University of Plymouth

PEARL **https://pearl.plymouth.ac.uk**

04 University of Plymouth Research Theses 01 Research Theses Main Collection

2017

THE DETERMINANTS OF AUDIT FEES AND REPORT LAG: A COMPARATIVE STUDY OF EGYPT AND THE UK

Abdelrazik, Donia

http://hdl.handle.net/10026.1/9510

http://dx.doi.org/10.24382/378
University of Plymouth

All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.

Copyright Statement

This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognise that its copyright rests with its author and that no quotation from the thesis and no information derived from it may be published without the author's prior consent.

THE DETERMINANTS OF AUDIT FEES AND REPORT LAG: A COMPARATIVE STUDY OF EGYPT AND THE UK

By:

Donia Samir Mahmoud Abdelrazik

BSc in Accounting, Mansoura University, Egypt

Certified Management Accountant "CMA", IMA, USA

A thesis in Accounting submitted to the Plymouth University in partial fulfilment for the degree of

DOCTOR OF PHILOSOPHY

Plymouth Graduate School of Management

Faculty of Business

2017

I dedicate my thesis to

My country, Egypt, for funding my research, hoping for a promising future

The memory of my Grandmother, God bless her soul

My father and mother for their belief in me and continuous encouragement

My husband, Ahmed, for his kind sacrifice, support and love

My son, Mohamed, the joy of my life

DECLARATION

At no time during the registration for the degree of Doctor of Philosophy, the author has been registered for any other University award without prior agreement of the Graduate Committee.

The work submitted for this research degree at the Plymouth University has not formed part of any other degrees either at Plymouth University or another establishment.

I am aware of the Plymouth University policy on plagiarism, and I certify that this thesis is my own work.

Word count of main body of thesis: 66,747

Signed: Donia Samir Mahmoud Abdelrazik

ACKNOWLEDGEMENT

Above all, I praise Almighty Allah for helping me and giving me the strength to overcome obstacles during the past four years to complete my PhD studies. I owe special thanks to my dear country Egypt for funding my scholarship to complete my PhD studies in Plymouth University, UK.

I am very grateful to **Dr Ahmed El-masry**, my 1st supervisor and director of studies, for his continuous support, guidance and advice at all the stages of my research. His valuable comments and constructive feedback helped me a lot during my research. Special thanks to **Dr Moji Olugbode**, my 2nd supervisor for giving me guidance, recommendations and help throughout my study.

Special thanks to **Professor Khaled Hussainey** for his kind encouragement, help and valuable online lectures that helped me a lot during my PhD journey. Also, I would like to express my thanks to **Professor Roberta Mock** and all the administrative and academic staff at the University of Plymouth for providing me with information, support and guidance to pursue my studies.

Last but not least, I am very grateful to my parents for their continuous encouragement and support. Words cannot express how grateful I am for my husband, Ahmed, for his great sacrifice and support during difficult times in writing up my thesis. My lovely son, Mohamed, thank you for making me happy and sorry for the time that I did not spend with you for being busy writing my thesis, promising to compensate you, I pray to Allah to keep you safe and support you in all stages of your life.

Abstract

The determinants of audit fees and report lag: A comparative study of Egypt and the UK

Despite the occurrence of recent economic and political events such as the global financial crisis and Arab spring in the Middle East, researchers have not addressed the effects of such events on the auditing profession. That is has given a motive to this study to explore this point of research. This study has three main objectives. The first objective is to investigate the determinants of audit fees and audit report timeliness in the Egyptian and UK contexts. The second objective is to point out how the economic and political events could affect these determinants. The third objective is to make a comparison between the response of auditors towards economic and political instability in both countries. These objectives are set to solve the research problem of this study which is to investigate how the price behaviour of audit fees and report timeliness can vary in two different contexts: Egypt and the UK, and to highlight how auditors respond to such economic (Global Financial Crisis) and political events (Egyptian Revolution). A special attention has been addressed to tourism industry while investigating audit pricing and timeliness decisions throughout this study for two reasons. First, tourism industry play a critical role for the economy of many developing and developed countries. Second, tourism industry is highly affected by any economic and political events. For these reasons, tourism industry is surrounded by high risk during the economic or political instability, and thus this might result in special procedures and decisions taken by the auditors regarding tourism industry clients during instable periods.

To take into account the most recent economic and political events, the study sample covers the period of six financial years from 2008 to 2013. This sample period has been chosen to capture the global financial crisis that has taken place during 2008-2009 and also to investigate the effects of the Egyptian revolution that has taken place on January 25, 2011, and subsequent political events. The study sample includes 212 Egyptian companies listed in the Egyptian stock market and the top 350 companies (FTSE 350)

listed in the London Stock Exchange. For guaranteeing the preciseness of the findings, advanced panel data Prais-Winsten statistical analysis technique has been used throughout this study.

Results of this study reveal consistency between Egypt and UK in most signs of coefficients of audit fees determinants. However, a lot of differences exist between the audit report lag determinants in the Egyptian and UK context that suggest that a one-size-fits-all approach cannot be generalized in audit report lag determinants for various countries. Despite that tourism is a very risky industry that is easily affected by economic and political instability, results reported in Egypt and UK reveal that audit fees charged and audit delay reported for tourism did not differ from other industries in both contexts.

Results also reveal that Big N auditing firms in the UK have competitive advantages of not charging an audit fee premium and offering a more timely audit report than non-big N. These advantages increase the demand of Big N in the UK and increase their dominance. On the other side, in Egypt, Big N auditing firms do not offer such advantage of timely audit reports than non-big N, besides, they charge their clients with audit fee premium. That enabled medium sized and small auditing firms to penetrate the Egyptian auditing market and increase their market share, and thus, Big N dominance is not high in the Egyptian audit market as that in the UK.

Different auditor responses to global financial crisis (GFC) have been documented in both countries. As auditors in Egypt decreased their audit fees and offered more timely audit report to face the economic recession and the anxiety of investors accompanied with the GFC. However, neither the pricing of auditing services nor the audit report lag have been affected during the GFC in the UK audit market.

According to the results of this study, during the Egyptian Revolution, auditors tended to charge audit fees premium without increasing/decreasing audit delay. This implies that the increase in audit fees during revolution was a risk premium due to the instability in economic and political conditions and was not accompanied by any increase in audit effort and delay.

Table of Contents

List of Figures

List of Tables

Abbreviations

Big N	Big (4/5/6/8) auditing firms
CMA	Capital Market Authority
egID	Egypt for information dissemination
ESA	Egyptian Standards of Auditing
ESAA	Egyptian Society of Accountants and Auditors
FE	Fixed-Effects model
GAAP	Generally Accepted Accounting Principles
GAO	General Accounting Office
GDP	Gross Domestic Product
GFC	Global Financial Crisis
IAASB	International Auditing and Assurance Standards Board
IFRS	International Financial Reporting Standards
ISA	International Standards of Auditing
IT	Information Technology
OLS	Ordinary Least Squares
PCAOB	Public Company Accounting Oversight Board
PCSE	Panel-corrected standard error Model
SEC	Securities and Exchange Commission
SOX	Sarbanes-Oxley Act
UK	United Kingdom
UNWTO	United Nations World Tourism Organization
US/ USA	United States
VIF	Variance Inflation Factor
WTTC	World Travel and Tourism Council
XBRL	eXtensible Business Reporting Language
XML	extensible Markup Language

Chapter 1 Introduction

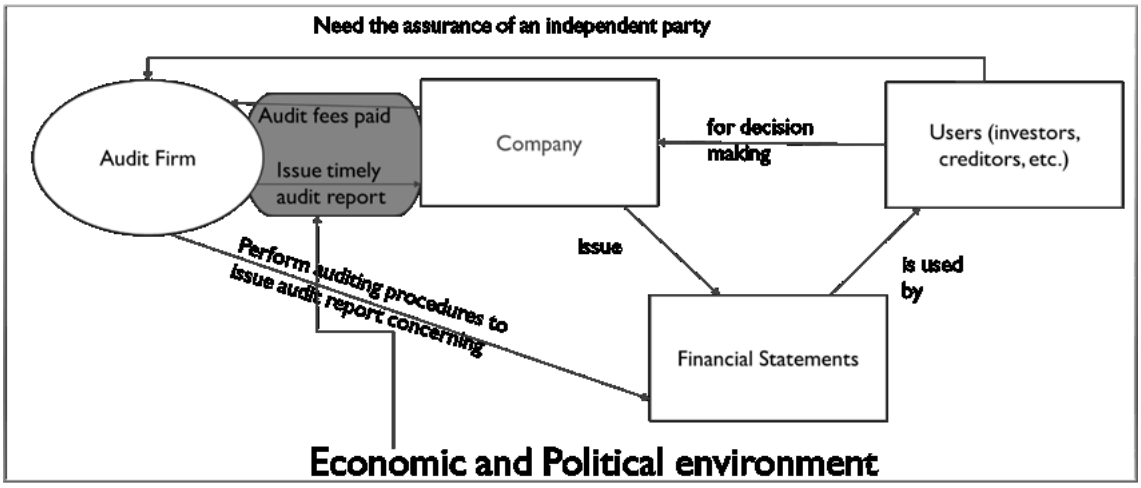
1.1 Overview

In recent years, dispersion in the ownership of companies highly raised agency problems related to conflict of interest and information asymmetry. Management usually has an information advantage because of its involvement in day-to-day operations, on the other side, shareholders do not have much information about the company they own its stocks. This information advantage can be used by management in increasing their own personal gains at the expense of shareholders. As management can manipulate the financial information to receive any bonuses tied to the company's earnings. Therefore, managers cannot be fully trusted, and need to be monitored by an independent party to protect the shareholders' rights. Hereby, the importance of auditing raised.

Auditing is the monitoring activity performed by an independent source to mitigate the agency problems. Dispersion of ownership increased the demand on auditing services for monitoring of management, protecting shareholders' rights and verification of reported financial information to interested parties. As illustrated in Figure 1-1, the objective of the auditing process and procedures performed by the audit firm is to issue an audit report. The audit report is issued with the financial statements to provide an assurance and opinion for different users about the reliability of the financial statements. The audit report had to be timely to provide the required assurance to users in the right time. In exchange of providing auditing services, audit fees are charged to the company. Pricing of audit services and timeliness of audit delay decisions depend on different variables, some of them are related to client attributes, other are related to auditing and

engagements attributes, moreover, surrounding and economic events could have an effect too.

Figure 1-1 The Auditing Process



Source: The author

The recent accounting scandals occurred at the beginning of the twenty-first century, and the collapse of giant companies, like Enron and WorldCom in the US, have highlighted the audit failure in uncovering fraud and threatened public trust in the auditing profession. To restore public confidence, regulators issued more rules to govern the auditing profession and increase auditing requirements. Researchers began to pay more attention to investigate the demand and supply sides challenged the auditing profession and auditing research has become more widespread in recent years. Many researchers have been interested in how auditing services are priced and the importance of audit report timeliness on influencing decision making of investors.

But despite the extensive literature on audit fees and audit report lag, still prior studies present mixed results and gap in literature exist in several aspects which need to be furtherly explored. Audit fees and delay literature reveals a scarcity of research relating to the determinants of audit fees and delay in the Middle East especially in Egypt, and non-recent data has been used in studies of the UK audit market. Moreover, the occurrence of recent economic and political events such as the global financial crisis and Arab spring in the Middle East have not been addressed by researchers to explore the effects of such events on the auditing profession.

That is why the research problem is to investigate the price behaviour of audit fees and report timeliness in two different contexts: Egypt and the UK, and to highlight how auditors respond to economic (Global Financial Crisis) and political events (Egyptian Revolution). For guaranteeing the preciseness of the findings, panel data advanced econometric statistical analysis techniques are used throughout this study which have not been used by most prior literature which used only pure cross-sectional or time series techniques.

1.2 Study motivations and gaps in literature

The main motivation for this study is to address the gaps in the prior research and contribute to the literature, motivations of the study problems can be summarized as follows:

- Despite the extensive literature on determinants of audit fees and audit report lag, much is still unknown about whether is it applicable to generalize the results on developing countries or not. As most of the prior studies are conducted in more developed countries. A review of the audit fees and delay literature reveals a scarcity of research relating to the determinants of audit fees and delay in the

Middle East especially in Egypt. That is why this was a motive for the study to explore determinants of audit fees and report lag in a developing country like Egypt.

- Moreover, few studies have investigated UK audit market. Also, the existing studies on the UK audit market suffered from using non-recent data. Therefore, there is a strong incentive to update audit fees and report lag research in the UK.
- Despite the advantages of the panel data methodology, this approach has not been used by most prior literature that used pure cross-sectional or time series techniques. A strong incentive for this study is to provide more accurate estimates by using advanced econometric techniques in analysing data.
- According to (Taylor and Simon, 1999), the majority of studies of audit fees are conducted in a single country and this is considered a significant gap in the literature at which most studies are conducted in isolation within the borders of a single country. Understanding the differences in auditors' behaviour in pricing audit services and timely reporting across countries will add to the literature. Therefore, it is a good motive to contribute to the literature by analysing differences between countries, such as Egypt and the UK, in the pricing of audit services and timeliness of audit report.
- An important difference exists between the Egyptian and UK audit markets. The Egyptian audit market is much competitive, at which small and medium sized auditing firms have a greater market share than Big N auditing firms. On the other side, the UK audit market is dominated by Big N auditing firms that audit more than 95% of companies in the stock market. There has been a motive by the current study to analyse if the pricing decisions and timeliness of auditors in both markets have any effect on increasing/decreasing Big N dominance.
- A review of audit fees and delay literature also reveals a scarcity of research relating to the effect of global financial crisis on them either in developed or developing countries. So, there is a strong incentive to make a comparison between auditors' response to global financial crisis in a developing country (e.g. Egypt) and a developed country (e.g. UK) that can update the literature and contribute to it.

- The occurrence of Arab spring with the recent political events and changes in the Middle East creates a strong incentive to investigate how political changes could have effect on the assessment of the business risk of the companies in the stock market and the related response by auditors towards these risks.

1.3 Research objectives and questions

Based on prior literature, agency, signalling, political and client size theories, this study first objective is to investigate the determinants of audit fees and audit report timeliness in the Egyptian and UK contexts. Political and economic events may increase business risk and recession in the economy, and thus auditors' pricing decisions and report delay could be affected. So, the second objective of this study is to point out how the economic and political events could affect these determinants. The third objective of this study is to make a comparison between the response of auditors towards economic and political instability in both countries.

Main research questions of this study are:

- Do audit fees and report lag decisions differ:
  i. from one client to another depending on client specific attributes?
  ii. for each auditing process according to auditor and engagement attributes?
  iii. across different countries e.g. Egypt and the UK?
- During periods of economic and political changes,
  i. Does the auditing profession is affected and auditors modify their pricing and timeliness decisions?
  ii. Does client industry risk assessment increase for certain industries (such as tourism industry) and therefore pricing and timeliness of audit services are affected?

- How do auditors take a combination of choices regarding audit pricing and timeliness decisions in response to various attributes and events surrounding the audit engagement?
- How Big N dominance in the audit market is related to pricing and timeliness decisions taken by the auditors?

1.4 Scope of the study

The occurrence of Arab spring and the recent political events in the Middle East have not been explored by prior literature of auditing. Egypt, as one of the Arab countries at which several revolutions and political events have occurred, is considered a proper context to explore how the auditing profession is affected during political events.

Moreover, after reviewing audit fees and delay literature, the researcher found a scarcity of research relating to the effect of global financial crisis on them either in developed or developing countries. This constitutes another gap in auditing literature, and a motive for this study to explore how one of the most important economic events can impact auditing profession in a developed and stable country like the UK, in comparison with, a less developed non-stable country like Egypt. Another interesting difference exists between Egyptian and the UK audit markets in that the Egyptian audit market is considered much competitive, at which small and medium sized auditing firms have a greater market share than Big N auditing firms. On the other side, the UK audit market is dominated by Big N auditing firms that audit more than 95% of companies in the stock market. That has created a motive for the current study to find out whether the pricing decisions and timeliness of auditors in both markets have any relation with the increase/decrease of Big N dominance.

To take into account the above economic and political events the study sample covers the period of six financial years from 2008 to 2013. This sample period has been chosen to capture the global financial crisis that has taken place during 2008-2009 and also to investigate the effects of the Egyptian revolution that has taken place on January 25, 2011, and subsequent political events. The study sample includes 212 Egyptian companies listed in the Egyptian stock market and the top 350 companies (FTSE 350) listed in the London Stock Exchange. Following prior studies, the financial sector has been excluded from the sample because of the nature of their operations that set them completely apart from non-financial sector during performing the auditing procedures.

A special interest has been addressed to tourism industry throughout this study for several reasons. First, tourism industry play a critical role for the economy of many countries and constitutes 40% of the income of the world's countries, and therefore it is a very important sector in many developing and developed countries. Second, tourism industry is highly affected by any economic and political events. As in time of economic crisis, people will tend to cover essentials of life, and therefore recreational activities will decline, and thus tourism sector worldwide has been highly affected during the global financial crisis, and according to United Nations World Tourism Organization (UNWTO), the growth of tourism industry declined by 5% during year 2008 with a high deterioration of the demand of international tourists. Also, for tourism industry to bloom, it requires stable political conditions at which tourists feel safe and out of harm. That is why, political instability would highly affect the tourism industry and threaten tourism investments. As after the Egyptian revolution, the ministry of tourism in Egypt reported a decline in tourism revenues by 17.75 % in 2011 and 45% decline by 2013 compared to

tourism revenues in year 2010. For these reasons, tourism industry is surrounded by high risk during the economic or political instability, and thus this might result in special procedures and decisions taken by the auditors regarding tourism industry clients during instable periods. That is why it has been a motive for our study to give special attention for tourism sector while investigating audit pricing and timeliness decisions.

1.5 Contribution of the study to Literature gap

This study contributes to the auditing literature in a number of ways:

- This research explores the determinants of audit fees and audit delay in Egypt in a period of six years (2008-2013). No previous study has tried to examine the determinants of audit fees and audit delay in Egypt during that period. This study contributes to the literature by investigating auditors' reaction in the Middle East context where very little literature has explored.
- This study is the first to apply political theory besides the agency, signalling and client size theories to examine the effect of unstable political and economic conditions on the auditing profession. Consistent with these theories, this study offers evidence that auditors tend to increase their fees in periods of severe political instability, as what occurred after the revolution, which is another contribution for this study. This can be interpreted by the more professional scepticism acted by the auditors in the form of higher assessed litigation risk which auditors try to mitigate -in such instable conditions- by increasing their fees.
- To the best of the researcher's knowledge, no study published has investigated the effect of global financial crisis (GFC) on the pricing of audit services and the audit report timeliness in Egypt or in the UK. Therefore, this study is considered

the first study to capture GFC effects on determinants of audit fees and audit delay in both contexts.

- This study also contributes to the literature by presenting a comparison between determinants of audit fees and audit delay in Egypt and the UK. To argue that one-size-fits-all approach used by researchers in generalizing determinants of auditing pricing and delay is considered inappropriate.
- The study presents a comparison between two different markets. A competitive market at which medium and small sized auditing firms have large market share as in the case of Egypt. On the other side, the UK market is less competitive at which the Big 4 dominant more than 95% of the audit market. This comparison highlights how Big 4 dominance could affect some determinants of audit fees and audit report timeliness.

1.6 Structure of the thesis

This chapter presented an overview of the importance of auditing research, the research problem, scope, objectives and questions addressed. Motives of the study, gaps in literature and contributions to the literature have also been briefly discussed.

The remainder of the thesis is organized as follows. Chapter two gives an overview of the economic development of the Egyptian economy, political changes and the auditing profession. Then the UK context is addressed with a highlight of the effect of global financial crisis on the British economy and the audit regulations applied. Then a brief discussion is presented of the importance of tourism industry globally and in the Egyptian and UK contexts with an overview of how tourism industry is affected by political and economic instability.

Chapter three illustrates the related theoretical frameworks inspired from prior seminal studies of audit fees and delay, agency theory, signalling, political and client size theories. These theories are employed during this study to analyse determinants of audit fees and audit delay.

Then chapter four presents a review of literature on determinants of audit fees and audit report lag. During the review of each determinant, literature gap is identified with suggestions to bridge this gap. A conceptual framework is then outlined.

Chapter five presents the methodology adopted in this study. First a discussion of research philosophies, paradigms and approaches commonly used by researchers are highlighted. Then the appropriate methodology chosen by the researcher in the current study is then discussed. Then data sources, sample characteristics and selection has been illustrated. After that, choices of analytical techniques (OLS, random-effects, fixed-effects, Prais-Winsten) are justified. Measures of dependent and independent variables are illustrated for each model. Then related hypotheses for each model has been demonstrated.

Chapter six presents and discusses the descriptive statistics of the Egyptian context. Followed by a presentation of correlation analysis. Results of audit fees and delay models in the Egyptian context are then discussed with inferences drawn from tests of the hypotheses. Analysis and discussion of auditor choices concerning mixing decisions of audit pricing and timeliness are then presented. Further analysis concerning the effect of audit firm size and client size have been also illustrated.

Chapter seven presents and discuss the descriptive statistics of the UK context. Followed by the presentation of correlation analysis. Results of audit fees and delay models in the UK context are then discussed with inferences drawn from tests of the hypotheses. Analysis and discussion of auditor choices concerning mixing decisions of audit pricing and timeliness are then presented. Further analysis concerning the effect client size has been also illustrated.

Chapter eight presents and discuss a comparison of audit fees and delay results between Egypt and the UK contexts. Also, a comparison of auditor decisions and choices in the two contexts are analysed.

Chapter nine presents a summary of this study. It summarizes the findings and conclusions of this study. Significance, conclusions and implications are drawn. Potential limitations and recommendations for future research are then presented.

Chapter 2 An overview of Egyptian and UK contexts and Tourism Industry

2.1 Introduction

The purpose of this chapter is to give a brief summary of the economic environment in the Egyptian and UK contexts, highlighting recent economic and political events affecting those contexts during the sample period of this study. The chapter also discussed the regulatory structure of auditing profession in Egypt and the UK to show the similarity between the audit regulations applied in both contexts. Finally, an overview of the global importance of tourism industry is presented with an outline of how tourism industry is affected by economic and political stability.

2.2 Egyptian Context

The Egyptian economy has different phases of bloom and recession. Events related to Egypt in the last three decades can be classified into three phases; the first phase is during the application of the economic reform program (from 1990 to 2007), the second phase is during the global financial crisis (2008-2009) and the third phase which is affected by political instability connected with the Egyptian Revolution (2011-2013). These phases will be briefly summarized in the following sections to highlight the important events affected the Egyptian context during the period of study of this research.

Auditing profession development in any country is associated with the bloom of the economy, investments, stock market performance and shareholders increase. A brief

discussion of the audit profession structure, development and regulations in the Egyptian environment will be highlighted afterwards in this chapter.

2.2.1 Economic and political events affecting Egyptian economy

2.2.1.1 Economic reform program (1990-2007)

By May 1991, Egypt began an economic reform program by the help of the International Monetary Fund (IMF), at which the economy began to bloom in number of ways (Rubin, 2015):

- Budget deficit decreasing from 15% in 1991 to 6% in 1992 to only 1% in 1995
- Job opportunities increased to 460000 opportunity a year, for period 1992-2000, compared to 250000 during 1976 to 1992.
- Tourism industry increased sharply realizing $4.3 billion in 2000 versus $1.1 billion in 1990.
- Value of stocks increased from representing only 5% of Gross Domestic Product (GDP) in 1994 to 20% in 2000.

However, the economic reform fade out by the beginning of 2000s with budget deficit jumping back to 9% of GDP due to several reasons such as; liquidity shortage, negative performance of stock market, September events in USA, terrorism attacks in Luxor (Bekheit, 2008). By 2004, a new cabinet has been appointed by Mubarak (the president of Egypt at that time) and the economic reform was accelerated again with 70% increase in tourism and exports during 2006-2007 (Rubin, 2015). Then the global financial crisis hit the Egyptian economy in 2008-2009, as will be discussed in the next section. Then the Egyptian Revolution occurred in 2011 that will be discussed later in this chapter.

2.2.1.2 Global financial crisis (2008-2009)

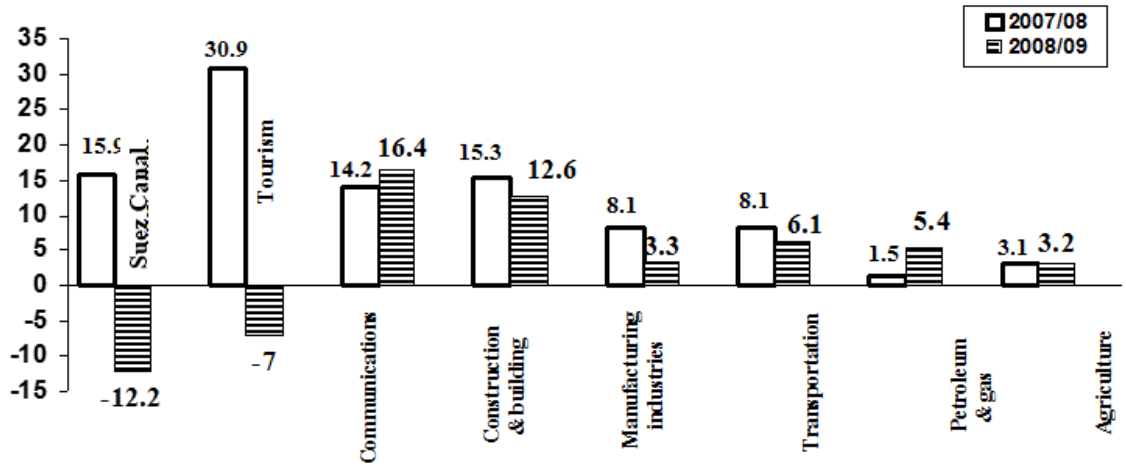
The financial crisis 2008-2009 was considered as the most horrible financial crisis since the Great Depression 1930s, at which collapse threatened the global financial system (Thakor, 2015). Lack of confidence prevailed among investors all over the world, causing 60%-70% reduction in stock exchange indices (Kopliku, 2010).

Developing countries had been relatively less affected by the global financial crisis (GFC), but still every economy in the world has relatively entered a recession. According to Zaytoun et al. (2010), the growth rate in the Egyptian economy has been adversely affected by the global financial crisis, as it declined from 7.2 % (for 2007-2008) to 4.7 % (for 2008-2009), with decline in job opportunities by 13% and the loss of US $20 billion of foreign exchange amounts.

Sectors that depend on external markets and world demand are more likely to be affected by GFC. That is why tourism industry is one of the sectors that was highly affected by the global financial crisis. In time of crisis, people tend to cover essentials of life, and therefore recreational activities decline, and thus tourism sector worldwide is highly affected (Zaytoun et al., 2010). The GFC resulted in a serious setback in the tourism industry, as according to United Nations World Tourism Organization (UNWTO), the growth of tourism industry declined by 5% during year 2008 with a high deterioration of the demand of international tourists (UNWTO, 2010). Moreover, according to World Travel and Tourism Council (WTTC), during the global financial crisis, the tourism industry share in global GDP decreased by 0.5% due to the economic recession accompanied with this financial crisis. Moreover, according to the report of Egyptian

Ministry of Economic and Development (MED), Suez Canal and Tourism sectors were the most adversely sectors affected in the Egyptian economy during the GFC (MED, 2009), as shown in figure 2-1. More details of the effect of GFC on the tourism industry is discussed later in this chapter.

Figure 2-1 Growth Rates for Tourism and Other Activities in Egypt during 2007-2009



Source: Ministry of Economic and Development report (MED, 2009)

2.2.1.3 The Egyptian revolution (2011-2013)

On October 1981, Mubarak has been appointed as the president of Egypt after the assassination of Sadat the previous president of Egypt. Mubarak has tried to adopt an economic reform programme for the Egyptian economy, however, little progress had been achieved especially by the beginning of 2000s as discussed in the previous sections. In recent years, there was a tremendous increase in corruption, injustice, inequality, and economic deterioration that affected the living conditions for most Egyptian citizens (Arafa, 2012).

After three decades of declining GDP and increase in unemployment rate, falsified parliamentary elections, inequality in income distribution, Arab spring begin to shine in Egypt and the Egyptian revolution went on January 25, 2011 (Elmassri et al., 2016). On February 11, 2011, and after nearly 30 years, Mubarak waived from being the president of Egypt.

The Egyptian revolution was a transformative event at the political and economic sides, whereas, it has not reaped its benefits yet (Hosny et al., 2014). Post-revolution, social expectations were relatively high for a better living standards. Different segments of workers and employees hit strikes for pay increase despite the declining production and the inflation increase in the Egyptian economy at that time. Strikes continued and the economic performance of Egyptian economy declined with decreasing foreign currency reserves that had not been sufficient for imports (Elmassri et al., 2016). Moreover, the annual GDP has dropped from 5%-6% (between 2000-2010) to 1.82% in 2011 and continued to deteriorate up till year 2014 (Abdel-latif and Mishra, 2016).

Instability of economic conditions and political conflicts accompanied with terrorism had threatened the security in Egypt during the period from 2011- 2013 and led to uncertainty by investors in the Egyptian business (Elmassri et al., 2016). Hosny et al. (2014) study examined how the Egyptian revolution has affected its economy. The study reported that sectors that has been faster in growing before the revolution are the ones that were highly deteriorated after the revolution. This has been the case for tourism industry that has been growing fast and blooming before the revolution. Tourism industry in Egypt was dramatically affected, revenues of tourism sector sharply declined during the revolution if compared with 2010 revenues. As according to the Egyptian Ministry

of Tourism, tourism industry began to achieve higher revenues with more than $12.5 billion by the end of 2010. However, by the beginning of Egyptian revolution on 2011, a severe decline in tourism revenues began to happen. According to Egyptian Ministry of Tourism, tourism industry achieved $8.8 billion in 2011 and $5.9 billion in 2013.

Auditors are expected to increase their professional scepticism and effort to respond to risky environment to avoid the higher probability of audit failure and damage of reputation. Auditors can respond to such risks using different strategies: (i) resign from the engagement or (ii) issue non-standard audit report or (iii) increase audit effort (Xu et al., 2013) or (iv) increase audit fees for the risk premium or (iiv) a mix of all of these strategies. Prior literature (Simunic, 1980; Seetharaman et al., 2002; Choi et al., 2008) supports the strategy of increasing audit effort by auditors in risky environments, so that they can defend their decisions in case of audit failure. The increase in audit effort may be in the form of collecting more audit evidence, increasing audit procedures, hiring more experienced experts and audit staff. This increase in audit effort may be reflected in both audit report lag and audit fees. Moreover, the risk surrounding the tourism industry during economic and political changes may affect the assessment of audit risk by auditors for companies working in this industry, and therefore may affect their audit fees and effort. Did auditors increase audit fees during the recent events as a compensation of higher risk cost during those events? Or did they increase audit fees due to an increase of audit effort? Or did they decrease audit fees due to recession in the audit market? This study main purpose is to find out which strategies have been adopted by auditors in Egypt to face recent economic and political events, i.e. GFC and Egyptian revolution.

2.2.2 Audit profession development, structure and regulations in Egypt

The economic reform adopted in Egypt in the last three decades has broadened the auditing market in the Egyptian economy. The Big N auditing firms, established in UK and USA, begin to operate in Egypt (Ebaya, 2015; Khlif and Samaha, 2016). Big N auditing firms operate in Egypt by directly supervising affiliates in exchange of a share of profit of these affiliates (El-diasty, 2008). The Big N international affiliations in Egypt have assisted in increasing the quality of audit services in the Egyptian audit market (Khlif and Samaha, 2016).

External auditing in Egypt is required by Company law 159/1981, the accounting practice law 133/1951, the capital market law 95/1992 and the Banking law, these set of laws represent the legal framework of the auditing profession in Egypt (El-Safty, 2009).

The Egyptian Society of Accountants and Auditors (ESAA) plays an important role in the auditing profession in Egypt. ESAA, established in 1946 , is the first professional body supervising and organizing accountants and auditors in Egypt and is responsible for (El-Safty, 2009):

i. supervising the training and education of accountants and auditors,
ii. developing the accounting and auditing profession,
iii. establishing professional standards by selecting the international accounting and auditing standards suitable for the Egyptian environment and translate it into Arabic considering any specific requirements for the Egyptian laws.

ESAA membership is voluntary, and has 1200 members , 785 of them are actively practicing the accounting and auditing profession, members of ESAA should satisfy at least one of the following requirements (Samaha and Hegazy, 2010):

- At least three years of accounting or auditing practice and passing the ESAA two-part examination or holding a doctoral degree in accounting
- Membership of a chartered institute in any acceptable foreign professional body (providing the pass of Egyptian tax law and Company Law examinations by ESAA)

In 1997, Ministerial Decree 478/1997 established the Permanent Committee for Accounting and Auditing standards to set those standards. However, ESAA was, in practice, responsible for issuing auditing standards by translating ISA into Arabic version and the final draft was submitted to the Permanent Committee for discussion and adoption, and this was the first issue of the Egyptian Standards of Auditing (ESA) (El-Safty, 2009).

In 2008, Ministerial Decree 166/2008 approved the issuance of 38 Egyptian audit standards to replace current standards, and they were in the Arabic version of related International Standards on Auditing (ISA). The introduction of ESA also stated that ISA should be applied in the case of the absence of appropriate ESA (El-Safty, 2009; Samaha and Hegazy, 2010).

On August 2002, the Capital Market Authority (CMA) applied some new rules that aims to maintain the timeliness and fair presentation of the financial statements. In 2007, CMA issued a code of ethics for auditors that discuss issues of independence, conflict of interest, competence, hiring of auditors and related audit fees…etc. This code of ethics is very similar to the APB Ethical Standards applied in the UK context that will be discussed later in this chapter.

Regarding pricing of audit services, the Company law 159/1981 stated that audit fees should be determined by the General Assembly of Stakeholders (or at least the Assembly determine the maximum range of audit fees) to maintain the independence of the auditors from the management, so that the management cannot use the audit fees as a tool to make pressure on the auditor to uncover any misstatement (Hamad, 2016).

The Egyptian auditing profession and regulations are considered very close to that in the USA and UK, with auditing standards similar to the ISA that will be discussed in much detail later in this chapter.

2.3 The UK context

During 2000s, the UK had been one of the major developed economies and considered one of the highest economic growth rates and the strongest country in the European Union, up till the second quarter of 2008 when the UK entered the recession of GFC (Davis, 2007).

2.3.1 Global financial crisis effect on UK

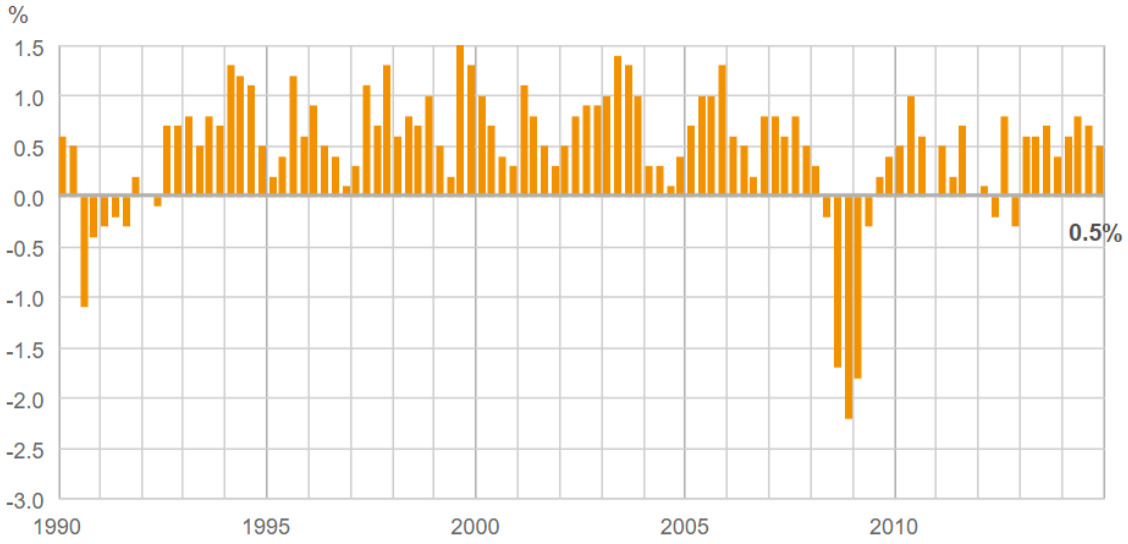
A big shock occurred on September, 2008 when one of the largest banks in the world (Lehman Brothers) filed for bankruptcy, and this was the beginning of the global financial crisis (Kopliku, 2010). According to, Thakor (2015), many factors have contributed to the occurrence of the financial crisis, including, politics, fraud, monetary policies and fragmented regulatory structure. Companies faced a challenging environment of economic recession and illiquid markets which exposed companies to higher risk of violation of debt contracts and bankruptcy.

