DETERMINANTS OF INTERNAL AUDIT OUTSOURCING: AN EMPIRICAL STUDY OF SMES IN MALAYSIA

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DECLARATION

We hereby declare that:

(1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) Equal contribution has been made by each group member in completing the research project.

(4) The word count of this research report is 10,412.

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DEDICATION

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

ASX	Australia Stock Exchange
AS	Asset Specificity
CAC	Chairpersons of the Audit Committees
CAE	Chief Audit Executive
CEO	Chief Executive Officer
CFO	Chief Financial Officers
CIT	Critical Incident Technique
COO	Chief Operating Officer
CPO	Chief Procurement managers
CT	Cost
DV	Dependent Variable
EU	Environmental Uncertainty
FQ	Frequency
GDP	Gross Domestic Products
IT	Information Technology
IIA	The Institute of Internal Auditors
IV	Independent Variable
OS	Internal Audit Outsourcing
PEU	Perceived Environmental Uncertainty
SAS	Statistical Analytical Software
SA	South African
SME	Small and Medium Enterprise
TCE	Transaction Cost Economics
TCT	Transaction Cost Theory

PREFACE

Internal audit is an assurance service that is provided by the professionals to the companies in order to improve their business operation. It is important for the businesses to engage and find out weaknesses and problems of their business and overcome them. This service will also enhance the market confidence which will eventually help in the development of the companies. Public listed companies are required to perform the internal audit function within their companies regardless whether it is provided by third parties or in house.

SMEs play a significant role in contributing for the nation's economic growth yet there are less exposure and awareness among them about the need of internal audit services. Thus, this dissertation aims to find out the determinants of internal outsourcing in SMEs Malaysia. It aids the key characters in a company to make the decision whether to outsource the service by examining the costs and benefits.

By emphasizing on the determinants which are the asset specificity, environmental uncertainty, frequency and cost, this dissertation will provide an insight to the related parties such as manager, financial controller and the researchers as there is no solid evidence or research done in Malaysia about the SMEs internal audit outsourcing decision.

ABSTRACT

This descriptive study discusses how the transaction cost theory (TCT) affects the internal audit outsourcing decision in Small and Medium Enterprise (SME) and analyses with quantitative data collection technique. The independent variables are asset specificity, environmental uncertainty, frequency and cost while the dependent variable is internal audit outsourcing. 1,700 online questionnaires will be sent to the accountants, managers and financial controllers of SMEs. The results showed that asset specificity and cost are significant against the TCT with outsourcing decision except the environmental uncertainty and frequency with the Statistical Analytical Software (SAS) analysis. This study will contribute to the management control teams in SMEs to enhance the corporate governance by helping them to make the internal audit outsource decision and providing an in-depth analysis of determinants of internal audit outsourcing in Malaysian SMEs. It will also benefit the audit firms as they will know what type of company that will involve in internal audit outsourcing the most. Moreover, researchers can make use of this study as an extended research which has never been done in Malaysia.

CHAPTER 1: INTRODUCTION

1.0 Introduction

In this chapter, this research will discuss about the background of the study, identify the problem statement, establish the research objectives and questions and provide the significance of the study. This chapter will allow readers to understand the content of the study.

1.1 Background of The Study

Internal audit has been defined as a strategy that helps in preserving and maintaining the resources or asset which facilitates the invention of the reliable accounting information that leads to a better decision making during organizational changes due to the global rivalry and overcapacity such as their non-core functions (Ebaid, 2011; Schneider, 2008). Currently, internal audit has been developed in order to incorporate operational auditing, risk assessment, Information Technology (IT) assurance services and further aspects (Spekle, 2007). Internal auditing has benefited particular organization undertakes its objectives by taking a systematic, disciplined approach to evaluate and improving the effectiveness of the risk management, control and governance processes (Barac & Motubatse, 2009 ; Caplan, Janvrin & Kurtenbach, 2007).

Small and medium enterprise (SME) plays an important role as a backbone in the nation economy as it represents the largest percentage of formations in Malaysia at 99.2 per cent which contributes 32 per cent to Gross Domestic Products (GDP), 56.4 per cent to total work force and 19 per cent to total exports (SMECORP, 2013). SME is defined by two criteria which are the sales turnover and number of employees. There are three categories of SMEs in Malaysia which are Micro,

Small and Medium and they are not only defined in terms of their sizes but also the types as manufacturing, manufacturing-related services, primary agriculture and services (Jayabalan, 2009; Saleh & Ndubisi, 2006).

Higher quality and profitability could be attained through the external sources; thus firms may achieve better productivity which eventually will lead to a better performance (Kamyabi & Devi, 2011). It is an approach to gain the world class capabilities and to gain competitive advantages when it is accomplished by the external parties (Ghodeswar & Vaidyanathan, 2008). Coram, Ferguson and Moroney (2007) said that outsourcing of internal audit is important in today's world to enhance the independence and objectivity of audit function.

1.2 Problem Statement

1.2.1 Problem Identified

In a business context, it is hard for SMEs to sustain their competitive advantages compared with large firms due to lack of capital and resources (Jayabalan et al., 2009; Evaraert, Sarens & Rommel, 2006). Scarce resources defined as the company lacks of knowledge or people to maintain their company function. Therefore, most of the SMEs prefer to outsource their function rather than establishing an in-house development. In addition, study has found that SMEs have to face the challenge of retaining skilled employees within their company (Dorasamy, 2010). Furthermore, in order to enhance the effectiveness of risk management, control, and governance processes of SMEs, internal audit function is needed to add value to an organization (Messier & Boh, 2007).

1.2.2 Past Studies Solved Problem

Based on the study of Carey, Subramaniam and Chua (2006), this study has conducted a research on determinants of internal audit outsourcing of listed companies of Australia Stock Exchange. It has studied the determinants, which were the independent variables, such as cost savings, firm size, and corporate strategy and the dependent variable which was the decision to outsource internal audit. Moreover, based on the past study of Everaert et al. (2006), this study has investigated the reasons of SMEs in Flemish, Belgium to engage in accounting outsourcing. This study has also extended the transaction cost economics (TCE) model. Several significant factors of outsourcing were found, including resource deficit, asset specificity and frequency. Furthermore, based on the study of Sharma and Subramaniam (2005), the determinants of internal audit outsourcing were perceived environmental uncertainty (PEU), asset specificity, size and cost pressure.

1.2.3 Deficiencies in Past Studies

There are limited and incomplete of empirical studies about determinants of internal audit outsourcing. Table 1.1 shows most of the studies about this topic were performed abroad.

Table 1.1: Studies Conducted Abroad

Past Studies	Country	Purpose
Carey et al., 2006;	Australia	To study the factors of internal audit outsourcing from companies listed on the Australia Stock Exchange (ASX).
Sharma et al., 2005		To investigate the determinants of several organizational-level variables on degree of internal

		audit outsourcing.
Gonzalez, Gasco, and Llopis, 2005	Spanish	To investigate the factors of information systems outsourcing in the largest firms in Spanish.
Barac et al., 2010	South Africa	To determine the rationales of internal audit outsourcing decision.
Capasso, Cusmano, Morrison, 2011	Italy	To examine the factors of outsourcing and off shoring strategies in Italy.
Fan, Scandal, Kong, Li, 2009	East China	To study and analyze the outsourcing in Chinese firms.
Spekl è, Elten and Kruis, 2005	Netherlands	To instigate the determinants of internal audit outsourcing decisions of organizations in the Netherlands.
Kamyabi et al., 2011	Iran	To examine the determinants affect SMEs in Iran decision to outsource accounting function.

Source: Developed for the research

In addition, most of the studies were examining the determinants of outsourcing in other sectors, such as accounting (Dorasamy et al., 2010; Marimuthu et al., 2010; Everaert et al., 2006), information systems (Gonzale et al., 2005), and hotel (Lamminmaki, 2007).

Furthermore, Table 1.2 shows the independent variables used by the past studies are different from this study.

Table 1.2: Different Independent Variables of Past Studies

Past Studies	**Independent variables**	**Dependent variable**
Dorasamy et al. (2010)	cost factor, resource factor, competencies factor, operations management factor, risk	accounting functions outsourcing of SMEs in Malaysia

	of outsourcing factor, firm size and type of industry.	
Spekl èet al. (2005)	asset specificity, environmental uncertainty, behavioral uncertainty and frequency	internal audit outsourcing

Source: Developed for the research

However, this study will be slightly different from the journals aforementioned, which is examining on asset specificity, environment uncertainty, frequency and cost. Nevertheless, some of these past studies will be applicable in this study.

1.3 Research Objectives and Questions

Table 1.3: Research Questions and Objectives

Objectives	**Questions**
General: To determine the factors that will affect internal audit outsourcing of small and medium enterprises in Malaysia.	General: What are the factors that contribute to internal audit outsourcing of small and medium firms in Malaysia?
Specific: a. To examine the relationship between asset specificity and internal audit outsourcing of small and medium enterprises in Malaysia. b. To inspect the relationship between cost and internal audit outsourcing	Specific: a. Does asset specificity affect internal audit outsourcing of small and medium enterprises in Malaysia? b. Is there any relationship between cost and internal audit outsourcing of small and medium enterprises in

of small and medium enterprises in Malaysia. c. To investigate the relationship between environmental uncertainty and internal audit outsourcing of small and medium enterprises in Malaysia. d. To identify the relationship between frequency and internal audit outsourcing of small and medium enterprises in Malaysia.	Malaysia? c. Does environment uncertainty affect internal audit outsourcing of small and medium enterprises in Malaysia? d. Does frequency influence internal audit outsourcing of small and medium enterprises in Malaysia?

Source: Developed for the research

1.4 Significance of Study

This empirical study provides an in-depth analysis of determinants of internal audit outsourcing in Malaysian SMEs. Besides, internal audit is recently becoming a mechanism of the corporate governance (Ernst & Young, 2006; Cooper et al., 2006). This study will be able to contribute to the management control teams of SMEs to enhance their corporate governance in terms of the organization's accountability, oversight and control. Management teams will be able to judge whether the internal audit outsourcing is beneficial to their companies. According to Shang (2008), outsourcing of services will improve a firm's performance. Firms will be able to achieve a better level of employee productivity and performance by outsourcing to external sources (Gilley et al., 2004). Thus, these findings will be provided as guidelines for Malaysian SMEs to decide whether to outsource or not to outsource the internal audit service.

Furthermore, based on the findings, it will benefit the audit firms as they will know what type of company that will involve in internal audit outsourcing the most. Generally, small and medium companies will be focusing more on cost saving, therefore, through this research; they are able to provide their services in

accordance with the company's condition. Also, due to high outsourcing demand, they are able to improve their services such as customizing their software as different companies will have different requirements of using an IT.

Lastly, this empirical study can be used as an academic reference for future research. Some of the determinants are not defined clearly and fully investigated in the past studies such as Australia, Spanish, South Africa, Italy, East China, Netherlands and Iran. Therefore, this is an extended research whereby it focuses on the SMEs in Malaysia, which has never been done in the past research.

1.5 Outline of the Study

Chapter 1 is illustrating the introduction, research background, problem statement, research objectives, research question, hypotheses of the study, significance of study, and chapter layout. The chapter is mainly investigating the determinants of internal audit outsourcing.

Next, the relationship between independent variables and dependent variable will be shown in Chapter 2. The theory of this study will be referred from the past studies or research. Research model or framework will be then developed and hypotheses will be made in this chapter.

Chapter 3 will be highlighting about the research methodology. This chapter consists of research design, selection of sample, data collection methods and data analysis techniques.

Chapter 4 will show the generated results from SAS analysis that consists of descriptive analysis, scare measurements and inferential analysis.

Finally, the Chapter 5 will discuss the major findings based on the results that have been generated and the implications of the study from managerial view.

1.6 Conclusion

After identifying the problem statements, establishing the research objectives and questions, and providing the significance of the study, this chapter will provide a platform to conduct Chapter 2. In Chapter 2, it will discuss about the past literature reviews which will help the research team to develop their hypothesis.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter will discuss about the foundation and studies related to the topic. Theoretical foundation and past studies are reviewed and further expressed. A proposed conceptual framework is developed to examine the relation between the independent variables and dependent variable.

2.1 Theoretical/Conceptual Foundation

Transaction Cost Theory (TCT) or Transaction Cost Economics (TCE) has been used by most of the past studies in order to internalize or externalize firms' activities (Mayer & Salomon, 2006; Geysken & Jacobides, 2004). As defined by Williamson, transaction cost is the cost of acquiring and managing the information about the inputs' quality, the related prices, and the reputation of the supplier (Martins, Serra, Leite, Ferreira & Li, 2010).

TCT has been used to evaluate various problems including structuring efficient administrative organizations, integration and efficient boundaries of the firm and franchise contracting (Ngwenyama & Bryson, 1997). It is used to explain the reason a particular transaction will choose a certain form of transaction instead of others (Liang & Huang, 1998). TCT argues that besides markets, transaction costs can also be reduced through mechanisms (Coase, 1937; Williamson, 1975).

