดทำบัญชีเป็นไปตามหลักเกณฑ์ และข้อปฏิบัติทางการบัญชีที่รับรองทั่วไป 4. กิจการให้ความสำคัญกับการรับรู้รายการที่เกี่ยวข้องกับพนักงานอย่างเป็นระบบ จะช่วยให้กิจการสามารถบันทึกต้นทุนและค่าใช้จ่ายได้อย่างมีประสิทธิภาพ 5. กิจการมุ่งเน้นให้มีการประยุกต์ใช้เทคโนโลยีในการจัดทำข้อมูลที่เกี่ยวข้องกับทรัพยากรมนุษย์ จะช่วยให้กิจการสามารถแสดงข้อมูลค่าใช้จ่ายได้อย่างถูกต้อง แม่นยำและน่าเชื่อถือ					
การวัดมูลค่าของทรัพยากรมนุษย์ (Human Resource Measurement) 6. กิจการเชื่อมั่นว่าการวัดมูลค่าของทรัพยากรมนุษย์ที่ดี จะช่วยให้สามารถวิเคราะห์และวางแผนการลงทุนในอนาคตได้อย่างแม่นยำ 7. กิจการให้ความสำคัญกับการวิเคราะห์อัตราผลตอบแทนจากการลงทุนในทรัพยากรมนุษย์ จะช่วยให้สามารถประเมินความคุ้มค่าได้อย่างมีประสิทธิภาพมากยิ่งขึ้น 8. กิจการให้ความสำคัญกับการคำนวณกิจกรรมต่างๆ ที่เกิดจากการดำเนินงานของพนักงานในรูปของตัวเงิน จะช่วยให้กิจการสามารถนำข้อมูลไปใช้ในการควบคุมค่าใช้จ่ายที่ไม่ก่อให้เกิดประโยชน์ได้อย่างมีประสิทธิภาพมากยิ่งขึ้น					



ตอนที่ 3 (ต่อ)

การประยุกต์ใช้การบัญชีทรัพยากรมนุษย์สมัยใหม่	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
9. กิจการมุ่งเน้นให้มีการวิเคราะห์ค่าใช้จ่ายที่เกี่ยวข้องกับบุคลากรในปัจจุบัน จะช่วยให้สามารถวางแผนงบประมาณในการดำเนินงานในอนาคตได้อย่างน่าเชื่อถือ					
การลงทุนด้านทรัพยากรมนุษย์ (Human Resource Investment) 10. กิจการเชื่อมั่นว่าการลงทุนด้านทรัพยากรมนุษย์อย่างเป็นระบบ จะช่วยให้กิจการสามารถเพิ่มประสิทธิภาพในการดำเนินงานได้อย่างยั่งยืน					
11. กิจการให้ความสำคัญกับการจัดสรรงบประมาณอย่างเพียงพอ ในด้านการพัฒนาทรัพยากรมนุษย์ ซึ่งจะช่วยให้กิจการมีศักยภาพและความสามารถในการบริหารงานที่มากขึ้น					
12. กิจการสนับสนุนให้มีการเข้าร่วมฝึกอบรมและพัฒนาบุคลากรอย่างต่อเนื่อง จะช่วยให้กิจการบรรลุเป้าหมายในการดำเนินงานได้เป็นอย่างดี					
13. กิจการมุ่งเน้นให้มีการพัฒนาระบบข้อมูลที่เกี่ยวข้องกับการพัฒนาและฝึกอบรมบุคลากรอย่างเป็นรูปธรรม จะทำให้กิจการมีข้อมูลที่ถูกต้อง ทันสมัย สอดคล้องกับความต้องการการใช้งานขององค์กร					
การรายงานด้านทรัพยากรมนุษย์ (Human Resource Reporting) 14. กิจการเชื่อมั่นว่าการจัดทำรายงานด้านทรัพยากรมนุษย์ที่ดี จะช่วยให้กิจการมีข้อมูลที่เป็นประโยชน์ต่อการตัดสินใจในการดำเนินงานได้ดียิ่งขึ้น					
15. กิจการให้ความสำคัญกับการนำเสนอรายงานการวิเคราะห์ความคุ้มค่าของการจัดสรรงบประมาณในการพัฒนาบุคลากรได้อย่างถูกต้องตามความเป็นจริง จะช่วยให้สามารถวางแผนการจัดสรรงบประมาณได้อย่างเหมาะสม					
16. กิจการให้ความสำคัญกับการนำเสนอรายงานผลการปฏิบัติงานของพนักงานอย่างเป็นระบบ จะช่วยให้กิจการสามารถวิเคราะห์ผลประโยชน์ของพนักงานได้อย่างเป็นธรรม					