Both developed and developing countries have been affected, but with different degree. A contraction hit developed countries in a range of 3%-3.5% and developing countries of range 1.5%-2.5% (Zaytoun et al., 2010). A deep recession has affected the United States leading to the loss of nine million jobs in the period from 2008-2009 (Thakor, 2015). A budget deficit of 13% in 2010 was reported for the United Kingdom which has been considered the highest deficit in the G20 countries (Kopliku, 2010).

The British bank "Northern Rock" was the first commercial bank that asked for funding emergency from the British government as a result of the crisis (CFR, 2009). Except the agriculture sector, all elements of the British economy slowed down, with the sharpest shrink in the manufacturing sector that has been contracting by 4.6% (BBC, 2009).

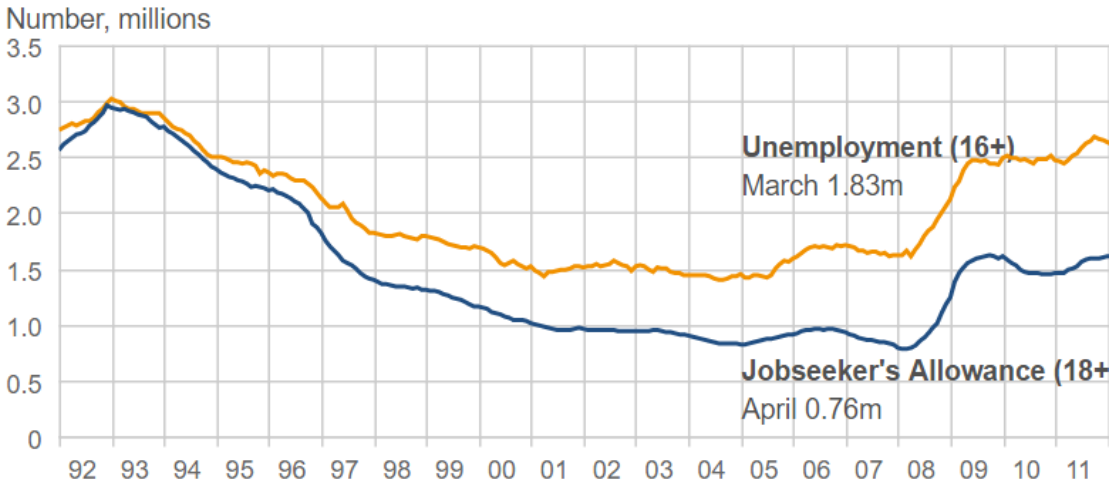
From figure 2-2, it is apparent that UK GDP has been hit sharply during the GFC, at which the GDP growth fall down to -2 which can be recognized as the greatest fall in GDP in UK in the last three decades. Moreover, as illustrated in figure 2-3, by the end of 2008, after the GFC, unemployment started to rise sharply with a rate over 5% or 1.6 million.

Figure 2-2 The UK GDP Growth



Source: (BBC, 2015)

Figure 2-3 Unemployment and Jobseeker's Allowance in the UK 1992-2011



Source: (BBC, 2015)

This recession that has affected different countries and sectors during the GFC, increased the business risk associated with different companies in different sectors. Client's higher risk can affect the auditing profession, as these conditions will create additional pressures on auditors to increase their audit procedures, audit time and may be audit fees. A risk

premium also could be charged as a compensation for higher litigation risk that auditors may face in case if they did not signal clients with going concern issues before they fail. Xu et al. (2013) reported an increase in audit fees in Australia during the global financial crisis and justified this increase because of the higher client related business risk during economic downturn.

However, audit services as any other service could face lower demand in periods of economic recession. Economic downturn can decrease the demand for audit services and increase the competition in the audit market. Therefore, audit fee discounts could happen to attract clients to demand audit services. This was proved by Krishnan and Zhang (2014) who found that clients have negotiated lower audit fees in USA during the global financial crisis. Moreover, Niemi (2002) on his study on Finland listed companies indicated that clients who reported losses usually pay lower audit fees than those clients achieving higher profits. Literature did not much explore the impact of global financial crisis on the auditing profession, and even empirical findings gave mixed evidence.

2.3.2 Audit regulations in the UK

The UK government has undertaken accounting and auditing reforms in 2002 after the recent accounting scandals and corporate failures to maintain the effectiveness of auditing profession and the quality of financial reporting. By 2004, the APB issued the International Standards on Auditing (ISAs) (UK and Ireland) based on the ISA issued by the IAASB (International Auditing and Assurance Standards Board). The APB also issued Ethical Standards to provide guidance on specific issues concerning fees,

economic dependence, litigation and other specific circumstances that may adversely auditor's independence and objectivity.

International Standards on Auditing (ISA) gives guidance regarding auditor independence and explains the nature and scope of an audit. According to ISA, the purpose of an audit is to express an opinion by the auditor on whether the financial statements are fairly stated or not to enhance the confidence of users in the financial statements (ISA200, 2010).

The basis of pricing audit services is the agreed upon audit fee with the client before undertaking the audit process. Paragraphs 6 (b) and 12 of (ISA210, 2010) state that audit fees should be agreed upon and stated in the audit engagement letter. Pricing of audit services reflects the time, skills and experience of the audit staff taking into the consideration the competitiveness of the audit market. ISAs and Ethical standards did not provide a definite basis to calculate audit fees, however, they defined the framework and the guidelines the auditor have to follow while pricing audit services to maintain auditor's independence, objectivity and professional due care.

According to all applicable auditing and ethical standards, the audit partner shall assign sufficient audit staff with required skills and time to perform the auditing process irrespective of the audit fee charged. Moreover, APB 5 states that total fees for audit and non-audit services should not exceed a certain percentage (10% for listed companies, 15% for non-listed companies) of the annual fee income of the audit firm. This percentage should not be exceeded for keeping the auditing firm economically independent, and safeguard the auditor's independence and objectivity. Maintaining the auditing firm economically independent from the audited company is fundamental for

the auditors' objectivity to, in cases of, disagreement with management or issuance of a non-standard audit opinion (Para. 31, 32, 36).

ISA also give guidance on the form and content of the audit report. Paragraph A19 and A20 of ISA 700/2012 state that the audit report date on a company's financial statements shall be the date at which the auditor has gathered all information, approved all available evidence and expressed the appropriate audit opinion on the financial statements (ISA700, 2012). Paragraphs A48 and A49 of ISA 200 give important guidelines for the auditor concerning the timeliness of financial reporting and the balance between benefit and cost (ISA200, 2010). It states that financial statements users expect the auditor to issue his opinion in a reasonable period of time. Therefore, appropriate planning is required by the auditing firm with sufficient allocation of audit time and resources to conduct an audit and to issue the audit report in a timely manner.

2.4 Tourism Industry

2.4.1 Global importance of tourism industry

Tourism plays an important role that contributes to the economy of many countries. According to World Tourism Organisation (UNWTO), tourism industry is the main source of income for around 40% of the world's countries (UNWTO, 2009).

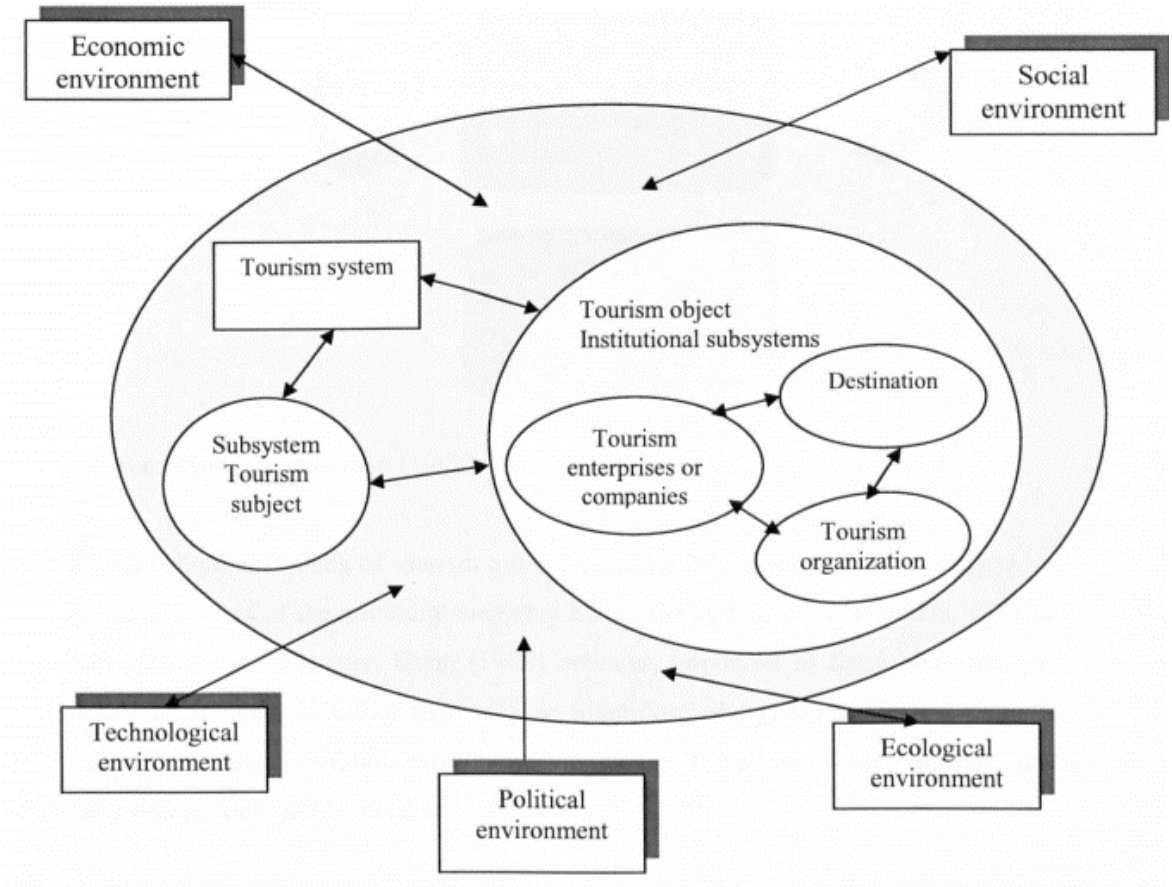
Due to the attractive features of Egypt, in its history, location, climate, beautiful beaches, tourism industry is considered critical to the Egyptian economy. Tourism in Egypt has increased by around 9% annually for the period from 1990 to 2005, but it then suffered recession during the global financial crisis (Morakabati, 2007).

Tourism industry in the UK ranked sixth in the international tourism, and most international tourists arrive to London. The importance of the tourism industry in the UK is represented in two aspects. The first is the ability of tourism industry in increasing income, as tourism sector accounts for 1.2% of the UK economy, the second aspect is the creation of job opportunities, as over 2 million jobs are generated by the tourism activity in the UK (Morakabati, 2007).

2.4.2 Economic and political environment effect on tourism

According to Glaesser (2003), tourism industry is affected by several factors of the surrounding environment, figure 2-4 depicts these factors. Political and economic environment are considered important factors that directly affect tourism industry.

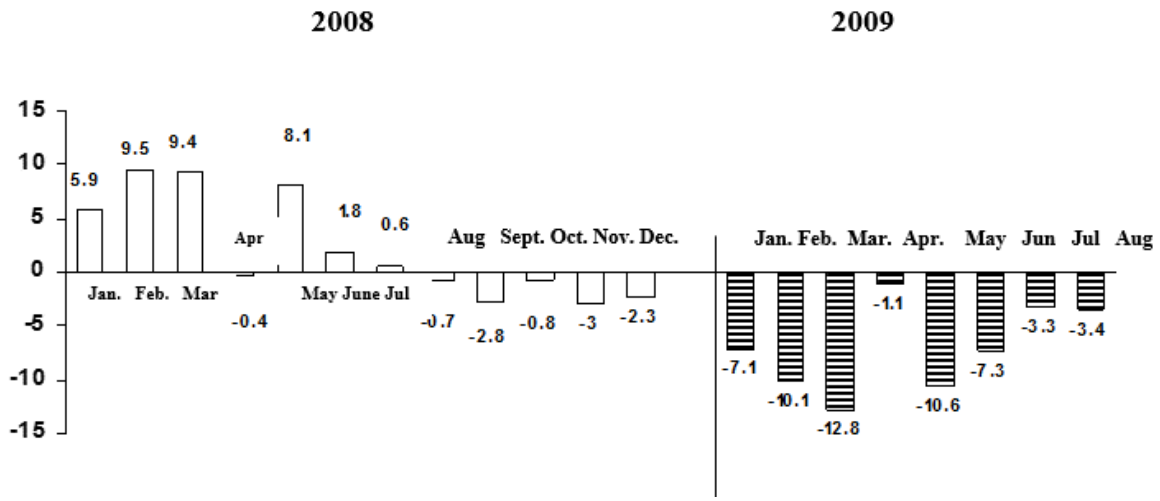
Figure 2-4 The tourism system



Source: Glaesser (2003)

According to the United Nations World Tourism Organization (UNWTO), growth of global tourism was 5% in the first quarter of 2008 compared with the same quarter in 2007 (UNWTO, 2010). In the Middle East, the growth was higher for a round 12.5%. However, UNWTO reported that international tourist demand highly deteriorated during the global financial crisis by the end of 2008 and during 2009 as shown in figure 2-5. Moreover, according to World Travel and Tourism Council (WTTC), during the global financial crisis, the tourism industry share in global GDP decreased by 0.5% due to the economic recession accompanied with this financial crisis.

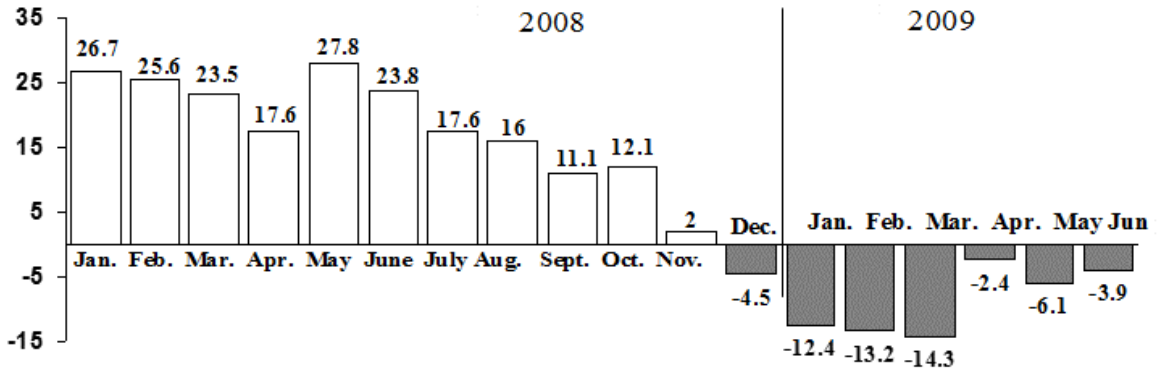
Figure 2-5 Monthly Change in Global international tourist arrivals during GFC



Source: (UNWTO, 2009)

The tourism sector in the Egyptian economy was also highly affected by the high recession of lower tourist demands during the financial crisis as shown in figure 2-6.

Figure 2-6 Monthly Change for tourist arrivals in Egypt during GFC



Source: (Egyptian Ministry of Tourism, 2009)

A successful industry requires stable political conditions at which tourists feel safe and out of harm. That is why, political instability would highly affect the tourism industry

and threaten tourism investments. By the beginning of the Egyptian revolution on 25 January, 2011, tourism industry dramatically affected. By the end of year 2010 after the end of GFC, according to the Egyptian Ministry of Tourism, tourism industry began to achieve higher revenues with more than $12.5 billion. However, by the beginning of Egyptian revolution on 2011, a severe decline in tourism revenues began to happen. According to Egyptian Ministry of Tourism, tourism industry achieved $8.8 billion in 2011 and $5.9 billion in 2013. Moreover, a severe decline in tourism revenues was realized after the Egyptian revolution. This severe decline in tourism revenues by 17.75 % in 2011 and 45% decline by 2013 compared to tourism revenues in year 2010, has highly affected investments in tourism industry in Egypt and thus increased business risk associated with tourism business.

2.5 Summary

A lot of economic and political events have taken place in recent years. Some events have affected most countries all over the world, such as the Global financial crisis. Other events have affected a fewer number of countries such as Arab spring that has taken place in the Arab countries. Global financial crisis affected most of the economies of the countries worldwide. Illiquid markets, unstable stock markets and global economic recession have affected the risk associated with companies and increased the associated agency costs. Political disturbance in Egypt during the period from 2011 to 2013 also affected the Egyptian economy, the stock market and the financial performance of companies.

This chapter has presented an overview of the economic reform adapted in Egypt from 1990s, the recession of the GFC and the political instability that occurred in Egypt during the Egyptian Revolution. It also highlighted how the economy of the UK has been affected by the GFC.

Tourism industry as one of the important industries in the world is considered a very sensitive industry to any instability either economically or politically. As presented in this chapter, tourism industry has been affected negatively by the global financial crisis in Egypt and UK and by the Egyptian Revolution.

As previously discussed, auditing profession in Egypt is very similar to that in the UK, at which Big N auditing firms have a good share in the audit market, and the audit regulations are in harmony with the international auditing standards applied in UK. Since the auditing profession is not isolated from the economic and political environment,

auditors' decisions regarding audit fees and report lag might be affected by any instability in the surrounding environment and by the risky business of any industry. This what will be examined later in this study to find out whether auditors' decisions have been affected or not.

The theoretical framework outlined by audit fees and lag prior literature and other theories, will be discussed in the next chapter.

Chapter 3 Overview and theoretical framework

3.1 Introduction

This chapter provides a background for audit fees, delay, auditor choices and theoretical framework for the present study. First an overview of auditor choice of possible combinations between audit fees and report lag decisions. Then, audit fees and report delay are discussed by presenting their definitions, importance and selected seminal empirical studies formulating the basic theoretical framework.

Later in this chapter, theories related to audit fees and report lag are summarized. Agency theory is discussed with a highlight of the principal-agent relationship. Followed by the signalling theory, that will be further explored to show how audit output can be considered a signal of higher quality companies. Then, the political theory will be further investigated to discuss how the agency and signalling theory could not be purely applied without considering the economic and political environment. Thereafter, client size theories are presented. Finally, a summary of the chapter is presented.

3.2 Auditor choices for audit fees and report lag

In the last four decades, audit market and services have attracted the attention of researchers and regulators. A large body of research has examined the different aspects of the audit market with increased interest in analysing the pricing of audit services and less interest in examining audit effort and delay. According to a literature review for auditing research by Causholli et al. (2010), most empirical studies interested in the audit market has not developed a broad picture of different aspects of auditing research. In

other words, researchers developed little integration between various elements of audit market which resulted in contrary perspectives between empirical results regarding various audit market studies. For example, prior literature (as will be discussed in detail in the next chapter) has supported the increase of audit fees after the issuance of SOX. But what the reason of the increase of audit fees? Was it because of the increase of audit effort and delay associated with the increase of audit requirements by SOX? Or was it because a risk premium due to the increase of the price of risk and penalties imposed by SOX? (Causholli et al., 2010).

Auditors can respond to different risks, characteristics or events either by adjusting audit effort and/or increasing/decreasing audit fees, however, there is limited literature that examined how audit fees and effort are jointly adjusted in response to different events (Schelleman and Knechel, 2010). Integration of auditing research is needed across various components of the audit market to formulate a broader overview and provide a more comprehensive understanding of audit markets, fees, effort and production (Causholli et al., 2010).

Simunic (1980) and subsequent studies have established the main attributes affecting audit fees. However, without making a good linkage of how audit effort is affected, it is hard to determine an appropriate justification of whether the increase in audit fees is due to a risk premium or because of the increase of audit costs passed to the client due to the higher audit effort exerted (Schelleman and Knechel, 2010).

There is a logical expectation that higher audit effort is associated with longer audit report lag at a certain level of audit effectiveness and audit resource allocation (Knechel and Payne, 2001). Since data of actual audit hours is always confidential and only limited

researchers had accessed it, audit report lag is much used by researchers as a suitable proxy of audit effort (Causholli et al., 2010).

Using prior literature and theories framework, that will be discussed in more detail in the next few sections, audit fees and delay models are constructed and hypotheses are tested to examine how audit pricing and delay are modified in response to various attributes and events surrounding the audit engagement, various choices can be selected by the auditor as suggested in table 3-1. Some attributes or events might result in higher/lower audit fees or higher/lower audit delay or a mix between them.

Table 3-1 Combinations of auditor choices and suggested justifications

	Lower audit fees	*Higher audit fees*	*Audit fees not affected*
Longer audit report lag	**Choice (1)** Audit risks discovered during the auditing process and after agreeing on the audit fees	**Choice (2)** Higher audit effort and costs passed to the client	**Choice (3)** Auditors are more conservative
Shorter audit report lag	**Choice (4)** • Recession in audit market • Economies of scale are realized because of more qualified audit staff	**Choice (5)** Higher qualified audit staff with higher audit rate and costs passed to the client	**Choice (6)** • To create higher competitive advantage in the audit market • Economies of scale are realized because of more qualified audit staff
Audit report lag not affected	**Choice (7)** • Audit fees discount to attract clients for competition issues • Client negotiation bargain • Recession in audit market	**Choice (8)** • More audit staff needed with costs passed to the client • Audit risk premium	**Choice (9)** Not significant driver of audit effort or fees, and therefore auditor has no response to that driver

Source: The author

In the next sections, a brief discussion is presented regarding prior seminal studies of audit fees and report lag and the theories from which hypotheses are derived.

3.3 Audit fees theory and the functional form of the audit fees model

According to, Causholli et al. (2010), audit fees reflect interdependence of audit demand, audit market structure, audit firm nature and the actual cost of the auditing process. Some researchers defined audit fees as the cost determined in the contract to be incurred by the client to the auditing firm for auditing the financial statements (El-Gammal, 2012; Rusmanto and Waworuntu, 2015). Or as the amount of fees the company pays for the verification of financial statements to have an opinion assessing their consistency to GAAP (Santos et al., 2015).

Audit fees paid to auditing firms are usually composed of three parts: (i) fixed cost of performing the audit process and issuing the audit opinion, (ii) litigation cost for possible audit failure and loss of reputation and (iii) profit margin determined by the audit firm and market competition (Zhang and Huang, 2013).

Simunic (1980) has been the first study to examine audit fees by developing a model of the process by which the audit fees are determined. This seminal study considered the external audit to be a subsystem of the company's financial reporting system and the audit service demanded by the company is viewed as an economic good that will result in marginal benefits and costs. The model developed by Simunic (1980) hypothesized

that audit fee is the product of the unit price and quantity of audit services demanded by the company's management, in addition to, the auditor's share in potential future losses from defects in the audited financial statements. In other words, audit fees consist of two main elements: (a) direct audit costs added to profit mark-up and (b) potential future losses that might arise related to the audit. Thus, audit fees model represents the determinants that affect audit quantity and price and potential associated audit risk. Simunic (1980) classic model of audit fees was:

$$E(\check{C}) = cq + E(\check{d}/a,q)E(\check{O}),$$

Where:

$E(\check{C})$ is the expected total audit cost, c is the cost per unit (including profit mark-up), q is the quantity of audit resources used, $\check{d}$ is the present value expected future losses that may arise from current audit, a represents the resources the client devoted to audit related activities and $E(\check{O})$ is the probability of suffering future loss by the auditor related to the current audit.

However, this previous equation, cannot be applied empirically except by accessing internal data of the auditing firm that is not available to all researchers (Picconi and Reynolds, 2013).

Francis (1984) has developed the previous equation to adopt the logarithmic audit fee model to define the association between the log of audit fees and other predictor variables. This logarithmic audit fees model has become the accepted standard used by most researchers in the accounting and auditing literature. According to Hay et. al. (2006), the common used estimation model used by most researchers is to regress audit

fees log to various measures and attributes that are hypothesized to have a positive or negative effect on audit fees, this model has the following form:

$$\mathbf{In}f_i = \mathbf{b}_0 + \mathbf{b}_1\ \mathbf{InA}_i + \Sigma \mathbf{b}_i\mathbf{g}_i + \mathbf{e}_i,$$

Where, Inf_i is the natural log of audit fees as the dependent variable, while InA_i is the natural log of total assets as a measure of client size. While, $\Sigma b_i g_i$ are the independent variables that are considered potential audit fee drivers/determinants.

Despite that (Picconi and Reynolds, 2013) study has criticized the above model, however, no literature has presented an alternative model. Moreover, an extremely large body of literature has been developed based on this classic audit fees model. These studies have served different purposes, the two major purposes were: (1) examining independence issues concerning the audit process, and (2) evaluating the competitiveness of audit markets (Hay et al., 2006). These studies have tried to investigate the determinants of audit fees in different countries such as US (Ettredge et al., 2007; Lowensohn et al., 2007; Mitra et al., 2007; Hogan and Wilkins, 2008; Scott and Gist, 2013; Villiers et al., 2013; Bryan and Mason, 2016), UK (Beattie et al., 2001; Seetharaman et al., 2002; Matthews and Peel, 2003; McMeeking et al., 2006; Clatworthy and Peel, 2007; Giroux and Jones, 2007; Ding and Jia, 2012), Australia (Ferguson and Stokes, 2002; Ferguson et al., 2003; Goodwin-stewart and Kent, 2006; De George et al., 2013; Yao et al., 2015), Canada (Bandyopadhyay and Kao, 2004), New Zealand (Rainsbury et al., 2009; Hay and Knechel, 2010), Korea (Jeong et al., 2005; Behn et al., 2009), France (Audousset-coulier, 2015), China (Chen et al., 2007; Liu and Subramaniam, 2013; Cahan and Sun, 2015; Shan and Troshani, 2016; Lin and Yen, 2016), Kuwait (Al-Harshani, 2008), Greece (Owusu-Ansah et al., 2010)…etc.

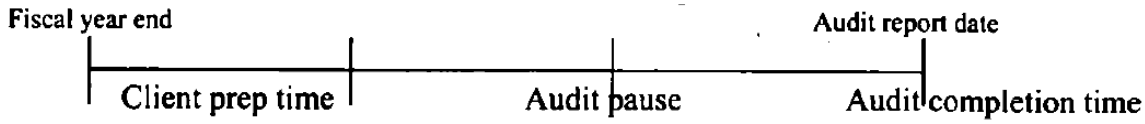
A review analysis has been made by Cobbin (2002) for determinants of audit fees literature, using 56 studies published during the period (1980-2000) in 17 countries. Moreover, using meta-analysis, Hay et al. (2006) decided to summarize a large body of research, about 122 studies, published during the period of (1980-2003) in more than 20 different countries. Further meta-analysis was conducted by Hay (2013) to include more recent published studies on audit fees during the period (2004-2007). Different determinants of audit fees have been reported by various studies, which is discussed in much detail in the next chapter.

3.4 Audit report lag theory and functional form of the audit report lag model

Audit report lag can be defined as the time needed to complete the auditing process (Afify, 2009) or the period between fiscal year end and date of audit report (Leventis et al., 2005; Habib and Bhuiyan, 2011; Knechel and Sharma, 2012; Abbott et al., 2012; Habib, 2015; Shin et al., 2016; Abernathy et al., 2017). A study by Cullinan (2003) has divided the audit report lag into three components, as shown in figure 3-1, at which:

- *Client preparation time*: refers to the time taken by the client to close records and prepare financial statements.
- *Audit pause*: refers to the time between the date the financial statements are ready and the commencement of the audit process.
- *Audit completion time*: refers to the time required to conduct the audit tests and completing the audit process to issue the appropriate audit report.

Figure 3-1 Audit report lag components



Source: Cullinan (2003, p. 184)

However, Khlif and Samaha (2014) argued that client preparation time should not be taken into account when calculating the audit report lag, as management may cause much delay in the preparation of financial statements. That is why the study preferred to calculate audit report lag as the number of days between the date at which the audit mission begins (i.e., the date of management submission of financial statements) up till the audit report date. But, in most cases, the date at which the client submit financial statements to the auditor is unavailable. That is why most previous studies measured the report lag by the number of days between financial fiscal year end and audit report date (such as: (Leventis et al., 2005; Afify, 2009; Habib and Bhuiyan, 2011; Abbott et al., 2012; Apadore and Noor, 2013; Whitworth and Lambert, 2014; Shin et al., 2016; Chan et al., 2016)).

Univariate analysis has been used by the earlier studies in examining the relationship between audit lag and some corporate and auditing attributes. For example, Dyer and McHugh (1975) study in Australian setting, is considered one of the first studies to examine determinants of audit report lag using the financial reports of 120 companies during the period from 1965 to 1971. The study was interested in investigating the corporate attributes effect on audit delay, it reported that client size and fiscal year end

are significant determinants of audit delay. Courtis (1976) study in New Zealand settings has also examined various determinants of audit report lag for 204 companies during 1974. However, Courtis (1976) results were in contrary with Dyer and McHugh (1975), as the study reported non-significant associations between client size and audit delay, this contrary results may be because of the sample characteristics, at which Courtis (1976) used only one year data.

Multivariate analysis has been first used by two studies in US setting (Givoly and Palmon, 1982; Ashton et al., 1987) in examining determinants of audit delay using simple regression model. The main form of audit report lag regression commonly used by researchers is as follows:

$$L_{it} = b_0 + \Sigma b_{it} D_{it} + e_{it}$$

Where, L_{it} is the audit report lag of company i in year t, and D represent independent variables that are considered audit report lag drivers/determinants.

Afterwards, a substantial stream of literature has tried to investigate the main determinants of audit report lag using multivariate regression analysis, mostly, in more developed countries such as US (Henderson and Kaplan, 2000; Johnson et al., 2002; Behn et al., 2006; Lee et al., 2009; Knechel and Sharma, 2012; Blankley et al., 2014; Chen et al., 2014; Mitra et al., 2015; Pizzini et al., 2015), Canada (Knechel and Payne, 2001), France (Soltani, 2002), Australia (Sultana et al., 2015) and New Zealand (Habib and Bhuiyan, 2011). Also some studies were undertaken in less developed countries like Egypt (Afify, 2009; Khlif and Samaha, 2014), China (Yan, 2012; Habib, 2015; Chan et al., 2016), Nigeria (Enofe et al., 2013), Bangladesh (Imam et al., 2001), Greece (Leventis

et al., 2005), Korea (Shin et al., 2016) , Malaysia (Apadore and Noor, 2013), Palestine (Hassan, 2016) and Indonesia (Mukhtaruddin et al., 2015). The next chapter discusses in detail the main determinants of audit report lag reported by prior literature.

Personnel resources have been argued to be the key controller of report delay. As, by surveying 179 audit partners in a US international audit firm in 2001, Behn et al. (2006) have summarized the impediments that hinder auditors from finishing the audit process quickly. Results suggest that insufficient personnel resources for both the client and the audit firm is the biggest burden that hinder the reduction in audit report lag. Similarly, Knechel and Payne (2001) suggest that the availability of audit personnel and their experience control the issuance of audit report in a timely manner. Moreover, Shin et al. (2016) found that if experienced personnel responsible for internal control exists in the company, this will help in completing the audit process more quickly due to the timely relevant information that will be provided to the external auditor.

Researchers have been interested in examining audit report lag because it is considered a proxy of audit timeliness and efficiency. The more efficient the auditors perform, the more timely audit reports will be issued (Habib, 2015). In other words, the audit process can be perceived to be efficient, if the audit is conducted more quickly while obtaining an effective outcome (Knechel and Sharma, 2012). Moreover, audit report lag is considered the single most important determinant of timeliness for earnings announcements and financial information. Investors prefer shorter audit report lag because as early as they receive audit report, they can timely decide their investment preferences. Timely financial information has been perceived to have various benefits by academic studies. Afify (2009) assures that conveying audit opinion in a timely

manner helps in enhancing decision making for investors, reducing information asymmetry, and affecting the timing of earnings announcement by the company. Moreover, longer report lag reduces information quality (Knechel and Payne, 2001) and indicates a delay in earnings announcement which is directly related to stock prices and lead to a decrease in the efficiency of financial information in the market (Leventis et al., 2005). Similarly, Mukhtaruddin et al. (2015) confirm that a delay in the financial information lead to a loss in the ability of financial statements to influence or make a difference in the investor decision making. Also, studies by (Apadore and Noor, 2013; Whitworth and Lambert, 2014) claim that excessive delay in reporting reduces the relevance, reliability and usefulness of reported financial statements and may lead to the loss of investors trust. Blankley et al. (2015) argue that abnormal audit report lag gives a warning signal of the likelihood of future restatements. Similarly, a study by Chan et al. (2016), found that companies with longer report lag are more likely to have non-standard audit opinion and even restatements in subsequent years.

After discussing the main prior studies that constitute the theory and functional forms of audit fees and report lag models, other theories that also underline assumptions of this study and prior studies are discussed in the next few sections.

3.5 Agency theory

Despite that the company is considered by law a separate legal entity, but it still does not act as an individual. Instead, management act as an agent for the company under certain contract and is appointed to manage daily operations of the company. Nowadays, there is a dispersed ownership at which shareholders are not mainly involved in the companies'

decisions, while managements act as the agents who are responsible for the decision making. This how the agency relationship exists, it is represented by a contract under which the owners (principal) of the company engage another person (agent) to perform some service on their behalf which involves delegating the authority of decision making to the agent (Jensen and Meckling, 1976). The agency theory assumes that the company is a nexus of contracts between the principals and the agents who are responsible for using and controlling the economic resources invested by the principals/owners (Adams, 1994).

Management generally has an information advantage due to their direct involvement in the daily operations of the company (Jensen and Meckling, 1976). That is why, information asymmetry is considered an important attribute of the financial statements. The financial statements are normally produced and controlled by management, while owners are not involved in their preparation. Owners need to have relevant and reliable financial information to be able to evaluate and expect the potential risks of their investment. According to the agency theory, conflict of interest between management and owners of the company may exist. At which managers can misreport the financial information and exploit the information in favour of the management (Carcello et al., 2002). Management may not provide all necessary information to owners, and even may manipulate it. For example, manipulation by management could happen by increasing the net income of the company in order to receive more bonus (Watts and Zimmerman, 1983).

The agency theory posits that the distinction between ownership and managerial decision making creates agency problems between agents and principals (Watts and Zimmerman,

1983). According to Adams (1994), there are two main problems related to the agency relationship between the principal and the agent. “Moral hazard” is the one of the agency problems, at which agents act against the interest of the owners and use the contracting process in favour of maximizing their wealth (Jensen and Meckling, 1976). The second problem is “Adverse selection” at which the principal does not fully access all the available information that the agent take into consideration during the decision-making process, which make the principal unable to evaluate whether this decision has been made for the best interest of the company or not (Adams, 1994).

Lessening the effect of agency problems can be accomplished by monitoring the behaviour of the agent. Monitoring costs can involve appointing appropriate agents such as external auditors and paying audit fees to them, costs related to internal control implementation and creation of policies and procedures. Agency theory recognises external auditing as the most efficient monitoring activity to reduce information asymmetry and mitigate conflict of interests (Watts and Zimmerman, 1983). The demand for auditing is highly connected to the agency theory. According to Wallace (1980), investors demand audit services to improve the quality of the financial information. He further suggests that audited financial statements can: (i) reduce both market risk and any company-specific risks, (ii) improve quality of information supplied for decision making.