Williamson has made two assumptions in TCT. The first assumption is bounded rationality. Bounded rationality indicates that people have limited cognitive processing power and limited memories (Bahli & Rivard, 2010). Bounded rationality proposed that an individual will tend to behave rationally, but only in

certain situation as they do not own perfect information nor the mental capacity or the time to completely process the information (Simon, 1961). In other words, they tend to make rational decisions, nevertheless, it is within the limits of their lacking cognitive capability and limited information (Martins et al., 2010).

The second assumption is opportunism. Opportunism assumption refers to the inspiration of human actions (Williamson, 1985). This assumption indicates people act are not only acting in their self-interest way, they are also acting with guile (Bahli & Rivard, 2010; Williamson, 1985). It involves a certain amount of dishonesty regarding whether the party is able to fulfill the terms of the agreement or their motivation to use up the effort required after the agreement is being ratified (Memili, Chrisman, & Chua, 2011).

TCT consists of four concepts. The first concept is uncertainty. The level of uncertainty facing by a firm depends on the environment in which a firm operates (Sharma et al., 2005). An unpredictable firm's activity will tend to be operated in-house as external contracts will be influenced by 'spot' pricing which is usually higher than long-term, negotiated prices (Widener & Selto, 1999). When a firm is facing a high level of uncertainty, the transaction costs will increase and this will lead to lower financial benefits when the amount of outsourcing increases (Sharman et al., 2005).

The second concept is asset specificity. Assets can be comprised of private information, technical knowledge and human skill and expertise (Klein, 2005; Masten, 1989; Monteverde & Teece, 1982). Different activities may tend to have different level of knowledge or information (Sharma et al., 2005). Outsourcing will likely provide a lower risk of manipulation of clients' information as the risk of opportunistic behavior by external providers is low. Hence, the increase amount of outsourcing will lead to greater benefits for firms with low asset specificity (Sharma et al., 2005).

The third concept is cost. Different levels of pressure to reduce cost are faced by different firms. Hence, there are different values placed by managers from different firms (Williamson, 1996). Outsourcing has been offering instant cost saving due to the efficiencies in market competition and economies of scale (Klass,

McClendon & Gainey, 1999). In order to cut cost, managers are likely to outsource the activities and ignore the increased possibility of opportunistic behavior in the long term (Sharma et al., 2005).

The fourth concept is frequency. It refers to the regularity of transactions (Murray, 2001). The larger the basis of transactions provided, the higher the frequency that supports the emergence of control (Williamson, 1985). Frequency can be assessed in terms of the size of the activity and the periodicity of the activity (Everaert et al., 2008). The more frequent or regular activities are tend to be operated internally (Williamson, 1985).

In other sectors, TCT is used as research theory to identify the factors affecting "make or buy" decision and the determinants of outsourcing (Sharma et al., 2005). Moreover, it has been applied by most of the organizations for internal audit sourcing decision. It is used to describe the reasons of internal audit sourcing decision (Spekle et al., 2007). Furthermore, it has been used to explore between similarities and differences between public sector internal audit and its counterpart in the private sector in South Africa (Yasseen, 2011). Besides, TCT is used to identify the determinants of outsourcing of accounting task in SMEs (Everaert et al., 2008). Also, it has been adopted in R&D outsourcing at Japanese firms (Miyamoto, 2007) and in identifying the best practices and the main risk factors in global IT outsourcing (Dhar & Balakrishnan, 2006).

The four concepts in TCT which are the asset specificity, uncertainty, cost and frequency will be used in this research to identify the determinants of internal audit outsourcing in the Malaysian SMEs. The purpose of this study is to identify the asset specificity, uncertainty and cost have positive relationships with internal audit outsourcing in SMEs in Malaysia, thus, examine the significant factors that influence the outsourcing decision of SMEs.

2.2 Review of the Prior Empirical Studies

2.2.1 Outsourcing of Internal Audit

According to The Institute of Internal Auditors (Definition of internal auditing, 2013), internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. Carey et al. (2006) described outsourcing as a service that provided or surrendered to external parties. Barac et al. (2010) defined internal audit outsourcing as an approach where the functions were executed by the outsider apart from the organization that will provide the benefits of cost advantage, effectiveness and efficiency of the operations and profession gain. Internal audit outsourcing is an activity where the firms employ or appoint independent public accounting firms and other professionals to execute the works that have not been done by internal auditors traditionally and a study found out the increasing importance of internal auditing in the Egyptian listed firms (Zhang & Gao, 2012; Ebaid, 2011). According to Mihret and Yismaw, 2007, the study stated that internal audit helps to improve the organization by enhancing the audit effectiveness and quality which will eventually help the management to recognize the problems and thus achieve the objectives of the particular organization. Prawitt, Sharp and Wood, 2011, also stated that accounting risk can be diminished when the internal audit function is outsourced to external third parties and it will be able to reduce the risk of fraudulent financial reporting. Although most of the studies have supported that outsourcing of internal audit will bring benefits into the organization, yet Muqattash (2011), says that by having the internal audit within the organizations will have more advantage rather than completely outsource to third parties.

2.2.2 Asset Specificity

Kamyabi et al. (2011) defined asset specificity as the resources such as business related knowledge and skills which included in the physical and human assets. Asset specificity is the resources that term as business related knowledge and skills which required carrying out an activity that included in the site specificity, physical and human assets (Alaghehband, Rivard, Wu & Goyette, 2011).

Nagpal (2006) has implemented transaction cost economics theory to study about the IT outsourcing through the evaluation of past studies of selected paper from top tier papers. It stated that asset specificity is always highly significant to the decision of outsourcing based on the prior researches conducted. It described asset specificity as a long-lasting resource assuming with the backing of certain matter or operation and the opportunity cost of which is smaller with other available choices provided.

Alvarez-Suescun (2010) has seek to explain the relationship between IT outsourcing with the transaction cost and resources based theory by targeting on the large firms which have more than 1000 employees in Spain. Positive result was shown by using binomial logistic regressions where the asset specificity is significant to the decision of IT outsourcing.

Aubert, Houde and Patry (2012) have aimed to add value on past studies and strengthen the understanding about Information Technology (IT) outsourcing decisions. 1,496 IT senior managers were selected from different industries of Canada and questionnaires were mailed to them. The T-statistics which is the statistical hypothesis testing revealed that asset specificity has no significant impact on the degree of IT outsourcing.
In addition, Kamyabi et al. (2011) have determined the factors affecting Iranian manufacturing SMEs in the decision of outsourcing of accounting functions. 1,750 manufacturing SMEs were selected and questionnaires were mailed to them. The multiple linear regression analysis had supported the

hypothesis of asset specificity which is negatively related with degree of accounting activities outsourcing.

Vita, Tekaya and Wang (2010) have conducted a research on how the asset specificity will influence the outsourcing relation assessment in United States. Questionnaires were posted to 137 companies randomly selected from the Financial Analysis Made Easy database using the stratified sampling method. The multiple regression analysis showed that asset specificity has a significant impact on the outsourcing among services-related industries.

2.2.3 Environmental Uncertainty

Sharma et al. (2005) have defined environmental uncertainty as changes in activities as a result of dynamism and environmental complexity. Besides, the volatility and irregularity of stakeholder engagement will also lead to the uncertainty. For an instance, the management level will consider outsourcing certain functions in order to reduce the environment uncertainty when the risk level increases.

Everaert et al. (2010) have studied the accounting outsourcing with transaction cost theory using 1,200 Belgian SMEs as a sample from the total population of 14,604 through systematic sampling. Using two limits Tobit analysis, it examined and stated that the environmental uncertainty is not significant with the intensity of outsourcing the accounting function.

Alvarez-Suescun (2010) has explained that environmental uncertainty is derived from the measurement problems and drew a conclusion that increasing uncertainty will reduce the intensity to outsource the business functions. It took some sample size on the large Spain firms and the binomial logistic regressions were used to show the result. However, the

result showed there is no significant relationship between the uncertainty and outsourcing of IT functions.

Lamminmaki (2007) has carried out an investigation on transaction cost economics (TCE) and identified other factors that will affect the Australian hotels outsourcing decisions in the study. 15 managers which comprised of financial controllers, general managers and project engineers were selected for interview and questionnaires were mailed to 356 general managers in Australian hotels with at least 100 rooms. Multiple regression analysis showed that the dependent variable, outsourcing is negatively associated with independent variable, environmental uncertainty was not supported.

Promsivapallop, Jones and Roper (2009) have examined the relationship between Transaction Cost Economics (TCE) variables and outsourcing decision in the hotel industry in Phuket. Critical Incident Technique (CIT) was used in the study. Senior managers, hotel General Manager and department head from 22 hotels were CIT interviewed. Result showed that environmental uncertainty has strong influence on decision to outsource.

2.2.4 Frequency

Spekle et al. (2007) defined frequency as number and value of a particular transaction over the time. It will influence the economic judgment of management in financing the operations in the organization. Spekle claimed that an organization prefers not to outsource the functions as there is a high cost to maintain the asset specificity yet some may outsource due to the high frequency transactions within the organization.

Spekle et al. (2007) have examined the factors that align with the Transaction Cost Economics theory which included the asset specificity, environmental uncertainty, behavioral uncertainty and frequency affecting company decision to outsource internal audit functions. 450 Chief Financial

Officers of organizations headquartered in Netherland were selected as a sample and questionnaires were mailed to them. Multiple regression analysis proved that frequency is significantly related with company outsourcing decision.

Christensen (2011) has aimed to investigate the internal and external determinants which will affect company decision on risk management activities outsourcing. The researcher has selected 271 ASX listed organizations as a sample. A questionnaire was designed and distributed to the selected sample to gather the insight regarding the risk management activities. The researcher has used logistic regression, statistical tests, linear and logistic multivariate regression analysis in analyzing the responses collected. The finding proved that frequency is significant related with risk management activities outsourcing.

Lamminmaki (2007) has investigated the transaction cost economics and identified other factors affecting Australian hotel outsourcing decision. 15 managers which comprised of financial controllers, general managers and project engineer were interviewed and questionnaires were mailed to 356 general managers in Australian hotels with at least 100 rooms. As a result, correlation analysis and regression analysis did not support the hypothesis as frequency is negatively associated with hotel outsourcing.

Ellram, Tate and Billington (2008) have intended to strengthen an understanding of the methods adopted by companies in managing the risks and cost of professional services offshore outsourcing. Interviews were conducted with procurement professionals comprising directors, Chief Procurement Officers and managers from 8 organizations. The data was analyzed by using QSR N Vivo, qualitative data analysis computer software. QSR N Vivo was used for organizing and analyzing non-numeric data. The result revealed that firms have higher tendency to outsource larger volume of transactions.

Everaert, Sarens and Rommel (2010) have determined whether Belgian SMEs participated in the accounting activities outsourcing. The researcher used systematic probability method to select a sample of 1200 SMEs and distributed the survey questionnaires by mail. Cronbach's alpha test, Tobit analysis and logit analysis were selected by the researcher to analyze the results. The findings proved that frequency is negatively related with frequency of accounting activities. In other words, SME will have lower tendency to outsource if the frequency of tasks is higher.

2.2.5 Cost

Carey et al. (2006) defined cost saving as an ability to gain economies of scale and improve technological efficiencies. Cost is always the key factor that will affect and influence the decision of an organization whether to outsource or not. Carey outlined that cost can be reduced through the performance of internal control assessment with the audit which will eventually increase the effectiveness and efficiency as the related parties gain more understanding of the organization when carrying out the internal control.

According to Barac et al. (2009), cost implication is one of the factors that contribute to the internal audit outsourcing as it is cost effective and able to get more proficiency and the same time, governing the internal audit. Targeting on the 30 listed firms in South Africa, questionnaires were submitted to the top executives of the firms and the results were analyzed by using the iKUTU study which is a research report done by the special team that comprised of members from Departments of Auditing at the University of South Africa (UNISA), University of Pretoria (UP), Nelson Mandela Metropolitan University (NMMU), Monash University – South Africa (MSA) and Tshwane University of Technology (TUT) in South Africa. It showed that there is a significant effect of cost on the outsourcing internal audit functions.

Dorasamy et al. (2010) have aimed to contribute an insight on accounting function outsourcing as limited data about outsourcing of accounting functions could be obtained in Malaysia. The researcher has selected 1,500 Malaysian SMEs as a sample by using systematic sampling and online questionnaires were sent to them. Correlation analysis and logistic regression analysis has concluded that the cost is not relevant with the Malaysian SMEs accounting functions outsourcing decision.