ตอนที่ 3 (ต่อ)

การประยุกต์ใช้การบัญชีทรัพยากรมนุษย์สมัยใหม่	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
17. กิจการตระหนักถึงการนำเสนอข้อมูลด้านสิทธิประโยชน์ของพนักงานอย่างเป็นรูปธรรม จะช่วยให้พนักงานเกิดความจงรักภักดีกับองค์กรมากขึ้น					
การติดตามตรวจสอบด้านทรัพยากรมนุษย์ (Human Resource Monitoring) 18. กิจการเชื่อมั่นว่าการสอบทานการดำเนินงานที่เกี่ยวข้องกับทรัพยากรมนุษย์อย่างต่อเนื่อง จะช่วยให้การดำเนินงานเป็นไปตามเป้าหมาย					
19. กิจการให้ความสำคัญกับควบคุมขั้นตอนการพัฒนาและฝึกอบรมพนักงานอยู่เสมอ จะช่วยให้กิจการสามารถประสบความสำเร็จในการดำเนินงานได้เป็นอย่างดี					
20. กิจการมุ่งเน้นให้มีการติดตามการใช้งบประมาณที่เกี่ยวข้องกับทรัพยากรมนุษย์อย่างต่อเนื่อง จะช่วยให้มีการบริหารงานอย่างมีประสิทธิภาพ					
21. กิจการตระหนักถึงการประเมินผลการพัฒนาทักษะความรู้ความสามารถของพนักงาน จะช่วยให้สามารถสร้างมูลค่าเพิ่มจากพนักงานได้อย่างมีประสิทธิภาพ					



ตอนที่ 4 ความคิดเห็นเกี่ยวกับผลการดำเนินงานของธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย

ผลการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
ประสิทธิภาพของการบริหารจัดการด้านทรัพยากรมนุษย์ (Human Resource Management Efficiency)					
1. กิจการมีวิธีการคัดเลือกบุคลากรที่เป็นระบบและเป็นรูปธรรม					
2. กิจการมีผู้ที่มีความรู้ความสามารถเข้ามาปฏิบัติงานในองค์กรมากขึ้น					
3. กิจการสามารถรักษาบุคลากรที่มีคุณภาพให้อยู่กับองค์กรได้ในระยะยาว					
4. กิจการมีบุคลากรที่มีความรู้ความสามารถตรงกับลักษณะของตำแหน่งงาน					
ความผูกพันของพนักงานในระยะยาว (Long-Term Employee Commitment)					
5. พนักงานมีความตั้งใจและทุ่มเทให้กับการทำงาน และใช้ความสามารถในการปฏิบัติงานอย่างเต็มที่					
6. พนักงานพร้อมเสมอที่จะให้ความร่วมมือและเสียสละ อุทิศตนให้กับการทำงานอย่างเต็มที่					
7. พนักงานเต็มใจและพร้อมที่จะปรับตัวกับงานต่างๆ ที่ได้รับมอบหมายอยู่ตลอดเวลา					
8. พนักงานมีความรู้สึกเป็นส่วนหนึ่งที่สามารถช่วยพัฒนาองค์กรให้เจริญก้าวหน้าได้ในระยะยาว					
คุณค่าของทุนมนุษย์ (Human Capital Value)					
9. กิจการมีบุคลากรที่มีศักยภาพและความสามารถที่สามารถเพิ่มมูลค่าให้กับองค์กร					
10. กิจการมีบุคลากรที่มีทักษะความรู้ ความชำนาญที่โดดเด่นกว่ากิจการอื่นๆ ในกลุ่มธุรกิจเดียวกัน					
11. กิจการมีบุคลากรที่มีทักษะความสามารถที่เป็นเอกลักษณ์เฉพาะแตกต่างจากคู่แข่ง และสร้างความได้เปรียบเหนือคู่แข่ง					
12. กิจการมีบุคลากรที่มีความคิดสร้างสรรค์ และสามารถปรับใช้ความรู้ให้สอดคล้องกับสถานการณ์ที่เกิดขึ้นได้อย่างเหมาะสม					