Auditors provide management, investors and other users with independent, reliable and timely assurance on the financial information and the value of assets. An independent audit should mitigates the risk of fraud or illegal reporting in the financial statements, and therefore provides recommendations that can improve the internal control and operational efficiency of the company (Wallace, 1980; Chow, 1982).

Therefore, according to the agency theory, the role of auditors is to mitigate the information asymmetry between managers and investors (Wallace, 1980). A company with more information asymmetry will need more audit effort, time and fees. Information asymmetry increases when company's size, risk and complexity increase due to problems of difficulty in valuation of accounts and that need more audit tests by the auditor to make sure of the accounts accuracy.

According to Jensen and Meckling (1976), costs paid by the principals for monitoring the actions of managers are called agency costs. Thus, audit fees are considered an important component of agency costs. Because auditors are responsible for ensuring that managers are behaving in favour of owners' interests not their own wealth.

In this study, the monitoring costs of appointment of auditors; i.e. audit fees, are studied as mechanisms that may mitigate agency problems. Moreover, the larger the agency problems, the more time the auditors will take in inspecting the company's financial information and thus the longer audit report lag associated. Thus, the agency theory is a basic theory that provide a general framework for both audit fees model and audit report lag model.

3.6 Signalling theory

Signalling theory has been developed by Spence (1973) to explain why managers disclose accounting information. Similar to the agency theory, signalling theory addresses the information asymmetry resulted from the separation of managers and ownership. This theory argues that agency problem of information asymmetry can be reduced when management gives signals of information to investors (Ezat, 2010).

Signals are the actions taken by management to provide quality information concerning the financial position of the company to investors (Spence, 1973). Therefore, higher quality companies would like to distinguish themselves from lower quality ones by signalling their good performance and achieving higher good reputation. Also, companies with bad news have motivation to disclose more timely information to avoid bad reputation that may arise because of late disclosure (Ezat, 2010).

The signalling theory explores how auditors can be considered a signal by management in the stock market. Companies may appoint higher quality auditors to send signals to interested parties on the quality of financial information. According to Moore and Ronen (1990), a better company can afford to appoint an expensive auditor to signal that it is a profitable company with higher quality expensive auditor that can add to the creditability of financial information.

Moreover, stock price of the company could be influenced by the earnings announcement and issuance of financial information. Signals of good or bad news provided from the financial statements will affect the decision of the investors and consequently the stock price of the company (Mukhtaruddin et al., 2015). Therefore, timely accounting information signals a good quality information provided by the management while a lower quality company will tend to not provide information in a timely manner. Non-timely information may give indication that there is bad news the company do not want to publish which may lead to a decrease in the company's stock price.

In this study, according to the signalling theory, a longer audit report lag could give a bad signal to investors concerning the company, while a shorter one confirms the quality of the information provided in the stock market. Moreover, the higher quality and

expensive audit firm could signal higher creditability for financial statements. Therefore, signalling theory provides a theoretical framework for our hypotheses for audit fees and report lag models.

3.7 Political theory

According to (Gourevitch, 2003; Roe, 2003; Pagano & Volpin, 2005), the political theory argues that any company is affected by the country's political and social environment. The political and social environment defines how the rights of the investors are protected. As if the legal and political system is strong, investors rights are expected to be well protected and thus the agency problems are mitigated because of the strong legal environment will rescue investors in case of management abuse (La-Porta et al., 1998). However, in weak political and legal environment, the company will react to such weakness to protect investors in different ways (Gourevitch, 2003; Roe, 2003; Pagano & Volpin, 2005). Reshaping the company's corporate governance mechanisms is one of the ways suggested by Roe (2003) that the company may select to face severe political and economic instability. Another way is to have a higher quality assurance services by selecting better auditing services. Better auditing services could mean more audit procedures with more effort and time by auditors and also may be higher fees.

Therefore, in this study, only applying purely agency and signalling theories may not capture effectively the instable environment at which the study is conducted and thus will not be informative. That is why it is necessary to integrate political theory with both the agency and signalling theories. Thus, taking into consideration the

political perspectives during the development of the study hypotheses. As the political environment in a country affects the related agency costs that investors have to bear to protect their rights.

3.8 Client size theories

According to Cullinan (2003), there are three theories related to the effect of client size on audit report lag and audit fees:

- **Client preparation theory**: This theory suggest that larger clients are quicker in preparing financial statements because of the better internal control those clients enjoy. According to this theory, the larger the client, the faster the preparation of financial statement, and therefore the client preparation component of report lag is much shorter leading to a shorter audit report lag (Ashton et al., 1989).
- **Client service theory**: This theory suggests that audit firms give priority to larger clients because of their importance due to the higher audit fees those clients pay. Thus, audit firms can devote their resources to finish auditing larger clients as soon as possible. According to this theory, larger clients enjoy shorter audit report lag because of the expected short pause component of audit lag (Bamber et al., 1993; Schwartz and Soo, 1996).
- **The transactions theory**: This theory suggests that larger clients have huge number of transactions. As the transactions increase, the effort and time exerted by the auditor increase. The increase in audit effort will lead to higher audit fees charged by the client and longer audit report lag accompanied because of the longer audit completion time component of the audit lag (Simnett et al., 1995).

This theory is very related to client size that is considered a very important driver identified by prior literature of audit fees and report lag.

3.9 Summary

This chapter has discussed the proposed suggested combinations of auditor choices and decisions concerning audit fees and report lag. Then it summarized some seminal prior literature of audit fees and report lag that constituted the theories and functional forms of these models. Afterwards, main theories shaping hypotheses of audit fees and report lag haven been discussed.

Demand for auditing arise from the principal-agent relationship that involve conflict of interests and the assumption that agents may maximise their own self-interest at the expense of the owners. Owners need external auditing to give assurance that management is carrying out their role without manipulating the financial information. Agency theory recognises external auditing as a monitoring mechanism that play an important role in mitigating the agent-principal conflict. Audit fees reflect the economic costs for the company to monitor the performance of the management.

Agency problem of information asymmetry can be reduced when management gives signals of information to investors. Signals are the actions taken by management to provide quality information concerning the financial position of the company to investors. Timely information is one of the signals that characterise the quality of the financial information. Audit report lag is one of the important drivers of the timeliness of financial information. Therefore, auditing services help in signalling the timeliness of the financial performance of the company to the investors that affect the stock price.

In periods of instable economic and political conditions, applying a purely agency and signalling theories may not capture effectively the role of auditing. It is necessary to

integrate both the political theory with agency and signalling theories. As agency problems and bad signals may increase in severe economic conditions and political conflicts, at which the right of investors may not be fully protected, and thus the importance of assurance by independent auditor may increase. Risks associated with instable economy and political conflicts may lead to an increase in audit procedures, longer audit report lag and even higher audit fees.

Client size theories also affect the strategy taken by the auditors during pricing audit services, performing the auditing process and exerting audit effort.

In sum, prior literature results integrated with Agency, Signalling, Political and client size theories, underline the main hypotheses used by this study, as will be shown in chapter 5. The next chapter will critically analyse the main findings by prior studies concerning different determinants of audit fees and report lag.

Chapter 4 Determinants of audit fees and report lag: A Literature review

4.1 Introduction

This chapter summarizes the major results in previous studies focusing on determinants of audit fees and audit report lag. The aim of this chapter is to review results of various studies with evidence obtained from different auditing markets. Therefore, they are important references for this study in Egyptian an UK context. This chapter reviews literature on determinants of audit fees and audit report lag. Then a conceptual framework of the current study is outlined. A summary of this chapter is then presented.

4.2 Determinants of audit fees and report lag

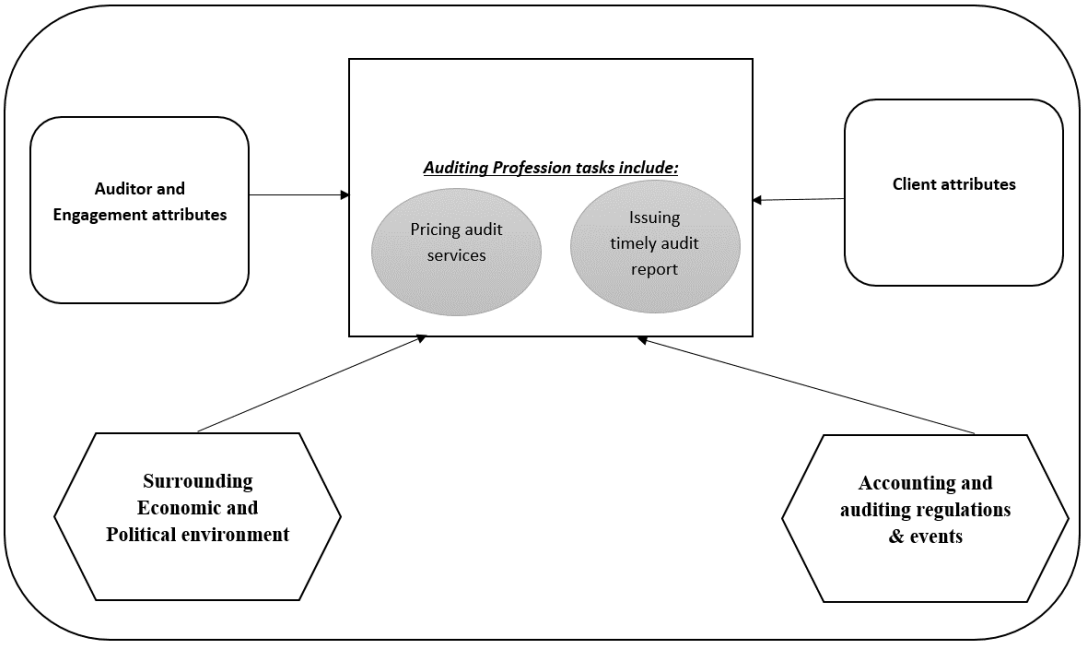
Client, auditor, engagement attributes and surrounding environment, regulations and events are considered the main drivers that affect auditing decisions. These drivers affect both decisions related to pricing of audit services and audit report timeliness, as shown in figure 4-1. Meta-analyses of prior audit fees literature (Hay et al., 2006; Hay, 2013) and a review study by Abernathy et al. (2017), have also classified main determinants of audit fees and delay into client, auditor and engagement attributes, and, they have also included new events and regulations as drivers of audit fees and delay.

However, despite that literature have found that these attributes affect both audit fees and report delay decisions, still most results of prior studies concluded different proxies for these attributes that have direct effect on audit fees and delay. A summary of different

proxies that commonly used in each model is summarized in Appendix II, these proxies are used as a reference while building audit fees and report delay models in this study.

The next few sections will briefly discuss different determinants of audit fees and delay. A summary of the objectives, results and sample characteristics of prior studies are included in Appendix I.

Figure 4-1 Determinants of audit fees and report lag



Source: The author

4.3 Client Attributes

4.3.1 Client size, risk and complexity

Larger client size means more accounts and transactions and thus more elements compromising the accounting population. Since external auditing is a sample based process, larger accounting population requires larger sample size (Simunic, 1980). More

effort and time are required to be exerted by the auditor to examine whether client's accounts are prepared in conformity with GAAP (Generally accepted accounting principles) or not (Hay et al., 2006). Moreover, larger clients are usually more decentralized, thus asymmetry of information is highly highlighted and hence that needs greater effort for monitoring and auditing to resolve associated agency problems (Ahmed and Goyal, 2005). The more decentralization and diversification of the financial reporting entity, the more complex it is. Companies that are cross-listed in other countries indicate more complexity, effort and costs for the auditors to audit several client's locations in various countries with diverse disclosure requirements and different shareholders' backgrounds (Hay et al., 2006). The more complex a client is, the harder it is to audit and the more time-consuming the audit is likely to be.

Audit risk is the risk that third parties litigate the auditing firm for damages related to misstatements in the financial statements audited (Simunic, 1980). Client's business risk is defined by Arens and Loebbecke (2000) as the risk that the auditor will suffer harm because of his relationship with a client even if the audit report was correct. Client's business risk increases auditor's litigation risk, that may lead to not just potential liability payments incurred by the auditor, but also a damage in reputation for the quality of its services which could much harm the audit firm (Lyon and Maher, 2005). For litigation financial and reputation costs, auditors must be prepared to defend their decisions in court (Tang et al., 2017). That is why litigation risk is considered an important factor while planning audit process. To avoid litigation risk, the auditor should increase audit evidence by exerting more effort in understanding client's industry, strategy and

processes of the client or charge audit fee premium to compensate related risks (Lyon and Maher, 2005; Bell et al., 2008).

Simunic (1980) study was the first to give evidence of the significant positive effect of client size, complexity and risk on audit fees. Several studies afterwards (e.g. (Matthews and Peel, 2003; Dickins et al., 2008; Bryan and Mason, 2016; Sharma et al., 2017)), have reported the same evidence. A review analysis has been made by Cobbin (2002) for determinants of audit fees literature, using 56 studies published during the period (1980-2000) in 17 countries. The review has given evidence that client size, complexity and risk are the most significant determinants of audit fees in all studies regardless of the level of differentiation across different countries. Moreover, using meta-analysis, Hay et al. (2006) decided to summarize a large body of research studies published during the period of (1980-2003) in more than 20 different countries. The meta-analysis study also confirmed that client size, complexity and risk are considered audit fee drivers that are consistently significant across studies, samples and countries. Further meta-analysis was conducted by Hay (2013) to include more recent published studies on audit fees during the period (2004-2007), and it also supported the previous results of the significant effect of client size, complexity and risk.

However, prior literature of audit fees that confirmed the significance of client size, risk and complexity in audit pricing model are considered highly biased to samples drawn from developed countries. As Cobbin (2002) review of 56 studies includes 31 studies with evidence from US, UK and Australia. Meta-analysis by Hay et al. (2006) for 122 studies includes 103 studies with samples from US, UK and Australia. Also Hay (2013) meta-analysis of 67 studies published during 2004-2007 includes 42 studies with samples

from the same developed countries. Whereas, different results have been observed from studies of samples drawn from developing countries. For example, a study by (Al-Harshani, 2008) on Kuwait audit market during year 2006, has found that client complexity is not a significant indicator in audit fees model. Another study on emerging economies (Pakistan, India and Bangladesh) by Ahmed and Goyal (2005) for year 1998 as a sample period, also has shown non-significant relation between audit fees and client complexity. This may give some indication that client complexity effect on audit fees may not apply to all audit markets in different countries, especially, less developed countries where clients are not often cross-listed or do not have subsidiaries in other countries. However, these two studies (i.e. (Ahmed and Goyal, 2005; Al-Harshani, 2008)) have used a one-year sample which is considered a very limited time period to generalize conclusions concerning client complexity effect on audit fees model in developing countries. Further studies of audit fees model in developing countries for a longer sample period could be recommended for future research to confirm consistency between markets in audit fees drivers.

Similarly, audit delay literature gives mixed evidence for different audit markets concerning client size effect on audit delay. Some studies, in less developing countries, argue that companies with large total assets are expected to take longer time to be audited due to the increased audit procedures needed which prolong the audit report lag. These results were reported by Afify (2009) study on Egyptian audit market, by Leventis et al. (2005) study on Greece audit market, and also by Yan (2012) on Chinese audit market. Whereas, most studies in US (Ettredge et al., 2006; Lee et al., 2009; Abbott et al., 2012; Whitworth and Lambert, 2014; Meckfessel and Sellers, 2017; Sharma et al., 2017), New

Zealand (Habib and Bhuiyan, 2011) and Australia (Shin et al., 2016) reported a negative relationship between client size and audit delay. Those studies argue that large companies have more advanced accounting systems and stronger internal controls that reduces the probability of financial errors to happen and thus lead to more timely audit reports. Or because larger clients are able to exert more power and pressure on auditors to finish audit report timely or can pay higher audit fees and appoint more qualified auditors to finish the auditing process as soon as possible. Differences between audit markets also appear to affect some determinants of audit report lag (which will also be highlighted in the next sections), that is why a literature synthesis study by Abernathy et al. (2017) has recommended future research in emerging economies concerning determinants of audit delay.

For client complexity effect on audit report lag, a positive relationship was reported by most previous literature in different audit markets (Ettredge et al., 2006; Habib and Bhuiyan, 2011; Knechel and Sharma, 2012; Chan et al., 2016; Abernathy et al., 2017). Companies characterized by complexity, diversity or significant number of domestic or foreign subsidiaries or high foreign sales ratio may have longer audit report delay because of the detailed audit work and effort needed (Bronson et al., 2017).

4.3.2 Client profitability

Profitability is one of the measures that gives evaluation of the company's operations. It is related to how efficiently assets and other resources are used (Habib, 2015; Shin et al., 2016). A more efficient use of assets and resources results in higher profits for the company (Moradi et al., 2012). Auditor can consider client profitability as a measure of

client performance. It may reflect the extent of loss exposure that could affect the auditor in case if the client is not financially stable (Simunic, 1980).

Despite the argument by some studies that client profitability neither affect audit delay (Leventis et al., 2005; Knechel and Sharma, 2012; Habib, 2015; Shin et al., 2016) nor audit fees model (Rainsbury et al., 2009; Owusu-Ansah et al., 2010; Scott and Gist, 2013; Audousset-coulier, 2015). Other studies argue that auditors may anticipate a financial failure for the company in case of recurring huge losses, which would drive the auditor to be cautious during the audit and spend more time and effort (Afify, 2009; Habib and Bhuiyan, 2011). Many prior studies reported that companies achieving losses suffer from longer audit report delay (Lee et al., 2009; Abbott et al., 2012; Munsif et al., 2012; Blankley et al., 2014; Chan et al., 2016; Meckfessel and Sellers, 2017) and higher audit fees charged (Simunic, 1980; Matthews and Peel, 2003; Hay and Knechel, 2010; Ittonen and Peni, 2012; Fung et al., 2012; Kwon et al., 2014).

A strong criticism could be addressed to previous studies in that they ignore the reason causing the company to loss, and hypothesis that the only reason for the loss achieved is because of the failure of the management in using company's assets and resources which raise the auditor's doubt towards company's performance and increase assessed audit risk. Although, there are many reasons that may lead the company to achieve loss other than the management performance. For example, during the global financial crisis, a lot of companies worldwide were suffering loss due to the economic recession affecting the whole economy all over the world. Moreover, the country where the company is operating may suffer any political or economic instability which may affect companies' performance negatively. Certain industries may suffer from losses during some periods

because of different reasons; such as; introduction of new advanced industries or the overpricing of some inputs during certain periods. Moreover, companies at the beginning of their operations achieve losses because of the beginning up costs that is compensated afterwards when the company achieves success in the market. All these reasons might not give any indication of risk to the auditor regarding the failure of the company especially if reasons for achieving loss is temporary and might be recovered afterwards. Consequently, this might give an explanation for different results reported by prior studies regarding the effect of client profitability effect on audit fees and report lag.

Further investigations for the effect of different reasons of companies' losses should be addressed by future researchers for different countries and during various time periods, to find out how economic and political instability could affect companies' performance, industry riskiness and the related audit effort, report lag and audit fees.

4.3.3 Client financial condition

Clients with high leverage ratio may give indication of financial problems which could lead to a manipulation in financial information to brighten the company's image. Prior literature results give mixed evidence concerning the effect of client financial condition on audit fees and report lag. Mostly, the difference between these results is because of the market from which the sample was drawn. As we can find that most studies with US evidence reported that companies with high leverage suffers from longer audit delay (Ettredge et al., 2006; Knechel and Sharma, 2012; Whitworth and Lambert, 2014) and audit fees premium (Francis et al., 2005; Bryan and Mason, 2016). These studies argue

that financial condition of clients take a considerable attention by the auditors when assessing audit risk. The auditor may need extra time for additional effort exerted to reduce audit risk associated with clients suffering bad financial conditions or ask for audit fee premium to compensate such risks.

However, in other markets, different results were obtained than those reported by US studies. As in the Chinese market, studies reported that companies with high leverage enjoy shorter audit delay (Habib, 2015; Chan et al., 2016). Moreover, lower audit fees for high leverage companies have been reported by (Al-Harshani, 2008) in Kuwait market. The justification for these results was that companies with high leverage attracts more monitoring from creditors and thus should be associated with less audit risk, shorter audit report lag and lower audit fees.

Criticism should be addressed to prior literature as they deal with leverage as it is only a risky attribute to the company without taking into consideration the surrounding economic environment. Taking into consideration the economic conditions for each market might justify the differences between studies in finding out the drivers of audit fees and audit delay. For example, in case of boom economic periods in any country, leverage might not be risky, because interest on debt might be written off the generated revenue and thus there is no risk associated in this case. While in recession economic periods, leverage may cause cash outflow problems because there might not be enough revenues to cover the interest payments. Therefore, associated economic environment should be clarified while explaining the effect of client leverage on auditor assessment of audit risk. Moreover, the trust in the banking system differ from one country to another. Some countries might have a good banking system that auditors can trust in

monitoring clients, while other countries at which bribes are common, the auditor may not trust that creditors can fully monitor the clients' operations and therefore might highly assess audit risk.

Future research could address such concerns about different economic characteristics and level of corruption for each market and how that may affect the assessed audit risk by the auditor.

4.3.4 Industry

The unique characteristics and the operations nature of some sectors; such as, the financial sector, non-profit and charity sectors, set them completely apart from non-financial profit-seeking companies. Some researchers have been interested in examining the audit fees drivers in the financial sector (Fields et al., 2004; Cameran and Perotti, 2014; Ettredge et al., 2014; Krishnan and Zhang, 2014). and in non-profit and charity sector (Beattie et al., 2001; Vermeer et al., 2009). There may be no apparent basis to hypothesize any specific industry effects on audit fees or delay. However, a number of studies (e.g.: (Simunic, 1980; Matthews and Peel, 2003; Hay et al., 2006)) have asserted that certain industries may be more complex, risky or time consuming for an auditor than other industries, which may cause differences in estimating the required audit fees and timely reporting audit opinion for different industries. For example, some researchers argue that financial industries are more complex and require more audit effort than non-financial industries. This was confirmed by Ettredge et al. (2006) study that reported a longer audit report lag for financial sector, also, Taylor and Simon (1999) study reported audit fee premium for financial companies and utility sector.

Moreover, Ettredge et al. (2006) argues that high-tech industries are less complex and are characterized by shorter report lag because of their advanced accounting information systems that allow audit tasks to be done faster. Manufacturing sector has been proven to be charged higher audit fees than non-manufacturing counterparts because of the complexity in auditing manufacturing companies (Matthews and Peel, 2003; Griffin and Lont, 2011). Also, companies working in mining sector have been reported to be charged higher audit fees (Goodwin-stewart and Kent, 2006).

Not only the complexity of the industry that could affect the associated audit fees or delay, but even social norms towards a certain industry can affect the audit engagement. A study by Leventis et al. (2013) has explored what is described as "sin" companies in US; i.e. companies that work in such industries that are considered averse to social norms; such as: alcohol, firearms, gambling, tobacco and nuclear power. The study provided evidence that such industries are charged higher audit fees than other industries may be because of the adverse context towards those industries that may increase client's business risk assessed by auditors. To the best of researcher's knowledge, no other studies explored these industries, despite its importance and anticipated effect on audit fees in some countries, for example, alcohol and gambling companies in countries where prevailed religion beliefs are against these industries.

Most prior were only concerned with how the difficulty of auditing a certain industry can affect the audit engagement. However, each industry can be sensitive to other factors related to social norms and other macroeconomic or political circumstances (e.g. tourism industry as previously discussed in the last chapter) in certain countries or during specific periods that can affect related risk assessments by the auditor and subsequent auditing

decisions. More research is needed to explore the sensitivity of some industries to such factors and the related effect on the audit engagement.

4.3.5 Corporate governance

Recent research has begun to investigate the corporate governance effect on auditing related decisions of pricing and timeliness. The quality of board of directors' oversight is considered an important tool for corporate governance, that is why researchers used it as a proxy for corporate governance in examining its effect on audit fees. Moreover, SOX made the audit committee directly responsible for appointing, compensating and overseeing the external auditor (Owens-jackson et al., 2009). For the importance of the audit committee as a corporate governance tool to protect interests of shareholders, many studies have been interested in analysing the relationship between different characteristics of audit committee and audit fees. There have been many proxies of corporate governance that were used by researchers to determine its effect on audit fees, some researchers addressed internal control reliance and internal audit role as tools of corporate governance to find their effect of audit fees and lag.

A study by Carcello et al. (2002) on 258 observations for US companies during the period 1992-1993, has reported a significant positive relationship between some characteristics of board of directors (independence, diligence and expertise) and audit fees. The study claimed that higher quality board of directors require higher quality audit than normally provided, and thus more audit effort and fees. The study argued that audit committee characteristics are not a significant variable and gives no incremental explanatory power

when the board variables are included in the model. A replicate of Carcello et al. (2002) study has been done by Goodwin-stewart and Kent (2006) but in a less regulated setting in Australia for 400 listed companies during year 2000. Results indicated that higher audit fees are associated with more frequent meetings by the audit committee. Board of directors independence and audit committee characteristics have been reported as a non-significant determinant of audit report delay in most prior studies in Egyptian setting (Khlif and Samaha, 2014), Malaysian setting (Apadore and Noor, 2013) and Chinese setting (Habib, 2015; Chan et al., 2016). While CEO duality has been proven by Habib (2015) study to increase audit report lag due to the higher assessment of audit risk by the auditor because roles of chairman or chief executive are combined, and thus lead to a longer audit report lag.

Another requirement imposed by SOX Section 404 requires companies to include an internal control report in their annual report. This requirement imposes more work and risk on the auditor and thus increases the importance of internal control as a corporate governance proxy when pricing audit fees (Griffin and Lont, 2007). In cases of control deficiencies, higher control and audit risk are assumed, and therefore more detailed audit tests and longer audit report lag are reported (Ettredge et al., 2006; Abbott et al., 2012; Blankley et al., 2014; Khlif and Samaha, 2014; Mitra et al., 2015) and higher audit fees. Raghunandan and Rama (2006) have reported in their study, that on year 2004, audit fees were 43% higher for firms that disclosed a material weakness than other firms without such disclosure. Some studies also found that remediating companies from past material weakness in internal control may incur lower audit fees than companies that continue to report material weaknesses (Hogan and Wilkins, 2008; Hoag and Hollingsworth, 2011;

Munsif et al., 2011; Calderon et al., 2012) and a shorter audit report lag (Munsif et al., 2012).

Professional auditing standards stated that internal auditors may help in auditing the financial statements by either working under the supervision of external auditors or independently during the year, and thus external auditors can rely on them and decrease their efforts and fees (Felix et al., 2001). Internal auditing is considered essential in providing assistance to external auditors due to their client-specific knowledge and their familiarity with the company's processes, suppliers and customers (Abbott et al., 2012). The internal auditors can influence external auditing activities in two ways. First, the internal auditors can maintain a strong system of internal control and, thereby, reduce control risk. Second, external auditors can rely on work performed by internal auditors, depending upon the quality of internal auditors, the higher quality the internal auditors are, the more reliance by external auditors on them (Pizzini et al., 2015). Therefore, reliance of external auditors on internal audit department has been reported by prior literature to reduce time consumption of the auditing processes and therefore results in shorter audit report lag (Abbott et al., 2012; Pizzini et al., 2015) and lower audit fees (Felix et al., 2001; Ho and Hutchinson, 2010; Mohamed et al., 2012; Abbass and Aleqab, 2013). However, Goodwin-stewart and Kent (2006) and Singh et al. (2014) have documented a positive relationship between audit fees and internal audit. They claim the reason for this positive relationship is that internal and external auditing are complementary, and clients tend to strength their corporate governance mechanisms by engaging internal audit department and pay for higher quality external audit.

Mixed results concerning internal audit may be because the studies did not take into account the quality of internal audit, as highly qualified internal auditors could cooperate and help external auditors, but non-qualified internal auditors will not render much help and may consume more time.

4.3.6 Form of Ownership

The demand of audit assurance emerges from the agency problem of information asymmetry between company's management (as agents) and shareholders (as owners). Researchers have examined how the form of ownership could affect auditing decisions regarding audit fees and delay.

A study in Finland setting by Niemi (2005) has investigated the influence of various forms of ownership in 200 companies during 1996 on pricing of audit services. The study argued that lower audit fees are associated with management majority-owned companies due to lower information asymmetry, whereas, higher audit fees are associated with foreign majority-owned companies because of the higher complexity associated with multinational companies. As each subsidiary of a multinational company may require to produce additional financial statements with a different language and thus requires more effort, besides the need to make required foreign currency transformations and transfer pricing. All that would add more complexity to the auditor and therefore more effort and fees. Mitra et al. (2007) study on 358 US companies during year 2000 also confirmed a negative effect of managerial ownership on audit fees. However, both studies used one-year sample that hinder generalization of the results concerning the influence of managerial ownership on pricing of audit services.

Governmental ownership effect has been analysed by Liu and Subramaniam (2013) in their study on 8116 observations during the period from 2001 to 2008. The study argued that in governmental owned companies, auditors tend to charge lower audit fees in exchange of reaping benefits from political connections. However, the Finland sample study by Niemi (2005) argued that governmental owned companies do not differ from other private companies when pricing audit services. These mixed results concerning the effect of governmental ownership on audit fees could be due to differences between countries. As taking advantage and benefits from political connections differ depending on the strict legal legislations applied, corruption and nepotism prevalence in each country. This also confirms that auditing profession is not in isolation from the legal, social or economic circumstances in the surrounding environment and therefore could be affected by these circumstances.

Despite that audit fees literature support the effect of ownership structure on pricing audit services, ownership structure was proved to not affect audit report lag by a number of studies in different countries such as Greece (Leventis et al., 2005), Egypt (Afify, 2009; Khlif and Samaha, 2014), Malaysia (Apadore and Noor, 2013) and China (Chan et al., 2016). This confirms that ownership structure is not a driver in the audit delay model, and that the auditor exerts the same effort whatever the form of the ownership of the company. This may indicate that any increase in audit fees in some cases in ownership structure is a risk premium for potential litigation risk by shareholders and not an increase in audit effort.

4.4 Auditor Attributes

4.4.1 Audit firm size

Over the last 30 years, a series of mergers and takeovers have changed audit market structure. There have been Big 8 international auditing firms in 1985, ended up to Big 4 auditing firms by the beginning of 2000s. These structural changes in the audit market have raised many questions of how that might affect the auditing profession, fees and timeliness. Would audit services offered by Big N be with superior advantages of higher quality services accompanied by faster audit processes and lower audit fees? Or would the demand on Big N auditing firms be high and lead to longer audit delay and higher audit fees charged? There is still contradiction between the results of the studies about the relationship between audit office size, audit fees and audit delay.

A replication of Simunic (1980) study of audit fees in US has been made by Francis (1984) but with a sample drawn from the Australian market. A contradiction in the results of the two studies has been reported concerning the effect of audit firm size on audit fees. At which, Simunic (1980) reported no differences between Big N audit firms and non-big N in pricing audit services, however, Francis (1984) reported that Big N charge higher audit fees than non-big N.

Further analysis of the audit fees in Australian market was conducted by Francis and Stokes (1986) to find out the reason of contradictory results between Simunic (1980) and Francis (1984). Francis and Stokes (1986) reported that, for larger clients in Australia, there were no differences in pricing audit services between Big N and non-big N auditing firms, which was consistent with Simunic (1980) study on US audit market characterised

by relatively large clients. Thus, for very large clients, audit firm size is not significant in affecting audit fees. However, the study reported that Big N charge higher audit fees than non-big N for smaller clients in Australian market, which is consistent with Francis (1984). Therefore, cross-country audit markets with different characteristics and various client size range, may report differences in results reported by studies.

Recent studies have argued that Big N auditing firms offer the advantage of faster audit process with shorter audit delay (Leventis et al., 2005; Meckfessel and Sellers, 2017) and charge lower audit fees (Sundgren and Svanström, 2013). Leventis et al. (2005) study on Athens stock exchange documented that larger audit firms' engagements are associated with shorter report delay. The study argues that big N auditing firms are expected to provide higher quality and faster audit processes than their counterparts of local audit firms because they use higher quality staff, superior technology, more efficient audit planning and resources. Moreover, a study by Sundgren and Svanström (2013) have reported audit fees discount by Big N audit firms in Sweden audit market. The study argued that, the reason behind audit fees discount offered by Big N auditing firms in Sweden, is the allocation of audit related overhead costs to larger number of clients which can lead to lower cost per client and therefore lower audit fees.

However, larger audit firms might suffer workload compression during busy season and despite the larger staff they had, it has not been proven whether auditor/client ratio could compensate this high audit work load or not, and thus larger audit firms' engagements might be accompanied with longer audit delay as reported in some prior studies (Imam et al., 2001; Austine et al., 2013; Whitworth and Lambert, 2014; Shin et al., 2016). Also, many researcher have claimed that Big N auditing firms charge audit fees premium

because of the more audit hours and effort invested, or because of the higher expertise of the auditor that takes the form of higher rate per hour (Hay, 2013). Choi et al. (2008) on his study of audit markets in 15 countries, have reported that Big N charge audit fees premium, especially in countries with stronger regimes, as a compensation of the potential legal liability cost that is considered higher for big N than non-big N. Similarly, a study on New Zealand audit market by Griffin et al. (2009) has argued that big N auditors spend more time and effort – than non-big N- to comply with IFRS, and therefore, they charge audit fees premium. Big N audit fees premium has been supported by the results of many empirical studies especially in US (Whisenant et al., 2003; Ettredge et al., 2007; Munsif et al., 2011; Leventis et al., 2013; Shan et al., 2015).

On the other side, most previous studies results have given empirical evidence that the size of auditing firms has no effect on audit delay (Afify, 2009; Lee et al., 2009; Apadore and Noor, 2013; Khlif and Samaha, 2014; Habib, 2015; Chan et al., 2016). Moreover, audit firm size has been found to have no effect on audit fees by some researchers who analysed audit fees using UK data samples (Seetharaman et al., 2002; Matthews and Peel, 2003; Chaney et al., 2004), and other audit fees samples from Finland (Niemi, 2005; Ittonen and Peni, 2012) and New Zealand (Rainsbury et al., 2009; Hay and Knechel, 2010).

Prior studies can be criticized for being analysing audit firm size in isolation of level of competitiveness in the audit market. Competitiveness in the audit market and Big N dominance could highly resolve the reason behind this contradiction in results. Chen et al. (2007) study on Chinese audit market have found that Big N auditing firms only charge higher audit fees in less competitive market where their dominance are high.

Differences in competitiveness and dominance of Big N in different audit markets and across countries could highly affect the relationship between auditing firm size and audit fees or report lag.

4.4.2 Auditor tenure

Auditor rotation has been viewed by regulators as a means of maintaining auditor independence and improving the quality of financial reporting (Brooks et al., 2017). However, according to a report by General Accounting Office (GAO, 2003), auditors take at least two or three years to know thoroughly client's business and operations. Ashton et al. (1987) suggest that for new clients, the auditor is required to become familiar with client's operations, transactions, control. This start up time for new clients lead to longer audit processes and thus result in more audit delay. On the other side, long-tenured auditors became familiar with the client operations and controls which save much effort and time during the audit process and result in shorter audit delay. This negative relationship between auditor tenure and report lag has been supported by the results of prior literature (Lee et al., 2009; Knechel and Sharma, 2012; Whitworth and Lambert, 2014; Chan et al., 2016; Meckfessel and Sellers, 2017). However, if the auditing firm make adequate planning for the allocation of its resources, the auditing process might not take a long time in presence of adequate audit staff. That is why some researchers (Leventis et al., 2005; Munsif et al., 2012; Yan, 2012; Blankley et al., 2014; Habib, 2015; Shin et al., 2016) proved that auditor tenure has no significant effect on audit report timeliness.

Despite that new clients need more effort and time from the auditor, most audit fees literature (Whisenant et al., 2003; Ghosh and Lustgarten, 2006; Krishnan and Yu, 2011; Evans Jr. and Schwartz, 2013) reported empirical evidence that auditors usually offer initial discounts for new clients. Obtaining a reduced audit fee from a new auditor is a common reason for clients to change auditors. This may justify the reason why auditors offer these initial discounts.