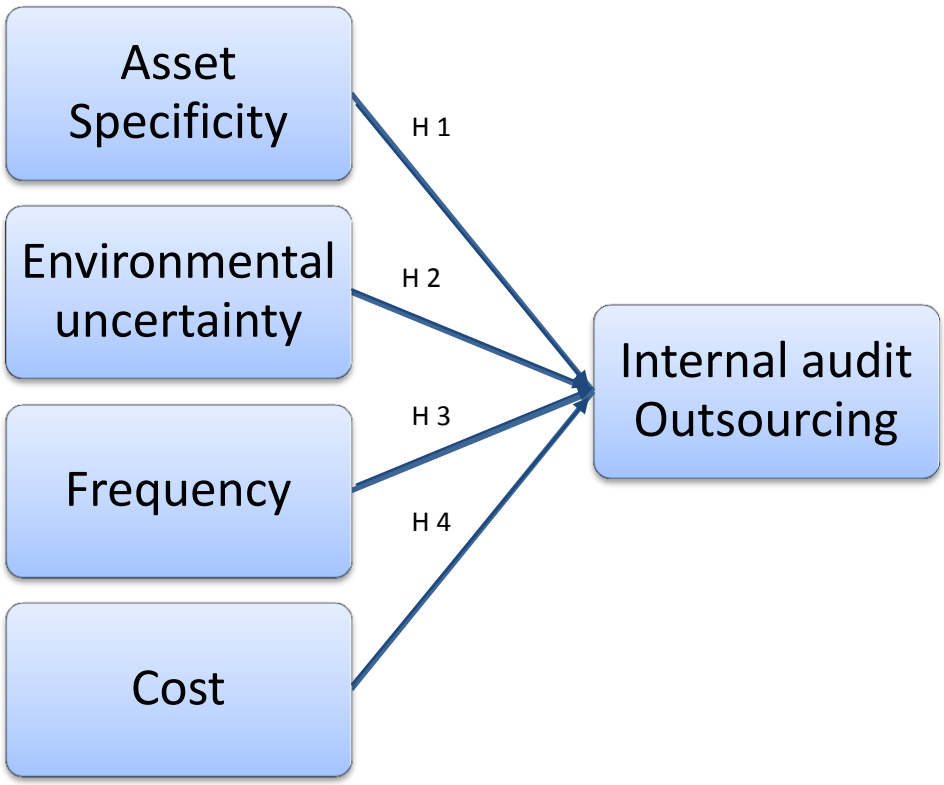
According to Alaghehband, Rivard, Wu and Goyette (2011), cost is defined as production and governance or transaction cost. The study has evaluated the past studies such as journals, case studies and articles that available in the online databases to address how the transaction cost theory will affect the outsourcing in the information technology. It is assumed that cost saving is always associated with the outsource decision. The evidences and analyzed studies showed that the cost advantage is always supported from 9 articles that collected by Alaghehband.

Peslak (2012) has investigated the factors driving the decision to outsource in IT by targeting top executives in USA based on 800 responses of secondary data from Financial Executive International using survey based research. Multi regression analysis was used in the study and showed that the cost is not supported in the IT outsourcing as it is not a core business function.

Yasseen (2011) has investigated the status quo of internal audit outsourcing of private and public organizations in South African (SA). Electronic questionnaires were distributed to 80 organizations in SA with targeted Chief Audit Executives (CAE), senior audit managers, Financial Directors, and other executives who in charge of internal audit function. Wilcoxon rank sum test revealed that there is a significant difference between cost reduction and factor for outsourcing.

2.3 Proposed Conceptual Framework

Figure 2.1: Proposed Theoretical Model



Adapted from source: Speckl é RF, Van Elten HJ, Kruis AM (2007) Sourcing of internal auditing:an empirical study.Management Accounting Research. 18: 102 – 124; Barac K and Motubatse KN (2010). Internal audit outsourcing practices in South Africa. African Journal of Business Management Vol.3 (13), pp. 969-979, December 2009.

The above frameworks are developed and served as the foundation for this research purpose which includes four independent variables and one dependent variable.

2.4 Hypothesis Development

Based on the past studies, the hypotheses have been developed as followings:

Hypothesis 1:
H1: There is a significant relationship between asset specificity of the internal audit function and the degree of internal audit outsourcing.

Hypothesis 2:
H1: There is a significant relationship between environmental uncertainty and internal audit outsourcing.

Hypothesis 3:
H1: There is a significant relationship between frequency and degree of internal audit outsourcing.

Hypothesis 4:
H1: There is a significant relationship between cost and internal audit outsourcing.

2.5 Conclusion

This chapter has discussed the relevant foundation and concept based on the developed conceptual framework that included four independent variables which are the asset specificity, environmental uncertainty, frequency and cost and one dependent variable which is the degree of internal audit outsourcing. The next chapter will be further elaborating the research methodology of how to conduct the research and process the data.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

This chapter comprises of 6 subsections such as research methodology and describes how the research is carried out in terms of research design, data collection methods, determining the population and sampling technique, variables and measurement, research instrument, data processing as well as data analysis technique.

3.1 Research Design

This study aims to investigate relationship between the determinants and internal audit outsourcing of SMEs in Malaysia. This study is a descriptive study as we portray an accurate profile of persons, events or situation (Saunders, Lewis, & Thornhill, 2009; Robson, 2002). This study conducts quantitative data collection technique to test a general theory by numerical data. Data will be collected through surveys because it is very cost effective and convenient for respondents and researchers to collect data through the internet. This is a cross-sectional study as it is conducted at a specific period of time in year 2013 (Saunders et al., 2009). The questionnaires will be sent to each targeted SMEs by e-mail (Jayabalan et al., 2009). The target respondents are the owner, manager (Kamyabi & Devi, 2011), managing and financial director (Carey, 2006), financial controller, and accountant (Sharma, 2005) of SMEs which they have educational background about internal audit and in the relevant audit field.

3.2 Data Collection Method

This study will perform both literature study and survey distribution (Yasseen,

2011). The data can be categorized in terms of its intrinsic properties or based on the way in which it was collected (Bless et al., 2006).

3.2.1 Primary Data Collection

Data obtained from the questionnaires represents primary data (Yasseen, 2011). An online-based questionnaire will be conducted and the unit of analysis will be the SME companies in Malaysia (Jayabalan et al., 2009). The questionnaire will be developed according to prior studies, and 1,700 of questionnaires will be sent through online to SME. 190 questionnaires are used to conduct the analysis.

Furthermore, prior to the distribution, a pilot test will be carried out. 30 sets of questionnaires will be distributed through online to SME companies for pilot testing. The purpose of pilot test is to pre-test the questionnaires and to ensure the understandability of questions and clarity of meaning, thus it will enhance its relevance and validity (Mihret et al., 2008).

3.3 Population, Sample and Sampling Procedures

Malaysian SMEs will be the population used in this study. The total number of registered SMEs in Malaysia in 8 March 2013 was 17,082 (www.smeinfo.com.my). 10% or 1,700 registered Malaysian SMEs are studied using the systematic sampling and online questionnaires will be sent to them (Dorasamy et al., 2010).

Systematic sampling is a method where the sample will be selected at regular intervals from the sampling frame. The sampling fraction is 1,700/17,082=0.0995 or 10%, which means, every ten elements will be chosen from the sampling frame. Systematic sampling is accurate and easier to access as the actual list is not needed yet suitable to all size of the sample. The minimum sample size to conduct this

research is 170 SMEs. The data collected in this research is 250 out of 1700. This research has used 190 out of 250 survey data to conduct the analysis. The remaining 60 survey data are not being used as they are either not completed or does not fulfill the requirements. The respond rate is 14.71% and the usable rate of the data is 76%.

3.4 Research Instrument

Questionnaire is the main instrument used in this research. Researchers believe that it will provide a more objective and consistent way to gather the information. Self-administered survey will be used in distributing the questionnaires through internet to obtain the responses for research hypothesis and proposed model testing. Malaysian SMEs are our target respondents to conduct this survey.

Soft copies of the questionnaires will be sent through e-mails to the target respondents in the effort to obtain their responses. In this research, the quality of data must be high so that it can accurately depict the relationship among the six variables which is the main objective of this research.

3.5 Variables and Measurement

The independent variables of this study are asset specificity, environmental uncertainty, frequency and cost. Meanwhile, the dependent variable is internal audit outsourcing. All independent and dependent variables are measured by using 5 items adopted from past studies. The sources of variables are shown in Appendix B. Interval scale will be applied in the measurement of each item. There are 25 items developed using 5 point Likert scale ranging from ‘Strongly Disagree’ (1) to ‘Strongly Agree’ (5). The summary has stated in Appendix D.

3.6 Data Analysis Technique

Data collected from the questionnaires will be coded and processed using Statistical Analytical Software (SAS). SAS is an analytic software and services, leading statistical and data analysis package. The major advantage is it scores and analyzes quantitative data very quickly and in many different ways (SAS, 2013). Descriptive and inferential analyses are performed in this research. Descriptive analysis is undertaken to describe the characteristics of sample (Sekaran, 2003). Besides, inferential analysis is used to generalize the population characteristics based on sample data (Zikmund et al., 2010).

3.6.1 Interval Scale

An interval scale allows researchers to perform certain arithmetical operations on data collected from the respondents (Sekaran, 2003). It allows respondents to indicate their degree of agreement and disagreement in a fixed scale and helps researchers to compute the means and standard deviations of the responses on the variables, using five-point Likert scale ranged from "1" which represent strongly disagree to "5" which represent strongly agree.

3.6.2 Descriptive Analysis

3.6.2.1 Reliability Test

The reliability test indicates the extent to which it allows the researchers to have a consistent measurement across the numerous time and items in the instrument (Sekaran, 2003). Cronbach's Alpha is the most popular test on

reliability in multipoint-scaled items that indicates the correlation between the variables (Sekaran, 2003). Based on Table 3.1, it is found that 0.6 is considered moderate, 0.7 is acceptable and 0.8 or more will be good (Sekaran, 2003). Cronbach's alpha is a reliability coefficient that indicates how well the items are positively correlated to another. The closer Cronbach's alpha is to 1, the higher internal consistency reliability (Sekaran, 2003).

Table 3.1: Rule of Thumb (Reliability test)

Cronbach's Alpha Coefficient Range	**Strength of Association**
Less than 0.6	Poor Reliability
0.6-0.7	Moderate Reliability
0.7-0.8	Good Reliability
0.8 and above	Excellent Reliability

Source: Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill buildings approach* (5th ed.). Chichester West Sussex: John Wiley & Sons Inc.

3.6.2.2 Normality Test

Normality test is used to examine whether the input data is normally distributed (Hair, Black, Bin, Anderson, & Tatham, 2006). To prove whether the data is normality distributed, Skewness and Kurtosis is used to determine the normality of the overall construction of the items and data collected. According to Sit, Ooi, Lin & Chong (2009), normality test that represents the normal distribution shape from the range of not exceed the absolute of +/- 1.

3.6.3 Inferential Analysis

The parametric statistics that we are using is Pearson Correlation Coefficient and Multiple Linear Regression.

3.6.3.1 Person Correlation Coefficient

According to Zikmund et al. (2003), correlation coefficient analyzes relationships between two variables. It is used to measure the strength of linear relationship between two variables. The result shown the Pearson Correlation is referred to as a correlation coefficient of the independent variable and dependent variable. It summarizes the degree to which the values in the two variables corresponding with each other. The correlation coefficient has values ranging between -1 and +1. A positive correlation indicates that an increase in one variable is associated with the increase in the other variable and vice versa (Malhotra, Hall, Shaw & Oppenhiem, 2006). Meanwhile, a correlation of 0 indicates that there is no linear relationship between the two variables. Table 3.2 shows the rule of thumb of the Pearson Correlation Coefficient.

Table 3.2: Rule of Thumb (Pearson Correlation Coefficient)

Coefficient Range	Strength of Association
±0.5 to ±1.0	Strong
±0.3 to ±0.5	Moderate
±0.1 to ±0.3	Weak

Source: Pearson Product-Moment Correlation," n.d., para. 4

3.6.3.2 Multiple Linear Regression Analysis

Regression measures the linear association between an independent and

dependent variable. It assumes that the dependent variable, Y, is predicatively linked to independent variable, X, and attempts to predict the value of continuous, interval-scale dependent variable from specific value of the independent variables (Zikmund, 2003). This technique is used to determine whether Independent Variables explained a significant variation towards the dependent variable.

Formula for the multiple regressions:

In this research, the multiple regression equation was formed is:

$Y = a + B_1(X_1) + B_2(X_2) + B_3(X_3) + B_4(X_4)$
Where,
X_1 = IV 1 = Asset Specificity
X_2 = IV 2 = Environmental Uncertainty
X_3 = IV 3 = Frequency
X_4 = IV 4 = Cost

Source: Developed for the research

3.7 Conclusion

This chapter has highlighted the research methodology employed in this study. The research methodology and data analyzing techniques of this research study were provided in this chapter. Next, Chapter 4 would provide the results obtained from the survey done.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

This chapter will contain the results that have been analyzed from 250 questionnaires collected. 190 questionnaires are useable and the remaining is not useable. Questionnaires are not usable due to the incomplete information and do not practices internal audit outsourcing. SAS software is used to analyze the data and results are presented with the Multiple Linear Regression and Pearson Correlation.

4.1 Pilot Test Result

4.1.1 Reliability Test

A pilot test is conducted first before distributing it to the target respondents. The purpose of conducting the pilot test is to test reliability of the instrument and simulate the actual data collection process on a small scale to get feedback on whether or not the instrument are likely to work as expected in a "real world" situation. Hence, 30 sets of questionnaire had been carried out by the Malaysia's SME.

Upon the collection of these questionnaires, Statistical Analysis System or commonly known as SAS has been used to test the reliability. The reliability of scales measured all variables is investigated by Cronbach's alpha. Based on the Table 4.1, it shows that all coefficients are more than 0.70 except Asset Specificity and Frequency. According to Hair et al. (2007), all coefficients satisfy the rule of thumb of Conbach's Alpha except Asset Specificity and

Frequency.