ตอนที่ 4 (ต่อ)

ผลการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
ความอยู่รอดขององค์กร (Firm Survival)					
13. กิจการมีอัตราการเติบโตของผลกำไรที่เพิ่มขึ้นอย่างต่อเนื่องเมื่อเทียบกับอดีตที่ผ่านมา					
14. กิจการมีส่วนแบ่งตลาดที่เพิ่มขึ้นอย่างต่อเนื่อง เมื่อเทียบกับผลการดำเนินงานในอดีต					
15. กิจการมีฐานะการเงินที่มั่นคงตั้งแต่อดีตจนถึงปัจจุบัน					
16. กิจการมั่นใจว่าจะสามารถดำเนินธุรกิจได้อย่างมั่นคงทั้งในปัจจุบันและอนาคต					



ตอนที่ 5 ความคิดเห็นเกี่ยวกับปัจจัยภายในที่มีผลต่อการดำเนินงานของธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย

ปัจจัยภายในที่มีผลต่อการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
วิสัยทัศน์เพื่อความยั่งยืน (Sustainability Vision)					
1. กิจการเชื่อมั่นว่าการกำหนดกลยุทธ์และทิศทางการดำเนินงานที่มุ่งเน้นเป้าหมายในอนาคตที่ชัดเจน จะช่วยให้การดำเนินงานบรรลุเป้าหมายได้ดียิ่งขึ้น					
2. กิจการให้ความสำคัญกับการนำเทคโนโลยีที่ทันสมัยมาใช้ในการบริหารงานอย่างเป็นระบบ ซึ่งจะช่วยให้การดำเนินงานประสบความสำเร็จและได้เปรียบคู่แข่ง					
3. กิจการมุ่งเน้นให้บุคลากรมีการเรียนรู้และฝึกอบรมวิธีการดำเนินงานใหม่ๆ อยู่เสมอ ซึ่งจะช่วยเพิ่มความสามารถและประสิทธิภาพการดำเนินงานได้ดียิ่งขึ้น					
4. กิจการส่งเสริมบุคลากรให้มีส่วนร่วมในการกำหนดวิสัยทัศน์ และแนวทางในการดำเนินงานขององค์กรร่วมกัน ซึ่งจะช่วยสร้างเป้าหมายและการทำสิ่งใหม่ๆ ให้กับองค์กรที่ดียิ่งขึ้น					
การเรียนรู้ของผู้บริหาร (Executive Learning)					
5. ผู้บริหารของกิจการเชื่อมั่นว่าการเรียนรู้อย่างต่อเนื่อง จะทำให้เกิดการพัฒนาศักยภาพในการดำเนินงานได้อย่างดีเยี่ยม					
6. ผู้บริหารของกิจการตระหนักถึงการพัฒนาแนวคิดวิธีการใหม่ๆ ในการดำเนินงานอย่างต่อเนื่อง ซึ่งจะช่วยเพิ่มความสามารถในการปฏิบัติงานให้มีประสิทธิภาพและประสิทธิผลมากยิ่งขึ้น					
7. ผู้บริหารของกิจการให้ความสำคัญกับการแลกเปลี่ยนเรียนรู้ร่วมกันในองค์กร ซึ่งจะทำให้การดำเนินงานมีประสิทธิภาพมากยิ่งขึ้น					
8. ผู้บริหารของกิจการมุ่งเน้นนำประสบการณ์ในอดีตมาใช้ในการบริหารงานปัจจุบัน ซึ่งจะช่วยให้เกิดศักยภาพในการบริหารงานในสถานการณ์ต่างๆ ได้ดียิ่งขึ้น					
ภาวะผู้นำการปรับเปลี่ยน (Transformational Leadership)					
9. กิจการเชื่อมั่นว่าการบริหารงานตามสถานการณ์ที่เปลี่ยนแปลงไปอยู่ตลอดเวลา จะทำให้สามารถวางแผนการบริหารงานได้ดีขึ้น					



ตอนที่ 5 (ต่อ)