However, it is not reasonable that a new client, who needs more audit resources with higher audit cost, to have an initial fees discount. That is why studies by Bell et al. (2008) and Munsif et al. (2011) have reported that new clients do not enjoy any fee discounts for initial engagements.

Again, audit market competitiveness could play an important role in determining whether new clients would have initial discounts or do they really are accompanied by much audit delay. Would initial discounts/faster audit delay be offered in a competitive audit market to the same extent like that in a non-competitive one? Would initial discounts/faster audit delay be offered by an auditing firm which dominate the audit market or by an auditing firm with a small share in the audit market? Or in other words, do an auditing firm that dominate the audit market, offer initial discount/faster audit delay to attract clients? All these questions were not answered by prior literature, and need much research to be conducted to answer these questions.

4.4.3 Auditor Specialization

Industry specialist auditors are those auditors who are well trained and largely experienced in a particular industry (Bae et al., 2016). As a differentiation strategy, audit firms tend to specialize in specific industries to render higher quality services to clients than other non-specialist audit firms (Hay, 2013). Auditor specialization is considered the gained expertise by the auditor through training, learning, and practicing of auditing in a certain industry (Mayhew and Wilkins, 2003).

Industry specialized auditors are perceived to have a comprehensive understanding of client's operations and characteristics due to their training and experience that is focused in a certain industry (Bae et al., 2016). Because of the industry related knowledge, training and skills acquired by industry specialist auditors, they are expected to finish audit work faster and thus have shorter audit report lag (Yan, 2012).

The relationship between auditor specialization, audit fees and delay is still an open question, where results are still mixed. Some researchers argue that engaging an industry specialist auditor lead to several benefits of (a) a shorter audit delay because industry specialists are expected to have the required skills to finish audit faster than non-specialists (Whitworth and Lambert, 2014), and, (b) an audit fee discount due to the effect of economies of scale from spreading audit investment costs over a large number of clients in the same industry and so they can pass the benefits of cost savings to clients in the form of fee discount (Defond et al., 2000; Fields et al., 2004).

Other researchers did not support these benefits and claimed that specialist auditors are associated with longer audit report lag because auditor specific industry expertise attracts

clients with much sophisticated audit issues that may require additional time to resolve (Blankley et al., 2014). Moreover, audit firms tend to invest in developing skills specific to industries and expertise needed, and they require a fee premium to compensate their investment (Ferguson et al., 2003; Francis et al., 2005; Wang et al., 2009; Fung et al., 2012; Zerni, 2012; Scott and Gist, 2013). Also, Bae et al. (2016), argue that higher audit fees associated with auditors' industry specialization is due to higher audit rate per hour charged by specialized auditors or greater audit hours.

The conflicting evidence of the literature of the effect of industry specialization on audit fees and delay is mainly because of the definition of industry specialist. According to literature, an audit firm can be an industry specialist if (a) its market share (based on audit fees or client audited total assets) is higher than a specific cut-off (e.g. 20% or 30%) (Craswell et al., 1995; Habib, 2011), or (b) its market share is considered from the top one or two auditing firms in the industry (Ferguson and Stokes, 2002; Ferguson et al., 2003), or (c) if the audit revenue realized in a certain industry is considered the highest (Hay and Jeter, 2011; Habib, 2011). Various definitions and measurements of industry specialist used in different studies results in different findings of the effect of industry specialization on audit fees or report delay. More research need to be conducted on evaluating various definitions of industry specialization and finding out what is the most appropriate definition to be used for either audit fees model or audit delay model.

4.4.4 Audit partner gender, education and experience

Individual characteristics of auditors might be an important determinant in the whole engagement process between the client and audit firm, as it could affect engagement planning, negotiation skills and risk preference.

Audit partner gender has been one of the individual attributes that attracted the attention of some researchers. Due to the differences between female and male, some studies were interested in investigating the relationship between audit partner gender and audit fees.

A study by Ittonen and Peni (2012) examined the effect of auditor's gender in Nordic countries (Finland, Denmark and Sweden) on audit fees. The study concluded that female audit partners charge higher audit fees, and suggested that potential reasons for this audit fees premium are the special characteristics of female auditors of higher level of preparation against audit risk, more diligence and lower overconfidence. Similar results were obtained by some other studies (Li and Shi, 2012; Nan-wei et al., 2014) in Chinese audit markets, where findings reported higher fees charged by female auditors than male counterparts. Potential results were suggested that female auditors are more risk aversions and exert more effort and time in audit engagements. In the contrary, a study by Huang et al. (2015), in Taiwan audit market, documented a negative relationship between the existence of a female audit partner and audit fees. The study accused Taiwan's auditing industry to be discriminative as it proved that female audit partners are associated with higher client earnings quality, which prove that audit fees differences cannot be explained by the superior audit quality of male.

Quantitative methodology adopted by prior literature cannot explain individual characteristics differences between male and female auditors. Only suggestions by authors with no theoretical basis or empirical evidence have been presented to explain the reason why would female auditors charge higher/lower audit fees than male auditors. Qualitative methodology by interviews or questionnaire can be used besides the quantitative one to find out whether there are real differences between female and male auditors in performing audit procedures, negotiating audit fees or assessing audit risk. Semi-structured interviews were adopted by Abed and Al-badainah (2013) study in Jordan audit market and found that audit partner gender has no effect in determining audit fees. However, the sample has been very limited consisting of only 5 male interviews and 5 female interviews, and therefore, results cannot be generalized. Moreover, discrimination between male and female is another factor that differ across countries depending on the prevailed social beliefs, and thus, should be taken into consideration when evaluating the effect of gender on audit fees.

Education and experience of audit partner are other individual attributes that few studies have investigated. A study by Allen and Woodland (2010) examines the effect of the 150-hour education required to enter the US accounting profession on audit fees and finds higher audit fees were realized after the implementation of this requirement. In the Chinese audit market, a study by Cahan and Sun (2015) also reported that audit fees increase when the audit partner's years of experience increase or when the audit partner has a postgraduate degree.

However, researchers only concluded that audit fees increase when the experience and education of the audit partner increase without analysing how the auditing process can

be affected by different audit partners with different experiences and education levels. Again, qualitative methodology can be used by future researchers to analyse how experience and education level of audit partners could affect the audit process and pricing of audit services. Future research also is needed to analyse whether individual auditor attributes have an effect on audit delay, as there is no single study that have tried to analyse this relationship.

4.4.5 Auditor Location

Some researchers have argued that pricing of audit services is affected by the auditor location, especially in more developed cities. It was claimed that higher fees could be charged to some cities in some countries where costs are higher than the rest of the country (Hay et al., 2006).

Clatworthy and Peel (2007) on their study on UK audit market, found that auditors located in London charge higher fees than other cities. However, a study by (Chen et al., 2007), found that auditors in more developed cities in China (Beijing, Shanghai, Shenzhen, Guangzhou) charge lower audit fees than other less developed cities in China. Most large companies are located in more developed cities, and therefore audit fees may be higher in developed cities because clients are usually larger and therefore have more transactions than those located in non-developed cities. Thus, the reason that audit fees is higher in developed cities can be because of the large size of clients located in the city not because of the development of the city by itself. This may be why auditor location

has not been used as an audit fees driver by most researchers. No single study has reported that auditor location could affect audit delay.

4.5 Engagement Attributes

4.5.1 Non-audit services

In the late 1990s and early 2000s, accounting firms began to market a variety of high-margin non-audit services to their audit clients. In those years, the accounting profession was criticized by focusing on non-audit services which affected required independence. Auditors were accused of being not sceptical enough and not implementing auditing standards in a sufficient manner because of the lack of oversight and accountability (Zeff, 2003)

After Andersen demise, SOX prohibited auditors from providing some categories of non-audit services to audit clients. Examples of these categories were: bookkeeping services, financial information systems design and implementation, management functions or human resources, and outsourcing of internal audit services. This rule was issued due to the belief that non-audit services affect auditor's independence, in that auditors might use their auditing services as a loss leader to attract non-audit services (Cosgrove and Niederjohn, 2008)

Results of prior studies (Francis et al., 2006; Hay et al., 2006; Holland and Lane, 2012; Hay, 2013) suggest that disclosure of non-audit and audit fees are of relevance to investors, as well as the information about auditor income. Regulations obligated auditors to disclose both audit and non-audit fees paid by clients, this requirement was

raised because of the belief that economic bonding generated by fees can impair perceived levels of auditor independence. As, Mironiuc and Robu (2012), claimed that the independence of the auditor has been affected by the level of the audit and non-audit fees paid by the client company and concluded that a high level of non-audit fees with a low level of audit fees led to a higher level of fraud risk in the New York Stock Exchange listed firms between 2001 and 2002 before the issuance of SOX. That ensures how non-audit fees might affect the independence of the auditor and that shareholders might perceive a threat to auditor independence at high total relative fee levels.

A great attention has been directed by researchers towards the relationship between audit fees and the existence of non-audit services. Some studies have argued that non-audit services provision has no effect neither on audit fees (Bell et al., 2008; Kwon et al., 2014) nor on audit delay (Habib and Bhuiyan, 2011; Whitworth and Lambert, 2014).

Whereas, other studies have argued that the provision of non-audit services can lead to lower audit fees because of cross-subsidization of fees between audit and non-audit services and many empirical studies have documented a negative relationship (Clatworthy and Peel, 2007; Krishnan and Yu, 2011; Ittonen and Peni, 2012; Hay, 2013). Moreover, other researchers have also argued that knowledge spill-over from non-audit services give the auditor a deeper understanding of the client's operations and an easier resolving of potential accounting problems that might result in a shorter audit delay (Lee et al., 2009; Knechel and Sharma, 2012; Blankley et al., 2014).

Most researchers do not have enough data to find out whether the audit team engaged to perform the auditing services is the same one who performed the non-audit services or not. Actually, most auditing firms nowadays, have different departments each one is

specialized in rendering different services, some are specialized in auditing certain industries and other are specialized in performing non-audit services of tax, consulting, bookkeeping services. Thus, if not confirmed that the same team have performed both audit and non-audit services, independence of auditors is not affected and no knowledge spill over is achieved. This point worth to be further investigated to find out, in terms of specialization applied in auditing firms, do non-audit services really affect the auditing process?

4.5.2 Audit Opinion

Auditors have the responsibility to assess the client's financial reports and issue an audit opinion accordingly (Kausar et al., 2017). Any report other than the standard unqualified opinion might indicate audit problems identified by the auditor. Problems identified during the auditing process indicate higher risk assumed by the auditor, higher audit work done and therefore more audit costs and fees (Leventis et al., 2005). Moreover, qualified or modified opinion is expected to give bad news in the stock market about the company which may affect its stock prices (Yan, 2012). That is why management often do not prefer qualified or modified opinions and might negotiate with the auditor for the remarks and the content of the audit report which is considered a time-consuming process that might prolong audit delay.

That is why most empirical research have reported that, clients who have been issued non-standard audit reports, charged higher audit fees (Francis et al., 2005; Ghosh and Lustgarten, 2006; Behn et al., 2009; Leventis et al., 2013; Cahan and Sun, 2015) and suffered longer report delay (Payne and Jensen, 2002; Ettredge et al., 2006; Knechel and

Sharma, 2012; Blankley et al., 2014; Whitworth and Lambert, 2014; Chan et al., 2016; Shin et al., 2016).

4.5.3 Busy Season

The term "busy season" is known to most of the auditors as the point of time at which most companies have their fiscal year end. Usually December 31 is the fiscal year end for most companies, and therefore January and February are considered the busy season for the auditors.

Obviously, audit services conducted during busy season will require more audit staff to work overtime and thus they may charge extra auditing fees during busy season and offer fees discount for working outside busy season (Hay et al., 2006). These results have been proven by most audit fees studies (Chaney et al., 2004; Hogan and Wilkins, 2008; Lin and Liu, 2013). Moreover, most audit delay studies also argued that at busy season, auditors are exposed to high work load that prolong audit report lag (Payne and Jensen, 2002; Lee et al., 2009; Habib and Bhuiyan, 2011; Abbott et al., 2012; Austine et al., 2013; Whitworth and Lambert, 2014).

Any auditing firm, especially Big N, can manage busy season by balancing the audit workload with the availability of audit staff, good planning and allocation of its staff. If the auditing firm efficiently matches its human resources with the required audit engagements needed to be completed, no report delay will be expected and even audit fees offered can be competitive by competitors. Thus, if an audit firm efficiently matched workload with audit resources, would then audit fees and audit delay be competitive, in comparison with non-efficient match by another auditing firm? This research point has

not been clarified by prior literature and thus, need to be investigated by future researchers.

4.6 New regulations and events

4.6.1 Andersen demise and SOX issuance

Auditing regulations can have a significant effect on the audit market due to the increase in auditor effort and documentation required by these regulations. That is why researchers try to evaluate the impact of some auditing regulations on both audit fees and lag to find out the costs of issuing such regulations and compare it with the benefits claimed by the regulators imposed those regulations.

In October 2001, Enron, one of the largest public companies in the United States at the time, became the subject of investigations by Securities and Exchange Commission (SEC) for its accounting practices. This investigation indicated high level of financial fraud that has been going on for several years. Shortly after Enron scandal, many other scandals were uncovered including large auditing firms like Arthur Andersen. In an attempt to restore public confidence after all these financial scandals, Congress passed the Sarbanes- Oxley Act (SOX) in July 2002. This act aimed to increase the oversight of the accounting profession and improve the role of corporate governance. SOX imposed strict independence rules by: prohibiting the provision of most types of non-audit services to audit clients, rotating audit partners off audit engagements every five years

and providing an audit of internal control over financial reporting for public companies (Cosgrove and Niederjohn, 2008).

But despite the benefits of SOX in increasing the regulations governing auditing profession and restoring public confidence, it was argued that SOX was passed very quickly with costs exceeding its benefits (Cosgrove and Niederjohn, 2008).

Many researchers have been concerned with studying the effect of SOX on audit fees. Mainly their results supported the increase in audit fees after SOX (Griffin and Lont, 2007; Salman and Carson, 2009; Evans Jr. and Schwartz, 2013) and argued that, from the auditor's point of view, the increase in regulations, increases client risk and therefore requires more time effort from the auditor to collect evidence in support of the audit opinion, and thus is associated with higher audit fees. Griffin and Lont (2007) study has tried to analyse audit fees for US companies audited by Big N during the period of 2000-2004, following the issuance of SOX. The study concluded that audit risk, effort and implementation of section 404 on internal control are the most influential factors that led to increase in audit fees in the period following SOX. Similar results were reported by Evans Jr. and Schwartz (2013) study on US market for the period (2000-2010). Moreover, non-US companies registered in the US have also suffered from higher audit fees after the issuance of SOX. Salman and Carson (2009) study has assessed the impact of SOX on Australian companies with foreign registrant status in the US for the period from 2001 to 2005, compared with audit fees for other Australian companies. The study reported substantial increases in audit fees after SOX issuance for Australian companies' registrant in US as a consequence of increase in audit effort and risk.

Longer audit report lag was also reported by some researchers (Ettredge et al., 2006; Pizzini et al., 2015) after the implementation of SOX and the issuance of section 404 on internal control which increased audit procedures required during the auditing process and led to substantial increase in audit delay.

On the other side, Cosgrove and Niederjohn (2008) study has suggested another reason for the increase in auditing fees after SOX. The study argued that the increase may be due to self-correction of cross subsidization of services. Many large auditing firms, have been using their auditing services as a loss leader to attract non-audit services. Since, SOX prohibited many categories of non-audit services to be rendered to audit clients, then auditing firms will not have a great opportunity to recover their auditing costs through non-audit services and that have led to an increase in audit fees. Similarly, Knechel and Sharma (2012) have concluded that companies that have been rendering non-audit services before SOX, have the largest increase in audit report lags after SOX.

Kohlbeck et al. (2008) and Srinidhi et al. (2012) were interested in finding how Andersen demise has affected its previous clients. Using a sample of former Andersen clients, they find that successor big 4 auditors charged an audit fee premium for ex-Andersen clients compared to existing clients and non-Andersen switch-ins. They suggest that audit fee premium is attributable to auditor conservatism towards clients previously audited by a risky auditing firm.

It is observable that literature have only focused on analysis of the implementation of new audit regulations in the US, whereas, regulations issued in other countries did not have that attention by researchers. This bias in the auditing research towards US audit market make it difficult to generalize the literature results on all audit markets. Therefore,

future researchers can analyse the effect of different regulations issued on other audit markets to enrich the auditing literature about the effect of implementation of various audit regulations on the auditing profession.

4.6.2 IFRS

International Financial Reporting Standards "IFRS" adoption has been claimed by regulators and standard setters to enhance quality of financial reporting, however, it has been considered to be costly to companies due to the increase in effort and knowledge needed to implement those new standards (De George et al., 2013). Therefore, the true returns to IFRS adoption should be considered by evaluating its benefits and its costs. An increase in audit fees and delay after IFRS adoption can be considered direct costs of this transition, that can be used in evaluating the true returns of IFRS. That is why many researchers investigated if IFRS adoption has any effect on audit fees or audit delay.

A study by Zhu and Sun (2012) has investigated the impact of IFRS adoption in China in 2007. The study finds that the new IFRS- based Chinese accounting standards adoption has led to an increase in audit fees in China during 2007. The new accounting standards increase the disclosure requirements of the companies about their market risk which increases the audit risk and related fees as argued by the study. However, the investigation of only one year which was 2007 is considered a bias reference for evaluating the impact of IFRS adoption on audit fees in China. Further investigations are needed for subsequent years after the IFRS adoption to find out the trend of audit fees afterwards. Also, a study by (Habib, 2015) examined the impact of IFRS adoption on audit report lag in China for a sample of Chinese companies during the period from

(2003-2011). Habib (2015) study gives evidence that audit report lag increased after IFRS adoption because of the adoption of fair value measurement in the new accounting standards which makes companies increase their disclosures about market risk. This increase the additional time and effort required by auditors to verify such estimations that are considered inherently risky.

The European Union countries adopted the IFRS on 2005. A study by Kim et al. (2012), has tried to examine the impact of IFRS transition on audit fees in 14 European Union countries for a sample period (2004-2008) to capture the change in audit fees pre- and post- IFRS transition. The study gives evidence that the IFRS adoption increases the audit task complexity and thus, audit fees premium has been observed post- IFRS adoption.

Australia also adopted IFRS on 2005, and a study by De George et al. (2013) on Australian companies reported an increase in the audit fees mean by 23% in the year of IFRS transition. The study argues that IFRS adoption led to an increase in audit effort exerted by the auditors to be knowledgeable about these new standards and to evaluate the implementation of such standards. Also, IFRS are considered more detailed and requires increased disclosures more than that previously required. This likely make auditors increase their audit fees to recover these increased efforts.

Griffin et al. (2009) study on the impact of New Zealand adoption of IFRS on audit fees reported similar results that support the increase of audit fees post-IFRS transition due to the increase in disclosure requirements. Habib and Bhuiyan (2011) also reported longer report lag post-IFRS adoption because of the increased amount of work required by auditors.

From the prior literature discussed, it is obvious that not only the change in auditing standards that could affect the auditor, but also the change in accounting standards; this is because the auditor uses accounting standards as the benchmark for assessing the quality of financial statements. That is why the issuance of IFRS has affected the scope of the audit and increased the time required by the auditor to understand the standards, which in turn, increased the audit tests to issue the report, and therefore audit fees premium has been charged and audit delay has been observed.

However, these standards are not new forever, as after some years, auditors will be fully knowledgeable of the IFRS requirements and therefore will not exert the same efforts previously exerted. Therefore, audit report lag will tend to be shorter again and audit fees may also be decreased. Further investigation using longer sample span can be considered for future research to capture the full effects of IFRS adoption and evaluate whether the increase in audit fees and report lag previously reported at the beginning of IFRS adoption has diminished over time or not.

4.6.3 Global Financial crisis

Generally, economic decline periods increase company's associated risks, their probability of bankruptcy and thus may affect the demand of auditing services and the related audit effort, time and fees charged (Alexeyeva and Svanström, 2015).

Some studies have reported an increase in audit fees associated with global financial crisis in different countries, such as, Australia (Xu et al., 2013), China (Zhang and Huang, 2013), Sweden (Alexeyeva and Svanström, 2015). These studies argue that

during GFC, managers' incentives to manipulate accounting information may increase to cover the low performance of their companies. This anticipated increase in client's risk requires more audit procedures to be exerted, and thus higher audit fees to be charged to compensate auditors' efforts. However, other studies have documented a negative effect of global financial crisis on audit fees in US (Krishnan and Zhang, 2014) and in Korea (Sonu et al., 2017). These studies argue that negative relationship is because of lower demand of audit services by clients in the recession period of global financial crisis, which led auditors to cut their fees to increase their competition in the audit market.

Mixed results obtained from literature regarding the effect of global financial crisis on audit fees because of the difference in GFC economic consequences from one country to another. As some countries were highly affected by GFC than other countries, so it is hard to have a generalized result for all markets. Moreover, studies that investigated the effect of macroeconomic factors on auditing profession are few and most of them have used shorter time spans that can be considered very bias to generalize conclusions about the effect of global financial crisis on auditing profession. Therefore, much research is needed to examine the effect of global financial crisis on audit fees and report lag in different countries during longer sample periods.

4.6.4 XBRL Requirement

According to Valentinetti and Rea (2013), XBRL (eXtensible Business Reporting Language) is:

"an application of the extensible Markup Language (XML) aimed to provide a standardized method of preparing, publishing and exchanging financial information. From the technical point of view, it consists of collections of business reporting concepts, called taxonomies, and electronic documents containing business information, called instance documents. Each company can create and instant document to report their business facts according to a prescribed taxonomy. The extensibility of the language also allows users to define customized elements to meet their specific reporting requirements and needs."

Throughout the world, regulators are promoting the use of XBRL adoption to simplify and enhance the communication of financial information. Two studies by (Shan et al., 2015; Shan and Troshani, 2016) have tried to find out whether XBRL adoption has any effect on audit fees. The study of Shan et al. (2015) on US and Japanese companies found that lower audit fees were associated with XBRL implementation in both countries. The study claimed that audit fees discount is realized because of the greater transparency associated with the use of XBRL that facilitates external auditing functions and thus reduce audit risks and costs. Similar results have been proven by Shan and Troshani (2016) on their study on the effect of XBRL implementation on Chinese audit fees.

To the best of researcher's knowledge, only those two studies have investigated the impact of XBRL on audit fees, and no single study has examined its impact on audit report lag, which gives opportunity for future research to further investigate this issue in different countries implementing XBRL.

After reviewing literature of determinants of audit fees and report delay, the next section will outline the conceptual framework of this study.

4.7 Conceptual framework

This section presents the conceptual framework of the study as developed from the literature review on determinants of audit fees and audit report lag. It demonstrates the linkage between dependent and independent variables in this study. The conceptual model is developed from the prior literature as reviewed in the previous sections of this chapter.

A conceptual framework represents a map of the area of the study highlighting the linking relationships between concepts (Novak and Cañas, 2007). Miles and Huberman (1994:18) define a conceptual framework as it:

"explains, either graphically or in a narrative way, the main elements to be studied, the key factors, concepts, or variables and the assumed relationships among them"

Depending on the results of prior studies illustrated in the previous sections of this study concerning determinants of audit fees and report lag models, a conceptual framework is depicted in Figure 4-1. The conceptual framework suggests that various client, auditor, engagement attributes together with surrounding regulations, economic and political

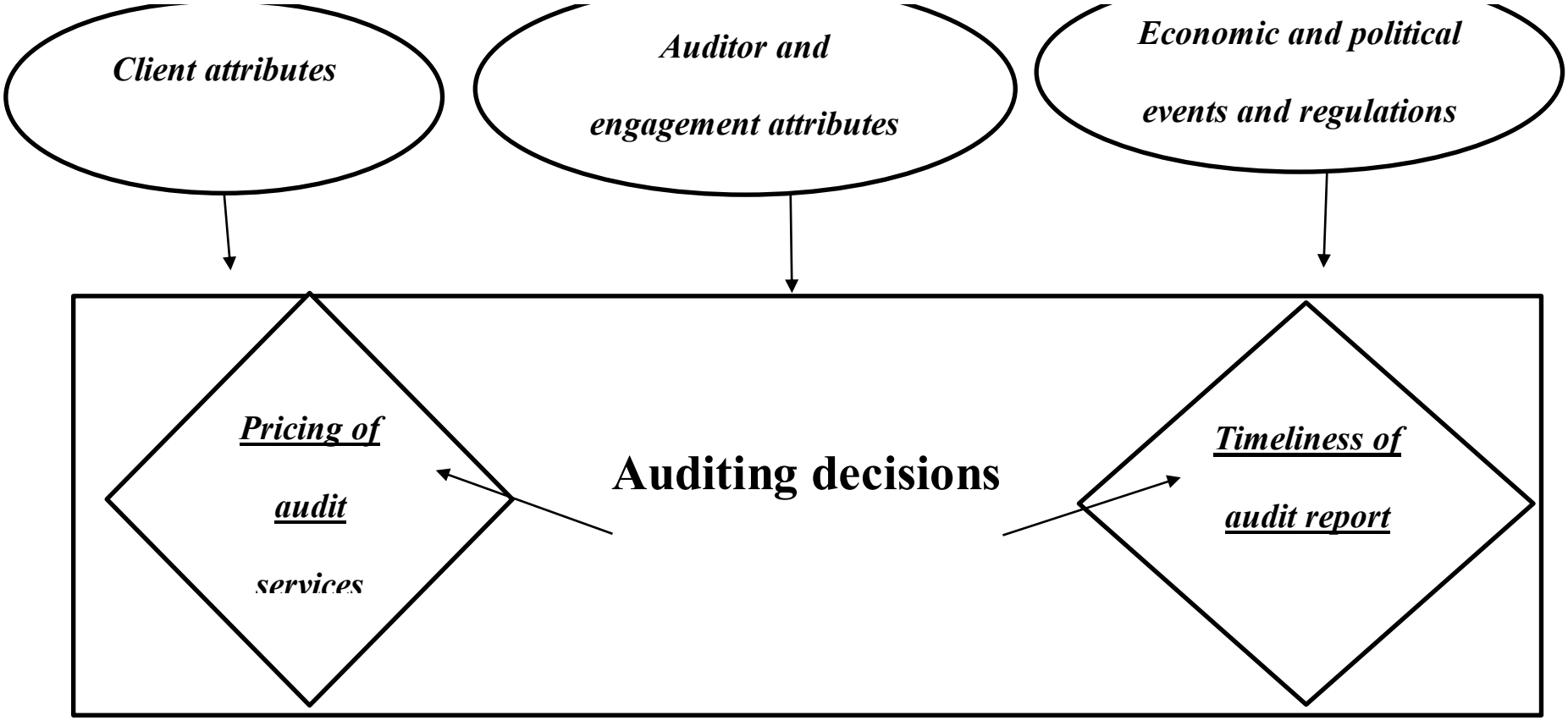
events could affect auditing decisions of pricing and timeliness of the audit services. So, to satisfy the first objective of this study of investigating the determinants of audit fees and audit report timeliness, audit fees and report lag models will be run based on determinants and proxies of audit fees and report lag identified in prior literature once in the Egyptian context and then in UK context during the sample period from 2008 to 2013. So that the study could answer the first research question of how audit fees and report lag decisions vary according to various client, audit and engagement attributes, and whether those decisions and determinants relationships differ across different countries (i.e. Egypt and the UK) or not.

To satisfy the second objective of this study to find out how the economic and political events could affect these determinants and therefore to answer the second research question of the study, audit fees and report lag models are run for subsample periods in both the Egyptian and UK contexts. The subsample periods include Global Financial Crisis period (2008-2009), Pre- revolution period (2008-2010) and Post-revolution periods (2011-2013). Comparing the results of these subsamples could give an indication of how auditors' decisions react to surrounding events and regulations and how auditors' response to such events are reflected in the determinants of audit fees and delay.

To fulfil the third objective of this study of making a comparison between the response of auditors towards economic and political instability in both countries and to answer the third and fourth research questions, a comparison of results is made for both models and across both countries. The comparison for determinants of audit fees and timeliness decisions give an analysis of how auditors mix and integrate audit pricing and timeliness decisions to respond to various attributes and events. Moreover, how this integration of

decisions could differ across countries is also analysed to satisfy the objectives of this study.

Figure 4-2 Conceptual Framework



Source: The author

4.8 Summary

This chapter reviewed previous literature relating to determinants of audit fees and audit report lag. Tables in appendix I provide a summary of main literature studies on audit fees and audit report lag.

Despite that the same determinant affect audit fees and report lag, however, based on prior studies results, proxies affecting them are not the same. Tables in appendix II provide a summary of most appropriate proxies used for audit fees and report lag models.

It is apparent that prior studies pay more attention to client, auditor and engagement attributes as if auditing is in isolation from surrounding environment. Most literature neglect economic and political events that may affect auditing profession and related decisions of pricing and increasing or decreasing audit procedures and reporting time. Therefore, in this study, we can contribute to the literature by exploring the Egyptian and UK context, we analyse the effects of economic and political events on attitudes and behaviour of auditors while performing auditing process by analysing determinants of audit fees and report lag during periods of economic and political events.

The next chapter will discuss the research methodology applied in this study and the hypotheses underlying audit fees and delay models.

Chapter 5 Research Methodology and Hypothesis development

5.1 Introduction

This chapter starts with highlighting how the researcher understands the ways and values of developing and gaining knowledge, which constitutes the researcher philosophical paradigm in dealing with the research problem. That is why the chapter begin with discussing research philosophies and approaches commonly used by researchers. Then a brief discussion of the chosen research design for the current study will be presented to highlight the key procedures that will be used in conducting the current study. After that, the chapter presented a discussion of sample characteristics, sources of collecting data and statistical procedures used in analysing data. Then the set of hypotheses that contribute in solving the main research questions is demonstrated.

5.2 Research Philosophies, paradigm and approaches

In this section, a brief discussion of research philosophies, paradigm and approaches commonly used by researchers are briefly discussed. Then, in the next section, the research philosophy, paradigm and approach chosen by the researcher for this current study are explained and discussed.

5.2.1 Research Philosophies

The research philosophy which is adopted by a researcher underlines the assumptions that s/he views the world through. Johnson and Clark (2006) noted that philosophical commitments researchers make, impact significantly their choice of research strategy which helps them in understanding what they investigate.

Research philosophy relates to the nature and development of the knowledge, and it shapes the hypotheses constructing the research strategy (Saunders et al., 2012). According to Easterby-Smith et al. (2008), the main reasons for understanding the research philosophy is to clarify research designs, to help the researcher to understand the best framework that can be adapted. Therefore, failure to understand the research philosophies may mitigate the quality of research design.

The researcher should first decide how s/he defines the nature of the reality (Ontology). Ontology explains the nature of reality from the standpoint of the researcher (Saunders et al., 2012). There are two aspects of ontology. First aspect is Objectivism; this represents the position that social entities exist independent of social actors (Crotty, 1998). While the second aspect is Subjectivism, that portrays that social phenomena are created from the consequent actions of social actors (Saunders et al., 2012).

Also it is very important to the researcher to determine the acceptable knowledge in the particular field of study s/he is engaged in, or what is called "*Epistemology*" (Johnson and Clark, 2006). The researcher should determine whether s/he is working in the tradition of natural scientist who is concerned with the collection of only facts and real objects data, or will take the pace of the feelings researcher who is concerned with the

feelings and attitudes of social actors in the society. "*Axiology*" is another aspect that should be taken into consideration by the researcher, that is about determining the role of values in all stages of the research process (Saunders et al., 2012).

Determining the research philosophies is concerned with determining the appropriate ontology, epistemology and axiology aspects that the researcher adopt. Different research philosophies will be discussed: positivism, realism, interpretivism, pragmatism in the next few sub-sections.

5.2.1.1 Positivism

A researcher who adopts positivism philosophy is the one who adopts the work of natural scientist who views the world theorized by definite laws. This is the one who is likely to use existing theory to develop hypothesis, test and confirm hypothesis to develop the theory which can then be tested by further research. Positivism researcher will probably use structured methodology and quantifiable observation and statistical analysis. Positivism researcher characteristics can be summarized as follows (Teddlie and Tashakkori, 2009; Saunders et al., 2012):

- Ontology: Positivists believe that there is a single reality independent of social actors.
- Epistemology: Positivists focus on observable phenomena, laws and generalizations, and supports the independence of the knower and the known.
- Axiology: Positivists believe that inquiry is value free.
- Data collection techniques: Positivists emphasize on quantitative deductive logic.

5.2.1.2 Realism

Realism is some much similar to positivism. There are two forms of realism: "Direct realism" supports the belief that, what we experience through our senses reflects the accurate world; while "Critical realism" argue that what we experience through our sensations are not the real things, because our senses deceive us. Saunders et al. (2012) have summarized the characteristics of realism as follows:

- Ontology: Realism believes that the reality is independent of social actors but is interpreted through social conditioning.
- Epistemology: Realism focus on explaining within a context.
- Axiology: Realism believe that the researcher is biased by the world views and cultural experiences.
- Data collection techniques: Realism believes that method chosen must be appropriate to the study whether it is quantitative or qualitative.

5.2.1.3 Interpretivism

Interpretivism argue that social world is more complex than being definite by laws. This philosophy supports the necessity of conducting research on the differences between humans rather than objects. Interpretivism characteristics can be summarized as follows: (Teddlie and Tashakkori, 2009; Saunders et al., 2012)

- Ontology: Interpretivism believes that there are multiple constructed realities
- Epistemology: Interpretivism focus on the reality behind the details, the subjective meanings motivating actions, and support that the knower and the known are inseparable.
- Axiology: Interpretivism believe that research is value bond.

- Data collection techniques: Interpretivism emphasize on qualitative inductive logic.

5.2.1.4 Pragmatism

Pragmatism is the philosophy that believes that choosing between one method and the other is practically unrealistic, and so it advocates mixed methods. Teddlie and Tashakkori (2009) suggests that the researcher should think about a certain philosophy as a continuum rather than opposite positions. Characteristics of Pragmatism could be summarized as (Saunders et al., 2012):

- Ontology: Pragmatism believes that there are multiple realities, the chosen reality is the one that best answer the research question.
- Epistemology: Pragmatism focus on both observable phenomena and subjective meanings.
- Axiology: Pragmatism believes that values play a large role in interpreting results, and the researcher adopt both objective and subjective points of view.
- Data collection techniques: Pragmatism emphasizes the use of mixed method including both quantitative and qualitative designs.

5.2.2 Research paradigm

Research paradigm refer to the researcher choice of the ways of collecting data. It can be classified as either qualitative or quantitative paradigms. This section will present a brief discussion of these paradigms.

5.2.2.1 Quantitative paradigm

Quantitative paradigms are concerned with collecting numerical data to quantify social phenomena and inferences are presented statistically (Saunders et al., 2012). This is achieved by using statistical models that link variables using cause and effect relationships of the assumed hypotheses drawn from theories (Ezat, 2010). Objectivity and reliability are the main advantages of adopting quantitative approach (Hussey and Hussey, 1997).

5.2.2.2 Qualitative paradigm

Qualitative research can be defined as any type of research with findings not statistically processed or quantified (Corbin and Strauss, 2008). It involves the in-depth understanding of individual behaviour and real-world settings (Creswell, 2003). Data are collected from observation or documents examination with the aim of understanding human behaviour and related values, beliefs and emotions (Nachmias and Nachmias, 2008).

5.2.3 Research approaches

There are two research approaches, Deduction and Induction. The two approaches could be explained as follows:

5.2.3.1 Deduction approach

Robson (2002) explained deduction research progress in five stages:

- Deducting a testable hypothesis; concerning the relationship between two or more variables from the theory.

- Explaining the hypothesis; in operational terms, i.e., demonstrating how the variables are going to be measured.
- Testing the hypothesis
- Examining the results
- If necessary, modifying the theory according to the results

In deduction approach, the researcher is testing a theory at which he should be independent of what is being observed and the variables need to be measured quantitatively.