Table 4.1: Reliability Test for Pilot Test

Variables	Number of Items	Conbach's Alpha
Internal Audit Outsourcing	5	0.8940
Asset Specificity	5	0.6580
Environmental Uncertainty	5	0.8248
Frequency	5	0.6649
Cost	5	0.8668

Source: Developed for the research

3.7.2 Normality Test

The results generated in the Table 4.2 shows that the majority of the data are fulfilled the requirement of normality test that represent of the normal distribution shape from the range of not exceed the absolute value of ±1 (Sit, Ooi, Lin, & Chong, 2009). Except the environmental uncertainty item 1, frequency item 1 and 5, internal audit outsourcing item 1 and 2 exceed value of ±1 but it still acceptable according to Rubin (2009) where the value does not exceed ±2. All items fulfil requirement of reliability test except frequency item 2 which is more than 2.

Table 4.2: Normality Test for Pilot Test

Items	Mean	Standard Deviation	Skewness	Kurtosis
AS1	3.466667	0.973204	-0.62137	-0.99066
AS2	4.033333	0.668675	-0.0368	-0.5889
AS3	4.033333	0.668675	-0.0368	-0.5889
AS4	3.933333	0.691492	0.087405	-0.76989
AS5	3.4	0.968468	-0.91759	0.964636

EU1	3.7	0.83666	-1.25663	2.886297
EU2	3.533333	0.860366	-0.28413	-0.44312
EU3	3.6	1.069966	-0.91209	0.707615
EU4	3.866667	0.507416	-0.26646	0.944561
EU5	3.733333	0.583292	0.086051	-0.35747
FQ1	1.733333	1.172481	1.79849	2.600378
FQ2	1.6	1.003442	2.009716	4.074099
FQ3	3.333333	0.802296	0.158983	-0.24308
FQ4	4.1	0.959526	-0.96356	0.19623
FQ5	4.5	0.776819	-1.6551	2.589051
CT1	3.266667	1.080655	-0.22432	-0.17803
CT2	3.733333	0.868345	-0.78647	0.217956
CT3	3.7	0.749713	-0.48397	0.332474
CT4	3.6	0.813676	0.065839	-0.40158
CT5	3.566667	1.006302	-0.30391	-0.92453
OS1	3.566667	0.85836	-1.79828	3.891885
OS2	3.7	0.749713	-1.53608	1.62148
OS3	3.8	0.961321	-0.56891	-0.42786
OS4	3.833333	0.833908	-0.43182	-0.08319
OS5	3.6	0.674665	-0.75073	0.466024

Source: Developed for the research

4.2 Descriptive Analysis

4.2.1 Demographic Profile of the Respondents

The demographic profile of unit of analysis in term of gender, age, number of employees in the company, highest education completed, length of time with current organization and job position.

4.2.1.1 Gender

Table 4.3: The Gender of Respondents

Gender	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
Male	117	61.58	117	61.58
Female	73	38.42	190	100
Total	190	100		

Source: Developed for the research

Table 4.3 shows the gender distribution of the 190 survey respondents. Based on the results, 117 with the percentage of 61.58% are male and 73 with the percentage of 38.42% are female.

4.2.1.2 Age

Table 4.4: The Age of Respondents

Age	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
25 years or less	19	10	19	10

26 to 35 years	38	20	57	30
36 to 45 years	108	56.84	165	86.84
46 years or greater	25	13.16	190	100
Total	190	100		

Source: Developed for the research

Table 4.4 shows the age distribution among the respondents. Majority with 108 respondents are between age of 36 to 45 years (56.84%). The next dominant age group is fall under 26 to 35 years with 38 respondents (20%), followed by 46 years or greater with 25 respondents (13.16%) and the remaining is 10% minority group of 19 respondents.

4.2.1.3 Number of Employees

Table 4.5: The Number of Employees

Employees	**Frequency**	**Percentage**	**Cumulative Frequency**	**Cumulative Percentage**
Less than 5	11	5.79	11	5.79
5-19	57	30	68	35.79
20-50	100	52.63	168	88.42
51-150	22	11.58	190	100
Total	190	100		

Source: Developed for the research

According to Table 4.5, it shows the greatest number of employees is 100 respondents between 20 to 50 (52.63%) followed by 57 respondents with 5 to 19 employees in their organization (30%). Next is fall under 22 respondents under the group of 51 to 150 numbers of employees (11.58%). The remaining 11 respondents have less than 5 employees (5.79%).

4.2.1.4 Highest Education Completed

Table 4.6: Highest Education Completed

Education	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
High School	15	7.89	15	7.89
Diploma	61	32.11	76	40
Degree/ Professional Qualifications	107	56.32	183	96.32
Master	7	3.68	190	100
Total	190	100		

Source: Developed for the research

Table 4.6 shows the highest education completed by our respondents. The majority respondents of 107 are degree or professional qualifications holders (56.32%). 61 respondents are diploma holders (32.11%) and 15 respondents are high school graduated with percentage of 7.89%. Only 7 respondents have completed master level in their education (3.68%).

4.2.1.5 Length of Time with Current Organization

Table 4.7: Length of Time with Current Organization

Time(Years)	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
Less than 1	9	4.74	9	4.74
1-3	15	7.89	24	12.63
3-5	24	12.63	48	25.26
5-10	63	33.16	111	58.42
10-20	68	35.79	179	94.21

Above 20	11	5.79	190	100
Total	190	100		

Source: Developed for the research

Table 4.7 shows length of time the respondents work with the organization. Most of the respondents had been working from 10 to 20 years with current organization (35.79%). Followed by 63 respondents had been working from 5 to 10 years (33.16%) and 24 respondents between 3 to 5 years with percentage of 7.89%. 11 respondents have worked above 20 years (5.79%) and 9 respondents have worked less than 1 years (4.74%).

4.2.1.6 Current Job Position

Table 4.8: Current Job Position

Job	**Frequency**	**Percentage**	**Cumulative Frequency**	**Cumulative Percentage**
Owner	20	10.53	20	10.53
Managing/Financial Director	41	21.58	61	32.11
Financial Controller	53	27.89	114	60
Manager	50	26.32	164	86.32
Accountant	26	13.68	190	100
Other	0	0	190	100
Total	190	100		

Source: Developed for the research

Table 4.8 shows majority of respondents are financial controller with total amount of 53 (27.89%). 50 respondents are managers with percentage of 26.32% followed by 41 respondents are managing or financial directors (21.58%). Next, 23 respondents are accountants with percentage of 12.11%. Minority group of respondents are owners with total of 20 (10.53%). Remaining for other position is none.

4.2.2 Central Tendencies Measurement of Constructs

Central tendencies and measurement of dispersion such as mean and standard deviation are calculated using SAS. Mean is calculated to obtain the average value of all the data, whereas standard deviation is to measure the variation of a set of data from its mean (Saunders et al., 2007).

The mean scores of a total of 25 items are generated using SAS. The items are measured using a 5-point Likert-scale which consists of "1=strongly disagree", "2=disagree", "3=neutral", "4=agree" and "5=strongly agree".

Based on Appendix G, the mean values for all the variables are in the range of 3.8000 to 3.9999. This shows that the variables are more towards agreed. Meanwhile, the standard deviation is less than 1 which indicates that there is less data distribution.

The mean and standard deviation of each questionnaire items are also computed. The mean of all the items ranges from 3.5000 to 4.1000. This shows that these items are more towards agreed and strongly agreed. Besides, most of the items have a standard deviation of less than 1 that indicates less dispersion of data.

4.3 Scale Measurement

4.3.1 Reliability Test

Reliability test is conducted to ensure the likelihood for satisfactory testing of the hypothesis developed in chapter 2. Cronbach's Alpha is directed and the generated results show the 25 items in the survey questionnaires are reliable as presented in Table 4.9.

Table 4.9: Reliability Test

Variables	Number of items	Cronbach's Alpha
Asset Specificity	5	0.58794
Environmental Uncertainty	5	0.718802
Frequency	5	0.717286
Cost	5	0.629948
Internal Audit Outsourcing	5	0.70632

Source: Developed for the research

Environmental uncertainty, frequency and internal audit outsourcing indicate the values of more than 0.70 of Cronbach's Alpha thus the items within these variables are reliable according to Sekaran (2003). The 5 items within asset specificity with Cronbach's Alpha value of 0.58794 is acceptable and the divergence resulted may due to the items constructed develop for the research on internal audit where the past studies are constructed in risk management or for other countries (Everaert et al., 2008). Cronbach's Alpha value of 0.629948 is acceptable as well which is consistent to Carey (2006). Thus, based on the result of reliability test, all variables are acceptable and reliable.

4.3.2 Normality Test

Skewness and Kurtosis tests are used to determine the normality of the overall construction of the items and the data collected.

The results in Table 4.10 show that the overall data are fulfilled the requirement of normality test that represent of the normal distribution shape from the range of not exceed the absolute value of ±1 (Sit, Ooi, Lin, & Chong, 2009). Only the environmental uncertainty items 5 exceed value of

±1 but it still acceptable according to Rubin (2009) where the value does not exceed ±2.

Table 4.10: Normality Test

Items	Mean	Standard Deviation	Skewness	Kurtosis
AS1	3.626316	0.892261	-0.18369	-0.26705
AS2	3.9	0.934636	-0.93841	1.015492
AS3	3.957895	0.883904	-0.382	-0.73867
AS4	3.915789	0.812119	-0.62291	0.463274
AS5	3.684211	1.051712	-0.57903	0.067358
EU1	3.931579	0.713107	-0.60769	0.732751
EU2	3.789474	0.958336	-0.62333	0.299925
EU3	3.757895	0.819289	-0.22521	-0.1595
EU4	3.784211	0.937611	-0.72352	0.738986
EU5	3.8	0.966092	-1.01195	1.195473
FQ1	4.015789	1.010403	-0.96492	0.538534
FQ2	3.931579	1.018637	-0.98493	0.635678
FQ3	3.926316	1.061516	-0.79059	0.044271
FQ4	3.9	0.87014	-0.43732	-0.46781
FQ5	3.805263	0.975343	-0.36054	-0.57927
CT1	3.736842	0.928223	-0.57486	0.078053
CT2	3.857895	0.929138	-0.43262	-0.65724
CT3	3.847368	0.886625	-0.75412	0.877013

CT4	3.910526	0.918588	-0.81444	0.93353
CT5	3.768421	0.884345	-0.54856	0.346597
OS1	3.757895	0.89343	-0.2679	-0.66786
OS2	3.784211	0.91476	-0.89912	1.158395
OS3	3.794737	0.967719	-0.46239	-0.11137
OS4	3.794737	0.973171	-0.86525	0.6478
OS5	3.884211	0.912734	-0.35873	-0.56401

Source: Developed for the research

4.4 Inferential Analysis

4.4.1 Pearson Correlation Analysis

Table 4.11 shows the strength of correlations between dependent variable (internal audit outsourcing) and independent variables (asset specificity, environmental uncertainty, frequency and cost).

Table 4.11: Table for Correlations

	Ave_AS	**Ave_EU**	**Ave_FQ**	**Ave_CT**	**Ave_OS**
Ave_AS	1				
Ave_EU	0.64906	1			
	<.0001				
Ave_FQ	0.63236	0.52503	1		
	<.0001	<.0001			
Ave_CT	0.55198	0.56021	0.47075	1	
	<.0001	<.0001	<.0001		

Ave_OS	0.57491	0.51712	0.47845	0.71166	1
	<.0001	<.0001	<.0001	<.0001	

AS = Asset Specificity

EU = Environmental Uncertainty

FQ = Frequency

CT = Cost

OS = Internal Audit Outsourcing

Source: Developed for the research.

4.4.2 Multicollinearity

Based on Table 4.11, there is no significant multicollinearity problem in the independent variables of the model (Sit et al., 2009). This can be proved by the values of correlation shown is not greater than 0.90 (Sekaran, 2003). As a result, multicollinearity assumption of Multi Linear Regression is satisfied.

4.4.3 Correlation between Asset Specificity and Internal Audit Outsourcing

Table 4.12: Correlation between Asset Specificity and Internal Audit Outsourcing

	Ave_OS	**Ave_AS**
Ave_OS	1	0.57491 <.0001
Ave_AS	0.57491 <.0001	1

Source: Developed for the research.

4.4.3.1 Hypothesis One

H0: There is no significant relationship between asset specificity of the internal audit function and the degree of internal audit outsourcing.
H1: There is a significant relationship between asset specificity of the internal audit function and the degree of internal audit outsourcing.

According to Table 4.12, the correlation between asset specificity and internal audit outsourcing is 0. 57491, indicates a positive and strong relationship between these two variables. The p-value is less than 0.01, indicates that the correlation coefficient is statistically significant. As a result, 33.1% (0. 57491^2) of the variation in internal audit outsourcing can be explained by asset specificity.

4.4.4 Correlation between Environmental Uncertainty and Internal Audit Outsourcing

Table 4.13: Correlation between Environmental Uncertainty and Internal Audit Outsourcing

	Ave_OS	**Ave_EU**
Ave_OS	1	0.51712 <.0001
Ave_EU	0.51712 <.0001	1

Source: Developed for the research.

4.4.4.1 Hypothesis Two

H0: There is no significant relationship between environmental uncertainty and internal audit outsourcing.