ปัจจัยภายในที่มีผลต่อการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
10. กิจการให้ความสำคัญกับการพัฒนากลยุทธ์ใหม่ๆ อย่างต่อเนื่อง จะช่วยให้สามารถตอบสนองต่อการเปลี่ยนแปลงต่างๆ ที่อาจเกิดขึ้นได้อย่างรวดเร็ว					
11. กิจการสนับสนุนให้มีการปรับเปลี่ยนและพัฒนาการทำงานอย่างต่อเนื่อง ซึ่งจะช่วยให้อาจมีความสามารถในการบริหารงานได้อย่างมีประสิทธิภาพ					
12. กิจการตระหนักถึงการเปลี่ยนแปลงของสถานการณ์ต่างๆ ที่เกิดขึ้น จะช่วยให้สามารถปรับเปลี่ยนวิธีการปฏิบัติงาน เพื่อให้สามารถดำเนินงานได้อย่างราบรื่นและมีประสิทธิภาพมากยิ่งขึ้น					
การมีเจตคติด้านการเจริญเติบโต (Growth Mindset)					
13. กิจการเชื่อมั่นว่าการพัฒนาองค์กรให้เจริญเติบโตอย่างต่อเนื่อง จะช่วยให้สามารถดำเนินงานได้อย่างมีประสิทธิภาพมากขึ้น					
14. กิจการมุ่งเน้นให้เกิดการสร้างนวัตกรรมใหม่อย่างต่อเนื่อง ซึ่งจะช่วยให้อาจพัฒนาความสามารถทางการแข่งขันได้ดียิ่งขึ้น					
15. กิจการตระหนักถึงการนำเทคโนโลยีมาประยุกต์ใช้ในองค์กร จะช่วยให้การดำเนินงานมีประสิทธิภาพดียิ่งขึ้น					
16. กิจการยึดมั่นว่าการปรับเปลี่ยนวิธีการปฏิบัติงานให้สอดคล้องกับสถานการณ์ที่เปลี่ยนแปลงไป จะช่วยทำให้เกิดแนวปฏิบัติที่ดีที่ได้รับการยอมรับจากผู้มีส่วนเกี่ยวข้อง					
วัฒนธรรมการดำเนินงานตามหลักธรรมาภิบาล (Governance Culture)					
17. กิจการเชื่อมั่นว่าการมีวัฒนธรรมองค์กรที่เน้นธรรมาภิบาล จะช่วยให้การบริหารงานมีประสิทธิภาพมากยิ่งขึ้น					
18. กิจการให้ความสำคัญกับการเคารพในสิทธิหน้าที่และความรับผิดชอบของแต่ละบุคคล จะช่วยให้ได้รับการยอมรับจากผู้เกี่ยวข้องอยู่เสมอ					
19. กิจการยึดถือแนวทางการปฏิบัติงานที่เป็นที่ยอมรับโดยทั่วไป จะช่วยสร้างความน่าเชื่อถือแก่ผู้มีส่วนเกี่ยวข้องได้เป็นอย่างดี					
20. กิจการตระหนักเสมอว่าการปฏิบัติตามกฎ ระเบียบและข้อบังคับที่เกี่ยวข้องเป็นสิ่งจำเป็นและมีความสำคัญ ซึ่งจะช่วยให้อาจประสบความสำเร็จและบรรลุเป้าหมายได้เป็นอย่างดี					



ตอนที่ 6 ความคิดเห็นเกี่ยวกับปัจจัยภายนอกที่มีผลต่อการดำเนินงานของธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย

ปัจจัยภายนอกที่มีผลต่อการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
การเปลี่ยนแปลงด้านเทคโนโลยี (Technology Change)					
1. เทคโนโลยีมีการเจริญเติบโตอย่างต่อเนื่อง ทำให้กิจการต่างๆ ต้องศึกษาและทำความเข้าใจ เพื่อให้สามารถปรับใช้ ในการดำเนินงานได้เป็นอย่างดี					
2. เทคโนโลยีปัจจุบันมีความหลากหลายมากขึ้น ทำให้กิจการต่างๆ สามารถนำเทคโนโลยีมาประยุกต์ใช้ให้สอดคล้องกับสภาพแวดล้อมและ โครงสร้างขององค์กรได้เป็นอย่างดี					
3. การเจริญเติบโตของเทคโนโลยีสมัยใหม่มีราคาถูกลง ทำให้กิจการต่างๆ สามารถจัดหาเทคโนโลยีมาใช้ในองค์กรได้อย่างเพียงพอและเหมาะสม					
4. เทคโนโลยีในปัจจุบันมีสมรรถนะที่สูงขึ้น ทำให้กิจการต่างๆ สามารถ ประมวลผลข้อมูลในการดำเนินงานได้อย่างถูกต้องแม่นยำมากยิ่งขึ้น					
ความไม่แน่นอนทางสภาพแวดล้อม (Environmental Uncertainty)					
5. ในปัจจุบันสภาพแวดล้อมในการดำเนินงานมีความไม่แน่นอน ทำให้กิจการต่างๆ ต้องมุ่งแสวงหาแนวทางการดำเนินงานที่ดีมา ใช้เพื่อให้เกิดประโยชน์สูงสุดในการทำงานขององค์กร					
6. ในปัจจุบันมีคู่แข่งเพิ่มมากขึ้น ทำให้กิจการต่างๆ ต้องมุ่งพัฒนาขีด ความสามารถในการดำเนินงานอย่างต่อเนื่อง เพื่อให้สามารถแข่งขันได้ดียิ่งขึ้น					
7. ผลิตภัณฑ์และบริการมีความหลากหลายมากขึ้นในปัจจุบัน ทำให้กิจการต่างๆ ต้องจัดสรรงบประมาณอย่างเต็มที่ในการพัฒนาสินค้าและ บริการ เพื่อให้สามารถแข่งขันกับคู่แข่งในอุตสาหกรรมเดียวกันได้อย่างยั่งยืน					
8. ในปัจจุบันมีการบังคับใช้กฎหมาย ระเบียบที่เกี่ยวข้องกับองค์กรมากขึ้น ทำ ให้กิจการต่างๆ มีการจัดทำและนำเสนอข้อมูลอื่นๆ ที่เป็นประโยชน์ต่อการบริหารองค์กร					



ตอนที่ 7 ข้อคิดเห็นและข้อเสนอแนะเกี่ยวกับการประยุกต์ใช้การบัญชีทรัพยากรมนุษย์ของธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย

.....

.....

.....

.....

.....

.....

(ขอขอบพระคุณที่ได้สละเวลาตอบแบบสอบถาม)



APPENDIX G
Cover Letter and Questionnaire (English Version)



**Questionnaire to the Ph.D. Dissertation Research entitled
“The Effect of the Modern Human Resources Accounting Implementation and
Firm Survival; An Empirical research of Information and Communication
Technology businesses in Thailand”**

Dear Sir,

The objective of this research is to investigate the effect of the modern Human Resources Accounting Application with the survival of Information and communication technology businesses in Thailand. This research is a part of doctoral dissertation of the researcher in doctor of philosophy program in accounting at Mahasarakham business school, Mahasarakham University, Thailand. Tel: 043-754333

The questionnaire is divided into 7 parts:

- Part 1 General information of accounting executives of information and communication technology businesses in Thailand.
- Part 2 General information of information and communication technology businesses in Thailand.
- Part 3 Conception of the modern Human Resources Accounting Application in Information technology and communication business in Thailand.
- Part 4 Conception of information and communication technology businesses operation result in Thailand.
- Part 5 Conception of Internal Factor Affected to the operation of information and communication technology businesses in Thailand.
- Part 6 Conception of External Factor Affected to the operation of information and communication technology businesses in Thailand.
- Part 7 Suggestion and Recommendation of Human Resource Accounting Application in information and communication technology businesses in Thailand.

Your answer will be kept as confidentiality and your information will not be shared with any outside party without your permission.

If you want a summary of this research, please indicate your e-mail address or attach your business card with this questionnaire. The summary will be mailed to you as soon as the analysis is completed. require summary (E – mail) don't require summary.

Thank you for your time to answer all questions completely. I have no doubt that your answer will provide the valuable information for academic advancement. If you have any question with respect to this research, please feel free to contact me directly.

The researcher: Miss Patarasiri Thiptanamanee

Tel. 086-8842233, E-mail: spider0365@hotmail.com

(Miss Patarasiri Thiptanamanee)
Ph. D. Student
Faculty of accountancy and Management
Mahasarakham University, Thailand.



Part 1 General information of accounting executives of information and communication technology business and communication in Thailand.