5.2.3.2 Induction approach

In induction approach, the researcher may be building a theory or gaining an understanding of the meanings human attach to events. At which the researcher is more likely to work with qualitative data, and will use different method to collect these data in order to establish different views of phenomena (Easterby-Smith et al., 2008).

5.3 The chosen research methodology

For fulfilling the objectives of this study and to answer the research questions, a suitable research methodology should be chosen. After giving a summary, in the previous section, of different research philosophies, paradigms and approaches that can be adopted by any researcher, the chosen methodology by the researcher to meet the objectives and questions of the current study will be explained in the following lines.

5.3.1 Research philosophy

The primarily aim of this study is to investigate the determinants of auditing decisions of pricing and timeliness in Egypt and the UK. To satisfy this aim, the researcher is likely to use existing theories and prior literature results to develop the hypotheses of this study, test it and find out whether these hypotheses have been accepted or rejected according to the statistical analysis. In this regard, the research philosophy employed in this study is the positivism philosophy that is more suitable to meet the objectives and answer the research questions previously discussed in section 1.3.

5.3.2 Research paradigm

As will be discussed in the following few sections, the researcher tried to collect data through electronic surveys addressed to auditors and researchers in auditing to have some answers about audit fees and delay variables. However, the response rate has been very limited which would be bias to use few responses in analysing relationships. That is why it was better to analyse actual audit and financial data to investigate audit fees and report delay models. This quantitative data has been collected from the financial statements of public companies in Egypt and UK during the period 2008-2013. These data have been analysed using Prais-Winsten Panel data technique to test and interpret relationship between various variables in the audit fees and report lag models in Egypt and the UK to answer the research questions. Therefore, the quantitative paradigm is the most suitable paradigm with the positivism philosophy and for the research design of this study.

5.3.3 Research approach

During the current study, the researcher has passed through the following steps:

1. Auditing literature and related theories concerning the research topic have been reviewed
2. Gaps in literature have been identified and research problem has been highlighted
3. Research questions have been established
4. Related hypotheses have been assumed based on prior literature and existing theories
5. Quantitative data has been collected
6. Statistical techniques are used to analyse data and test the hypotheses.
7. Findings has been interpreted after accepting or rejecting the hypotheses previously assumed

According to the above steps the researcher has passed during this study, it is clear that the current study implements deduction approach where data is collected and analysed to test the relationship between the dependent variables and the independent variables.

After determining the appropriate research philosophy, paradigm and approach, a suitable design and plan of the current study can be developed. The chosen population, the time horizon over which the research is undertaken, the sources for collecting data and the model design are demonstrated in the following sections.

5.4 Sample characteristics

This section is concerned with explaining the sample characteristics of the two contexts, i.e., Egypt and UK.

5.4.1 Egyptian sample

The initial Egyptian sample for this study is 212 companies listed in the Egyptian Stock Exchange by 2013. It includes large, medium, and small sized companies to avoid any data bias. Moreover, they constitute a broad range of various industry sectors as shown in table 5-3. The sample period covers fiscal years from 2008 to 2013. This time period was selected because it includes two important events (i.e. the global financial crisis and the Egyptian revolution), which this study aims to explore their effects on determinants of audit pricing and audit report timeliness.

Following most previous studies, 23 companies working in the financial and banking sector were deducted[1]. Moreover, we exclude companies: (1) with missing audit

[1] Due to the unique characteristics of the financial sector that set them completely apart from non-financial companies during the auditing process. And due to the nature of the operations that could make some variables (such as quick ratios, inventory and receivables ratio) meaningless for financial companies. Most previous studies tend to exclude financial companies from the sample.

information and (2) companies whose annual reports for the current or the previous years are missing. The final sample for the Egyptian context is summarized in table 5.1.

Table 5-1The Egyptian Sample size

Companies in Egyptian stock exchange	212
Less: financial and banking sector companies	(23)
No. of non-financial companies in the sample	189 companies
Multiply by: 6 For 6-year period (2008-2013)	* 6
No. of observations	1134 observations
Less: Missing audit data	(291)
Less: Missing client attributes data	(184)
Final sample	659 observations

5.4.2 UK sample

The initial UK sample for this study include FTSE-350 companies listed in London Stock Exchange. The FTSE-100 comprises the 100 largest companies and the FTSE 250 comprises next largest 250 companies. Together they comprise the largest FTSE-350 UK listed companies. According to, Beattie et al. (2003), FTSE-350 account for 74% of listed companies' total audit fees. The sample period covers fiscal years from 2008 to 2013. This time period was selected because it can capture the global financial crisis effects on audit pricing and audit report timeliness in the UK context.

Following most previous studies, 120 companies working in the financial and banking sector were deducted. Moreover, we exclude companies: (1) with missing audit information and (2) companies whose annual reports or auditor information for the current or the previous years are missing. Ending with final sample of 651 observations for the UK context, as summarized in table 5.2.

Table 5-2 The UK Sample size

FTSE 350	350
Less: financial and banking sector companies	(120)
No. of non-financial companies in the sample	230 company
Multiply by: 6 For 6-year period (2008-2013)	* 6
No. of observations	1380 Observation
Less: Missing audit data	(439)
Less: Missing client attributes data	(290)
Final sample	651 observations

Table 5-3 Distribution of the sample among industries[1]

Industry	Egypt %	UK %
Oil & Gas	2.58	7.23
Basic Materials	8.35	9.28
Industrials	28.98	32.29
Consumer Goods	22.15	13.49
Health Care	5.01	3.61
Consumer Services	27.31	22.41
Telecommunications	2.88	2.29
Utilities	0.00	4.94
Technology	2.73	4.46
TOTAL	100.00	100.00

[1] This table provides the distribution of the sample amongst industries. The definitions of the industries are based on the Industry Classification Benchmark (ICB).

5.5 Sources of Data

The researcher tried to collect data through electronic surveys addressed to auditors and researchers in auditing to have some answers about audit fees and delay variables. However, the response rate has been very limited which would be bias to use few responses in analysing relationships. That is why it was better to analyse actual audit and financial data to investigate audit fees and report delay models. Sources of data from which the sample has been collected in both the Egyptian and UK contexts are being illustrated in the next sections.

5.5.1 Egyptian sample

For each company, financial information and board of directors' data were retrieved manually from company's website and "Egypt for information dissemination" website[1] (EgID, 2014), this website is specialized in providing and analysing the annual reports of companies in the Egyptian stock market.

For the information concerning audit fees, it is collected manually from the Egyptian Stock Exchange website [2] (Egx, 2014). Table 5-4 summarizes the sources of variables' data for Egyptian sample.

[1] http://www.egidegypt.com

[2] www.egx.com.eg

Table 5-4 Source for data for Egyptian sample

Variable		Source
LNAF	Audit fees	Minutes of the company's general assembly from Egyptian Exchange website
LNRE_LAG	Audit report lag	Balance sheet (Annual report) and Auditor report: company's web site and egID
LNTA	Total assets	Balance sheet (Annual report): company's web site and egID
QUICK	Quick ratio	Balance sheet (Annual report): company's web site and egID
REC	Receivables ratio	Balance sheet (Annual report): company's web site and egID
INVENT	Inventory ratio	Balance sheet (Annual report): company's web site and egID
Leverage	Leverage	Balance sheet (Annual report): company's web site and egID
FORG	Foreign subsidiaries	Footnotes disclosure (Annual report): company's web site and egID
ROA	Return on assets	Income statement and Balance sheet (Annual report): company's web site and egID
Loss	Loss realized	Income statement (Annual report): company's web site and egID
BODIND	BOD independence	Board of Directors data: egID
CEODUAL	CEO duality	Board of Directors data: egID
Big N	Big 4 auditing firms	Auditor report: company's web site and egID
SPECZ	Auditor specialization	Auditor report: company's web site and egID
INITIAL	Initial engagement	Auditor report: company's web site and egID
Tenure	Auditor tenure	Auditor report: company's web site and egID
AUDOP	Auditor opinion	Auditor report: company's web site and egID
BUSY	Busy season	Balance sheet (Annual report): company's web site and egID

5.5.2 UK sample

For each company, financial data, audit fees and board of directors' data are obtained from DataStream database. A sample of the data acquired from DataStream database has been validated and matched with the actual financial reports of the companies to assure its accuracy. Auditing firm data and audit report dates were collected manually from companies' websites. Sources of data for the UK sample are summarized in table 5-5 as follows.

Table 5-5 Source of data for the UK sample

Variable		Source
LNAF	Audit fees	DATASTREAM database
LNRE_LAG	Audit report lag	DATASTREAM database and Auditor report: company's web site
LNTA	Total assets	DATASTREAM database
QUICK	Quick ratio	DATASTREAM database
REC	Receivables ratio	DATASTREAM database
INVENT	Inventory ratio	DATASTREAM database
Leverage	Leverage	DATASTREAM database
FORG	Foreign subsidiaries	DATASTREAM database
ROA	Return on assets	DATASTREAM database
Loss	Loss realized	DATASTREAM database
BODIND	BOD independence	DATASTREAM database
CEODUAL	CEO duality	DATASTREAM database
Big N	Big 4 auditing firm	Auditor report: company's web site
SPECZ	Auditor specialization	DATASTREAM database
INITIAL	Initial engagement	Auditor report: company's web site
Tenure	Auditor tenure	Auditor report: company's web site
AUDOP	Auditor opinion	Auditor report: company's web site
BUSY	Busy season	DATASTREAM database

5.6 Panel data estimation for regression models

Multiple regression model is used to study the effects of independent variable on the dependent variables. In other words, it is the prediction of dependent variable based on a set of independent variables. A simple equation for the linear model can be written as follows:

$$\mathbf{Y=\alpha+\beta X+ error\ term}$$

Where:

Y is the dependent variable

α is the intercept

β is the coefficient of the estimate

X is the independent variables being investigated

Ordinary Least Squares model, known as OLS, is the popular approach used to estimate the classical linear model. OLS is one of the most popular estimators used in the literature of audit fess and audit report lag. OLS aim is to minimize the value of residuals; the variance between real and estimated values. Certain assumptions constitute the basis of OLS such as; Linearity, absence of multicollinearity, Homoscedasticity, absence of autocorrelation (Field, 2013). However, the violation of these assumptions may lead to biased results.

Empirical data analysis for regression models could be done either using (Gujarati and Porter, 2009):

- **Time series data analysis** refers to observing a set of observations on the values of variable(s) over different periods of times such as daily, weekly, monthly or annually. Despite that it is used heavily by researchers, it has a serious problem in that it assumes that the mean and variance do not vary over time (stationary problem).
- **Cross section data analysis** refers to observing value of variable(s) for several sample units at the same point in time. Cross-sectional data is criticized because it does not take into account the size and scale effect of various heterogenous sample units in the statistical analysis.
- **Pooled (combined) data analysis** refers to observing value of variable(s) for several sample units over a period of time, it analyses data that are elements of both time series and cross-section data.
- **Panel data/longitudinal analysis** is a special type of pooled data at which each cross-sectional unit is analysed over time. Cameron and Trivedi (2010: 235) define panel data as:

  "panel data or longitudinal analysis are repeated measurements at different points in time on the same individual unit, such as person, firm, state or country. Regressions can then capture both variations over units, similar to regression on cross- section data, and variation over time"

There are some problems regarding estimation and inference (e.g. heteroscedasticity and autocorrelation) may be accompanied with panel data (Gujarati and Porter, 2009). However, panel data has its advantages over using simple pure cross section or time series analysis (Cameron and Trivedi, 2010):

- Panel data can better detect certain effects that could not be measured by cross-section analysis only or time series analysis only.
- Panel data gives more informative data with lower collinearity among variables and more efficiency.
- Panel data is more helpful in studying dynamics of change and complicated behavioural models.

A panel data regression equation could be summarized as (Baltagi, 2008):

$$y_{it} = \alpha + X'_{it}\beta + u_{it}$$

Where i denoting sample units (cross-section dimension) and t denotes the time-series dimension. α is a scalar, β is the coefficient and X is the explanatory variable.

If each individual unit (firm, country... etc.) in the panel data has the same number of observations and observed in all time periods, this is called a balanced panel. Whereas, if each individual unit in the panel data has different number of observations and not observed in all time periods, it is called unbalanced panel (Gujarati and Porter, 2009).

Despite the advantages of the panel data methodology, it has not been fully used by most researchers looking to explain audit fees and audit report timeliness models. Therefore, it is considered a contribution of this study to provide more precise estimates using econometric techniques and data that go beyond the existing literature. In the next sections, some panel data techniques used and compared in this study will be discussed.

5.6.1 Pooled OLS Model

The pooled OLS model simply pool all the observations and estimate the overall regression with a single overall intercept term, neglecting the cross-section and time series nature of the data and ignores its panel (Henderson and Kaplan, 2000; Gujarati and Porter, 2009).

5.6.2 Fixed effects Model

The fixed effects (FE) model pool all observations but includes an intercept for each cross-section unit to capture its specific effects (Henderson and Kaplan, 2000; Gujarati and Porter, 2009). FE model can be used whenever the variables change overtime. However, for variables that do not change over time, fixed effects model may not appropriate to be used, and then other panel data models can be used instead (Baltagi, 2008).

5.6.3 Random effects Model

Random effects model assumes variation between cross-section units and also variations within cross-section units over time. In random effects model, the intercept of each sampling unit is assumed to be random. One of the advantages of random-effects model is that variables that do not change over time (such as: gender, religion) can be introduced in the model (Gujarati and Porter, 2009).

Some tests can be performed to find out which is the most appropriate model for the data analysis, Breush-Pagan Lagrange Multiplier and Hausman tests are two well-known tests used in comparing different models to find out the most appropriate model.

Random-effects vs Pooled OLS: Breusch–Pagan Lagrange Multiplier test

Breusch–Pagan Lagrange Multiplier test, proposed by Breusch and Pagan (1980), helps to decide whether the random-effects model or the simple pooled OLS is appropriate. The null hypothesis in the LM test is that variances across entities is zero. This is, no significant difference across units (i.e. no panel effect).

Random vs fixed-effects: Hausman Test

In order to check whether fixed or random effects is the most appropriate model which results can be relied on, a Hausman test is performed. In the Hausman test, the null hypothesis is that the preferred model is random effects while the alternative hypothesis is that the fixed effects is the preferred model.

5.6.4 Prais-Winsten panel-corrected standard error Model (PCSE)

If heteroscedasticity and autocorrelation are exhibited in the error terms of fixed or random-effects estimators, then, in this case, fixed and random-effects estimators are inefficient and biased. Therefore, an appropriate methodology is needed to correct the standard errors for autocorrelation and heteroscedasticity. The appropriate panel data regression model capable of accounting for error terms that exhibit heteroscedasticity and autocorrelation is Prais-Winsten regression.

Prais- Winsten panel-corrected standard error (PCSE) technique take into account the heteroscedasticity and correlations problems. Thus, it is perfect in situations where time dimension is more limited than cross-section dimension, like the case of this study.

Prais-Winsten estimation was recommended by Beck and Katz (1995). This technique allows for disturbances that are heteroskedastic and auto correlated panels. It is often used as an alternative method in studies focusing on relatively "short and wide" panels like this study. Following some prior literature in business, (Lapré and Tsikriktsis, 2006; Mehic et al., 2013; Onder and Karal, 2013; Thomas et al., 2014), Prais- Winsten regression estimation is used in this study to account for both heteroscedasticity and autocorrelation between units in the audit fees and delay models. A discussion of why Prais- Winsten model is used and tests conducted are presented in the next chapters.

5.7 Hypothesis development for audit fees model

Following previous research (Simunic, 1980; Taylor and Simon, 1999; Lyon and Maher, 2005; Ettredge et al., 2007; Bell et al., 2008; Wang and Zhou, 2012; Ittonen and Peni, 2012; De George et al., 2013; André et al., 2016; Huang et al., 2016; Foster and Shastri, 2016; Cheng et al., 2016), and others, regression model will be used to employ variations of the regression of audit fees to several variables.

Audit fees proposed model could be summarized in an equation as follows:

$$LNAF = \beta_0 + \beta_1 LNTA + \beta_2 QUICK + \beta_3 REC + \beta_4 INVENT + \beta_5 FORG + \beta_6 ROA + \beta_7 BODIND + \beta_8 CEODUAL + \beta_9 BigN + \beta_{10} SPECZ + \beta_{11} INITIAL + \beta_{12} AUDOP + \beta_{13} BUSY + \beta_{14} TOURISM + \beta_{15} dum2008 + \beta_{16} dum2009 + \beta_{17} dum2011 + \beta_{18} dum2012 + \beta_{19} dum2013 + error\ term$$

Where:

LNAF is the natural log of external audit fees,

LNTA is the natural log of total assets,

QUICK is the ratio of current assets less inventory to current liabilities,

REC is the percentage of receivables over total assets,

INVENT is the percentage of inventories over total assets,

FORG is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise,

ROA is the ratio of net income before tax divided by total assets,

BODIND is the percentage of independent directors on the board,

CEODUAL is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person,

BigN is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise,

INITIAL is a dummy variable given the value 1 if this is the first year the auditor is appointed with the client, and 0 otherwise,

AUDOP is a dummy variable given the value 1 when a company receives a non-standard unqualified audit opinion, and 0 otherwise,

BUSY is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise,

dum2008, dum2009, dum2011, dum2012, dum2013 are dummy variables for years 2008, 2009, 2011, 2012 and 2013, respectively

5.7.1 Dependent Variable

Following prior research, such as: (Whisenant et al., 2003; Lyon and Maher, 2005; Ettredge et al., 2006; Hogan and Wilkins, 2008; Wang and Zhou, 2012; De George et al., 2013; André et al., 2016; Huang et al., 2016; Foster and Shastri, 2016; Cheng et al., 2016), $LNAF$ is audit fees dependent variable that is transformed to natural log to achieve normality of data, reduce skewness within the data and to prevent large firms from influencing the results.

Independent Variables

5.7.2 Client size

Some researchers have used various indicators of client's size such as: client's market value, turnover, number of employees and sales, but most researchers (such as: (Simunic, 1980; Seetharaman et al., 2002; Yatim et al., 2006; Barua and Smith, 2013)) favour the value of total assets as the most commonly used indicator of client's size. Value of total assets is usually transformed using the natural logarithm to normalize the distribution of the data set.

$LNTA$ is used as a measure of client size and is defined as the natural log of total assets (Simunic, 1980; Seetharaman et al., 2002; Yatim et al., 2006; Barua and Smith, 2013). It is argued that as the size of the client increases, that requires more effort to be exerted by the auditor to examine the client accounts, and thus that will increase the audit fees. So, higher audit fees are expected to be charged to larger client.

H_1: There is a significant positive relationship between client size and audit fees

5.7.3 Client risk

Inherent risk for certain accounts in the client's balance sheet is another issue that literature proved that it is an important variable affecting audit fees. Auditors and researchers considered some accounts like receivables and inventories to be inherently risky, as they involve higher risk of misevaluation and needs specific audit procedures. Results of many studies suggest a strong positive relationship between inherent risk (represented by receivables and inventory accounts ratio to total assets) and audit fees

(Hay et al., 2006). However, inventory ratio still has mixed results on its effect on audit fees. As some US sample based studies (Carcello et al., 2002; Scott and Gist, 2013) have found that inventory ratio has no effect on audit fees. While some Chinese sample based studies (Liu and Subramaniam, 2013; Cahan and Sun, 2015) have found a negative relationship between inventory ratio and audit fees, this also was evident by (Shan et al., 2015) in a Japanese sample.

The variables *REC and INVENT* are the client's accounts receivable and inventory as a proportion of total assets. It is used as a proxy of client risk by most prior studies. Simunic (1980) argued that accounts receivable and inventory are considered risky items in the balance sheet. That is why they require more audit procedures and effort to decrease the risk of audit failure and thus result in increased audit fees. This argument was supported by the results of many subsequent studies (such as: (Kealey et al., 2007; Charles et al., 2010; Habib et al., 2013)). So, companies with higher receivables and inventories ratios are expected to be charged higher audit fees.

H_{2a}: There is a significant positive relationship between receivables ratio and audit fees

H_{2b}: There is a significant positive relationship between inventory ratio and audit fees

QUICK is the quick ratio which is equal to the ratio of the current assets (excluding inventory) to current liabilities, and is used as a proxy of client risk. Prior literature argued that quick ratio is negatively related to audit fees as a trade-off for auditor's litigation risk (Simunic and Stein, 1996; Whisenant et al., 2003; Choi et al., 2008; Wang and Zhou, 2012; Scott and Gist, 2013).

H_{2c}: There is a significant negative relationship between quick ratio and audit fees

5.7.4 Client Complexity

FORG is defined as a dummy variable in which we assign a value of 1 if the company owns a subsidiary in a foreign country and 0 otherwise. The more decentralization and diversification of the financial reporting entity, the more complex it is. Researchers typically expect that the more complex a client, the harder it is to audit and the more audit fees likely to be charged (Simunic, 1980; Mitra et al., 2007; Ghosh and Pawlewicz, 2009; De George et al., 2013).

H_3: There is a significant positive relationship between client complexity and audit fees

5.7.5 Client profitability

ROA is the ratio of firm's net income to total assets. Previous studies used ROA as a proxy for client profitability. It is expected that the wealthier the client is, the higher audit fees the auditor will bill to compensate the effort and time spend in auditing huge revenues and expenses.

H_4: There is a significant positive relationship between client profitability and audit fees

5.7.6 Client industry- Tourism

Tourism is a very sensitive industry towards any economic and political instability could happen in any country. According to the United Nations World Tourism Organization (UNWTO), growth of global tourism was 5% in the first quarter of 2008 compared with the same quarter in 2007. In the Middle East, the growth was higher for a round 12.5%. However, by the end of 2008 and during 2009, the tourism industry worldwide witnessed

a decline according to UNWTO World Tourism Barometer. Therefore, the GFC affected world tourism growth. In Egypt, by the end of GFC, according to the Egyptian Ministry of Tourism, tourism industry began to achieve higher revenues with more than $12.5 billion by the end of 2010. However, by the beginning of Egyptian revolution on 2011, a severe decline in tourism revenues began to happen. According to Egyptian Ministry of Tourism, tourism industry achieved $8.8 billion in 2011 and $5.9 billion in 2013. This risk surrounding the tourism industry during economic and political changes will affect the assessment of audit risk by auditors, and therefore may affect their audit fees and effort. So, a significant relationship between clients working in the tourism industry and audit fees can be hypothesized.

H_5: There is a significant relationship between clients in tourism industry and audit fees

5.7.7 Corporate governance

Board of directors' independence and CEO duality are commonly used proxies for client's corporate governance. Prior literature reported their significant effect on audit fees (Carcello et al., 2002; Goodwin-stewart and Kent, 2006; Mitra et al., 2007; Singh et al., 2014).

H_{6a}: There is a significant positive relationship between CEO duality and audit fees

H_{6b}: There is a significant positive relationship between board of directors' independence and audit fees.

5.7.8 Audit firm size

Big N is a dummy variable that equals 1 if the partner's audit firm is one of the big 4 auditing firms and 0 otherwise. Thinggaard and Kiertzner (2008) study believed that audit office size has no effect on audit fees, while (Choi et al., 2008; Campa, 2013) believed that audit office size has a positive effect on audit fees. Because of the conflict in results between prior studies, a meta-analysis by Hay (2013) recommend further investigation by researcher for the effect of audit office size on audit fees. However, a positive relationship between audit fees and audit firm size can be expected.

H_7: There is a significant positive relationship between audit firm size and audit fees

5.7.9 Auditor specialization

SPECZ can be defined as a dummy variable that equals 1 if the audit partner is an industry specialist and 0 otherwise. Consistent with prior literature, audit firm market share is used as a proxy for auditor specialization (Palmrose, 1986; Carcello and Nagy, 2004; Francis et al., 2005).

The auditor market share is based on the percentage of audited assets within each industry. The auditing firm is considered industry specialist if it is ranked among the top two auditing firms in an industry at a specified year. A negative effect of auditor specialization on audit fees is expected.

H_8: There is a significant negative relationship between auditor specialization and audit fees

5.7.10 Initial engagements

INITIAL is a dummy variable that equals 1 if this is the initial engagement of the partner to the client, 0 otherwise. Most prior studies gave evidence that auditors offer discounts for initial engagements (Whisenant et al., 2003; Ghosh and Lustgarten, 2006; Krishnan and Yu, 2011; Evans Jr. and Schwartz, 2013).

H_9: There is a significant negative relationship between initial engagements and audit fees

5.7.11 Busy season

Busy season is a dummy variable that equals 1 if the client's fiscal year end is on December/ January, 0 otherwise. Audit services conducted during busy season will require more audit staff to work overtime and thus they may charge extra auditing fees during busy season and offer fees discount for working outside busy season (Hay et al., 2006). This was proven by many studies (such as: (Chaney et al., 2004; McMeeking et al., 2006; Hogan and Wilkins, 2008; Lin and Liu, 2013)). So, a positive relationship between audit fees and busy season can be expected.

H_{10}: There is a significant positive relationship between busy season and audit fees Audit Opinion

5.7.12 Audit opinion

Audit opinion is a dummy variable that equals 1 if a non-standard audit opinion was issued for the client, 0 otherwise. A positive relationship was proven by some researchers between audit fees and audit reports in case of qualified or modified audit reports (Francis et al., 2005; Ghosh and Lustgarten, 2006; Behn et al., 2009; Leventis et al., 2013; Cahan and Sun, 2015). So, higher audit fees can be hypothesized to be associated with non-standard audit opinion

H_{11}: There is a significant positive relationship between auditor opinion and audit fees

5.7.13 Global financial crisis and Egyptian revolution

Year dummies 2008 and 2009 tend to account for the effect of global financial crisis on audit fees. While, year dummies 2011,2012 and 2013, tend to account for the effect of political instability and economic recession on audit fees during the revolution in Egypt. Economic and political instability may make the auditor be more cautious about the company's financial condition in this instable environment, and thus increase audit procedures and audit fees. Or, the auditor may be exposed to the recession in the audit market during the economic instability and thus decrease audit fees. So, a significant effect of global financial crisis and Egyptian revolution on audit fees can be hypothesized.

H_{12a}: There is a significant effect of global financial crisis on audit fees

H_{12b}: There is a significant effect of Egyptian revolution on audit fees

Table 5-6 Hypothesis summary for audit fees model

Hypothesis	Variable	Expected sign
H_1: There is a significant positive relationship between client size and audit fees	Client size (LNTA)	+
H_{2a}: There is a significant positive relationship between receivables ratio and audit fees	Client risk (REC)	+
H_{2b}: There is a significant positive relationship between inventory ratio and audit fees	Client risk (INV)	+
H_{2c}: There is a significant negative relationship between quick ratio and audit fees	Client risk (QUICK)	-
H_3: There is a significant positive relationship between client complexity and audit fees	Client complexity (FORG)	+
H_4: There is a significant positive relationship between client profitability and audit fees	Client Profitability (ROA)	+
H_5: There is a significant relationship between clients in tourism industry and audit fees	Tourism Industry	?
H_{6a}: There is a significant positive relationship between CEO duality and audit fees	Corporate governance - CEO duality	+
H_{6b}: There is a significant positive relationship between board of directors' independence and audit fees.	Corporate governance- BOD independence	+
H_7: There is a significant positive relationship between audit firm size and audit fees	Audit firm size	+
H_8: There is a significant negative relationship between auditor specialization and audit fees.	Auditor specialization	-
H_9: There is a significant negative relationship between initial engagements and audit fees	Initial engagement	-
H_{10}: There is a significant positive relationship between busy season and audit fees	Busy season	+
H_{11}: There is a significant positive relationship between auditor opinion and audit fees	Audit opinion	+
H_{12a}: There is a significant effect of global financial crisis on audit fees	Global financial crisis	?
H_{12b}: There is a significant effect of Egyptian revolution on audit fees	Egyptian Revolution	?

5.8 Hypothesis development for audit report lag model

Following previous research by (Ettredge et al., 2006; Lee et al., 2009; Habib and Bhuiyan, 2011; Abbott et al., 2012; Apadore and Noor, 2013; Whitworth and Lambert, 2014; Habib, 2015) , regression model will be used to employ variations of the regression of audit report lag to several variables.

Audit report lag proposed model could be summarized in an equation as follows:

$$\begin{aligned} LNRE\_Lag \quad &= \beta_0 + \beta_1 LNTA + \beta_2 FORG + \beta_3 LEV + \beta_4 LOSS + \beta_5 CEODUAL \\ &+ \beta_6 BODIND + \beta_7 Tenure + \beta_8 BigN + \beta_9 SPECZ + \beta_{10} BUSY \\ &+ \beta_{11} AUDOP + \ +\beta_{12} TOURISM + +\beta_{13} dum2008 + \beta_{14} dum2009 \\ &+ \beta_{15} dum2011 + \beta_{16} dum2012 + \beta_{17} dum2013 + error \end{aligned}$$

LNRE_lag is the natural log of audit report lag in days,

LNTA is the natural log of total assets

FORG is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise,

LEV is the ratio of long-term debt to total assets,

Loss is a dummy variable given the value 1 if net income is negative, and 0 otherwise,

CEODUAL is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person,

BODIND is the percentage of independent directors on the board,

BigN is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise,

AUDOP is a dummy variable given the value 1 when a company receives a non-standard unqualified audit opinion, and 0 otherwise,

Tenure is the number of years the auditor has been performing the audit to the company, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise,

dum2008, dum2009, dum2011, dum2012, dum2013 are dummy variables for years 2008, 2009, 2011, 2012 and 2013, respectively

5.8.1 Dependent Variable

Audit report lag is the time taken by the auditor to finish the auditing process, and it equals to the number of days between fiscal year end and audit report date. Following prior research, such as: (Knechel and Sharma, 2012; Blankley et al., 2014; Whitworth and Lambert, 2014; Shin et al., 2016), $LNRE\_Lag$ represents the report lag in days transformed to natural log to achieve normality of data, reduce skewness within the data.

Independent Variables

5.8.2 Client size

LNTA is used as a measure of client size and is defined as the natural log of total assets (Afify, 2009; Munsif et al., 2012; Chan et al., 2016). Most previous studies report significant effect of client size on audit report lag, but whether it is negative or positive effect differ from one study to another. That is why a significant relationship can be hypothesized between client size and audit report lag.

H_1: There is a significant relationship between client size and audit report lag

5.8.3 Client complexity

Following prior studies (Blankley et al., 2014; Khlif and Samaha, 2014; Shin et al., 2016), *FORG* is used as a proxy for the complexity of the client. *FORG* can be defined as a dummy variable in which we assign a value of 1 if the company owns a subsidiary in a foreign country and 0 otherwise. Researchers typically expect that the more complex a client, the more time-consuming the audit is likely to be and the longer the audit report lag, (Ettredge et al., 2006; Habib and Bhuiyan, 2011; Knechel and Sharma, 2012; Chan et al., 2016).

H_2: There is a significant positive relationship between client complexity and audit report lag

5.8.4 Client financial condition

Leverage was used by previous studies as a measure of client's financial condition (Ettredge et al., 2006; Abbott et al., 2012; Munsif et al., 2012; Chan et al., 2016). LEV can be defined as the leverage of the client that equal to the ratio of the firm's total debt to total assets, and is used as a proxy of client financial condition. The auditor may need extra time for additional effort exerted to reduce client risk associated with bad financial conditions. That is why some previous studies (Ettredge et al., 2006; Knechel and Sharma, 2012; Khlif and Samaha, 2014; Whitworth and Lambert, 2014; Chan et al., 2016; Shin et al., 2016) found a positive relationship between leverage ratio and audit report lag. Therefore, a significant positive relationship can be hypothesized between client financial condition and audit report lag.

H_3: There is a significant positive relationship between client leverage and audit report lag

5.8.5 Client performance

LOSS was used as a measure of client performance by previous literature. LOSS is a dummy variable that equals 1 if the firm reported loss and 0 otherwise. Some studies used LOSS as proxy for client performance (Yan, 2012; Whitworth and Lambert, 2014; Chan et al., 2016), and argued that companies experiencing losses may wish to delay this bad news and auditors tend to be cautious during the audit and spend more time accompanied with longer audit report lag.

H_4: There is a significant positive relationship between client loss and audit report lag

5.8.6 Client Industry- Tourism

Tourism industry was globally affected by economic recession during GFC in most countries. Moreover, a severe decline in tourism revenues was realized after the Egyptian revolution. Ministry of tourism in Egypt reported a decline in tourism revenues by 17.75 % in 2011 and 45% decline by 2013 compared to tourism revenues in year 2010. High industry risk associated with tourism could increase audit risk, and therefore auditors might spend more time auditing this risky industry especially after any economic and political change. So, a longer audit report lag can be expected for tourism industry clients.

H_5: There is a significant positive relationship between clients in tourism industry and audit report lag

5.8.7 Corporate governance

Previous studies (Afify, 2009; Khlif and Samaha, 2014; Habib, 2015) have used $CEODUAL$ *and* $BODIND$ as measures of client's corporate governance strength. CEODUAL can be defined as a dummy variable of 1 in case of CEO also holds the position of Chairman, 0 otherwise. BODIND could be defined as the percentage of independent directors on the Board. Researchers give mixed results of the relationship between corporate governance characteristics and audit report lag, but, we can hypothesize that a positive relationship exists between board of directors' independence, CEO duality and audit report lag.

H_{6a}: There is a significant positive relationship between CEO duality and audit report lag

H_{6b}: There is a significant positive relationship between board of directors' independence and audit report lag

5.8.8 Audit firm size

Big N is a dummy variable that equals 1 if the audit firm is one of the big 4 auditing firms and 0 otherwise. Big N has been used as a proxy of audit firm size by previous literature (Leventis et al., 2005; Lee et al., 2009; Yan, 2012; Shin et al., 2016). It is expected that big N auditing firms are able to provide higher quality and faster audit processes than their counterparts of local audit firms because they use higher quality staff, superior technology, more efficient audit planning and resources. So, we can hypothesize that a negative relationship exists between audit firm size and audit report lag.

H_7: There is a significant negative relationship between audit firm size and audit report lag

5.8.9 Auditor industry specialization

SPECZ can be defined as a dummy variable that equals 1 if the auditor is an industry specialist and 0 otherwise. A partner can be considered industry specialist if the partner is ranked among the top two partners in an industry at a specified year based upon the amount of total assets audited in a certain industry. Because of the industry related knowledge, training and skills acquired by industry specialist auditors, they are expected to finish audit work faster and thus have shorter audit report lag. Therefore, a significant

negative relationship exists between audit report lag and auditor specialization can be hypothesized.

H_8: There is a significant negative relationship between auditor specialization and audit report lag.

5.8.10 Auditor tenure

TENURE can be defined as the number of years of auditor tenure auditing the client. (Lee et al., 2009; Knechel and Sharma, 2012; Whitworth and Lambert, 2014; Chan et al., 2016) have proven a negative relationship between auditor tenure and audit report lag. They argue that long-tenured auditors became familiar with the client operations and control which save much effort and time during the audit process

H_9: There is a significant negative relationship between auditor tenure and audit report lag

5.8.11 Busy season

Following (Payne and Jensen, 2002; Habib and Bhuiyan, 2011; Austine et al., 2013), *BUSY* refers to a dummy variable of 1 if the company's fiscal year end is on December/January, 0 otherwise. At that time of fiscal year end, auditors tend to be very busy and therefore audit report lag tend to be prolonged.

H_{10}: There is a significant positive relationship between busy season and audit report lag

5.8.12 Global financial crisis and Egyptian revolution

Year dummies 2008 and 2009 tend to account for the effect of global financial crisis effect on audit report lag. While, year dummies 2011,2012 and 2013, tend to account for the effect of political instability and economic recession during the revolution in Egypt. Economic and political instability may make the auditor be more cautious about the company's financial condition in this instable environment, and thus increase audit procedures and report lag. Or, the auditor may be exposed to pressure from management to finish the auditing process as fast as possible to avoid bad rumours in the stock market and to provide timely information for investors. So, a significant effect of global financial crisis and Egyptian revolution on audit report lag can be hypothesized.