H1: There is a significant relationship between environmental uncertainty and internal audit outsourcing.

Based on Table 4.13, the correlation between environmental uncertainty and internal audit outsourcing is 0.51712. Thus, there is a strong positive relationship between these two variables. The p-value with less than 0.01 indicates a significant correlation coefficient. Result shows 26.7% (0.51712^2) of the variation in internal audit outsourcing can be explained by environmental uncertainty.

4.4.5 Correlation between Frequency and Internal Audit Outsourcing

Table 4.14: Correlation between Frequency and Internal Audit Outsourcing

	Ave_OS	**Ave_FQ**
Ave_OS	1	0.47845 <.0001
Ave_EU	0.47845 <.0001	1

Source: Developed for the research.

4.4.5.1 Hypothesis Three

H0: There is no significant relationship between frequency and degree of internal audit outsourcing.
H1: There is a significant relationship between frequency and degree of internal audit outsourcing.

According to Table 4.14, these is 0.47845 of Pearson Correlation value, indicates a moderate and positive relationship between frequency and internal audit outsourcing. P-value of less than 0.01 indicates that the

correlation coefficient is statistically significant. Result shows 22.9% (0.47845^2) of the variation in internal audit outsourcing can be explained by frequency.

4.4.6 Correlation between Cost and Internal Audit Outsourcing

Table 4.15: Correlation between Cost and Internal Audit Outsourcing

	Ave_OS	**Ave_CT**
Ave_OS	1	0.71166 <.0001
Ave_CT	0.71166 <.0001	1

Source: Developed for the research.

4.4.6.1 Hypothesis Four

H0: There is no significant relationship between cost and internal audit outsourcing.
H1: There is a significant relationship between cost and internal audit outsourcing.

Table 4.15 shows the value of Pearson Correlation between cost and internal audit outsourcing of 0.71166, which means a strong positive relationship between these two variables. There is a significant correlation coefficient with p-value of less than 0.01. Therefore, 51% (0.71166^2) of the variation in internal audit outsourcing can be explained by cost.

4.4.7 Multi Linear Regression

The purpose of Multi Linear Regression is to examine the relationship between one dependent variable and two or more independent variables (Saunders et at., 2009).

Adjusted R Square is more precise than R Square. So, according to the model summary Table 4.14, Adjusted R Square of the research is 0.5493. This means that 54.93% of the variation in dependent variable (Internal Auditor Outsourcing) can be explained by the four independent variables (Asset Specificity, Environmental Uncertainty, Frequency, and Cost). However, 45.07% (100%-54.93%) of the variation in the dependent variable is unexplained in the research, which means 45.07% of other important additional variables are not considered in the research.

Based on Saunders et al., (2009), significant value of less than 0.05 indicates that a coefficient is unlikely to have occurred by chance alone. In contrast, significant value of more than 0.05 indicates the coefficient could have occurred by chance alone. According to Table 4.17, asset specificity and cost are significantly affecting internal audit outsourcing with significant value of less than 0.05. As a result, null hypothesis are rejected. In other words, alternative hypothesis H1 and H4 are supported. Meanwhile, environment and frequency are not significantly influencing the decision to outsource internal audit with significant value of more than or equal to 0.05. Therefore, null hypothesis are supported. Alternative hypothesis H2 and H4 are not supported.

Table 4.16: Model Summary

Model Summary

Model	R Square	Adjusted R Square	Std Error of Estimation
1	0.5588	0.5493	33.36844

Source: Developed for the research.

Table 4.17 Coefficients

Coefficients

IVs	**Unstandardized Coefficients**		**Standardizes Coefficients**	**T**	**Sig.**	**Hypothesis**	**Supported / Not Supported**
	B	Std. Error	Beta				
1(Constant)	0.23083	0.24345	0	0.95	0.3443	-	-
Ave_AS	0.22477	0.08253	0.2005	2.72	0.0071	H1	Supported
Ave_EU	0.04744	0.07135	0.0455	0.66	0.507	H2	Not Supported
Ave_FQ	0.06818	0.06055	0.07304	1.13	0.2616	H3	Not Supported
Ave_CT	0.59268	0.0683	0.54112	8.68	<.0001	H4	Supported

Source: Developed for the research.

Standardized Coefficients

Based on Table 4.17, cost has the greatest significant effects on internal audit outsourcing with $\beta = 0.54112$ followed by asset specificity with $\beta = 0.2005$. Frequency and environmental uncertainty have the least impacts on internal audit outsourcing with $\beta = 0.07304$ and $\beta = 0.0455$ respectively.

Unstandardized Coefficients

Unstandardized coefficient (B) is used to produce regression equation of this research. Based on Table 4.17, an equation is formed as:

$$\mathbf{Y = a + B_1(X_1) + B_2(X_2) + B_3(X_3) + B_4(X_4)}$$

Where,

X_1 = IV 1 = Asset Specificity

X_2 = IV 2 = Environmental Uncertainty

X_3 = IV 3 = Frequency

X_4 = IV 4 = Cost

Source: Developed for the research

The regression equation of the model employed in the research:

Internal Audit Outsourcing = 0.23083 + 0.22477(Asset Specificity) + 0.04744(Environmental Uncertainty) + 0.06818(Frequency) + 0.59268(Cost)

Source: Developed for the research

The formula shows there is are relationships exist between asset specificity, environmental uncertainty, frequency, cost and internal audit outsourcing. All variables have positive relationships with internal audit outsourcing. This equation determined that internal audit outsourcing was predicted to increase by 0.22477 when asset specificity went up by 1; increased by 0.04744 when environmental uncertainty went up 1; increased by 0.06818 when frequency went up by 1; increased by 0.59268 when cost went up by 1, holding other variables are remain unchanged.

4.5 Conclusion

This chapter has illustrated the characteristics of target respondents by descriptive analysis. Scale measurement and inferential analysis were discussed. Next chapter, chapter 5, will provide the major findings, implication of the study, limitations and recommendations of the study.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

This chapter serves as a linkage between hypothesis development and data analysis to test on hypothesis. It starts with summary of statistical analysis as well as descriptive analysis and inferential analysis. Next, this chapter provides a deep discussion of major findings which is related to the theory and past studies presented. Implication of the study for both practical and theoretical perspectives is revealed in this chapter following with some limitations encountered and recommendations. Finally, this chapter will be ended up with a small conclusion.

5.1 Summary of Statistical Analysis

5.1.1 Summary of Descriptive Analysis

A total of 250 respondents have taken part in this research, but only 190 were useful cases. The total respondent rate yield was 76%. Out of 190 target respondents, 117 are male (61.58%) and 73 are female (38.42%). Majority of respondents fall under the gender group are male. Besides, majority of respondents fall under the age group of 36 to 45 years old (56.84%) followed by 26 to 35 years old (20%), 46 years old or greater (13.16%), and 25 years old or less (10%). The largest ethnic group among the respondents is Chinese, followed by Malay, Indian and other races.

Moreover, majority of respondents fall under the group of number of employee in their SME are 20-50 (52.63%), followed by 5-19 (30%), 51-150 (11.58%) and less than 5 (5.79%). Most of the respondents have completed their degree or professional qualification (56.32%), followed by diploma (32.11%), high school (7.89%), and master (3.68%).

Majority respondents have worked with their organization for 10-20year (35.79%), followed by 5-10 years (33.16%), 3-5years (12.63%), 1-3 years (7.89%), above 20 years (5.79%), and less than 1 year (4.74%). Most of the respondents job position's are Financial Controller (27.89%), followed by Manager (26.32%), Financial Director (21.58), Accountant (12.11%), Managing Director (10.53%), Others (1.58%).

5.1.2 Summary of Scale Measurement

Normality and reliability test were conducted to tested data collected. Reliability is assumed as all the variables have Cronbach's alpha value of 0.6 is considered moderate, 0.7 is acceptable and 0.8 or more will be good (Sekaran, 2003). According to Sit, Ooi, Lin, & Chong, 2009, the requirement for normality test that represents the normal distribution shape from the range of not exceed the absolute value of ±1. Besides, data collected is tested and proven to achieve normality and reliability. In addition, there is no multicollinearity problem as correlation between each independent variable is less than 0.9. Multiple Regression test could be preformed since all the pre-requisite assumptions are fulfilled.

5.1.3 Summary of Inferential Analysis

5.1.3.1 Person Correlation Coefficient Analysis

The result from Pearson Correlation analysis showed that all the four independent variables (Asset Specificity, Environmental Uncertainty, Frequency and Cost) are positively and significantly correlated with the dependent variable (Internal Audit Outsourcing).

5.1.3.2 Multiple Linear Regression Analysis

Furthermore, in Multiple Regression analysis which has been conducted, adjusted R-square indicates that 0.5493 (54.93%) of the variation in dependent variable can be explained by the four independent variables. According to Coefficients table, it shows that only two independent variables are significantly affecting the dependent variable as their significance values are less than alpha value of 0.05. It means that asset specificity and cost are significantly affecting dependent variable and environmental uncertainty and frequency are insignificant to the dependent variable. Based on the Standardized Coefficients Beta value, it is found that Cost ($\beta = 0.54112$) is the most effective factor whereas Frequency ($\beta = 0.07304$) is found to be the least effective factor in affecting internal audit outsourcing decision. Therefore, results show that only 2 hypotheses (H1 and H4) are found to be supported.

5.2 Discussion of Major Findings

5.2.1 Asset Specificity

In this research, asset specificity was found to have a significant relationship with the dependent variable, internal audit outsourcing. The Multiple Linear Regression showed p-value is 0.0071 which is less than 0.05. Therefore Hypothesis 1 is supported. Positive relation proved with the significant value of $p<0.05$.

H1: There is a significant relationship between asset specificity of the internal audit function and the degree of internal outsourcing.

Therefore, H0 rejected. The results are consistent with the past studies reviewed in chapter 2. Study of Kamyabi (2010) has conducted multiple linear regression analysis and proved that asset specificity is significant with degree of accounting outsourcing. Positive result also supported in Alvarez-Suescun (2010) study, Nagpal (2006) while Aubert et al. (2012) states that asset specificity is significant with the Information Technology outsourcing.

Thus, asset specificity is part of the importance factor to consider during the outsource decisions by the management team in most of the business industry in Malaysia based on the outcome in this research and the overall past studies which are parallel with this research outcome. Based on Chandler, McKelvie and Davidsson (2009), asset specificity is related with the subcontract or so called outsourcing in order to employ more resources to generate sales due to the difficulty of hiring skilled employees. So, the organizations will consider outsourcing for the purpose of preventing time and money wastage on hiring new skilled employees with the necessary knowledge.

5.2.2 Environmental Uncertainty

Result showed that the p value>0.05 which means that there is no significant relationship between environment uncertainty and internal audit outsource and it is in line with the past studies of Sharma et al. (2005), Everaert et al. (2010) and Emilio et.al (2010). Lamminmaki (2007) illustrates that there is no substantial connection between environmental uncertainty and intensity of outsource in hotel industry while Promsivapallop et al. (2009) examines and the outcome shows that there is a significant relationship between environmental uncertainty and decision of outsourcing in the hotel industry.

H2: There is a significant relationship between environment uncertainty and internal audit outsourcing.

Thus, H2 is rejected. The outcome showed in this research is not consistent with H2 under chapter 2 which claims that environmental uncertainty should be significant to the internal audit outsourcing. The variances resulted can be concluded that environmental uncertainty is not significant with the intensity of internal audit outsource according to Everaert et al. (2010). Everaert claimed that business functions still need to be performed regardless whether there is any uncertainty. According to Matanda and Freeman (2009), environmental uncertainty will not affect the outsource decision because of the willingness of the particular organizations to deal with external parties. The decision of sub-contract is more likely to be caused by the benchmark of the industry by the auditors. For instance, if an organization chooses to outsource the internal audit function, then the competitors will tend to follow and outsource the function as well (Prawitt, Sharp & Wood, 2011).

5.2.3 Frequency

Multiple linear regression results indicated that there is no relationship to such an extent p value<0.05 with the internal audit outsourcing. Thus, reject H3 and support for H0.

H3: There is a significant relationship between frequency and degree of internal audit outsourcing.

Meanwhile, the past studies of Christensen (2011) and Everaert et al. (2010) showed an evidence to support H3 with negative association with the hotel outsourcing. However, Spekle et al. (2007) and Ellram et al. (2008) is not consistent with this research as frequency is one of the significant factors affecting the decision of outsourcing to third parties.

Lamminmaki et al. (2007) study also did not support the H3, in other words, it showed negative association between frequency and outsource decision which aligns with the generated results.

Hence, according to the past studies evaluation, the discrepancy between the initial expected result and final outcome is formed because of the size of the organization that produces different amount of workloads throughout the years. The small and medium enterprises produce lower frequency transactions compared to the large or multinational organizations. Therefore, the decision for internal audit outsourcing varies accordingly (Ellram et al., 2008). Lacity, Willcocks and Khan (2011) also found that there is no evidence to support frequency with the degree of outsourcing with the TCE logic.

5.2.4 Cost

The generated results indicated that the cost is significant with the intensity of internal audit outsourcing and do not reject H4 since the p value<0.05.