1. Gender

- Male Female

2. Age

- Less than 30 years old
 30 – 40 years old
 41-50 years old
 More than 50 years old

3. Marital Status

- Single Married
 Divorced

4. Education Level

- Lower than bachelor's degree or equivalent
 Higher than bachelor's degree

5. Working experience

- Less than 5 years 5 - 10 years
 11 – 15 years More than 15 years

6. Average monthly income at present

- Less than 75,000 Baht
 75,000 – 100,000 Baht
 100,001 – 125,000 Baht
 More than 125,000 Baht

7. Working position at present

- Accounting executive
 Accounting manager
 Accountant
 Others (Please Specify).....



Part 2 General information and communication technology businesses in Thailand

1. Business Formation

- Company Limited Limited Partnership

2. Business Category

- Computer and Accessories
 Electronic Devices and Game Consoles
 Information Technology Renting
 Computer and Communication Devices Fixing
 Communication Networking and Installing
 Others (Please specify).....

3. Operation Characteristics

- Thai Owner Only
 Thai-Inter Co-investment

4. Amount of Staff

- Less than 50 50 –100
 101 – 200 More than 200

5. Investment Fund

- Lower than 25,000,000 THB
 25,000,000 – 50,000,000 THB
 50,000,001 – 75,000,000 THB
 More than 75,000,000 THB

6. Average Annual Income

- Lower than 50,000,000 THB
 50,000,000 – 75,000,000 THB
 75,000,001 – 100,000,000 THB
 More than 100,000,000 THB

7. Operation Period

- Shorter than 5 years
 5 - 10 years
 11 – 15 years
 Longer than 15 years



Part 3 Conception of the modern Human Resources Accounting Application in information and communication technology businesses in Thailand

Modern Human Resources Accounting Application	Level				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Human Resource Identification					
1. Firm believes that data from good Human Resource Identification will enhance firm to make the most efficiency economics decision.					
2. Firm emphasizes on reviewing the financial data involved staff to make more transparency decision in properly staff's benefit.					
3. Firm recognizes the personal categorization clearly to make the account as rules and approved normal account regulations.					
4. Firm focuses on systematic staff's data collection to make firm can record the cost and expenses effectively.					
5. Firm continually supports newly technology using in personal data collection to make the firm can review properly expenses, accurately and reliable.					
Human Resource Measurement					
6. Firm believes that good Human Resource Measurement will make firm can analyze and plan the investment accurately in the future.					
7. Firm focuses on Human Resources Investment Return Rate to make the properly worthiness analysis more effectively.					
8. Firm emphasizes on every activity occurred from staff operations in cash term and from this data can make firm control the non-benefit expenses more effectively.					
9. Firm focuses on present staff's expense analysis to make the reliable estimation planning in the future.					
Human Resource Investment					
10. Firm believes in the systematic Human Resource Investment will increase firm operation effectiveness consistency.					



Part 3 (Continued)

Modern Human Resources Account Application	Level				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
11. Firm emphasizes on properly enough investment cost in Human Resource Development to make firm increases potential and management ability.					
12. Firm supports staff continually participate training and personal development courses to make firm achieve the operation target as well.					
13. Firm focuses on developing the Training and Personal Development data system substantialize to make the accurately up-to-date data conformed to the requirement of firm.					
Human Resource Reporting					
14. Firm believes that good Human Resource Reporting will make firm a better operation decision from the advantaged data.					
15. Firm focuses on the presentation of actually worthiness proper Human Resource Development Estimation Planning Analysis Report will make the properly estimation planning.					
16. Firm supports the presentation of staff's achievement systematically will make firm can analyze a fare benefit for staff.					
17. Firm recognizes the presentation of staff's privilege substantialize will make staff more loyalty.					
Human Resource Monitoring					
18. Firm believes in Human Operation check-up continually will make the operation achieved.					
19. Firm emphasizes on the development procedures and staff training continually to make firm operational achieved as well.					
20. Firm always monitor in Human Resource investment cost continually will make an effectively management.					



Part 3 (Continued)

Operation Result	Level				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
21. Firm recognizes that the Skill and Ability of Staff Development evaluation will create effectively value-add from staff.					

Part 4 Conception of information and communication technology businesses operation result in Thailand.