H_{11a}: Global financial crisis significantly affects audit report lag

H_{11b}: Egyptian Revolution significantly affects audit report lag

Table 5-7 Hypothesis summary for audit report lag model

Hypothesis	Variable	Expected
H_1: There is a significant relationship between client size and audit report lag	Client size	?
H_2: There is a significant positive relationship between client complexity and audit report lag	Client complexity	+
H_3: There is a significant positive relationship between client leverage and audit report lag	Client financial condition	+
H_4: There is a significant positive relationship between client loss and audit report lag	Client performance	+
H_5: There is a significant positive relationship between clients in tourism industry and audit report lag	Tourism Industry	+
H_{6a}: There is a significant positive relationship between CEO duality and audit report lag	CEO duality	+
H_{6b}: There is a significant positive relationship between board of directors' independence and audit report lag.	BOD independence	+
H_7: There is a significant negative relationship between audit firm size and audit report lag	Audit firm size	-
H_8: There is a significant negative relationship between auditor specialization and audit report lag.	Auditor specialization	-
H_9: There is a significant negative relationship between auditor tenure and audit report lag	Auditor tenure	-
H_{10}: There is a significant positive relationship between busy season and audit report lag	Busy season	+
H_{11}: There is a significant positive relationship between auditor opinion and audit report lag	Audit opinion	+
H_{12a}: There is a significant effect of global financial crisis on audit report lag	Global financial crisis	?
H_{12b}: There is a significant effect of Egyptian revolution on audit report lag	Egyptian Revolution	?

5.9 Summary

During the current study, the researcher has reviewed auditing literature and related theories concerning the research topic, and identified gaps in literature from which the research problem has been addressed. Appropriate research design and model have been selected, and related hypotheses have been assumed. Then, quantitative data has been collected and statistically analysed, findings has been interpreted. Implications and recommendations have been suggested as will be discussed in the following sections.

The researcher has adopted for the current study is positivism research philosophy by relying upon empirical evidence and actual data of audit fees and report lag to explain its relationship with client and audit attributes. Accordingly, the current study implements quantitative paradigm and deduction approach where data is collected and analysed to test the relationship between the dependent variables and the independent variables.

Consistent with prior literature, the log of audit fees and log of audit report lag are used as the dependent variables in the audit fees model and audit report timeliness models respectively.

The two models are constructed and a set of hypotheses are stated. These models are tested using two samples; one sample includes 212 Egyptian companies listed in the Egyptian stock market and, another sample includes the top 350 companies (FTSE 350) listed in the London Stock Exchange. The study covers the period of six financial years from 2008 to 2013. Hypothesis are derived for each model to investigate the determinants

of audit fees and audit report timeliness in Egypt and UK, and how these determinants are affected during severe economic and political instability.

Because of the advantages of panel data statistical analysis, Prais- Winsten panel-corrected standard error (PCSE) technique that take into account the heteroscedasticity and correlations problems has been selected for analysing data. As this technique is considered perfect in situations where time dimension is more limited than cross-section dimension, like the case of this study.

After the detailed description provided by this chapter regarding the sample characteristics, the sources of data, the measurement of independent variables, the suitable analytical techniques used and hypotheses assumed. The next three chapters will discuss the results of analysing audit fees model and audit report lag models in Egypt and the UK.

Chapter 6 Empirical analysis and Discussions- Egypt

6.1 Introduction

This chapter presents the results of the data analysis based on the research methods discussed in the previous chapter. Hypotheses outlined in the previous chapter concerning audit pricing and audit report lag are tested in the Egyptian context. First descriptive statistics are discussed. Then related correlation coefficients are presented. Discussion of the results of the testing of hypotheses are illustrated. Additional analysis of the effect of audit firm size and client size on audit fees and report lag models are then highlighted. Finally, a summary of the analysis is presented.

6.2 Descriptive Statistics

Table 6-1 presents the descriptive statistics of main variables used in audit fees model and audit report lag model for the full period of the study (2008–2013), for the global financial crisis (2008-2009), pre-revolution (2008-2010) and post- revolution (2011-2013) periods in Egypt.

Audit fees Log *LNAF* mean in Egypt is 11.07 and audit report lag log (*LNRE_Lag*) is 4.2. The mean of total assets *LNTA* is 20.238. 11.8% of full sample total assets are represented by the account receivable and 18.5% are represented by inventories. It is observable that receivables and inventories increased from 10.7% and 16.9 % in pre-revolution period to 12.8% and 19.9% respectively in the post-revolution period, that might indicate a higher client's risk and an economic recession in the post-revolution

period. This is also indicated in the *QUICK* ratio that was 37 % in pre-revolution period and decreased to 32.5% in the post-revolution period.

Regarding the firm's complexity, we can find that, in Egypt, only 15.7% of the companies in our full sample have foreign subsidiaries. This percentage decreased by nearly 3% post-revolution period in Egypt due to the instability in the economic and political environment which may have affected the companies' investments.

In terms of firms' performance, the mean of *ROA* and *LOSS* in Egypt were around 8.8% and 12.898% respectively. After revolution, a reduction in *ROA* (from 10.7% to 7.1%) and an increase in *LOSS* (from 7.54% to 17.51%) appear as another indicator of client's business risk and economic recession associated with the political and economic changes in Egypt.

For board of director's variables, the average proportion of independent non-executive directors on board of directors in Egypt is 75.8%. Around 37% of the firms in the Egyptian sample have CEO duality, which is considered a relatively high percentage comparable with the UK descriptive statistics of only 3.5%, as will be demonstrated in the next chapter.

In terms of auditor and engagement attributes, around 39% of the Egyptian sample companies engage with Big 4 auditing firms, and 26% of the sample companies have appointed an industry specialist auditor.

Egyptian companies tend to change auditors more frequently with 26% of the sample are initial engagement for auditors and with average auditors' tenure of 3 years. For busy

season, we can find that 82% of the Egyptian firms are audited during year end December/January.

On average, 19% of the Egyptian companies in the sample have been issued qualified or modified audit report during the sample period. Tourism industry constitutes 10.47% of the Egyptian sample

Table 6-1 Descriptive statistics- EGYPT

Panel A: Continuous variables

	FULL SAMPLE			2008-2009			2008-2010			2011-2013		
Variable	N	Mean	St. Dev.	N	Mean	St. Dev.	N	Mean	St. Dev.	N	Mean	St. Dev.
LNAF	659	11.075	0.967	195	10.937	0.909	305	10.992	0.900	354	11.146	1.018
LNRE_Lag	659	4.159	0.486	195	4.106	0.4776	305	4.144	0.503	354	4.173	0.472
LNTA	659	20.238	1.697	195	20.270	1.768	305	20.276	1.743	354	20.206	1.657
QUICK	659	0.346	0.206	195	0.378	0.232	305	0.370	0.224	354	0.325	0.187
REC	659	0.118	0.134	195	0.106	0.130	305	0.107	0.130	354	0.128	0.137
INVENT	659	0.185	0.161	195	0.171	0.142	305	0.169	0.142	354	0.199	0.174
ROA	659	0.088	0.102	195	0.108	0.105	305	0.107	0.104	354	0.071	0.097
BODIND	659	0.758	0.148	195	0.769	0.138	305	0.768	0.138	354	0.750	0.155
Tenure	659	2.835	1.609	195	1.385	0.488	305	1.786	0.797	354	3.737	1.585

(continued)

Panel B: Dummy variables

	FULL SAMPLE		2008-2009		2008-2010		2011-2013	
	N	%	N	%	N	%	N	%
FORG	659	15.781	195	16.920	305	17.377	354	14.407
LOSS	659	12.898	195	6.670	305	7.541	354	17.514
CEODUAL	659	37.329	195	36.920	305	36.721	354	37.853
BigN	659	38.695	195	37.440	305	37.705	354	39.548
SPECZ	659	26.404	195	29.230	305	30.164	354	23.164
INITIAL	659	26.252	195	58.970	305	42.623	354	12.147
AUDOP	659	19.120	195	17.950	305	19.344	354	18.927
BUSY	659	82.398	195	82.560	305	81.639	354	83.051
TOURISM	659	10.470	195	10.260	305	10.164	354	10.734

LNAF is the natural log of external audit fees, ***LNRE_lag*** is the natural log of audit report lag in days, ***LNTA*** is the natural log of total assets, ***QUICK*** is the ratio of current assets less inventory to current liabilities, ***REC*** is the percentage of receivables over total assets, ***INVENT*** is the percentage of inventories over total assets, ***LEV*** is the ratio of long-term debt to total assets, ***FORG*** is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise, ***ROA*** is the ratio of net income before tax divided by total assets, ***Loss*** is a dummy variable given the value 1 if net income is negative, and 0 otherwise, ***BODIND*** is the percentage of independent directors on the board, ***CEODUAL*** is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person, ***BigN*** is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise, ***INITIAL*** is a dummy variable given the value 1 if this is the first year the auditor is appointed with the client, and 0 otherwise, ***AUDOP*** is a dummy variable given the value 1 when a company receives a non-standard unqualified audit opinion, and 0 otherwise, ***Tenure*** is the number of years the auditor has been performing the audit to the company, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise.

6.3 Correlation matrix

The correlation matrix aims at examining whether there is any correlation between the independent variables, and that any correlation is less than 80 per cent (Gujarati, 2003). Multicollinearity problem, should be considered if the correlation is over 80 per cent as it may threaten the regression analysis.

From the correlation coefficients for the audit fees and delay models, shown in tables 6-2 and table 6-3, no high correlation is found among the variables. As a result, collinearity does not appear to create a threat to the interpretation of regression coefficients of the independent variables in this model.

A relatively high correlation coefficient is found between receivables (REC) and quick ratio (QUICK) for 0.5437, this correlation is expected, as it suggests that companies with higher receivables have higher quick ratio. Another high correlation (51.7%) is found between log of total assets (LNTA) and companies with foreign subsidiaries and that indicate that larger companies in Egypt always extend their activities to other foreign countries. Also, Big N and specialist auditor SPECZ has high correlation coefficient of 0.5344 which suggests that mostly specialized auditors in Egypt are Big N audit firms. However, given these relatively high correlations, correlation matrix values are within acceptable limits, or in other words, all values are less than 0.8.

Table 6-2 Correlation matrix- audit fees model: Egypt

	LNTA	QUICK	REC	INVENT	FORG	ROA	BODIND	CEODUAL	BigN	SPECZ	INITIAL	AUDOP	BUSY	TOURISM
LNTA	1													
QUICK	-0.2212	1												
REC	-0.1647	0.5437	1											
INVENT	-0.2677	-0.0472	0.2162	1										
FORG	0.517	-0.0827	-0.0612	-0.0648	1									
ROA	0.0124	0.2289	-0.0941	-0.0777	-0.0025	1								
BODIND	0.1723	-0.0978	-0.0122	-0.1503	0.0519	-0.0645	1							
CEODUAL	0.1845	-0.1236	-0.1224	0.0707	0.2425	-0.0325	-0.0916	1						
BigN	0.3884	-0.1206	-0.0827	0.0028	0.4338	0.0896	0.0789	0.2629	1					
SPEC	0.4453	-0.0802	-0.0628	-0.0822	0.3427	0.117	0.0357	0.174	0.5344	1				
INITIAL	-0.0758	0.0913	0.0174	0.0408	-0.0312	0.0634	-0.0021	0.003	0.0217	-0.0293	1			
AUDOP	-0.0382	0.0096	0.0183	-0.081	-0.1258	-0.25	-0.0462	-0.0242	-0.109	-0.075	0.0169	1		
BUSY	0.0021	-0.1587	0.0203	0.0564	0.0689	-0.0644	0.0206	0.1261	0.1545	0.1891	0.0041	-0.1806	1	
TOURISM	0.0934	-0.2272	-0.1967	-0.2745	-0.0257	-0.1186	0.0607	-0.1	0.0438	-0.0783	-0.0125	-0.0276	0.158	1

LNTA is the natural log of total assets, ***QUICK*** is the ratio of current assets less inventory to current liabilities, ***REC*** is the percentage of receivables over total assets, ***INVENT*** is the percentage of inventories over total assets, ***LEV*** is the ratio of long-term debt to total assets, ***FORG*** is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise, ***ROA*** is the ratio of net income before tax divided by total assets, ***BODIND*** is the percentage of independent directors on the board, ***CEODUAL*** is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person, ***BigN*** is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise, ***INITIAL*** is a dummy variable given the value 1 if this is the first year the auditor is appointed with the client, and 0 otherwise, ***AUDOP*** is a dummy variable given the value 1 when a company receives a non-standard unqualified audit opinion, and 0 otherwise, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise, ***dum2008, dum2009, dum2011, dum2012, dum2013*** are dummy variables for years 2008, 2009, 2011, 2012 and 2013, respectively

Table 6-2 *Correlation matrix- audit report lag model: Egypt*

	LNTA	FORG	LEV	LOSS	CEODUAL	BODIND	Tenure	BigN	BUSY	AUDOP	SPECZ	TOURISM
LNTA	1.0000											
FORG	0.5170	1.0000										
LEV	0.2091	0.2153	1.0000									
LOSS	-0.0316	-0.0672	0.1052	1.0000								
CEODUAL	0.1845	0.2425	0.0452	0.0680	1.0000							
BODIND	0.1723	0.0519	-0.0514	0.1033	-0.0916	1.0000						
Tenure	0.0722	0.0057	-0.0632	0.0368	0.0209	0.0330	1.0000					
BigN	0.3884	0.4338	0.1634	-0.0176	0.2629	0.0789	-0.0152	1.0000				
BUSY	0.0021	0.0689	-0.0778	0.0471	0.1261	0.0206	0.0070	0.1545	1.0000			
AUDOP	-0.0382	-0.1258	0.0592	0.1698	-0.0242	-0.0462	-0.0172	-0.1090	-0.1806	1.0000		
SPECZ	0.4453	0.3427	0.0599	-0.0135	0.1740	0.0357	0.0392	0.5344	0.1891	-0.0750	1.0000	
TOURISM	0.0934	-0.0257	-0.1317	0.1641	-0.1000	0.0607	-0.0326	0.0438	0.1581	-0.0276	-0.0783	1.0000

LNTA is the natural log of total assets ***FORG*** is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise, ***LEV*** is the ratio of long-term debt to total assets, ***Loss*** is a dummy variable given the value 1 if net income is negative, and 0 otherwise, ***BODIND*** is the percentage of independent directors on the board, ***CEODUAL*** is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person, ***BigN*** is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise, ***AUDOP*** is a dummy variable given the value 1 when a company receives a non-standard unqualified audit opinion, and 0 otherwise, ***Tenure*** is the number of years the auditor has been performing the audit to the company, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise

6.4 Findings and discussions

6.4.1 Audit fees model: Findings and discussion

This study examines the effect of different independent variables on audit fees as a dependent variable, thus a multiple regression analysis is considered to be used in this study following most previous literature. Due to the advantages of panel data over ordinary OLS analysis, as discussed in the previous chapter, panel data analysis will be used in our testing of hypotheses. Different types of panel data models could be applied, as shown in table 6-4, the two most common models are estimated: fixed-effects regression and random-effects regression, in addition to, the estimation of the ordinary OLS model.

Table 6-3 OLS vs Random vs Fixed data analysis

Variable	OLS	Random	Fixed
LNTA	0.30465255***	0.19060689***	0.04901955
QUICK	-0.47140886**	-0.27112051**	-0.20363854*
REC	0.48107965*	0.01261742	-0.02483528
INVENT	-0.62516159***	-0.08707405	-0.0430068
FORG	-0.01760423	0.14961233*	0.15103022*
ROA	0.15752798	0.27894242	0.21662026
BODIND	0.00888111	0.115847	0.05308885
CEODUAL	0.13778973**	0.07755196	0.06137074
Big N	0.74446367***	0.73767147***	0.69041177***
SPECZ	-0.07667237	0.0052487	0.0456361
INITIAL	0.08660763	-0.04496003	-0.04846697
AUDOP	0.05074453	0.1097264**	0.10332675**
BUSY	0.00595226	0.07521283	0.10326563
TOURISM	0.14139371	0.29165972	(omitted)
dum2008	-0.26214124*	-0.17518117***	-0.19916681***
dum2009	-0.07242332	-0.09667461***	-0.10658967***
dum2011	0.02802147	0.02897929	0.03909883
dum2012	0.08578964	0.0582695*	0.06856134*
dum2013	0.10227983	0.07422471*	0.09605186**
_cons	4.7639217***	6.7765468***	9.6885272***

N	659	659	659
r2	0.65187134		0.51175017

legend: * p<0.05; ** p<0.01; *** p<0.001

To find out which statistical estimation method is appropriate for the Egyptian sample, first, Breusch–Pagan Lagrange Multiplier test, proposed by Breusch and Pagan (1980) is performed to decide between random-effects regression and simple OLS regression. The null hypothesis in the LM test is that variances across entities is zero. As illustrated below, the test results indicate that there is significant difference across units, thus, the null hypothesis is rejected and therefore, the random-effects estimation is more appropriate than ordinary OLS.

Breusch and Pagan Lagrangian multiplier test for random effects

LNAF[ID,t] = Xb + u[ID] + e[ID,t]

Estimated results:

	Var	sd = sqrt(Var)
LNAF	.9359977	.9674698
e	.0402206	.2005506
u	.3722614	.6101322

Test: Var(u) = 0

chibar2(01) = 764.76

Prob > chibar2 = 0.0000

When N is large while T is small (as in the case of this study), the estimates by fixed effect regression and random effects regression can significantly differ (Gujarati and Porter, 2009). To decide between fixed or random effects, a Hausman test can be run. In the Hausman test, the null hypothesis is that the preferred model is random effects while

the alternative hypothesis is that the fixed effects is the preferred model. As shown below, the results of the test rejected the null hypothesis and hence the fixed-effects estimation is more appropriate for our model than the random-effects.

Table 6-4 Hausman Fixed Random

	Coefficients			
	(b) Fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
LNTA	.0490195	.1906069	-.1415873	.0261883
QUICK	-.2036385	-.2711205	.067482	.0348626
REC	-.0248353	.0126174	-.0374527	.0465307
INVENT	-.0430068	-.0870741	.0440672	.0566424
FORG	.1510302	.1496123	.0014179	.0251313
ROA	.2166203	.2789424	-.0623222	.0414141
BODIND	.0530888	.115847	-.0627581	.0570172
CEODUAL	.0613707	.077552	-.0161812	.0314064
BigN	.6904118	.7376715	-.0472597	.0252892
SPECZ	.0456361	.0052487	.0403874	.0146392
INITIAL	-.048467	-.04496	-.0035069	.0051214
AUDOP	.1033267	.1097264	-.0063997	.0082188
BUSY	.1032656	.0752128	.0280528	.024394
dum2008	-.1991668	-.1751812	-.0239856	.0071436
dum2009	-.1065897	-.0966746	-.0099151	.0022773
dum2011	.0390988	.0289793	.0101195	.0032252
dum2012	.0685613	.0582695	.0102918	.0043536
dum2013	.0960519	.0742247	.0218272	.0062168

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(18) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 39.86

Prob>chi2 = 0.0022

The Variance Inflation Factor (VIF) has been calculated to check for multicollinearity problem. Gujarati (2003) suggests that a VIF value of less than 10 is acceptable, which

means that if VIF value is above 10, this suggests the existence of collinearity among variables, while if it is close to 1, this means there is no collinearity. The mean value of VIF tests is 1.60, as shown in table 6-6, which indicates that there is no concern about multicollinearity problem.

Table 6-5 VIF: checking for multi-collinearity

Variable	VIF	1/VIF
dum2008	2.53	0.395640
INITIAL	1.98	0.505031
QUICK	1.92	0.521460
LNTA	1.84	0.543299
dum2012	1.77	0.563739
REC	1.76	0.569059
dum2011	1.75	0.572979
dum2013	1.72	0.580089
BigN	1.69	0.590559
SPECZ	1.67	0.599626
dum2009	1.64	0.610106
FORG	1.57	0.637560
INVENT	1.37	0.729541
ROA	1.31	0.761807
TOURISM	1.27	0.785269
BUSY	1.20	0.833811
CEODUAL	1.18	0.847034
AUDOP	1.16	0.861370
BODIND	1.10	0.908293
Mean VIF	1.60	

Gujarati and Porter (2009) stated that problems concerning heteroscedasticity and autocorrelation may be accompanied with panel data. Assuming homoscedastic disturbance when heteroscedasticity exists results in non-efficient estimates. Therefore, in order to check heteroscedasticity in the model, Wald test for panel-level heteroscedasticity can be performed. As shown below, the results of the test suggest the existence of heteroscedasticity.

Modified Wald test for groupwise heteroscedasticity in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (139) = 6.4e+32

Prob>chi2 = 0.0000

Moreover, ignoring the existence of autocorrelation results in biased standard errors and inefficient regression estimates. Therefore, to test the null hypothesis of no first-order serial correlation in the residuals, the test for autocorrelation setup by Wooldridge (2002) can be used. According to such tests, the results suggests the existence of autocorrelation.

Wooldridge test for autocorrelation in panel data

H0: no first order autocorrelation

F(1, 119) = 163.952

Prob > F = 0.0000

Based on the results of the above tests, we need a panel data model that can account for both heteroscedasticity and autocorrelation. Since, in this case, fixed and random-effects estimators are inefficient and biased, we need a methodology which corrects the standard errors for autocorrelation and heteroscedasticity. The panel-corrected standard error (PCSE) technique suggested by Beck and Katz (1995) is often used as an alternative method in studies focusing on relatively "short and wide" panels like this study. Prais-Winsten regression method is used to account for both heteroscedasticity and autocorrelation between units in the audit fees model (Stata command: xtpcse). Table 6-7 summarizes audit fees regression results in Egypt using Prais-Winsten analysis.

Table 6-6 Audit fees regression results- Egypt

Variable	FULL SAMPLE (2008-2013)	During GFC (2008-2009)	BEFORE REVO (2008-2010)	AFTER_ EVO (2011-2013)
LNTA	0.28534305***	0.25004978***	0.2286882***	0.34271426***
QUICK	-0.46173318***	-0.61421071***	-0.56344618***	-0.40474442*
REC	0.41305208**	0.23114971	0.33368739	0.55642642*
INVENT	-0.40490087***	-0.87863769***	-0.97088047***	-0.29249596*
FORG	0.05093022	0.16944547	0.1892207**	-0.10420737
ROA	0.34332095**	0.57780799*	0.44177284**	0.15074246
BODIND	0.16479215	-0.10194634	0.08373565	0.09984535
CEODUAL	0.13379577***	-0.01511042	0.02232799	0.19850466***
BigN	0.73755285***	0.79821133***	0.76158523***	0.71224791***
SPECZ	-0.06901154*	-0.12359611	-0.0813167	-0.07963902
INITIAL	-0.01374808	-0.06473174	-0.08218412**	-0.04879903
AUDOP	0.10254448**	0.10696982	0.1083177*	0.0741109
BUSY	-0.00246675	-0.10593739	-0.05249303	0.03853665
TOURISM	0.08011526	-0.01531529	-0.0784351	0.11060411
dum2008	-0.19241707***			
dum2009	-0.09630371***			
dum2011	0.02915033			
dum2012	0.06688459*			
dum2013	0.08307203*			
_cons	5.0234272***	6.0750694***	6.355342***	3.9011528***
N	659	195	305	354
r2	0.98996516	0.97503749	0.9874525	0.98479173

***, **, and *denote statistical significance at the 1%, 5% and 10% levels respectively

LNTA is the natural log of total assets, ***QUICK*** is the ratio of current assets less inventory to current liabilities, ***REC*** is the percentage of receivables over total assets, ***INVENT*** is the percentage of inventories over total assets, ***LEV*** is the ratio of long-term debt to total assets, ***FORG*** is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise, ***ROA*** is the ratio of net income before tax divided by total assets, ***BODIND*** is the percentage of independent directors on the board, ***CEODUAL*** is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person, ***BigN*** is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** 1 is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise, ***INITIAL*** is a dummy variable given the value 1 if this is the first year the auditor is appointed with the client, and 0 otherwise, ***AUDOP*** is a dummy variable given the value 1 when a company receives a non-standard unqualified audit opinion, and 0 otherwise, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise, ***dum2008, dum2009, dum2011, dum2012, dum2013*** are dummy variables for years 2008, 2009, 2011, 2012 and 2013, respectively

It is expected that more accounts and transactions compromising financial information of larger clients, require more time and effort by auditors. Thus, larger clients are expected to be charged higher audit fees. As expected in (H_1) audit fees are higher for larger clients than smaller ones. Results show a significant positive coefficient for log of total assets ***LNTA*** (as a proxy of client size) and audit fees in Egypt and that larger clients are charged nearly 28.5% higher fees than smaller clients. This is consistent with results of prior literature (Simunic, 1980; Matthews and Peel, 2003; Dickins et al., 2008; Hay, 2013; Bryan and Mason, 2016; Lin and Yen, 2016).

Specific auditing procedures are needed for auditing and evaluating some complex and risky accounts such as accounts receivables. So, clients with more complex and risky balance sheet components are expected to be charged a premium to compensate auditors for the increased effort and audit risk assumed. Results of Egyptian sample audit fees model confirm our expectation (H_{2a}) and previous studies results (Carcello et al., 2002; Chen et al., 2007; Liu and Subramaniam, 2013; Shan and Troshani, 2016) by reporting a positive significant coefficient for receivables ratio ***REC***. It is observable that receivables ratio coefficient is higher during the revolution period 2011-2013 than before the revolution by around 22%. This indicates that client complexity and risk concerns highly raised auditors' concerns while pricing audit services in periods of political and economic instability.

Significant negative coefficient for inventory ratio was reported in some audit fees studies in China by (Liu and Subramaniam, 2013; Cahan and Sun, 2015; Lin and Yen, 2016). Similarly, inventory ratio ***INV*** shows a significant negative coefficient in Egypt especially during the global financial crisis, despite it is in contrary to our expectation

(H_{2b}). The only explanation for this result is that increased inventory may give an impact of an economic recession. So, as a way of increasing the demand on audit services in recession periods, auditors may try to offer discounted audit fees, especially, when recession consequences are affecting the client in the form of a high inventory ratio.

Another proxy of client risk and complexity is quick ratio ***QUICK***. Consistent with hypothesis (H_{2c}) and results of previous studies (Ferguson et al., 2003; Francis et al., 2005; Fung et al., 2012; Krishnan and Zhang, 2014), quick ratio has a negative significant effect on audit fees. The better the client's liquidity position, the less risk the client is and the less audit risk assumed and so a discount of audit fees can be offered. During GFC, quick ratio coefficient tended to be higher by around 15% in Egypt than in the full sample indicating the auditors' trust in companies with good financial conditions during the global financial crisis led them to offer audit fee discount for those clients.

Foreign subsidiaries existence ***FORG*** is another proxy that increase client complexity. In Egypt, in contrary to our hypothesis (H_3), results show it is not a significant variable. However, this is consistent with results of a Japanese a study made by (Shan et al., 2015), and study in Kuwait by (Al-Harshani, 2008) that client complexity is a non-significant variable in the audit fees model.

Results suggest a positive significant relationship between ROA and audit fees which is consistent with results of a Chinese sample based study by Cahan and Sun (2015). This may be because auditors tend to charge higher audit fees to clients when they seem more wealthy, achieving higher profits and audit fees costs may not be a burden to them. Another explanation may be that higher profits require more audit time to accurately test for revenues and expenses identification to avoid management profit manipulation.

However, after the revolution, we can find that ROA has a non-significant effect on audit fees. This may be due to the decrease in the mean of ROA ratio for the clients from 10.7% before the revolution to 7.1% after the revolution. Therefore, auditors try not to increase the burden of audit fees on clients in that instable less profitable period of time.

Weak corporate governance leads to greater audit risk and higher audit fees. That is why companies of no segregation of duties between CEO and BOD chairman (CEODUAL) pay higher audit fees in the Egyptian sample, this is consistent with results of Lin and Liu (2013) study on Hong Kong exchange market. It is also noticeable that CEODUAL coefficient was not significant before the revolution, and gained much significant higher coefficient of 19.85% after the revolution. This indicates that auditors became more cautious after the revolution for companies with poor corporate governance mechanisms. BOD independence does not seem to have a significant effect on audit fees, this indicates that auditors in Egypt worry more about companies with poor corporate governance than companies with higher quality corporate governance.

Big 4 auditing firms are claimed to render higher quality audit services than non-big 4. Accordingly, Big 4 audit firms are expected to spend more audit hours or give higher rate per hour for experienced auditors working in those firms. To compensate these increasing audit costs, Big 4 audit firms charge higher audit fees than non-big 4 audit firms. Consistent with previous audit literature (Hay et al., 2006; Choi et al., 2008; Sundgren and Svanström, 2013) and with our expectations (*H_7)*, Big N audit firms in Egypt seem to charge a higher rate than non-big 4 by around 74%. It is notable that Big N premium coefficient in Egypt decreased from 76.2% before the revolution to 71.2% after the revolution. This relatively lower premium may be an attempt by Big N to retain

or even to increase their market share (which actually increased by nearly 5% after the revolution) in a recession post-revolution period.

By specializing in a certain industry, auditors gain special experience in that industry and therefore become more adaptive in addressing specific auditing issues within that industry. This could provide the auditing firm with the advantage of decreasing costs as a result of economies of scale, which can be passed to the client in the form of lower audit fees. Consistent with prior studies (Defond et al., 2000; Fields et al., 2004), a significant negative relationship between audit fees and auditor's specialization SPECZ is documented in the Egyptian audit fees sample.

Consistent with previous literature (Bell et al., 2008; Hay and Knechel, 2010; Fung et al., 2012; Zhu and Sun, 2012), initial audit engagements are reported to have no effect on audit fees determination in Egypt. However, it has a negative coefficient that may imply initial engagement discount in some cases, as we can find that during the period 2008-2010, initial engagement discount of around 8% was offered to new clients. However, after that period, the coefficient decreased to 4% and became non-significant for initial engagements, may be because of the riskier political environment that made auditors do not want to offer discounts for clients they ignore much about the quality of their management and financial statements misstatements.

Qualified or modified audit reports usually indicate potential problems found during the auditing process. These problems give a signal for higher audit risk assumed by the auditor and accompanied by higher audit efforts and costs. Therefore, higher audit fees are expected to be charged to cover these higher costs and risks. A significant positive audit opinion coefficient in the Egyptian audit fees model support our expectation and

results of previous audit fees literature (Francis et al., 2005; Ghosh and Lustgarten, 2006; Behn et al., 2009; Cahan and Sun, 2015).

Consistent with some previous studies (Ferguson et al., 2003; Wang and Zhou, 2012; Sundgren and Svanström, 2013; Audousset-coulier, 2015), busy season was reported as a non-significant variable in the Egyptian sample. However, this result is inconsistent with our hypothesis.

Despite that TOURISM coefficient was not significant in the full sample audit fees model in Egypt, we can notice that TOURISM coefficient changed from negative sign (discount) of 7% during pre-revolution period to positive sign (premium) of 11% post revolution which imply higher risk associated with the decline in revenues of the tourism sector. This confirms that political instability during Egyptian revolution has affected some industries especially tourism industry and therefore could affect auditors while pricing audit services.

Consistent with Krishnan and Zhang (2014) study on the effect of global financial crisis on audit fees in US. In the Egyptian context, GFC period dummy variables (2008, 2009) have significant negative coefficient in audit fee model. As auditors in Egypt tend to cut their fees due to the recession and bad financial conditions influencing the world. This is also apparent in the increase of the discount offered for clients with better financial conditions (represented in higher quick ratio QUICK), as previously discussed. Also, it seems that auditing services sector has suffered from recession that led auditors to offer 10% discount for clients with fiscal year end in December/January.

Revolution period dummy variables (2011, 2012, 2013) have positive coefficients which are significant in years 2012 and 2013. This is also apparent in the effect of some variables on pricing decision during the revolution period. As we can find that REC, CEODUAL and TOURISM are variables that might seem to alert the auditors of potential risks during the revolution period and lead them to pay special attention and may charge the company higher audit fees. As previously discussed, REC coefficient increased by 22% after the revolution as a proxy of higher client risk assessment during this period. Also, CEODUAL coefficient increased after revolution by 17% due to the more cautious auditors became towards risky clients with lower quality corporate governance. TOURISM coefficient changed from negative coefficient to a positive coefficient of 11% that implies more audit risk assessment for risky client industry highly affected by political instability. A client in a such political and economic instable environment with these risky variables, certainly will increase auditors' anxiety and lead them to increase efforts, costs and fees to mitigate anticipated risks.

6.4.2 Audit report lag model: Findings and discussion

This study examines the effect of different independent variables on audit delay as a dependent variable, thus a multiple regression analysis is considered to be used in this study following most previous literature. Due to the advantages of panel data over OLS as previously discussed, panel data analysis will be used in our testing of hypothesis.

Fixed-effects regression and random-effects regression, besides that we estimated the ordinary OLS model analyses are shown in table 6-8.

Table 6-7 OLS vs Random vs fixed data analysis

Variable	OLS	Random	Fixed
LNTA	0.06063405***	0.06883806**	0.11683593**
FORG	-0.0280287	-0.09430689	-0.10810044
LEV	0.17591023	0.1006664	0.04310232
LOSS	0.04986115	0.06107128	0.07391915
CEODUAL	0.01616669	0.04654025	0.06591995
BODIND	0.25523472	0.41378996**	0.54105274**
Tenure	-0.00433637	0.00593902	0.0153691
BigN	0.03400555	0.05446637	0.11012902
BUSY	0.10265757*	0.19299256**	0.27644793***
AUDOP	0.18994596***	0.13801261***	0.13799789**
SPECZ	-0.2039469***	-0.10924004*	-0.09032463
TOURISM	-0.04496756	-0.03246737	(omitted)
dum2008	-0.08727649	-0.05524538	-0.0315352
dum2009	-0.12100242	-0.10374881**	-0.09105176*
dum2011	-0.04895167	-0.03019718	-0.0363858
dum2012	-0.03558674	-0.04452575	-0.06767468
dum2013	-0.00666427	-0.01092134	-0.04339467
_cons	2.6764307***	2.2707023***	1.0927686
N	659	659	659
r2	0.09904059		0.10795884

legend: * p<0.05; ** p<0.01; *** p<0.001

First, a Breusch–Pagan Lagrange Multiplier test. Results indicate that the random-effects is more appropriate.

Breusch and Pagan Lagrangian multiplier test for random effects

LNRE_Lag[ID,t] = Xb + u[ID] + e[ID,t]

Estimated results:

	Var	sd = sqrt(Var)
LNRE_Lag	.2363319	.4861398
E	.0620293	.2490568
U	.1651104	.4063378

Test: Var(u) = 0 chibar2(01) = 769.94

Prob > chibar2 = 0.0000

Then, a Hausman test has been performed to decide between fixed effects model and random effects model. The results of the test accepted the null hypothesis and hence the random-effects model is applicable for the Egyptian sample.

Table 6-8 Hausman test: Fixed vs Random

	Coefficients			
	(b) Fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
LNTA	.1168359	.0688381	.0479979	.0384272
FORG	-.1081004	-.0943069	-.0137935	.0482035
LEV	.0431023	.1006664	-.0575641	.062006
LOSS	.0739192	.0610713	.0128479	.0135033
CEODUAL	.0659199	.0465402	.0193797	.0557407
BODIND	.5410527	.41379	.1272628	.107396
Tenure	.0153691	.005939	.0094301	.0089475
BigN	.110129	.0544664	.0556627	.0490048
BUSY	.2764479	.1929926	.0834554	.0468899
AUDOP	.1379979	.1380126	-.0000147	.0162004
SPECZ	-.0903246	-.10924	.0189154	.027145
dum2008	-.0315352	-.0552454	.0237102	.0170026
dum2009	-.0910518	-.1037488	.012697	.0084209
dum2011	-.0363858	-.0301972	-.0061886	.0090219
dum2012	-.0676747	-.0445258	-.0231489	.0173061
dum2013	-.0433947	-.0109213	-.0324733	.0267458

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(16) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 20.55

Prob>chi2 = 0.1965

The Variance Inflation Factor (VIF) has been calculated to check for multicollinearity problem. The mean value of VIF tests in Egypt is 1.55 which indicates that there is no concern about multicollinearity problem, as shown in table 6-10.