H4: There is a significant relationship between cost and internal audit outsourcing.

Barac et al. (2009) and Yasseen (2011) are in line with this research where cost is significant with the internal audit outsourcing yet Dorasamy et al. (2010) displayed that cost is not applicable with accounting function outsourcing. Besides, Alaghehband et al. (2011) also line up with this research outcome which has examined that cost is a plus and will bring benefits if the organization chooses to outsource their core functions. On the other hand, Peslak (2012) states that cost is not a key reason to influence the decision to outsource in IT industry.

From the research outcome, cost shows a significant factor and value to take into account on the internal audit outsource decision. Cost has been determined as the main factor which will influence the outsource decisions within the management line in conjunction to reduce overall operational cost in an organization regardless whether it is large or small and medium enterprises (Carey, 2006).

5.3 Implications of Study

5.3.1 Managerial Implications

This research is important to all small and medium enterprises (SMEs) in Malaysia as it will provide useful information to assist in making internal

audit outsourcing decision. It reveals the need for understanding each operation and in-depth knowledge to reach a competitive advantage and selecting suitable service providers in the case of internal audit practices (Kamyabi & Devi, 2011). Therefore, it is important to have suitable service providers who are capable of providing quality services to the clients. SMEs will be able to increase their other internal resources if they are able to engage with external service providers with good quality services (Kamyabi & Devi, 2011).

Based on the findings, it can be concluded that asset specificity and cost are the major factors that will affect the internal audit outsourcing decision in SMEs in Malaysia. However, for frequency and environmental uncertainty, firms seem to have paid less attention on these issues.

Among the four determinants, cost is the main factor that will lead to the internal audit outsourcing decision. Due to the market competition and economies of scale, outsourcing has been offering immediate cost savings. Firms tend to choose or increase the level of internal audit outsourcing in order to reduce their costs (Sharma & Subramaniam, 2005). It is concluded that small firms have a greater internal audit outsourcing as they are facing more severe cost pressures.

Moreover, lower asset specificity tends to encourage the firms to outsource their internal audit function (Sharma & Subramaniam, 2005; Spekle, Elten & Kruis, 2007). Staff working in an internal audit department needs to acquire specialized knowledge, skills and abilities that are not transferable to another company. These trainings represent a significant investment to the firms. Besides, most of the small and medium enterprises have insufficient of in-house technological know-how, as they have less number of employees to operate in each department.

As most of the SMEs are focusing on cost savings, they do not focus much on how often their financial transactions will incur. Smaller firms will more likely to seek for external supply as they are less audit-intensive (Spekle et

al., 2007). It will affect the internal audit outsourcing significantly, as the firms will decide the set-up cost of specialized control when the outsourcing decision is taken into consideration.

Besides, firms seldom consider the environmental uncertainty factor in order to outsource their internal audit function. It relates to whether a function is being carried out effectively or whether the external provider has complied with contractual obligations in performing the function (Evaraert, Sarens & Rommel, 2010). The level of uncertainty facing by a firm depends on the environment in which a firm operates (Sharma & Subramaniam, 2005). If a firm is unable to assess the quality of performance accurately, the proposed contract will lead to the increase in the overall costs (Kamyabi & Devi, 2011). However, the level of uncertainty facing by a firm depends on the environment in which a firm operates (Sharma & Subramaniam, 2005). This explains why the environmental uncertainty does not contribute much impact on making internal audit outsourcing decision as smaller firms will have lower level of uncertainty.

5.4 Limitations of the Study

5.4.1 Inaccuracy of Primary Data

Our sources of primary data are from SMEinfo (www.smeinfo.com.my). Based on the observations and failure of delivery of emails, most of the companies have provided invalid email address. As a result, our online questionnaires were unable to reach to the target respondents accurately.

Furthermore, the members in the SMEinfo do not represent the population of Malaysia SMEs. Some of the SMEs may not register under the website. Based on the sample drawn from SMEinfo, SMEs around Malaysia is not

equally distributed. Rural areas such Sabah, Sarawak, and Kelantan has lesser SMEs. Urban area such as Kuala Lumpur has up to 3000 SMEs. As a result, there is a significant gap between the states. Moreover, Malaysian SMEs may not enough to represent the population.

5.4.2 Cross-sectional Study

Cross- sectional study is a study on certain phenomenon at a point of time. It fails to detect the changes in level of internal audit outsourcing over time. People do not get to know the current internal audit outsourcing level from the study. In addition, the independent variables such as asset specificity, environmental uncertainty, cost and frequency may vary with time passage. Cross-sectional study did not take into account the possibilities of changes of independent variables.

5.4.3 Survey Based Study

The study obtained data from survey-questionnaire. Target respondents were not given a chance to provide reasons motivating them to perform internal audit outsourcing as the questionnaire required the respondents to evaluate or rank the importance of factors affecting internal audit outsourcing in their company. The study did not get to target respondents to find out what factors they consider in making internal audit outsourcing decision.

5.4.4 Mediating Factor

This research studies the relationship between independent and dependent variables directly without any mediating variable. Based on result of Multi Linear Regression, 45.07% of other additional variables which are important are not considered in this research. Thus, it may be lack of some significant

mediating factors which will affect the accuracy and reliability of the research.

5.4.5 General Needs of Market

This research studies on overall market without focuses on specific sectors. So, it may not be able to determine which sector that will outsource the internal audit function the most and the least. As a result, this may reduce the contribution to the markets. Auditing firms may lose their opportunity to determine the needs of specific sectors.

5.5 Recommendations for Future Research

5.5.1 Update SMEinfo Database

SMEinfo is encouraged to update their database annually. To update database accurately and effectively, SMEinfo can contact with their members frequently to ensure any changes are informed. Future research is recommended to get more accurate population by increasing the sample size, which will represent a more accurate population (Gravetter & Wallnau, 2008). Moreover, population can be extended worldwide by drawing sampling frame from overseas countries' SMEs. Asia countries may become the population due to similar culture and environment.

5.5.2 Perform Longitudinal Study

Future researchers are highly recommended to perform longitudinal study in conducting the researches. Longitudinal study observes the same variables over the time. The difference of observations implies changes of same variables, which will lead to different results from the study. Longitudinal study identifies the changes in internal audit outsourcing behavior of companies over time and explains how independent variables will change internal audit outsourcing (Spekle, Elten and Kruis, 2007).

5.5.3 Conduct Interview

It is recommended for future researchers to perform interviews instead of distributing surveys in data collection process. Companies have opportunities to provide the actual reasons affecting them in making internal audit outsourcing decision. In addition, researchers may able to investigate what motivates companies to perform internal audit outsourcing deeply (Dorasamy, 2010).

5.5.4 Instill Mediating Factors

In order to explain the relationship between independent and dependent variables more accurately, future studies are recommended to instill mediating factors. According to the study of Beulen and Ribbers (2003), culture issues are one of the important factors affecting the management of outsourcing relationships in Asia. Culture similarity will also bring impact of outsourcing success (Fitzgerald & Willcocks, 1994; Henderson, 1990). Thus, future researchers are recommended to investigate deeply on mediating factors for a more accurate and reliable research.

5.5.5 Market Segmentation

Future researches are recommended to focus on specific sectors in order to get a more accurate research. Needs-based market segmentation should be conducted to enable decision makers and users to make appropriate decisions specific to each sector group (Karthryn Greengrove, 2002). By conducting a more appropriate and precise research, audit firms will be able to customize their services and Information System to fit the needs of each sector customer.

5.6 Conclusion

The general objective of the study is to examine the relationship between four independent variables and dependent variable. The four independent variables, such as asset specificity, environmental uncertainty, cost and frequency are adopted based on comprehension analysis of past researches. According to the Multiple Linear Regression Test, asset specificity and cost exert significant influences on internal audit outsourcing. Meanwhile, environmental uncertainty and frequency are not the significant factors affecting internal audit outsourcing.

In a nutshell, small and medium enterprises should pay great attention on the significant factors such as asset specificity and cost while considering decision of internal audit outsourcing. Last but not least, future researchers should take note of limitations revealed in the study in order to produce a high quality report. Recommendations are also provided to overcome possible obstacles in future research.

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APPENDICES

Appendix A: Summary of Past Empirical Studies

Study	***Country***	***Data***	***Major Findings***
Ebaid, 2011	Egypt	Interview and questionnaires survey with the Egyptian listed firms.	Results showed the firms face many difficulties that affect negatively its effectiveness in corporate governance and still focus on financial audit and internal control only.
Mihret and Yismaw, 2007	Ethiopia	Case study of a large public sector higher educational institution in Ethiopia.	The findings of the study highlight that internal audit effectiveness is strongly influenced by internal audit quality and management support.
Muqattash , 2011	United Arab Emirates	27 questionnaires have been distributed to chief audit executives or the internal auditor whom are working in the UAE banking sector.	This study examines the factors that will affect the internal auditors' objectivity in banking industry which included internal audit outsourcing.
Prawitt, Sharp and Wood ,2011	United States	Surver questionnaire to Chief Audit Executives of 327 firms.	This research has stated the importance of internal audit outsourcing to prevent the fraud corruption of the companies in United States and the relation between internal audit outsourcing and accounting risk.
Zhang and Gao,	China	35 semi-structured interviews with the	Results showed that the SMEs are facing challenges on recruitment and maintaining qualified internal auditors and role

2012		local SMEs administrations in China.	of cognitive capital is the most important for IACB among SMEs in the construction sector of China.
Alvarez-Suescun, 2010	Spain	Internet questionnaire survey of 111 firms	The positive result is shown by using binomial logistic regressions where the asset specificity is significant to the decision of IT outsourcing.
Kamyabi and Devi, 2011	Iran	Questionnaire survey of 1750 manufacturing SMEs	Asset specificity is negatively related with degree of accounting activities outsourcing.
Alaghehband, Rivard, Wu and Goyette, 2011	Canada	Review 25 articles from the databases: ABI/INFORM Global, Science Direct and JSTOR	Based on the past studies reviewed, asset specificity has a significant role and impact in the IT outsourcing under Transaction Cost Economies theory.
Nagpal (2006)	United States	Observed and studied the selected papers from 1994-1998 to test whether the constructs were covered in the papers and the impacts with the theory implemented.	Reviewed the past studies to determine how the transaction cost theory influences the information technology outsourcing and result showed asset specificity has relationship with the outsource decision.
Vita, Tekaya and Wang (2010)	United States	Post-mail questionnaire to 137 companies randomly selected from the Financial Analysis Made Easy database.	The multiple regression analysis shows that asset specificity has a significant impact on the outsourcing among services-related industry.
Aubert, Houde and Patry, 2012	Canada	Internet questionnaire survey of 1497 Information Technology senior managers	Asset specificity has no significant impact on the degree of IT outsourcing.

Everaert, Sarens and Rommel, 2010	Belgium	Interview of senior managers, hotel general manager an department head of 22 hotels	Environmental uncertainty is moving in an opposite direction with the intensity of outsourcing the accounting function.
Promsivapallop, Jones and Roper, 2009	Phuket	Interview of senior managers, hotel general manager and departmental head of 22 hotels	Environmental uncertainty has strong influences on decision to outsource.
Sharma and Subramaniam, 2005	Australia	Survey questionnaires to internal audit manager or financial controller among 350 companies.	This study use TCE theory to examine the internal audit outsourcing decision and environmental uncertainty is partially supported as a factor based on the Kruskal-Wallis non-parametric test.
Alvarez-Suescun ,2010	Spain	Conducted the study with 45 responses from 111 large firms that have more than 1000 employees with online based questionnaires.	This research showed there is not significant between the uncertainty and outsourcing of IT functions with the transaction cost theory and resources based theory.
Lamminmaki, 2007	Australia	Interview of 15 managers (financial controllers, general managers and project engineers) Questionnaire survey of 356 managers in Australia hotels with at least 100 rooms	The hypothesis of outsourcing is negatively associated with environmental uncertainty was not supported by the finding.

Lamminmaki, 2007	Australia	Interview of 15 managers (financial controllers, general managers and project engineers) Questionnaire survey of 356 managers in Australia hotels with at least 100 rooms	The finding did not support the hypothesis of frequency is negatively associated with hotel outsourcing.
Spekle, Elten and Kruis, 2007	Netherland	Questionnaire survey of 450 Chief Financial Officers (CFO)	Frequency is significantly related with company outsourcing decision.
Christensen, 2011	Australia	271 survey questionnaire sent to ASX listed companies	The finding proved that frequency is significant related with risk management activities outsourcing.
Everaert, Sarens and Rommel, 2010	Belgium	Mail the questionnaire to 1200 SMEs.	The finding showed that frequency is negatively related with frequency of accounting activities.
Ellram, 2008		Interview of procurement professionals comprising directors, Chief procurement managers (CPO) of 8 organizations	Firms have higher tendency to outsource larger volume of transactions.
Yasseen, 2011	South Africa	Questionnaire survey of Chief Audit Executive (CAE), senior audit managers, Financial Directors, and other executives of internal audit function of 80 organizations	Study indentified that there is significant difference between cost reduction and factors for outsourcing.