Operation Result	Level				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Human Resource Management Efficiency					
1. Firm has systematic staff recruitment and substantial.					
2. Firm recruits skilled and ability people more.					
3. Firm can keep quality staff stay for a long period.					
4. Firm has skilled and expertise staff for properly work requirement.					
Long-Term Employee Commitment					
5. Staff has intention and focusing on work and use full potential for their work.					
6. Staff always ready for cooperation and dedicate themselves to full potential working.					
7. Staff willingly and ready for adaptation to their every assignment for all time.					
8. Staff feel as a part of firm development helping in a long period.					
Human Capital Value					
9. Firm has skilled and potential staff to create a value-add for firm.					
10. Firm has higher skilled and expertise staff than other firms in the same business.					
11. Firm has unique skilled and expertise staff make an advantaged difference from other competitors.					



Part 4 (Continued)

Operation Result	Level				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
12. Firm has creative staff and can adapt the knowledge to properly situation using.					
Firm Survival					
13. Firm increases profit rate continually compare to the past.					
14. Firm increases market share continually compare to the past.					
15. Firm has stable financial status from the past until now.					
16. Firm is confident in stable business operations from now to the future.					

Part 5 Conception of Internal Factor Affected to the operation of information and communication technology businesses in Thailand.

Affected Internal Factor	Level				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Sustainability Vision					
1. Firm believes in focusing on clearly future target strategic planning and operational directing will make firm better target achievement.					
2. Firm supports newly systematic management technologies to make successful operation and get competitors advantaged.					
3. Firm always encourages staff to newly operation method courses and training participation to improve a better work skill and effectiveness.					
4. Firm encourages staff to participate in vision specify and operational direction of firm to create a better target and new things to do for firm.					
Executive Learning					
5. Firm executive believes in continually learning will improve a better operational potential.					



Part 5 (Continued)

Affected Internal Factor	Level				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
6. Firm executive recognizes the new working idea improvement continually to increase a better effective operation.					
7. Firm executive focuses on internal firm knowledge exchange to increase the operation effective.					
8. Firm executive emphasizes using a past experience in present operation running to make a better effective operation in each situation.					
Transformational Leadership					
9. Firm believes in adaptive administration depend on real-time situation change will make a better administration plan.					
10. Firm focuses on newly strategic improvement continually to make a quick response to real-time situation change.					
11. Firm encourages in changing and working improvement continually to make firm has effective administration ability.					
12. Firm recognizes on real-time situation change to make proper operational adaptation for better smooth and effective result.					
Growth Mindset					
13. Firm believes in continually firm growth development will make a better effective operation.					
14. Firm focuses on newly innovative creation continually to improve a better competency.					
15. Firm recognizes in using newly technologies to improve a better operational effective.					
16. Firm believes in operational method change conform to real-time situation will create a good operating direction accepted by accomplice.					



Part 5 (Continued)

Affected Internal Factor	Level				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Governance Culture					
17. Firm believes in good governance culture will make a better effective administration.					
18. Firm focuses on right and responsibility of each person will always make acceptance from accomplice.					
19. Firm emphasizes on common accepted operational method will make a better accomplice reliability.					
20. Firm recognizes in necessary and matter of operation by rules and related regulations to make successful operation and target achieve as well.					

Part 6 Conception of External Factor Affected to the operation of information and communication technology businesses in Thailand.

Affected External Factor	Level				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Technology Change					
1. Firm has to learn and try to understand the newly technologies that continually growth to make a properly using in operation.					
2. According to the more variation of technologies recently firm can choose a properly conformed to the real-time situation and firm structure as well.					
3. Firm can provide enough and properly technologies according to the growth of technology that make price cheaper.					
4. Recently technology has a higher efficiency that make firm can process operational data more precise and accurate.					



Part 6 (Continued)

Affected External Factor	Level				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Environmental Uncertainty 5. There is uncertainty environmental recently make firm has to seek for a good operating direction for the most benefit in operation.					
6. According to the increasing of competitors recently firm has to continually focus on improve operational capability to make a better competitiveness.					
7. According to the more variation of products and services recently make firm has to allocate the full investment fund in research and development products and services to make a sustainable competitiveness with other firms in the same business.					
8. According to the more laws and firm related regulations enforce recently make firm has to create and present other benefit information of firm administration.					

Part 7 Suggestion and Recommendation of Human Resource Accounting Implementation in Information and Communication Technology businesses in Thailand.

.....

.....

.....

.....

.....

.....

.....

.....