Table 6-9 VIF: checking for multi-collinearity

Variable	VIF	1/VIF
dum2013	2.23	0.448199
Tenure	2.20	0.454471
dum2012	1.96	0.511410
dum2008	1.85	0.540007
dum2011	1.76	0.568460
LNTA	1.74	0.573388
BigN	1.69	0.590336
dum2009	1.69	0.593131
SPECZ	1.68	0.594764
FORG	1.57	0.636477
TOURISM	1.18	0.845279
CEODUAL	1.17	0.851666
LEV	1.17	0.853972
LOSS	1.17	0.854795
BUSY	1.15	0.868746
BODIND	1.12	0.895765
AUDOP	1.09	0.913782
Mean VIF	1.55	

To perform a reasonable inference about the model results, homoscedasticity and no autocorrelation in the data need to be assumed. Since autocorrelation in linear panel data models biases the standard errors and causes the results to be less efficient, we need to test its existence. To test the null hypothesis of no first-order serial correlation in the residuals, autocorrelation test setup by Wooldridge (2002) is run. As shown below, results report the existence of autocorrelation:

Wooldridge test for autocorrelation in panel data

H0: no first order autocorrelation

F(1, 119) = 20.825

Prob > F = 0.0000

Finally, in order to check heteroscedasticity in the model, Wald test is performed to find out panel-level heteroscedasticity. The test suggests the existence of heteroscedasticity as shown below:

Modified Wald test for groupwise

H0: sigma(i)^2 = sigma^2 for all i

chi2 (139) = 8.3e+31

Prob>chi2 = 0.0000

Since the error terms exhibit heteroscedasticity and autocorrelation, it has to be decided which panel data approach need to be chosen to correct for heteroscedasticity and autocorrelation. Since in this case random-effects estimators are inefficient and biased, we require a methodology which corrects the standard errors. The appropriate panel data regression model in this case is Prais-Winsten regression with PCSEs. From table 6-11, results can be summarized as follows:

Table 6-10 Audit report lag regression results- Egypt

Variable	FULL_SAMPLE (2008-2013)	During_GFC (2008-2009)	BEFORE_REVO (2008-2010)	AFTER_REVO (2011-2013)
LNTA	0.06273102***	0.05019445**	0.06851248***	0.05072521**
FORG	-0.06764385	-0.0114411	-0.13185989	0.06651972
LEV	0.17545021**	0.14718799	0.16589024	0.22845441*
LOSS	0.04933962	0.16732701*	0.03081174	0.10598946
CEODUAL	0.02808622	0.01461729	0.06745865	-0.03896849
BODIND	0.30301392**	0.13720974	0.35995265**	0.07808861
Tenure	-0.00017854	-0.0603551	0.0025019	0.02392563
BigN	0.04637062	0.03045643	0.04186023	0.0492437
BUSY	0.09277169	0.19431824	0.02386374	0.19004677**
AUDOP	0.14244288***	0.13841679	0.12521718	0.21541783***
SPECZ	-0.17421606***	-0.20427493**	-0.18855521***	-0.22896547***
TOURISM	-0.03259732	-0.17150953	-0.00145382	-0.09073099
dum2008	-0.07350435			
dum2009	-0.117958***			
dum2011	-0.03678435			
dum2012	-0.04238604			
dum2013	-0.01065371			
_cons	2.5865926***	2.9021321***	2.4507509***	2.8124664***
N	659	195	354	305
r2	0.7119875	0.51258782	0.69828298	0.54761732

***, **, and *denote statistical significance at the 1%, 5% and 10% levels respectively

LNTA is the natural log of total assets ***FORG*** is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise, ***LEV*** is the ratio of long-term debt to total assets, ***Loss*** is a dummy variable given the value 1 if net income is negative, and 0 otherwise, ***BODIND*** is the percentage of independent directors on the board, ***CEODUAL*** is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person, ***BigN*** is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise, ***AUDOP*** is a dummy variable given the value 1 when a company receives a non-standard unqualified audit opinion, and 0 otherwise, ***Tenure*** is the number of years the auditor has been performing the audit to the company, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise, ***dum2008, dum2009, dum2011, dum2012, dum2013*** are dummy variables for years 2008, 2009, 2011, 2012 and 2013, respectively

Log of total assets *LNTA,* as a proxy for client size, tend to cause a significant increase in report lag in Egypt because of the additional time and effort needed to audit larger companies than smaller ones. Similar results were obtained by Leventis et al. (2005) study on Greece stock market and Yan (2012) study on Chinese sample. However, it is inconsistent with previous Egyptian based sample study by Afify (2009) who reported a negative relationship between client size and report lag, it is also inconsistent with a study by Khlif and Samaha (2014) who reported a non-significant relationship. These differences may be due to the short time span that was used by the study of Afify (2009) which was only one year and 3 years in the study of Khlif and Samaha (2014). Short time spans could not fully capture the relationship between dependent and independent variables.

Consistent with a study on Indonesian stock Exchange by Mukhtaruddin et al. (2015), foreign subsidiaries existence (FORG) in Egypt has a negative non-significant effect on audit report lag. A shorter audit report lag may be required by the parent company to have enough time to translate different currencies of different subsidiaries' financial statements before issuing consolidated ones. Another possible reason is that more complex and larger companies has stronger internal controls that give confidence to the auditor that the accounting information is more monitored and controlled and thus decreases the audit risk and the audit report delay. The Egyptian sample based study by Khlif and Samaha (2014) also reported a negative effect of foreign subsidiaries existence on audit report lag. However, we may notice that after the Egyptian revolution, the coefficient of FORG became positive, it is still non-significant, but the sign has changed. A good justification for this change may be because auditors became more cautious after

the revolution due to the losses realized by some Egyptian companies. As indicated by this study sample, companies with foreign subsidiaries realizing losses increased from 3.8% before revolution to 11.8% after the revolution. That led auditors to increase their audit procedures and prolong their report lag.

Consistent with Egyptian sample study by Afify (2009) and some prior US sample studies (Ettredge et al., 2006; Abbott et al., 2012; Knechel and Sharma, 2012; Whitworth and Lambert, 2014), a positive relationship is found between leverage *LEV* and audit report timeliness in Egypt. A company with high leverage ratio may indicate the existence of financial problems that require more attention and time by the auditor and thus longer audit report delay. This is also observable after the Egyptian revolution, where losses for the companies increased, and the economy became riskier, the coefficient of leverage increased by 6% than before revolution. This reflects that auditors became more suspicious about the financial conditions of high leveraged companies in Egypt.

Companies achieving loss do not have a significant effect on audit report lag in the Egyptian audit market. Despite that it is in contrary to our hypothesis, but it is consistent with other previous studies (Leventis et al., 2005; Knechel and Sharma, 2012; Habib, 2015; Shin et al., 2016). It is noticeable, that auditors in Egyptian market were more concerned about clients achieving loss during the global financial crisis because of the risky economic conditions affecting the world at that time. That is reflected in the positive significant coefficient of LOSS in global financial crisis subsample. Also, after Egyptian revolution, the *LOSS* coefficient, increased by around 7.5% due to the increase in number of companies realizing losses after the revolution. This may point out to the

professional scepticism acted by auditors in Egypt during non-stable economic and political conditions. Which also confirms that economic conditions could affect the auditing profession consistent with the political theory.

Consistent with Khlif and Samaha (2014) study on Egyptian sample, CEO duality *CEODUAL* proxy does not significantly affect report delay in Egypt. However, board of directors' independence BODIND in Egypt tend to increase audit report delay because more independent board of directors require higher quality audit services with more precise auditing tests which may increase audit process and thus audit delay.

Consistent with prior studies (Leventis et al., 2005; Munsif et al., 2012; Habib, 2015; Shin et al., 2016), auditor tenure tends to not affect audit report delay in the Egyptian sample. Also, auditing firm size (*Big N)* is a non-significant determinant of audit report lag. Similarly, some previous Egyptian based studies (Afify, 2009; Khlif and Samaha, 2014) and other Chinese based studies (Yan, 2012; Habib, 2015; Chan et al., 2016) found non-significant relationship between auditing firm size and audit report lag.

Consistent with results of prior literature (Whitworth and Lambert, 2014), industry specialist auditors tend to have shorter audit report lag by nearly 17.4% than non-specialist auditors. This is because industry specialist auditors possess more industry related knowledge and skills that enable them to finish the auditing procedures faster than their non-specialist counterparts.

Because any auditor opinion other than standard audit report, is perceived to include bad news that may affect stock prices. Management may not prefer these kinds of reports and may negotiate with the auditors for the type and content of the audit opinion. Besides

that, non-standard audit report may give indication of the presence of financial problems that increase auditor litigation risk. In turn, the auditor tries to reduce litigation risks by increasing audit tests and prolonging audit delay. That is why many previous literature reported a positive association between audit report lag and auditor opinion (Payne and Jensen, 2002; Ettredge et al., 2006; Blankley et al., 2014; Shin et al., 2016). Audit report timeliness model in Egypt document a significant increase by more than 14% in report delay for companies with non-standard audit report than other companies with standard report. Also, we may notice, that after the Egyptian revolution, the auditor opinion became more significant, and the coefficient increased from around 12.5% delay before the revolution to 21.5% after the revolution for companies with non-standard audit report. That may reflect how auditors became more suspicious after the revolution about risky companies in such an unstable environment, which led them to spend more time doing audit tests and consequently longer audit report.

Because Egyptian audit market is competitive; at which many small and medium sized local auditing firms constitute a high share in the audit market. The work load in the busy season is divided on a larger number of auditing firms. This makes December/January relatively not so busy season for auditors and a not a significant determinant of audit report timeliness in Egypt. Some prior studies (Knechel and Sharma, 2012; Blankley et al., 2014) have supported the non-significance of the busy season as a determinant of audit report timeliness. However, the researcher found that after Egyptian revolution, busy season became more significant variable. A good explanation is that auditors, after the revolution, tend to spend more time in auditing for those companies with high leverage ratio or those realizing losses or with non-standard audit reports, as previously

mentioned. This presents another confirmation of how economy changes and political instability could affect the auditing output.

Tourism industry clients did not seem to have short or prolonged audit report lag than other industries. This is documented by a non-significant coefficient in the Egyptian audit report lag model.

In Egypt, during the global financial crisis, especially year 2009, companies tend to have shorter audit report delay than other years. This may be because during global financial crisis, investors tend to be anxious about the performance of their companies during that economic recession, and management tend to make pressures on auditors to finish auditing as fast as possible to publish relative financial information to investors in a timely manner. Similarly, we can find that dummies for years 2011,2012 and 2013 for the revolution years have a negative coefficient, however, they are non-significant.

6.5 Analysis and discussion of auditor choices

Tables 6.5 and 6.6 show combinations of different choices made by the auditor during the auditing process. The positive coefficients of most proxies of client size, risk and complexity in audit fees and delay models (LNTA, REC and LEV) support the auditor choice number 2 in table 3-1. At which the auditor tries to face any increase in client size, complexity or risk by increasing the audit delay which may indicate more effort and costs accompanied by higher audit fees. This supports the transaction theory which suggests that clients with larger number of transactions associated with increased complexity and risk, need higher audit effort. That increase in audit effort leads to higher

audit fees charged by the client and longer audit report lag accompanied. Similarly, the same choice has been selected by the auditor in cases where a non-standard audit opinion has been issued. A positive significant coefficient for audit opinion is reported in both audit fees and report delay models that indicated that those companies require more time and effort that result in longer audit delay accompanied with higher production costs that increase the audit fees charged to the client.

Higher audit fees were charged to clients with weak corporate governance of no segregation of duties between CEO and Chairman. However, those clients did not suffer longer audit delay than other clients, which indicates that those clients did not need longer auditing time or effort. Thus, the audit fees premium charged to such clients can be considered a risk premium for weak corporate governance of those clients, which represent choice number 8 in table 3-1. On the other hand, in cases of clients with strong corporate governance with independent directors in the board, the auditor tends to be more conservative (choice number 3) spending more audit time leading to longer audit delay without charging higher audit fees.

Big N auditing firms in Egypt tend to have audit fees premium without giving any advantage of shorter audit lag than non-big N auditing firms. This supports choice number 8, at which the potential legal liability cost is considered higher for big N than non-big N, and thus the increase in audit fees is only a risk premium.

Industry specialized auditors tend to select choice 4, at which they offer lower audit fees and shorter audit report delay than non-specialized auditors. This indicates that specialized auditors can offer economies of scale and reduction in audit production costs that can be passed to the client in the form of audit fees discount.

Recession in audit market was obvious during the global financial crisis (2008-2009), at which there was a decline audit fees during this period and even audit delay was shorter (choice 4), especially clients with good liquidity ratio were offered audit fees discount with coefficient bigger than that of the full sample.

The auditors' choices were different during the Egyptian Revolution (2011-2013). As, during years (2012-2013) auditors tended to charge audit fees premium without increasing/decreasing audit delay (choice 8). This implies that the increase in audit fees during revolution was a risk premium due to the instability in economic and political conditions. This was also obvious in the change in coefficients of some variables before and after the revolution. Audit fees was higher for clients with high receivables ratio or with weak corporate governance (CEO duality) with no effect in audit effort or productions cost that was not reported in any change in audit report lag. Even initial discounts, that have been offered before the revolution, were not offered after the revolution, may be because new clients are more risky than old ones. Despite that the coefficient of tourism industry was not significant in either the audit fees nor the audit delay models, but the sign of the coefficient was negative (imply discount) and become positive (imply premium) due to the deterioration of such industry after the revolution. Moreover, auditors became more conservative (choice 3) by spending more time resulting in longer audit delay without increasing audit fees for clients issued non-standard audit opinion or with high leverage ratio or during busy season after the revolution.

6.6 Additional analysis

6.6.1 Auditing firm size effect

Additional analysis is carried out to explore whether audit fees and delay determinants differ between Big N and non-big N. A re-estimation of the audit fees and audit delay models is done by dividing the sample to Big N and Non-Big N subsamples as shown in tables 6.12 and 6.13.

It is noticeable that non-big N are more concerned with clients of higher leverage ratios, or poor corporate governance quality, or non-standard audit opinion. From tables 6.12 and 6.13, non-big N charge audit fees premium and longer audit report lag to riskier clients (with higher receivables ratio, CEO duality, non-standard audit opinion) than Big N. Whereas, Big N are more concerned about client performance, and consider clients realizing loss are riskier and thus have longer audit report lag by around 20%. Non-big N offer higher audit fee discounts for clients with good quick ratio. Moreover, specialized non-big N tend to give discount to their clients while Big N do not. Whereas, during busy season, big N charge higher fees of around 33.5% for their clients, but non-big N do not.

It is also noticeable that global financial crisis has affected auditors in both big N and non-big N auditing firms. As auditors in big N and non-big N tried to offer audit fee discounts to clients during the global financial crisis due to the economic recession that most companies in the world have suffered. Moreover, auditors tried to speed up their auditing process and shorten audit report lag to publish financial statements in a timely manner so that investors can know the real performance of their investments.

It is also apparent that non-Big N tried to increase audit fees during the revolution period while Big N did not, but even as previously discussed, they decreased the premium they used to have before the revolution.

Table 6-11 Audit firm size effect: audit fees- Egypt

Variable	BIG N	NON BIG N
LNTA	0.26141336***	0.31117541***
QUICK	-0.44242638	-0.55349609***
REC	0.3575482	0.42862524**
INVENT	-0.63868078*	-0.40555529***
FORG	0.06788285	0.08452712
ROA	-0.45177525	0.47727785***
BODIND	0.2319683	0.19000033
CEODUAL	0.11264187	0.08413484*
SPECZ	0.07213134	-0.16929494***
INITIAL	0.13830075	-0.03531255
AUDOP	0.04295577	0.07297101*
BUSY	0.33570239***	-0.05581278
TOURISM	0.4832783***	-0.26275447***
dum2008	-0.30744882***	-0.16557132**
dum2009	-0.08688853*	-0.09528542***
dum2011	0.0121467	0.04606371
dum2012	0.07625612	0.09491837**
dum2013	0.11505916	0.09402772*
_cons	5.8226568***	4.6455205***
N	255	404
r2	0.98838913	0.99452505

***, **, and *denote statistical significance at the 1%, 5% and 10% levels respectively

Table 6-12 Audit firm size effect: audit report lag

Variable	BIGN	NONBIGN
LNTA	0.03451359	0.07952582***
FORG	-0.00968057	0.01811885
LEV	-0.00398855	0.24250274**
LOSS	0.19976858**	-0.0461832
CEODUAL	-0.10396124	0.12743084***
BODIND	-0.10816405	0.44380467***
Tenure	-0.01840587	0.01048558
BUSY	0.12638928	0.1181503*
AUDOP	-0.07712098	0.24523321***
SPECZ	-0.12214392	-0.26451167***
TOURISM	-0.24452308	0.08545112
dum2008	-0.09643559	-0.03545585
dum2009	-0.15759615*	-0.08691451*
dum2011	-0.07744329	0.01742457
dum2012	-0.04111573	-0.01432497
dum2013	0.04532566	-0.03646992
_cons	3.6946679***	2.0295439***
N	255	404
r2	0.71439594	0.75740283

***, **, and *denote statistical significance at the 1%, 5% and 10% levels respectively

6.6.2 Client size effect

Following Lee et al. (2009), additional analysis is performed to capture whether determinants of audit fees and report lag are driven by client size or not. Using median of LNTA, tables 6.14 and table 6.15 summarize audit fees and report lag models for subsamples of large and small clients.

It is apparent that auditors of large clients worry more about companies achieving loss. But for small clients, auditors worry more about highly leveraged companies, and those companies with CEO duality or with non-standard audit reports. Also, small clients are charged higher audit fees than larger clients if they were issued a non-standard audit

report. This indicates that auditors become more worried if a smaller client is issued a qualified or modified report and increase client associated risk and consequently audit fees. This is consistent with previous sub-sample models of Big N and non-big N subsamples. This is because, 55% of large clients are audited by Big N auditing firms, while, 77% of small clients are audited by non-big N clients.

It is also obvious that Big N auditing firms in Egypt strategy is to attract larger clients than smaller ones, as Big N premium is higher for small clients than large clients by around 14%. Moreover, Big N auditing firms try to shorten audit report lag and provide more timely audit report for large clients, this appears in the negative significant coefficient for the Big N in the large clients' subsample model. On the contrary, a different result of a positive significant coefficient for Big N in the small clients is found in the subsample model. Which indicates that Big N auditing firms do not give much attention to the timeliness of audit report for small clients but even, they tend to increase report lag by around 33% than other non-big N auditing firms do. This is also reflected in the market share of Big N for small clients which is only 23%.

The period of global financial crisis is characterized by a relatively short report lag for both large and small clients, especially for year 2009. Moreover, it is observed that large clients during global financial crisis were offered audit fees discount during that recession time.

Table 6-13 Client size effect: audit fees- Egypt

Variable	Large clients	Small clients
LNTA	0.28879211***	0.34239057***
QUICK	-0.51030285***	-0.48929143***
REC	0.67083716**	0.22803121
INVENT	-0.54182699**	-0.45575771***
FORG	0.04188253	-0.06933893
ROA	0.18032857	0.48221695**
BODIND	0.16817452	0.14778618
CEODUAL	0.11905318**	0.12659791**
BigN	0.64549611***	0.78683784***
SPECZ	-0.10304926	-0.02273526
INITIAL	0.07191386	-0.04472604
AUDOP	0.14719343**	0.29551468***
BUSY	0.06576192	0.09261844
TOURISM	0.24908653	-0.19198312
dum2008	-0.31256176***	-0.08860219
dum2009	-0.15020101***	-0.04165259
dum2011	0.06444508	-0.00736653
dum2012	0.08269387	0.06591479
dum2013	0.0997826	0.07920632
_cons	4.9633496***	3.8795089***
N	329	330
r2	0.99008946	0.99221343

***, **, and *denote statistical significance at the 1%, 5% and 10% levels respectively

Table 6-14 Client size effect: audit report lag- Egypt

Variable	Large clients	Small clients
LNTA	0.12338914***	0.05932208*
FORG	0.04377894	-0.41410844*
LEV	0.09680261	0.26159114***
LOSS	0.17465207*	-0.03397988
CEODUAL	-0.02531967	0.09891819**
BODIND	0.22700307	0.48669535***
BigN	-0.14898552*	0.33256792***
Tenure	0.00180082	-0.01670969
BUSY	0.08463891	-0.02071799
AUDOP	0.10321568	0.17356445***
SPECZ	-0.12284138*	-0.32202178***
TOURISM	-0.11315582	0.07369858
dum2008	-0.04957739	-0.1001248
dum2009	-0.12718063*	-0.1218809**
dum2011	-0.07813613	0.0260065
dum2012	-0.04025315	0.00170602
dum2013	0.05429694	-0.01786055
_cons	1.3921658*	2.5950213***
N	329	330
r2	0.72305514	0.78475884

***, **, and *denote statistical significance at the 1%, 5% and 10% levels respectively

6.7 Summary

This chapter reports the results of empirical findings of the audit fees and report lag determinants in Egypt context over the six-year period from 2008 to 2013. Descriptive statistics are first presented followed by correlation matrices. Audit fees and report lag models' regression results are then discussed within the Egyptian sample. Egyptian auditors' choices of determining audit fees and prolonging audit process towards various determinants are then analysed. Several further analyses are conducted later in the chapter.

The next chapter will discuss the results of the two models of audit fees and audit report lag in the UK context.

Chapter 7 Empirical analysis and Discussions- UK

7.1 Introduction

This chapter presents the results of the data analysis based on the research methods previously discussed. Hypotheses outlined in the chapter 5, concerning audit fees and report timeliness, are tested throughout this chapter in the UK context. Related correlation coefficients are presented. Then a discussion of the results of the testing of hypothesis are illustrated in the UK context. An analysis of UK auditor choices (related to audit fees and report lag) towards different attributes are then presented. Additional analysis of the effect of client size on audit fees and lag models are illustrated. Finally, a summary of the analysis is presented.

7.2 Descriptive Statistics

Table 7-1 presents the descriptive statistics of main variables used in audit fees model and audit report lag model for the full period of the study (2008–2013), for the global financial crisis (2008-2009) periods in UK.

Audit fees Log *LNAF* mean in UK is 14.124 and the audit report lag log *LNRE_Lag* is 4.1. The mean of *LNTA* is 14.939, where 13.9% of it is receivables and 11.1% of it is inventory. Receivables and inventory ratios were higher during GFC of around 14.5% and 11.9% respectively which gives indication of the existence of relative recession. The mean of the quick ratio in the UK sample is 28.7% which was also relatively higher (29.5%) during the GFC.

Regarding the firm's complexity, 88.79% of the companies in our UK sample have foreign subsidiaries. In terms of firms' performance, the mean of *ROA* and *LOSS* were 10.6% and 8.45% respectively. It is observable that LOSS was very high during the GFC of around 11% and decreased to nearly 5% during 2011-2013.

For board of director's variables, the average proportion of independent non-executive directors on board of directors in UK is 67.9%, and around 3.5% of the companies in the UK sample have CEO duality.

In terms of auditor and engagement attributes, Big 4 tend to have a very high share of audit market of around 98.5%, moreover, 35.64% of UK sample companies tend to appoint industry specialist auditors.

18.7% of the UK sample are initial engagement for auditors and 55.6% of the companies are audited during year end December/January which is considered the busy season for auditors.

On average, auditors' tenure for UK companies is 3 years. All UK companies in the sample are issued a standard unqualified audit report. Tourism industry constitutes 7.37% of the UK sample.

Table 7-1 Descriptive statistics- UK

Panel A: Continuous variables

	FULL SAMPLE			2008-2009			2008-2010			2011-2013		
Variable	N	Mean	St. Dev.	N	Mean	St. Dev.	N	Mean	St. Dev.	N	Mean	St. Dev.
LNAF	651	14.124	1.267	210	14.090	1.152	321	14.095	1.174	330	14.153	1.353
LNRE_Lag	651	4.095	0.220	210	4.109	0.221	321	4.102	0.219	330	4.088	0.222
LNTA	651	14.939	1.615	210	14.886	1.634	321	14.881	1.623	330	14.996	1.608
QUICK	651	0.287	0.179	210	0.295	0.186	321	0.295	0.187	330	0.279	0.171
REC	651	0.139	0.103	210	0.145	0.107	321	0.143	0.107	330	0.136	0.098
INVENT	651	0.111	0.158	210	0.119	0.165	321	0.117	0.162	330	0.106	0.154
ROA	651	0.106	0.196	210	0.103	0.234	321	0.108	0.254	330	0.104	0.116
BODIND	651	0.679	0.114	210	0.658	0.124	321	0.664	0.121	330	0.694	0.106
Tenure	651	3.073	1.609	210	1.457	0.499	321	1.887	0.806	330	4.227	1.332

(continued)

Panel B: Dummy variables

	FULL SAMPLE		2008-2009		2008-2010		2011-2013	
Variable	N	%	N	%	N	%	N	%
FORG	651	88.79	210	88.57	321	88.47	330	89.1
LOSS	651	8.45	210	11	321	11.84	330	5.15
CEODUAL	651	3.5	210	5.71	321	4.3	330	2.7
BigN	651	98.46	210	98.1	321	98.13	330	98.79
SPECZ	651	35.64	210	35.71	321	35.51	330	35.76
INITIAL	651	18.7	210	50.95	321	34.9	330	3
BUSY	651	55.6	210	56.2	321	57	330	54.24
TOURISM	651	7.37	210	7.14%	321	7.16	330	7.58

LNAF is the natural log of external audit fees, ***LNRE_lag*** is the natural log of audit report lag in days, ***LNTA*** is the natural log of total assets, ***QUICK*** is the ratio of current assets less inventory to current liabilities, ***REC*** is the percentage of receivables over total assets, ***INVENT*** is the percentage of inventories over total assets, ***LEV*** is the ratio of long-term debt to total assets, ***FORG*** is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise, ***ROA*** is the ratio of net income before tax divided by total assets, ***Loss*** is a dummy variable given the value 1 if net income is negative, and 0 otherwise, ***BODIND*** is the percentage of independent directors on the board, ***CEODUAL*** is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person, ***BigN*** is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** 1 is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise, ***INITIAL*** is a dummy variable given the value 1 if this is the first year the auditor is appointed with the client, and 0 otherwise, ***Tenure*** is the number of years the auditor has been performing the audit to the company, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise

7.3 Correlation matrix

The correlation coefficients have been checked for the presence of high collinearity among independent variables. Table 7-2 presents correlations for the audit fees model in the UK, and table 7-3 presents correlations for the audit report lag model in UK.

From the correlation coefficients for table 7-2 and table 7-3, no high correlation is found among the variables. As a result, collinearity does not appear to create a threat to the interpretation of regression coefficients of the independent variables in both models.

Table 7-2 Correlation matrix- Audit fees model: UK

	LNTA	QUICK	REC	INVENT	FORG	ROA	BODIND	CEODUAL	BigN	SPECZ	INITIAL	BUSY	Tourism
LNTA	1.0000												
QUICK	-0.3353	1.0000											
REC	-0.3125	0.6344	1.0000										
INVENT	-0.0882	-0.2323	-0.1331	1.0000									
FORG	0.1181	0.1785	0.2593	-0.4107	1.0000								
ROA	-0.2986	0.3120	0.3029	-0.0678	-0.0920	1.0000							
BODIND	0.0612	-0.0848	-0.1185	-0.0180	0.0909	-0.0057	1.0000						
CEODUAL	0.0184	-0.0304	-0.0045	-0.0052	0.0416	-0.0549	0.0088	1.0000					
BigN	0.0122	0.0685	0.0415	-0.0354	-0.0444	-0.0226	0.0372	0.0239	1.0000				
SPECZ	0.1755	-0.1431	-0.0673	-0.1346	-0.0303	0.0531	-0.0641	0.0487	0.0929	1.0000			
INITIAL	-0.0122	0.0104	0.0244	0.0213	0.0085	-0.0379	-0.0922	0.0360	-0.0360	-0.0204	1.0000		
BUSY	-0.1338	0.0642	0.0712	-0.0178	0.0254	0.0421	0.0312	-0.0635	0.0141	0.0580	-0.0146	1.0000	
Tourism	0.0377	-0.0550	0.0111	-0.0922	0.0258	0.0182	0.1104	0.1052	0.0352	-0.0995	0.0001	-0.1738	1.0000

LNTA is the natural log of total assets, ***QUICK*** is the ratio of current assets less inventory to current liabilities, ***REC*** is the percentage of receivables over total assets, ***INVENT*** is the percentage of inventories over total assets, ***LEV*** is the ratio of long-term debt to total assets, ***FORG*** is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise, ***ROA*** is the ratio of net income before tax divided by total assets, ***BODIND*** is the percentage of independent directors on the board, ***CEODUAL*** is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person, ***BigN*** is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise, ***INITIAL*** is a dummy variable given the value 1 if this is the first year the auditor is appointed with the client, and 0 otherwise, ***AUDOP*** is a dummy variable given the value 1 when a company receives a non-standard unqualified audit opinion, and 0 otherwise, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise, ***dum2008, dum2009, dum2011, dum2012, dum2013*** are dummy variables for years 2008, 2009, 2011, 2012 and 2013, respectively

Table 7-3 Correlation matrix- audit report lag model: UK

	LNTA	FORG	LEV	LOSS	CEODUAL	BODIND	Tenure	BigN	BUSY	SPECZ	Tourism
LNTA	1.0000										
FORG	0.1181	1.0000									
LEV	0.1671	0.1495	1.0000								
LOSS	0.0146	-0.0146	0.0037	1.0000							
CEODUAL	0.0184	0.0416	0.0511	0.0017	1.0000						
BODIND	0.0612	0.0909	-0.0284	-0.0343	0.0088	1.0000					
Tenure	0.0498	0.0405	0.0495	-0.1101	-0.0088	0.1340	1.0000				
BigN	0.0122	-0.0444	-0.0340	0.0379	0.0239	0.0372	0.0368	1.0000			
BUSY	-0.1338	0.0254	-0.0494	0.0602	-0.0635	0.0312	-0.0398	0.0141	1.0000		
SPECZ	0.1755	-0.0303	-0.0372	-0.0415	0.0487	-0.0641	-0.0641	0.0929	0.0580	1.0000	
Tourism	0.0377	0.0258	-0.0993	-0.0434	0.1052	0.1104	-0.0020	0.0352	-0.1738	-0.0995	1.0000

LNTA is the natural log of total assets ***FORG*** is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise, ***LEV*** is the ratio of long-term debt to total assets, ***Loss*** is a dummy variable given the value 1 if net income is negative, and 0 otherwise, ***BODIND*** is the percentage of independent directors on the board, ***CEODUAL*** is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person, ***BigN*** is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise, ***Tenure*** is the number of years the auditor has been performing the audit to the company, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise

7.4 Findings and discussions

7.4.1 Audit fees model: Findings and discussion

Following most prior literature, multiple regression model is used to analyse determinants of audit fees in the UK during the sample period. Due to the advantages of panel data over OLS as discussed in the methodology chapter, panel data analysis will be used in our testing of hypothesis.

Different types of panel data models could be applied, we begin with the two most common models: fixed-effects regression and random-effects regression, besides estimating the ordinary OLS model as shown below in table 7-4.

Table 7-4 OLS vs Random vs Fixed data analysis

Variable	OLS	Random	Fixed
LNTA	0.05469113	0.02342486	0.02119883
QUICK	-0.31565368	-0.32425256	-0.31252493
REC	1.7261323**	-0.01438185	-0.12212391
INVENT	0.00223983	0.25932475	0.3087119
FORG	0.38234165*	0.1422097	0.10288803
ROA	0.18343796	-0.00117457	-0.00731038
BODIND	3.4553408***	0.35285824	0.24461876
CEODUAL	-0.27630265	0.09967333	0.10987617
BigN	0.65841012	0.12905901	0.06909819
SPECZ	0.09342042	-0.1499375**	-0.15629934**
INITIAL	-0.40478711	-0.1951225*	-0.18221176*
BUSY	0.50511741***	0.2873056	-0.08136098
Tourism	-0.1849635	-0.12150279	(omitted)
dum2008	0.40430506	0.19179929*	0.17487262*
dum2009	0.1065982	0.04310235	0.04160622
_cons	9.5079113***	13.208179***	13.652129***
N	651	651	651
r2	0.18669957		0.06262905

legend: * p<0.05; ** p<0.01; *** p<0.001

To determine which analysis best fits our data, several tests have been done. First, Breusch–Pagan Lagrange Multiplier test, with results indicate that there is difference across units, or in other words, the null hypothesis is rejected and the alternative one is accepted. Therefore, the random-effects is more appropriate than ordinary OLS.

Breusch and Pagan Lagrangian multiplier test for random effects

LNAF[ID,t] = Xb + u[ID] + e[ID,t]

Estimated results:

	Var	sd = sqrt(Var)
LNAF	1.605509	1.267087
e	.0769825	.2774573
u	1.626615	1.275388

Test: Var(u) = 0

chibar2(01) = 885.43

Prob > chibar2 = 0.0000

When N is large while T is small (as in our case), the estimates by fixed effect regression and random effects regression can significantly differ (Gujarati and Porter, 2009). To decide between fixed or random effects, a Hausman test can be ran. Results of the test rejected the null hypothesis and hence the fixed-effects model is more appropriate than using the random model.

Table 7-5 Hausman test: Fixed vs Random

	Coefficients			
	(b) Fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
LNTA	.0211988	.0234249	-.002226	.007695
QUICK	-.3125249	-.3242526	.0117276	.0579432
REC	-.1221239	-.0143819	-.1077421	.0958404
INVENT	.3087119	.2593248	.0493871	.08644
FORG	.102888	.1422097	-.0393217	.0284569
ROA	-.0073104	-.0011746	-.0061358	.0221422
BODIND	.2446188	.3528582	-.1082395	.0464365
CEODUAL	.1098762	.0996733	.0102028	.0119284
BigN	.0690982	.129059	-.0599608	.1123955
SPECZ	-.1562993	-.1499375	-.0063618	.012636
INITIAL	-.1822118	-.1951225	.0129107	.0116337
BUSY	-.081361	.2873056	-.3686666	.1348485
dum2008	.1748726	.1917993	-.0169267	.0129109
dum2009	.0416062	.0431024	-.0014961	.0019942

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(14) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 39.69

Prob>chi2 = 0.0003

The Variance Inflation Factor (VIF) has been calculated to check for multicollinearity problem. The mean values of VIF tests in UK is 1.81, as shown in table 7.6, which indicate that there is no concern about this problem.

Table 7-6 VIF: checking for multi-collinearity

Variable	VIF	1/VIF
dum2008	5.30	0.188666
INITIAL	5.21	0.191862
QUICK	1.94	0.516049
REC	1.90	0.526167
FORG	1.41	0.709314
INVENT	1.35	0.739852
LNTA	1.32	0.759643
ROA	1.26	0.796010
SPECZ	1.15	0.870971
Tourism	1.10	0.910999
BODIND	1.08	0.928320
BUSY	1.07	0.938787
dum2009	1.05	0.949213
BigN	1.04	0.965011
CEODUAL	1.03	0.968749
Mean VIF	1.81	

In order to check heteroscedasticity in the model, Wald test for panel-level heteroscedasticity is rum. The test suggests that the existence of heteroscedasticity.

Modified Wald test for groupwise heteroscedasticity in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (140) = 1.1e+31

Prob>chi2 = 0.0000

Wooldridge test for autocorrelation is also run. Results suggests the existence of autocorrelation.

Wooldridge test for autocorrelation in panel data

H0: no first order autocorrelation

F(1, 117) = 127.682

Prob > F = 0.0000

Thus, we need a panel data model that can account for both heteroscedasticity and autocorrelation. Since, in this case, fixed and random-effects estimators are inefficient and biased, we need a methodology which corrects the standard errors for autocorrelation and heteroscedasticity. The panel-corrected standard error (PCSE) technique suggested by (Beck and Katz, 1995) is often used as an alternative method in studies focusing on relatively "short and wide" panels like this study.