Carey, Subramaniam and Chua, 2006	Australia	Survey on 99 companies listed on the Australian Stock Exchange.	This research indicated that cost is the significant factors that will affect the internal audit outsource decision.
Alaghehband, Rivard, Wu and Goyette, 2011	Canada	Review 25 articles from the databases: ABI/INFORM Global, Science Direct and JSTOR	Based on the past studies reviewed, cost has a significant role and impact in the IT outsourcing under Transaction Cost Economies theory supported from 9 articles that collected in this research.
Peslak, 2012	United States	Collected 800 responses of secondary data from Financial Executive International with survey based research.	The results showed that cost is not supported in the IT outsourcing as it is not the core business function.
Barac and Motubatse, 2009	South Africa	Questionnaire survey of top executive (CAEs, CACs, CEOs, COOs, and CFOs) of 30 listed firms	The results gathered from the study show that is significant effect of cost on the outsourcing internal audit functions.
Dorasamy, Marimuthu, Javabalan, Raman and Kaliannan, 2010	Malaysia	Internet questionnaire survey of 1500 SMEs	Cost is not relevant with the Malaysian SMEs accounting functions outsourcing decision.

Appendix B: Variables and Measurement

Variable	***No of Item***	***Reference***	***Definition***	***Measurement***
Asset specificity (IV)	5	Christensen, 2011 Sharma and Subramaniam,2005	The level by which assets required to carry out an activity is not transferable to other activities.	5 Point Likert Scale
Environmental Uncertainty (IV)	5	Rau, 2007	Changes in activities as a result of dynamism and environmental complexity.	5 Point Likert Scale
Frequency (IV)	5	Everaert, Sarens, Rommel, 2010 Spekle, Elten and Kruis, 2007	Number and worth of a particular transaction over the time.	5 Point Likert Scale
Cost (IV)	5	Sharma and Subramaniam,2005 Juras, 2007 for C 2,3	Production Cost- Cost of producing goods.	5 Point Likert Scale

		Dorasamy, Marimuthu, Jayabalan, Raman, Kaliannan, 2010 Gray, 2010 for C5	Governing Cost- Cost of planning, controlling and modifying the transaction.	
Outsource of internal auditing (DV)	5	Vita, Tekaya, Catherine, 2010	An activity where the firms employ or appoint independent public accounting firms and other professional to execute the works that not been done by internal auditors traditionally.	5 Point Likert Scale

Appendix C: Survey Questionnaires

UNIVERSITI TUNKU ABDUL RAHMAN

Faculty of Business and Finance

BACHELOR OF Commerce (HONS) Accounting

FINAL YEAR PROJECT

TITLE OF TOPIC: Determinants of internal audit outsourcing: An empirical study of SMEs in Malaysia

Survey Questionnaire

Dear respondent,

We are the final year undergraduate students of Bachelor of Commerce (HONS) Accounting, from Universiti Tunku Abdul Rahman (UTAR). The **purpose** of this survey is to determine the factors that will affect internal audit outsourcing of small and medium enterprises in Malaysia.

Thank you for your participation.

Instructions:

1) There are **THREE** (3) sections in this questionnaire. Please answer ALL questions in ALL sections.

2) Completion of this form will take you approximately 5 to 10 minutes.

Section A: Demographic Profile

Please place a tick "√" or fill in the blank for each of the following:

1. Does your company use outsourced internal audit function?
   - □ Yes
   - □ No. If no, the following questions are needed not to be answered. Thank you for your time and participation.
2. Gender:
   - □ Male
   - □ Female
3. Age:
   - □ 25 years or less
   - □ 26 to 35 years
   - □ 36 to 45 years
   - □ 46 years or greater
4. Number of employees:
   - □ Less than 5 employees
   - □ 5-19 employees
   - □ 20-50 employees
   - □ 51-150
5. Highest education completed:
   - □ High School
   - □ Diploma
   - □ Degree/ Professional qualifications
   - □ Master

6. Length of time with your current organization:
   - □ Less than 1 Year
   - □ 1-3 Years
   - □ 3-5 Years
   - □ 5-10 Years
   - □ 10-20 Years
   - □ Above 20 Years
7. Current job position:
   - □ Owner
   - □ Managing/Financial Director
   - □ Financial Controller
   - □ Manager
   - □ Accountant
   - □ Other (Please specify): _____

Section B: Determinants of internal audit outsourcing

This session is seeking your response towards the determinants of internal audit outsourcing and their importance in this study on the decision of whether outsource or not to outsource the internal audit function. Please circle your answer to each statement using 5 Likert scale [(1) = strongly disagree; (2) = disagree; (3) = neutral; (4) = agree and (5) = strongly agree]

Asset Specificity

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	**Staff working in internal audit department acquires specialized knowledge, skills and abilities that would not be transferable to another company (i.e 'asset specific' skills).**	1	2	3	4	5
2	**It would be hard for an industry experienced and suitably qualified outsider to work in internal audit function without additional 'asset specificity' training.**	1	2	3	4	5
3	**Training in 'asset specificity' skills for internal auditor represents a significant investment.**	1	2	3	4	5
4	**Employment contract with internal auditor includes performance incentives designed for retention purposes (e.g. promotion opportunities).**	1	2	3	4	5
5	**There is an insufficient in-house technological know-how.**	1	2	3	4	5

Environmental Uncertainty

The term "vendors" refer to the outsourcing partners chosen and other firms that could replace the function of the current partner.

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	**Dealing with the vendors implied changes for the employees of your firm e.g. In terms of required skills and training needed.**	1	2	3	4	5
2	**Dealing with the vendors implied changes for the overall functioning of your firm e.g. In**	1	2	3	4	5

	terms of adaptation of internal processes.					
3	**The vendor uses standardized operating procedure to execute the outsourced internal audit.**	1	2	3	4	5
4	**The standard of performance (in terms of quantity, quality, and timeliness of output) for the outsourced internal audit is clearly specified in the contract.**	1	2	3	4	5
5	**The vendor has precisely written rules and procedures for the performance of outsourced internal audit.**	1	2	3	4	5

Frequency

No.	**Questions**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	**My company has been frequently recorded the entry of purchase invoices, sales invoices and financial transactions.**	1	2	3	4	5
2	**My company has been frequently prepared the interim profit and loss account.**	1	2	3	4	5
3	**My company has been frequently prepared the financial statements.**	1	2	3	4	5
4	**My company has been frequently prepared the period end accounting.**	1	2	3	4	5
5	**My company has been frequently performing the internal audit function.**	1	2	3	4	5

Cost

No.	**Questions**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	**Cost of financial statement audit can be reduced if the services are provided by third**	1	2	3	4	5

	parties.					
2	**The outsourcing agreement truly captures all costs.**	1	2	3	4	5
3	**The continuing costs of the arrangement are appropriately accounted for in arriving at the initial decision to outsource.**	1	2	3	4	5
4	**Reduction of the cost of acquiring relevant resources to carry out the business process.**	1	2	3	4	5
5	**Cost of outsourcing will be lower than the cost of using permanent full-time employees to maintain internal auditing.**	1	2	3	4	5

Section C: Outsource of internal audit

This session is seeking your response toward the decision of whether outsource or not to outsource the internal audit function based on the determinants in Section B. Please circle your answer to each statement using 5 Likert scale [(1) = strongly disagree; (2) = disagree; (3) = neutral; (4) = agree and (5) = strongly agree]

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	**Through internal audit outsourcing my company has benefited from better access to skilled personnel.**	1	2	3	4	5
2	**The objective set by my company in relation to the outstanding project has been met.**	1	2	3	4	5
3	**The vendor has been frequently providing the internal audit function to my company.**	1	2	3	4	5
4	**My company has achieved the target level of cost savings expected by outsourcing this function.**	1	2	3	4	5
5	**My company is very satisfied with the vendor's responsiveness to problem or quaries.**	1	2	3	4	5

Thank you for your time, opinion and comments.

~ The End ~

Appendix D: Permission Letter to Conduct Survey

UNIVERSITI TUNKU ABDUL RAHMAN
Wholly Owned by UTAR Education Foundation (Company No. 578227-M)

14th March 2013

To Whom It May Concern

Dear Sir/Madam

Permission to Conduct Survey

This is to confirm that the following students are currently pursuing their *Bachelor of Commerce (HONS) Accounting* program at the Faculty of Business and Finance, Universiti Tunku Abdul Rahman (UTAR) Perak Campus.

I would be most grateful if you could assist them by allowing them to conduct their research at your institution. All information collected will be kept confidential and used only for academic purposes.

The students are as follows:

Name of Student	Student ID
ANDREW KHOO GUAN JIE	10ABB03457
CHANG HIEW NAM	10ABB00615
CHOONG KUAN MEI	10ABB00544
KOH LEY KHOON	10ABB00666
TAN SHEEMON	10ABB00681

If you need further verification, please do not hesitate to contact me.

Thank you.

Yours sincerely

.....
Mr Mahendra Kumar a/l Chelliah
Head of Department,
Faculty of Business and Finance
Email: mahendra@utar.edu.my

.....
Ms Yamuna Rani A/P Palanimally
Supervisor,
Faculty of Business and Finance
Email: yamunarp@utar.edu.my

Address: 9, Jalan Bersatu 13/4, 46200 Petaling Jaya, Selangor Darul Ehsan, Malaysia **Postal Address:** P O Box 11384, 50744 Kuala Lumpur, Malaysia
Tel: (603)7958 2628 **Fax:** (603) 7956 1923 **Homepage:** http://www.utar.edu.my

Appendix E: Central Tendencies Measurement

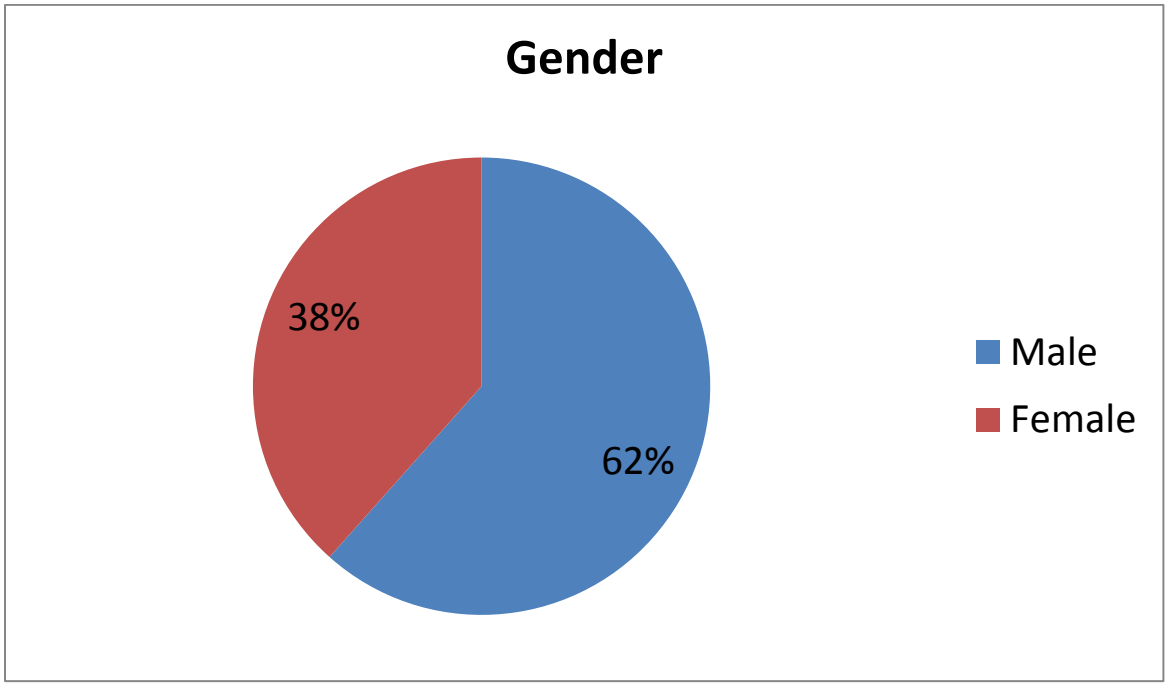
Variable	Mean	Standard deviation
AS	3.816842	0.914926
AS_1	3.626316	0.892261
AS_2	3.9	0.934636
AS_3	3.957895	0.883904
AS_4	3.91579	0.812119
AS_5	3.684211	1.051712
EU	3.812632	0.878887
EU_1	3.931579	0.713107
EU_2	3.789474	0.958336
EU_3	3.757895	0.819289
EU_4	3.784211	0.937611
EU_5	3.8	0.966092
FQ	3.915790	0.987208
FQ_1	4.01579	1.010403
FQ_2	3.931579	1.018637
FQ_3	3.926316	1.061516
FQ_4	3.9	0.87014
FQ_5	3.805263	0.975344
CT	3.824211	0.909384
CT_1	3.736842	0.928223

CT_2	3.857895	0.929138
CT_3	3.847368	0.886625
CT_4	3.910526	0.918588
CT_5	3.768421	0.884345
OS	3.803158	0.932363
OS_1	3.757895	0.89343
OS_2	3.784211	0.91476
OS_3	3.794737	0.967719
OS_4	3.794737	0.973171
OS_5	3.884211	0.912734