APPENDIX H
Letter to Experts



สำเนา



บันทึกข้อความ

หน่วยงาน คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม โทรศัพท์ 043-754333-3431 Fax 043- 754422

ที่ ศธ.0530.10/

วันที่ 23 พฤษภาคม 2560

เรื่อง ขอเรียนเชิญเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัย

เรียน ผู้ช่วยศาสตราจารย์ ดร.ศรัญญา รักสงฆ์

ด้วย นางสาวภัทรสิริ ทิพย์ธนมณี นิสิตระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต (ปร.ด.) สาขาวิชาการบัญชี คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม กำลังศึกษาวิทยานิพนธ์ เรื่อง “ผลกระทบของการประยุกต์ใช้การบัญชีทรัพยากรมนุษย์สมัยใหม่ที่มีต่อความอยู่รอดของกิจการธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย” ซึ่งเป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปรัชญาดุษฎีบัณฑิต ดังนั้น เพื่อให้การดำเนินการเป็นไปด้วยความเรียบร้อยและบรรลุตามวัตถุประสงค์ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม จึงใคร่ขอความอนุเคราะห์ท่านเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัยและข้อเสนอแนะเพื่อนำข้อมูลที่ได้ไปดำเนินการทำวิทยานิพนธ์ต่อไป ตามเอกสารแนบท้าย

จึงเรียนมาเพื่อโปรดพิจารณา

(ผู้ช่วยศาสตราจารย์ ดร.นิติพงษ์ สังศรีโรจน์)

คณบดีคณะการบัญชีและการจัดการ





สำเนา

บันทึกข้อความ

หน่วยงาน คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม โทรศัพท์ 043-754333-3431 Fax 043- 754422
 ที่ ศธ.0530.10/ วันที่ 23 พฤษภาคม 2560
 เรื่อง ขอเรียนเชิญเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัย

เรียน ผู้ช่วยศาสตราจารย์ ดร.เกสินี หมั่นไธสง

ด้วย นางสาวภัทรสิริ ทิพย์ธนมณี นิสิตระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต (ปร.ด.) สาขาวิชาการบัญชี คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม กำลังศึกษาวิทยานิพนธ์ เรื่อง “ผลกระทบของการประยุกต์ใช้การบัญชีทรัพยากรมนุษย์สมัยใหม่ที่มีต่อความอยู่รอดของกิจการธุรกิจเทคโนโลยีสารสนเทศและการสื่อสารในประเทศไทย” ซึ่งเป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปรัชญาดุษฎีบัณฑิต ดังนั้น เพื่อให้การดำเนินการเป็นไปด้วยความเรียบร้อยและบรรลุตามวัตถุประสงค์ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม จึงใคร่ขอความอนุเคราะห์ท่านเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัยและข้อเสนอแนะเพื่อนำข้อมูลที่ได้ไปดำเนินการทำวิทยานิพนธ์ต่อไป ตามเอกสารแนบท้าย

จึงเรียนมาเพื่อโปรดพิจารณา

(ผู้ช่วยศาสตราจารย์ ดร.นิติพงษ์ สังศรีโรจน์)

คณบดีคณะการบัญชีและการจัดการ



VITA



VITA

NAME Miss Pattarasiri Thiptanamanee
DATE OF BIRTH July 19, 1980
PLACE OF BIRTH Phitsanulok, Thailand
ADDRESS 273 Malabiang Road, Nai-Muang Sub-District, Muang District, Phitsanulok Province, 65000, Thailand.
POSITION Lecturer
PLACE OF WORK Phibun Songkhram Rajabhat University, Phlai Chumphon Sub-District, Muang Phitsanu Lok District, Province, 65000, Thailand.

EDUCATIONAL

2001 Bachelor of Accounting, Naresuan University, Phitsanulok, Thailand.
2006 Master of Business Administration (Accounting), The University of the Chamber of Commerce, Bangkok, Thailand.
2018 Doctor of Philosophy (Accounting), Mahasarakham University, Mahasarakham, Thailand.

RESEARCH

Thiptanamanee, P. and Ussahawanitchakit, P. (2016). Learning Orientation, Emotional Intelligence and Job Success: An Empirical Research of Automobile Industry in Thailand. *The Business & Management Review*, 7(5), 487-498.