Source: Developed for the research

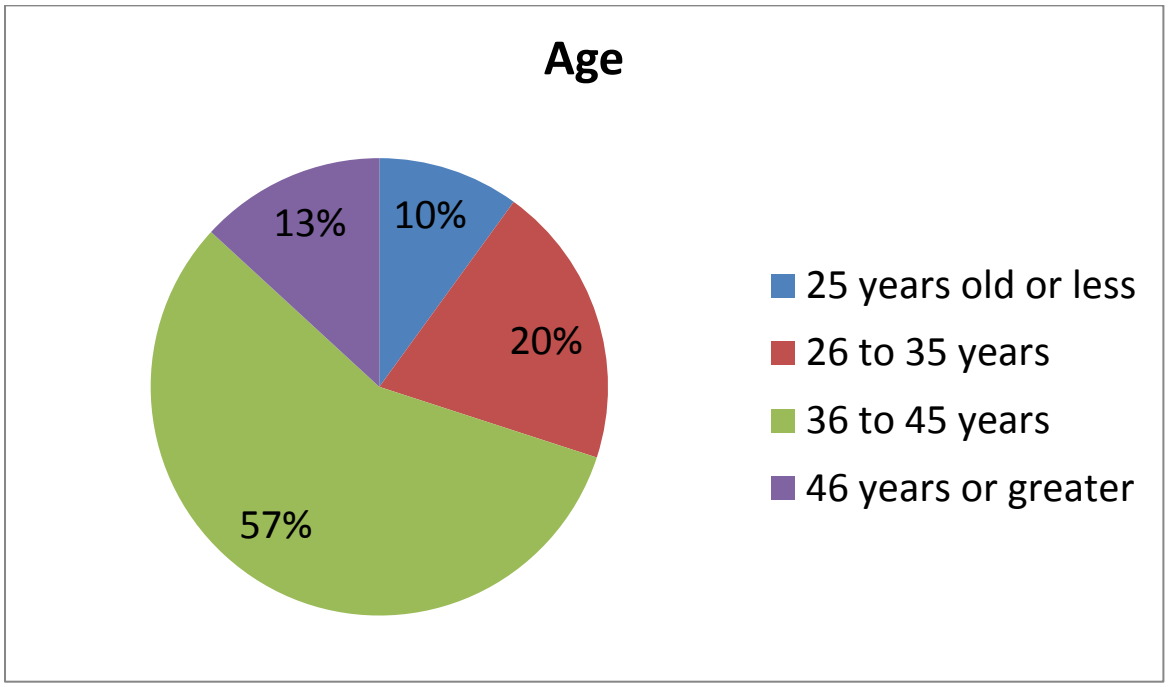
Appendix F: List of Figures

Figure 4.3: The Gender of Respondents



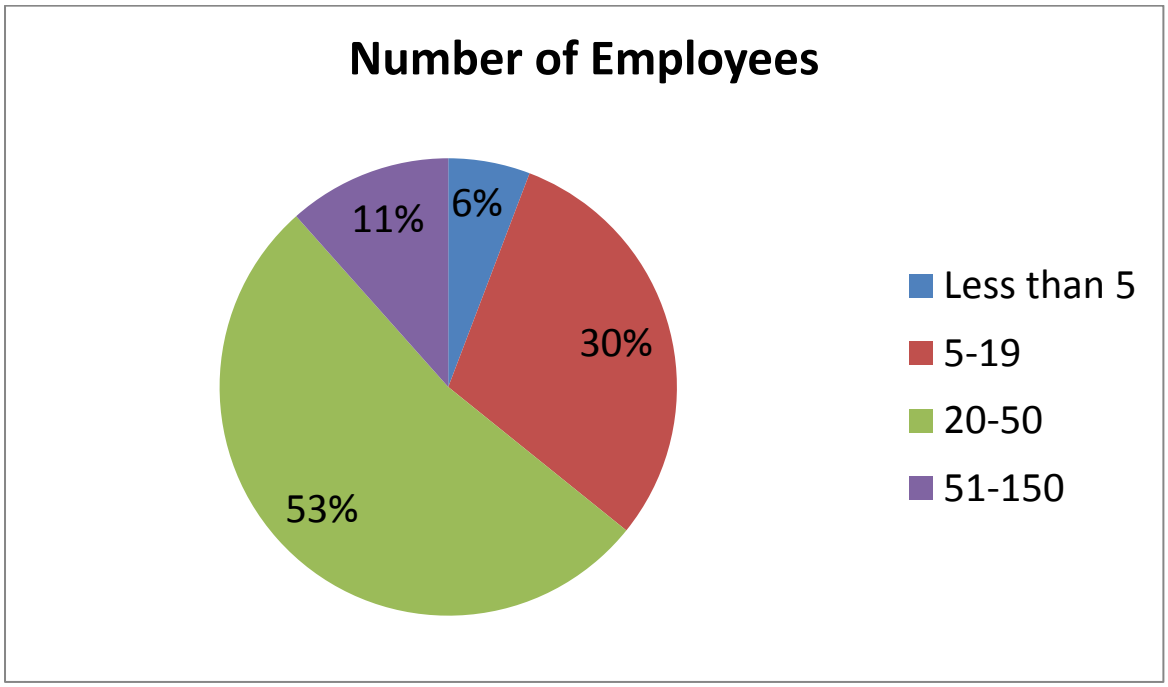
Source: Developed for the research

Figure 4.4: The Age of Respondents



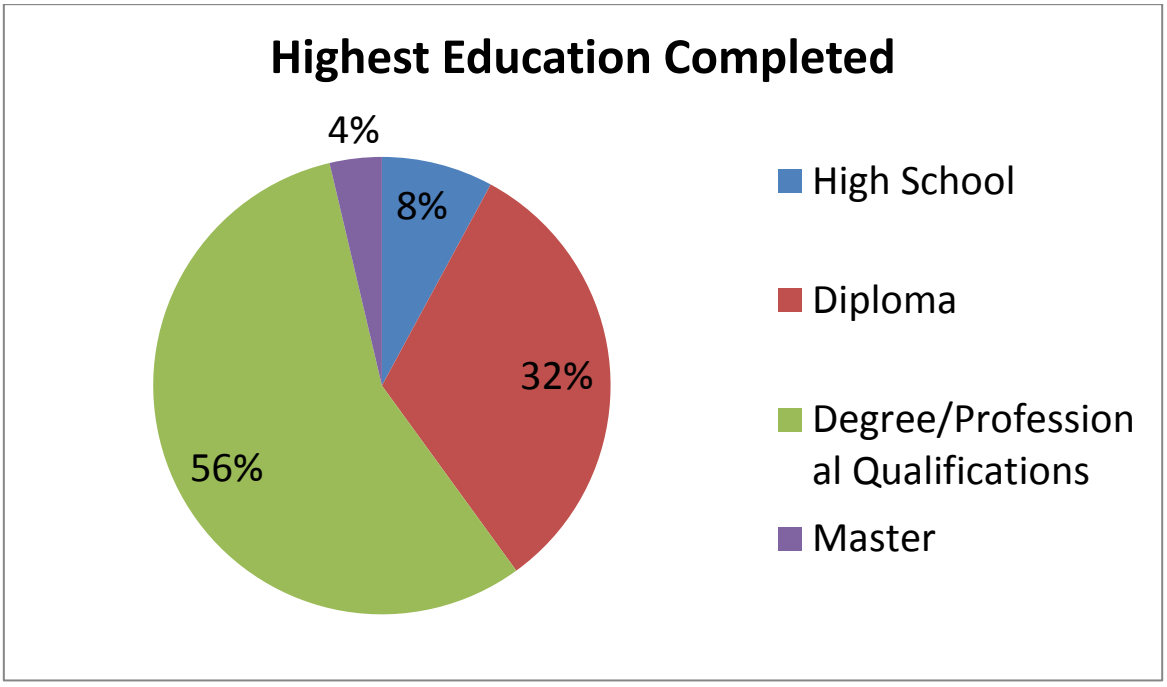
Source: Developed for the research

Figure 4.5: The Number of Employees



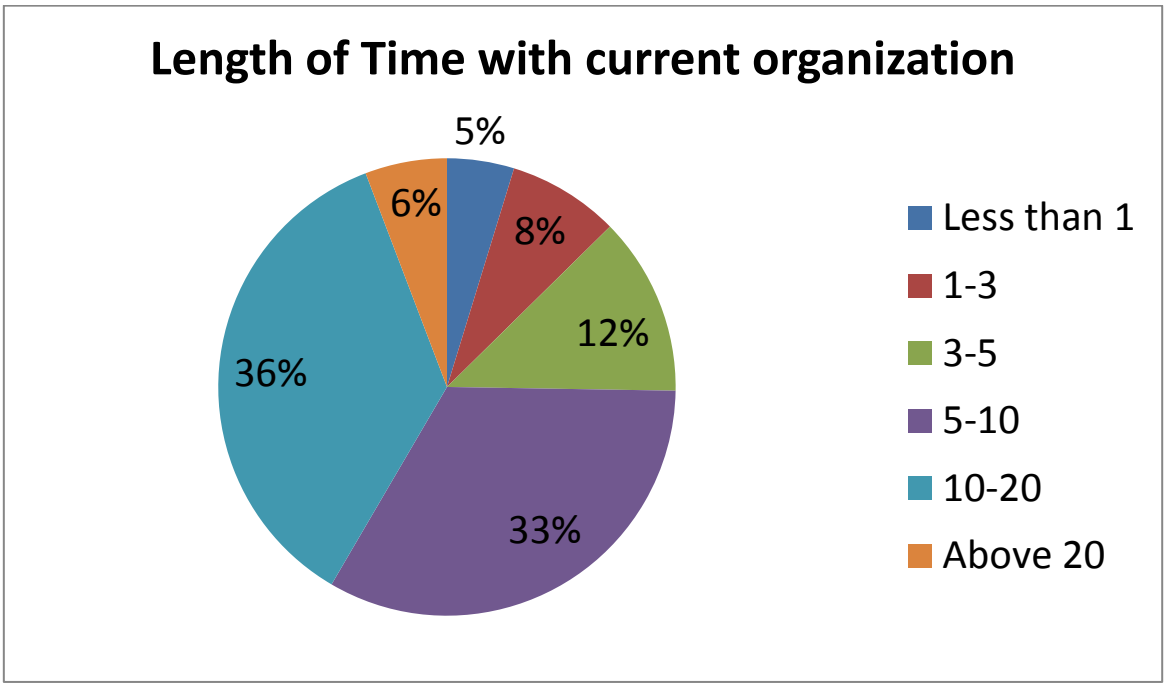
Source: Developed for the research

Figure 4.6: Highest Education Completed



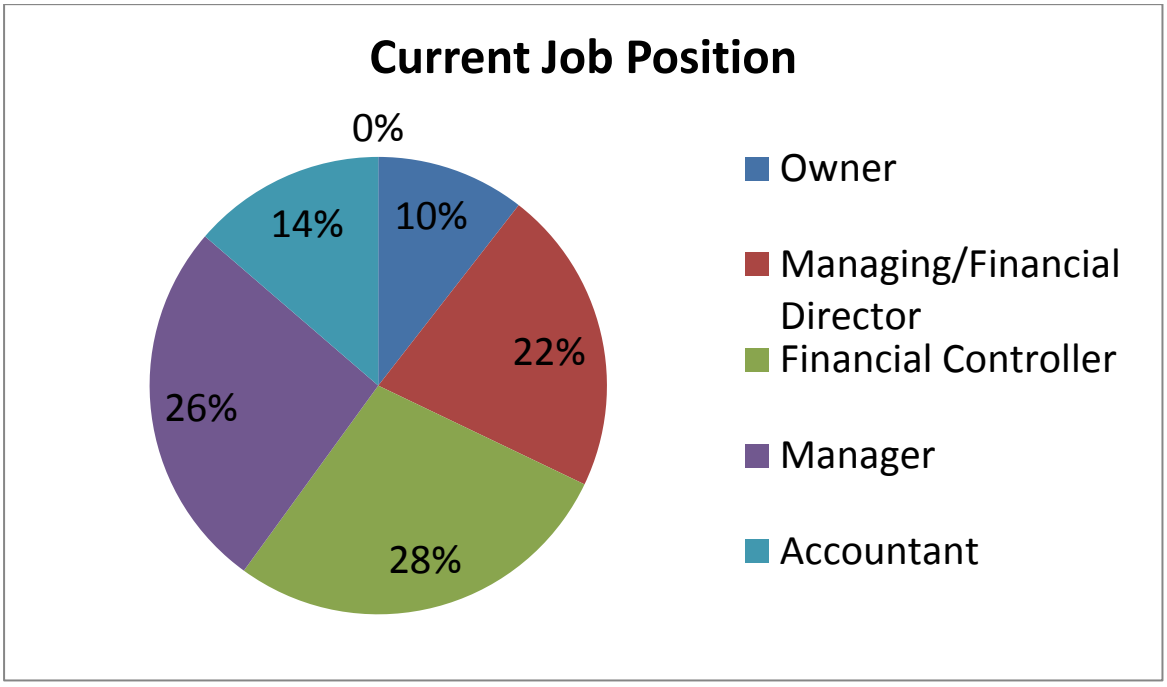
Source: Developed for the research

Figure 4.7: Length of Time with Current Organization



Source: Developed for the research

Figure 4.8: Current Job Position



Source: Developed for the research