Following (Lapré and Tsikriktsis, 2006; Mehic et al., 2013; Onder and Karal, 2013; Thomas et al., 2014) we used the Prais- Winsten regression method to account for both heteroscedasticity and autocorrelation between units in the model (Stata command: xtpcse). Using Prais-Winsten analysis, Table 7-7 summarizes audit fees regression results in UK:

Table 7-7 Audit fees regression results- UK

Variable	UK_FULL (2008-2013)	DURING_GFC (2008-2009)	AFTER_GFC (2010-2013)
LNTA	0.0776237**	0.07589622	0.09881602**
QUICK	-0.11430318	-0.40403149	-0.10717708
REC	1.6763754**	1.2015818*	1.9537485**
INVENT	-0.29475732	-0.11313535	-0.27198969
FORG	0.35484751**	0.27679449	0.59306777***
ROA	0.02312088	0.27912257	-0.00903432
BODIND	2.3670282***	2.3801831***	2.4309574***
CEODUAL	-0.15431328	-0.3334979*	-0.10317728
BigN	0.28211035	0.57690023	1.1571155***
SPECZ	-0.06248806	-0.05080098	-0.07606515
INITIAL	-0.21625478	-0.05920758	-0.45584893**
BUSY	0.64877946***	0.50234578***	0.53269328***
Tourism	-0.22539493	-0.10539086	-0.396239**
dum2008	0.21493146		
dum2009	0.06113283		
_cons	10.214525***	10.311087***	8.8328623***
N	651	210	441
r2	0.97760663	0.93699007	0.97026236

***, **, and *denote statistical significance at the 1%, 5% and 10% levels respectively

LNTA is the natural log of total assets, ***QUICK*** is the ratio of current assets less inventory to current liabilities, ***REC*** is the percentage of receivables over total assets, ***INVENT*** is the percentage of inventories over total assets, ***LEV*** is the ratio of long-term debt to total assets, ***FORG*** is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise, ***ROA*** is the ratio of net income before tax divided by total assets, ***BODIND*** is the percentage of independent directors on the board, ***CEODUAL*** is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person, ***BigN*** is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** 1 is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise, ***INITIAL*** is a dummy variable given the value 1 if this is the first year the auditor is appointed with the client, and 0 otherwise, ***AUDOP*** is a dummy variable given the value 1 when a company receives a non-standard unqualified audit opinion, and 0 otherwise, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise, ***dum2008, dum2009, dum2011, dum2012, dum2013*** are dummy variables for years 2008, 2009, 2011, 2012 and 2013, respectively

From table 7-7, it is observable that there is a positive significant relationship between audit fees and client size. This is consistent with (H_1) and previous literature that greater effort and time are needed for auditing larger clients, which results in higher audit fees of around 7.8% charged to larger clients than smaller ones in the UK sample.

Due to the higher risk associated with evaluating receivables ratio REC and the more complex auditing tests receivables need to be audited. Receivables ratio has a strong positive coefficient indicating an increase in audit fees for those companies with higher receivable ratios. Whereas, a non-significant relationship between inventory ratio is reported by results in the UK sample. Despite it is in contrast with our hypothesis, a non-significant inventory ratio coefficient was also reported by a Chinese study by (Chen et al., 2007) and an Australian study by (Goodwin-stewart and Kent, 2006). This can be interpreted to the change in business world where just-in-time manufacturing is now used at which inventory hold are not in large quantities. Moreover, inventory control systems and barcode systems used in most companies nowadays make continuous control over inventory levels and facilitate auditor's task in verifying the accuracy of inventory account.

Quick ratio (QUICK) effect on audit fees in the UK sample, tend to be non-significant. This is consistent with results of Wang and Zhou (2012), but is in contrary to our expectation of a significant relationship.

The more complex a client is, the harder it is to audit and the more time-consuming the audit is likely to be and consequently the higher audit fees to be charged (Simunic, 1980; Matthews and Peel, 2003; Hay et al., 2006; Naser and Nuseibeh, 2007; Dickins et al.,

2008; Hay, 2013; Bryan and Mason, 2016). Consistent with our (H_3) and most previous studies, the existence of foreign subsidiaries increases audit fees in UK by around 35%.

Mixed results surround the relationship between client profitability and audit fees. Some studies proved a positive relationship, some found a negative one, and others found it a non-significant determinant. In line with a Swedish study by Zerni (2012) and a U.S study by Scott and Gist (2013), audit fees model in UK sample suggests that ROA -as a proxy for client profitability- has no effect on audit fees.

Consistent with prior studies (Carcello et al., 2002; Goodwin-stewart and Kent, 2006; Mitra et al., 2007; Singh et al., 2014), results indicate that independence of board of directors BODIND has a positive effect on audit fees. In other words, clients with independent board of directors pay higher audit fees in the UK. This is because, higher quality board of directors requires higher quality audit which needs more qualified auditors with higher audit fees. However, CEO duality tend to have non-significant effect on audit fees model.

Big N coefficient tended to be a non-significant coefficient in UK audit fees model. This support the results of some prior studies on UK audits such as: (Seetharaman et al., 2002; Matthews and Peel, 2003; Chaney et al., 2004; Giroux and Jones, 2007) that failed to show Big N premium. However, it is obvious in the subsample, after GFC (2011-2013), that Big N in UK began to highly increase their audit fees than non-big N.

Auditor specialization is insignificant variable in audit fees model in UK sample, this is still consistent with some previous literature (Ferguson and Stokes, 2002; Lowensohn et al., 2007), however, it is inconsistent with our expectation.

Despite continuous claims that low balling practice may affect auditor independence, auditors still offer initial audit discounts in most audit fees studies in different countries. Results indicate that during 2010-2013, subsample of UK audit fees model, auditors offer nearly 4.6% audit fee discount for initial audit engagements. However, for the full sample model, it is a non-significant negative coefficient.

Busy season tends to be a significant variable resulting in higher audit fees in UK sample by 65% for audit engagement performed by year end December/January which is consistent with our expectation. A positive coefficient for busy season is also reported by other prior studies on audit fees of UK firms (Chaney et al., 2004; McMeeking et al., 2006; Clatworthy and Peel, 2007). For tourism industry, it seems to be a non-significant industry in the UK audit fees model.

Mixed results surround the response of auditors to GFC. It seems that it depends on the context of the study, where evidence from China (Zhang and Huang, 2013) and Australia (Xu et al., 2013) show audit fees premium during the GFC, however evidence from the USA (Krishnan and Zhang, 2014) report a cut in audit fees which is also reported in Egyptian audit fees model previously discussed. In UK, it seems that audit fees were not affected by the GFC, and even the determinants of audit fees have not changed much during the global financial crisis period.

7.4.2 Audit report lag model: Findings and discussion

This study examines the effect of different independent variables on audit report lag as a dependent variable, thus a multiple regression analysis is considered to be used in this study following most previous literature. Different types of panel data models could be applied, we begin with the two most common models: fixed-effects regression and random-effects regression, besides that we estimated the ordinary OLS model as shown below.

Table 7-8 OLS vs Random vs Fixed data analysis

Variable	OLS	Random	Fixed
LNTA	-0.00581702	-0.00292156	-0.0022261
FORG	-0.09855717***	-0.02708697	0.00883537
LEV	-0.08080351*	-0.03881226	-0.02901172
LOSS	0.02611395	0.03192987	0.02907082
CEODUAL	-0.00513019	-0.0243665	-0.01303917
BODIND	0.12734883	0.08378169	0.03329733
BigN	-0.28828209***	-0.15500152	-0.05460182
Tenure	-0.02055051**	-0.0091203	-0.00647562
BUSY	0.05119362**	0.04001002	0.02249992
SPECZ	-0.01261552	-0.01482309	-0.01503098
Tourism	-0.07094576*	-0.07716216	(omitted)
dum2008	-0.02881959	0.02920723	0.03902888
dum2009	-0.02814414	0.01394554	0.02286217
_cons	4.5662138***	4.2960564***	4.1697257***
N	651	651	651
r2	0.10436163		0.06028529

legend: * p<0.05; ** p<0.01; *** p<0.001

To decide which data analysis type is better, some tests can be done. First, a Breusch–Pagan Lagrange Multiplier test has been performed with results indicating that the random-effects is appropriate.

Breusch and Pagan Lagrangian multiplier test for random effects

LNRE_Lag[ID,t] = Xb + u[ID] + e[ID,t]

Estimated results:

	Var	sd = sqrt(Var)
LNRE_Lag	.0484375	.2200852
e	.0118915	.1090483
u	.0430374	.2074545

Test: Var(u) = 0

chibar2(01) = 514.14

Prob > chibar2 = 0.0000

Then, a Hausman test has been performed to decide between fixed effects model and random effects model. The results of the test accepted the null hypothesis and hence the random-effects model is applicable for the UK sample.

Table 7-9 Hausman test: fixed vs random

	Coefficient			
	(b) Fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
LNTA	-.0022261	-.0029216	.0006955	.0033729
FORG	.0088354	-.027087	.0359223	.0215469
LEV	-.0290117	-.0388123	.0098005	.0198209
LOSS	.0290708	.0319299	-.002859	.0042095
CEODUAL	-.0130392	-.0243665	.0113273	.0101328
BODIND	.0332973	.0837817	-.0504844	.037067
BigN	-.0546018	-.1550015	.1003997	.0801273
Tenure	-.0064756	-.0091203	.0026447	.001298
BUSY	.0224999	.04001	-.0175101	.0705521
SPECZ	-.015031	-.0148231	-.0002079	.0098819
dum2008	.0390289	.0292072	.0098217	.004758
dum2009	.0228622	.0139455	.0089166	.003308

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(12) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 15.29

Prob>chi2 = 0.2260

As shown in table 7-10, the Variance Inflation Factor (VIF) has been calculated to check for multicollinearity problem. The mean value of VIF tests in UK is 1.24 which indicates that there is no concern about this problem.

Table 7-10 VIF: checking for multi-collinearity

Variable	VIF	1/VIF
Tenure	2.11	0.473006
dum2008	1.93	0.517897
dum2009	1.47	0.679836
LNTA	1.11	0.898679
SPECZ	1.10	0.912239
Tourism	1.09	0.920109
LEV	1.08	0.928058
BUSY	1.07	0.933992
BODIND	1.05	0.947961
FORG	1.05	0.949661
CEODUAL	1.04	0.965733
LOSS	1.03	0.974179
BigN	1.02	0.980219
Mean VIF	1.24	

To test the null hypothesis of no first-order serial correlation in the residuals we use the test for autocorrelation setup by Wooldridge. As indicated below, rejection of the null hypothesis indicates the need to correct the standard errors for serial correlation.

Wooldridge test for autocorrelation in panel data

H0: no first order autocorrelation

F(1, 117) = 10.545

Prob > F = 0.0015

Finally, in order to check heteroscedasticity in the model we perform Wald test for panel-level heteroscedasticity. The test suggests the existence of heteroscedasticity.

Modified Wald test for groupwise heteroskedasticity

H0: sigma(i)^2 = sigma^2 for all i

chi2 (140) = 2.0e+30

Prob>chi2 = 0.0000

Since the error terms exhibit heteroscedasticity and autocorrelation, the appropriate panel data regression model to be used is Prais-Winsten regression.

Table 7-11 summarizes the results of determinants of audit report lag in the UK context using Prais- Winsten analysis.

Table 7-11 Audit report lag regression results – UK

Variable	Full sample (2008-2013)	During GFC (2008-2009)	After GFC (2010-2013)
LNTA	-0.00495508	-0.00907523	-0.00133718
FORG	-0.07959169**	-0.03649615	-0.11355911***
LEV	-0.06836544*	-0.06512519	-0.06929355
LOSS	0.02554569	0.0220238	0.02709312
CEODUAL	-0.00900265	-0.11318387	0.06779469
BODIND	0.1178486	0.06252778	0.11695629
BigN	-0.27048747***	-0.25760644***	-0.30397015***
Tenure	-0.0152799**	-0.01858578	-0.01716963**
BUSY	0.04579228**	0.02657636	0.0503444*
SPECZ	-0.01165647	-0.01686199	-0.00569232
Tourism	-0.05528049	-0.05958372	-0.08588715**
dum2008	-0.00340046		
dum2009	-0.00587041		
_cons	4.499096***	4.5522004***	4.5139835***
N	651	210	441
r2	0.95542058	0.90521005	0.95704953

***, **, and *denote statistical significance at the 1%, 5% and 10% levels respectively

LNTA is the natural log of total assets ***FORG*** is a dummy variable given the value 1 if the company has foreign subsidiaries, and 0 otherwise, ***LEV*** is the ratio of long-term debt to total assets, ***Loss*** is a dummy variable given the value 1 if net income is negative, and 0 otherwise, ***BODIND*** is the percentage of independent directors on the board, ***CEODUAL*** is a dummy variable given the value of 1 if the CEO and Chairman of board is the same person, ***BigN*** is a dummy variable given the value 1 when a Big 4 auditor is used, and 0 otherwise, ***SPECZ*** is a dummy variable given the value of 1 if the auditor is a specialized industry, 0 otherwise, ***Tenure*** is the number of years the auditor has been performing the audit to the company, ***BUSY*** is a dummy variable given the value of 1 if fiscal year-end is December/January, ***TOURISM*** is a dummy variable given the value 1 when the company is in the tourism sector, and 0 otherwise, ***dum2008, dum2009, dum2011, dum2012, dum2013*** are dummy variables for years 2008, 2009, 2011, 2012 and 2013, respectively

As shown in table 7-11, the log of total assets *LNTA* used as a proxy for client size, tend to have a non-significant effect on audit report lag in UK sample, which is consistent with most US sample based studies (Ettredge et al., 2006; Lee et al., 2009; Abbott et al., 2012; Knechel and Sharma, 2012; Munsif et al., 2012; Whitworth and Lambert, 2014). This can be because of the accurate planning by UK and US auditors to allocate appropriate human resources required to finish auditing large companies timely, or because of the high audit fees earned by auditing firms in the UK that allow them to appoint qualified auditors to finish the auditing process in a timely manner.

FORG has a negative significant effect on audit report lag in the UK context. Despite it is inconsistent with our hypothesis and most previous literature, but it is still consistent with the results of a study by Khlif and Samaha (2014). This negative relationship can be justified for two reasons. First, the need of the parent company to have the financial statements of the subsidiaries finished as soon as possible to have enough time to make necessary currency translations and issue consolidated financial statements. Second, larger multinational companies with foreign subsidiaries have strong internal controls that auditors can trust and therefore lead to a shorter auditing process and a faster issuance of audit report.

A significant negative relationship exists between leverage *LEV* and audit report timeliness in the UK, this negative relationship is consistent with Chinese-sample previous studies (Habib, 2015; Chan et al., 2016). An appropriate justification for this relationship is that, when a company credit from banks or any other institution, creditors usually study the financial condition of the company and its creditability rank before giving any loans and tend to monitor the performance of the company. These monitoring

tasks done by creditors decrease audit risk and therefore the audit report lag tends to be shorter.

LOSS as a proxy of client performance tend to not affect audit report lag in the UK context. This is in contrary to the argument of some studies (Afify, 2009; Habib and Bhuiyan, 2011) that management of companies realizing losses may wish to delay this bad news from investors. But these results are consistent with results of some other prior studies (Leventis et al., 2005; Knechel and Sharma, 2012; Habib, 2015; Shin et al., 2016) that also has reported a non-significant relationship between LOSS and audit report lag.

Board of directors' independence (BODIND) and CEO duality (CEODUAL) as tools of corporate governance tend to be non-significant variables in the audit report lag model in the UK sample. This is in contrary to Afify (2009) argument that stronger board of directors' characteristics implies higher monitor by management and gives higher trust of auditors on controls and thus decreases the level of substantive tests and therefore shorten report lag. Non-significance of board of directors independence and CEO duality was reported by prior Chinese-sample studies by (Habib, 2015; Chan et al., 2016) and also by (Apadore and Noor, 2013) study on Malaysian audit market.

Similar to Leventis et al. (2005) results on Athens stock exchange, auditing firm size in the UK has a negative effect on audit report lag model. That could be justified by the reason that larger auditing firms hire higher quality staff and employ more efficient audit plan that enable them to finish the auditing process faster. Shorter audit report lag offered by big N could be a competitive advantage over non-big N counterparts. This is reflected in the domination of big N for around 98.5% of the UK audit market. On the other side,

auditor specialization is not a significant determinant in the audit report lag in the UK sample.

Learning time spent by auditors for client's industry and processes decrease as auditor tenure increase and therefore audit delay decrease, prior studies supported this negative relationship (Lee et al., 2009; Whitworth and Lambert, 2014; Chan et al., 2016). Similarly, a negative significant coefficient of tenure in the UK sample is reported.

Since, in the UK sample, around 98.5% of the companies are audited by the Big N auditing firms that dominate the audit market. This increases work load on Big N auditing firms and therefore lead to a longer report delay during busy season, that is why BUSY has a positive significant coefficient in the audit report lag model in the UK sample. As companies being audited during the busy season tend to have a longer audit delay by around 4.5% than other companies not audited during busy season. This consistent with results of (Payne and Jensen, 2002; Lee et al., 2009; Habib and Bhuiyan, 2011; Enofe et al., 2013).

Tourism industry clients did not seem to have short or prolong audit report lag than other industries. This is documented by a non-significant coefficient in the UK audit report lag model.

Year dummies (2008,2009) for global financial crisis effect on audit report lag were tested. Results reported that the global financial crisis did not significantly affect audit report delay in UK. However, negative coefficients are observed for these dummies.

7.5 Analysis and discussion of auditor choices

Tables 7-7 and 7-11 show combinations of different choices made by the auditor during the auditing process.

The positive coefficients of most proxies of client size, risk, complexity and strong corporate governance in audit fees model (LNTA, REC and FORG, BODIND) support the increase in audit fees in response to higher transactions, risk or complexity for the client. However, the report lag tends to be not affected (as in LNTA, BODIND) or even shorter (as in FORG and LEV) for proxies of client size, risk and complexity. This is can be interpreted in choice 8, at which the auditor may need more audit staff with higher effort and costs to issue a timely audit report, these higher cost is passed to the client in the form of higher audit fees. This is consistent to client service theory, at which auditing firms give priority to larger clients due to the higher fees paid by those clients, and therefore, audit reports are issued as timely as possible.

Choices and decisions of auditors in the UK are not affected during determining audit fees or timing of audit report by client profitability, financial performance and industry (Tourism), CEO duality or auditor specialization (Choice 9).

More efficient auditing process (choice 6) has been realized in audit engagements with Big N or for auditors with longer tenure with the client, at which audit delay is shorter without any effect in audit fees. This efficiency may be realized because of the employment of higher quality auditors in Big N or because long tenure make the auditor more oriented with the client's business. However, during busy season, audit efficiency cannot be realized, as report delay tend to be longer associated with audit fees premium

(choice 2). As audit time is limited during busy season and any increase in the audit effort is associated with higher costs either by overtime work by auditors or by the engagement of more audit staff, these costs are passed to the client in the form of higher audit fees.

Global financial crisis tends to not affect auditors in the UK neither when pricing audit services nor in the timeliness of audit opinion (choice 9).

7.6 Additional analysis

7.6.1 Client size effect

Additional analysis is performed to capture whether determinants of audit fees are driven by client size or not. Using median of LNTA, tables 7-12 and 7-13 summarize audit fees model and audit report lag model for subsamples of large and small clients.

It is apparent that Big N auditing firms offer audit fee discounts for smaller clients, while charging audit fee premium to larger clients. This indicates that Big N pricing decisions are very affected by client size. It is also observed that large clients tend to have relatively shorter audit report lag than that of smaller clients. This is apparent in the negative coefficient of LNTA for larger clients than that of the smaller clients in the audit report lag analysis.

Table 7-12 Client size effect: audit report lag- UK

Variable	Large clients	Small clients
LNTA	-0.04373755***	0.01260264
FORG	-0.03866088	-0.09114929***
LEV	-0.16093676*	-0.08497565*
LOSS	0.03929809	0.01262746
CEODUAL	-0.07932094	0.08110432
BODIND	0.15044681	0.08507104
BigN	-0.2126494***	-0.32264302***
Tenure	-0.02754212***	-0.01045145
BUSY	0.05476034*	0.02017543
SPECZ	0.01134558	0.00016812
Tourism	-0.07772882	-0.1193651***
dum2008	-0.02326088	-0.0039754
dum2009	-0.03244843	0.01029899
_cons	5.1112053***	4.3355252***
N	325	326
r2	0.93583194	0.9641194

***, **, and *denote statistical significance at the 1%, 5% and 10% levels respectively

Table 7-13 Client size effect: audit fees- UK

Variable	Large clients	Small clients
LNTA	0.14752704**	-0.10569456
QUICK	-0.76083157**	-0.11916302
REC	1.0385136	2.4382975**
INVENT	-1.0644219***	0.8012826**
FORG	0.139217	0.5442441***
ROA	-0.54449731	-0.05788514
BODIND	2.0183801***	3.0320624***
CEODUAL	-0.16746579	-0.12683893
BigN	0.89177737**	-0.33860758**
SPECZ	-0.05362271	-0.068068
INITIAL	0.01661194	-0.33212445**
BUSY	0.5196669***	1.0493227***
Tourism	-0.29412177	-0.03935608
dum2008	-0.11602219	0.39811276
dum2009	-0.01094242	0.17259583
_cons	9.4241527***	12.163798***
N	325	326
r2	0.97657622	0.97767721

***, **, and *denote statistical significance at the 1%, 5% and 10% levels respectively

7.7 Summary

This chapter reports the results of empirical findings of the audit fees and audit report lag determinants in the UK context over the six-year period from 2008 to 2013. First, analysis of determinants of audit fees model in the UK has been discussed. Then, the analysis of determinants of audit report lag have been illustrated.

Analysis of auditor choices of audit fees and report lag towards various attributes and events are summarized. Finally, additional analysis has been summarized for client size effect on audit fees and report lag using subsamples by client size median.

The next chapter will provide a comparison of audit fees and report lag determinants differences between the Egyptian and UK samples.

Chapter 8 Findings and conclusion-Country comparison

8.1 Introduction

This chapter presents a comparison of drivers of audit fees between the Egyptian and UK contexts. After that, another comparison of drivers of audit report lag between the Egyptian and UK contexts is presented. Finally, comparison of auditors' decisions and choices in both contexts are briefly discussed.

8.2 Audit fees model: Results and discussion- Comparison Egypt and the UK

Table 8-1 summarizes audit fees regression results in Egypt and UK context.

Client size is a core significant determinant of audit fees whatever the country or the audit market or the economic and political conditions or regulations. To the best of researcher's knowledge, no study has reported a negative or a non-significant coefficient of client size in the audit fees model. It is clear that an auditor will spend more effort, time and resources in auditing a firm with larger total assets than a smaller one. Results reported a significant positive coefficient for log of total assets ***LNTA*** (as a proxy of client size) and audit fees in both Egypt and the UK. However, the coefficient of client size in Egypt is much higher than that in the UK sample. As the coefficient of the client size in Egypt is 28.5% compared to only 7% in UK sample, that implies that client size is more effective during pricing audit services in Egypt than in the UK.

Client risk is another core dominant variable proved by previous literature to be a significant determinant during pricing decisions of audit services. Receivables ratio tend to be positively significant in both the Egyptian and UK samples. For inventory ratio, a negative coefficient is reported in both Egypt and the UK, however the coefficient in Egypt is significant while in UK, it is non-significant. This support the mixed results obtained by previous literature for the effect of inventory ratio on audit fees model.

Despite that QUICK ratio is not significant in UK sample, but it has a negative coefficient similar to the Egyptian sample. Also during GFC, quick ratio coefficient tended to be higher in Egypt and UK than in any other period. This gives indication that global financial crisis affected auditors' attitude in audit pricing decisions and led them to offer audit fee discounts for those companies with better financial conditions.

Client's complexity represented by whether client owns foreign subsidiary or not (FORG) has a positive coefficient but differs in significance between Egypt and UK. This difference may be because of the significance of foreign subsidiaries in the UK sample which constitutes around 88% of the sample versus only 15% in the Egyptian sample. This confirms how differences between countries and market characteristics affect core variables in audit pricing model. Also, a positive coefficient of ROA is found in both Egyptian and UK samples, however, it has a non-significant coefficient in the UK sample.

Table 8-1 Summary of audit fees model results

Hypothesis	Variable	Expected	Actual results	
			Egypt	UK
H_1: There is a significant positive relationship between client size and audit fees	Client size (LNTA)	+	+ sig	+ sig
H_{2a}: There is a significant positive relationship between receivables ratio and audit fees	Client risk (REC)	+	+ sig	+ sig
H_{2b}: There is a significant positive relationship between inventory ratio and audit fees	Client risk (INV)	+	- sig	- n.s
H_{2c}: There is a significant negative relationship between quick ratio and audit fees	Client risk (QUICK)	-	- sig	- n.s
H_3: There is a significant positive relationship between client complexity and audit fees	Client complexity (FORG)	+	+ n.s	+ sig
H_4: There is a significant positive relationship between client profitability and audit fees	Client Profitability (ROA)	+	+ sig	+ n.s
H_5: There is a significant relationship between clients in tourism industry and audit fees	Tourism Industry	?	+ n.s	- n.s
H_{6a}: There is a significant positive relationship between CEO duality and audit fees	Corporate governance - CEO duality	+	+ sig	- n.s
H_{6b}: There is a significant positive relationship between board of directors' independence and audit fees.	Corporate governance - BOD independence	+	+ n.s	+ sig
H_7: There is a significant positive relationship between audit firm size and audit fees	Audit firm size	+	+ sig	+ n.s
H_8: There is a significant negative relationship between auditor specialization and audit fees.	Auditor specialization	-	- sig	- n.s
H_9: There is a significant negative relationship between initial engagements and audit fees	Initial engagement	-	- n.s	- n.s
H_{10}: There is a significant positive relationship between busy season and audit fees	Busy season	+	- n.s	+ sig
H_{11}: There is a significant positive relationship between auditor opinion and audit fees	Audit opinion	+	+ sig	n.a
H_{12a}: There is a significant effect of global financial crisis on audit fees	Global financial crisis	?	- sig	+ n.s
H_{12b}: There is a significant effect of Egyptian revolution on audit fees	Egyptian Revolution	?	+ sig	n.a

- "sig" is for significant relationship
- "n.s" is for non-significant relationship
- "n.a" is for non-applicable

Board of director's characteristics tend to increase audit fees whether it is strong or weak corporate governance tool. As we can find that weak corporate governance mechanism represented in Egypt by CEO duality constitutes more than 37% of the Egyptian sample. Consequently, this weak governance characteristic increase audit risk assessed by the auditor and tend to increase associated audit fees. However, in UK sample, where CEO duality constitutes only 3.5%, while non-executive directors constitutes 68% of the board of directors on average. This higher quality characteristic of corporate governance in the UK require higher quality auditors with higher audit fees. That is why corporate governance is a significant determinant of audit fees in Egypt and UK despite differences in the strength of governance mechanisms.

The difference between Big N coefficient in Egypt and UK, confirms the differences in pricing decisions that vary between audit market characteristics in different countries. The difference in pricing attitude by Big N in Egypt and UK affect their market domination, as shown on the descriptive statistics in tables 6.1 and 7.1, Big N market share in Egypt is less than 39% while in UK is about 98.5 %. As due to the high Big N premium in Egypt, it is easy for small and medium sized audit firms to penetrate and compete by much lower audit fees. However, results indicate that Big N in UK do not charge higher premium than non-big N which led to the difficulty of non-big N penetration in the UK audit market. This implies how Big N audit fees premium affects competitiveness and dominance in audit markets.

Despite its insignificance in UK audit fees model, auditor specialization coefficient tends to have a negative sign in both Egypt and UK. This supports the claim by some prior literature that auditing firms' investment in developing industry-specific-skills of

auditors are spread over a large number of clients, leading to cost savings passed to the client in the form of audit fee discount.

Initial engagement tends to be a non-significant variable in audit fees model in the Egyptian and UK samples. However, both coefficients have negative signs implying probability of some audit fee discount given to new clients.

Busy season is a non-significant variable in audit fees model in Egypt despite that more than 82% of Egyptian companies are audited in the busy season versus only 55.6% of UK firms. But the busy season tends to be a significant variable resulting in higher audit fees by 65% for audit engagement in UK. A proper explanation for this difference in results of *BUSY* between Egypt and the UK is the market share of Big N. As nearly 98.5% of the UK firms appoint only four auditing firms (Big4), and logically, year-end December/January will be a very busy season, and auditors would charge higher audit fees. While the case in Egypt is very different where dominance of Big N is not very high (nearly 38%) and the market is very competitive with many medium and small sized audit firms. So, the year end is relatively not so busy season for auditors in Egypt as it is in the UK.

Tourism industry was a non-significant variable in the audit fees model in both Egypt and UK. The global financial crisis effect on audit fees differed between the two contexts in Egypt and UK. As results indicate a significant cut in audit fees in Egypt, and non-significant effect on UK audit fees.

In sum, results revealed consistency between Egypt and UK in most signs of coefficients of audit fees determinants. They may differ in significance of the variables due to

different audit market characteristics, but they generally agree in the direction of the relationship of whether it is a positive or a negative sign for most of the audit fees determinants.

8.3 Audit report lag model: Results and discussion- Comparison Egypt and UK

Table 8-2 summarizes audit report lag regression results in Egypt and UK context.

There are differences in results of the effect of company size LNTA on audit report lag between Egypt and UK, at which Egyptian sample reported a positive significant coefficient and the UK sample reported a non-significant negative coefficient. A possible reason for this difference is that UK companies pay higher audit fees that enable audit firms to hire more auditors and offer the required human resources to finish the auditing process timely and that is why larger UK clients do not suffer from longer report lag in contrast to larger Egyptian clients.

Existence of foreign subsidiaries *FORG* as a proxy of client complexity differs in its significance on audit report lag between Egypt and UK, but they are consistent in the negative sign of the coefficient. The difference in coefficient significance between Egypt and UK may be due to the difference of foreign subsidiaries descriptive that constitutes only 15% of the Egyptian sample while constitutes 88% of the UK sample.

Table 8-2 Summary of audit report lag model results

Hypothesis	Variable	Expected	Actual results	
			Egypt	UK
H_1: There is a significant relationship between client size and audit report lag	Client size	?	+ sig	- n.s
H_2: There is a significant positive relationship between client complexity and audit report lag	Client complexity	+	- n.s	- sig
H_3: There is a significant positive relationship between client leverage and audit report lag	Client financial condition	+	+ sig	- sig
H_4: There is a significant positive relationship between client loss and audit report lag	Client performance	+	+ n.s	+ n.s
H_5: There is a significant positive relationship between clients in tourism industry and audit report lag	Tourism Industry	+	- n.s	- n.s
H_{6a}: There is a significant positive relationship between CEO duality and audit report lag	CEO duality	+	+ n.s	- n.s
H_{6b}: There is a significant positive relationship between board of directors' independence and audit report lag.	BOD independence	+	+ sig	+ n.s
H_7: There is a significant negative relationship between audit firm size and audit report lag	Audit firm size	-	+ n.s	- n.s
H_8: There is a significant negative relationship between auditor specialization and audit report lag.	Auditor specialization	-	- sig	- n.s
H_9: There is a significant negative relationship between auditor tenure and audit report lag	Auditor tenure	-	- n.s	- sig
H_{10}: There is a significant positive relationship between busy season and audit report lag	Busy season	+	+ n.s	+ sig
H_{11}: There is a significant positive relationship between auditor opinion and audit report lag	Audit opinion	+	+ sig	n.a
H_{12a}: There is a significant effect of global financial crisis on audit report lag	Global financial crisis	?	- sig	- n.s
H_{12b}: There is a significant effect of Egyptian revolution on audit report lag	Egyptian Revolution	?	- n.s	n.a

- "sig" is for significant relationship
- "n.s" is for non-significant relationship, "n.a" is for non-applicable

Different results exist between Egypt and the UK concerning the effect of client's financial condition on audit report lag. A positive coefficient of leverage LEV is reported in the Egyptian model, while a negative one is obtained from the UK model. This could highlight a matter of overconfidence of the UK auditors in their clients and related creditors. While auditors in Egypt tend to be more cautious about clients with higher leverage ratio especially after the instability, economy recessions, decrease in realized profits that companies have suffered after the Egyptian revolution. This confirms how differences between countries economic stability and even professional scepticism attitude by auditors may affect the auditing outputs.

Consistent with prior literature (Leventis et al., 2005; Knechel and Sharma, 2012; Habib, 2015; Shin et al., 2016), results indicate that both audit report lag models in Egypt and the UK report a non-significant relationship of audit delay and companies realizing losses.

Despite that tourism is a very risky industry that easily affected by political instability or financial crisis. But it is proved by the audit report delay model in Egypt and UK that audit time spent in this industry does not differ from other industries.

Board of directors' independence tend to be more significant in the Egyptian context than the UK. However, CEO duality tend to be non-significant determinant in both countries.

Differences between audit markets in Big N domination are reflected in the audit report lag model. This is obvious in results of the effect of audit firm size on audit report timeliness in the Egyptian and UK samples. In the Egyptian sample where Big N

dominance is only 38.7%, Big N do not differ from non-big N in report timeliness, so they do not have a competitive advantage of shorter report lag than non-big N counterparts that could help them to differentiate their services. On the contrary, in the UK sample where Big N dominate nearly 98.5%, it is obvious that big N have a relatively competitive advantage in issuing audit reports faster than non-big N. This may reflect that competitive advantages and differentiation strategy adopted by auditing firms could help in increasing their market share and dominating the audit market as in the case of the UK audit market.

Despite the difference in significance of the auditor specialization coefficient in Egypt and the UK, they are consistent in the negative sign of the coefficient. There is also a difference in the significance of auditor tenure effect on audit delay in both Egypt and UK, but it has a negative coefficient in both countries.

Another confirmation of how the differences between audit markets in Big N domination are reflected in the audit report lag model appear in the busy season variable. As due to the domination of Big N in UK sample, this makes the busy season full of workload concentrated on only four auditing companies, which lead to a longer audit report lag. However, in Egyptian sample, where small and medium sized auditing firms are competing with Big N, this make work load in busy season is divided by a large number of auditing firms, leading to non-significant coefficient of busy season in audit report lag model in Egyptian sample. This presents another confirmation of how audit market domination and characteristics make determinants of audit report timeliness differ from one country to another.

In the Egyptian context, during the global financial crisis, auditors tended to finish the auditing process faster in order to publish relative financial information to investors in a timely manner. However, in the UK context, it is a non-significant variable but still has a negative coefficient.

8.4 Auditor decisions and choices: Comparison Egypt and UK

Differences between auditors' decisions in the two countries appear regarding their response to different risks, characteristics and events by choosing to adjust audit effort, delay or fees.

For example, auditors' decisions concerning client size, risk and complexity variables is different in the two countries. Despite that auditors in both countries tend to increase audit fees for large, risky or more complex clients, auditors in Egypt tend to increase audit delay, while UK auditors do not prolong audit delay for those clients and even they may shorten the audit process. This indicates that auditors in Egypt follow the transactions theory that suggests that when the transactions increase, the effort and time exerted by the auditor increase. The increase in audit effort will lead to higher audit fees charged by the client and longer audit report lag accompanied because of the longer audit completion time component of the audit lag. However, auditors in the UK follow the client service theory that suggests that due to the higher audit fees large clients pay, those clients enjoy priority by the auditing firms in the form of shorter audit delay.

Client with strong corporate governance are also treated differently by auditors in the two countries. In Egypt, auditors tend to be more conservative for companies with highly independent board of directors, as they take longer time to finish the audit process. On

the other side, auditor in the UK, tend to not take longer time for those clients but they compensate the increase in audit effort asked by the board by charging them with higher audit fees.

The decisions and marketing strategies used by Big N in Egypt and UK are highly different. In Egypt, Big N auditors do not create a competitive advantage related to shorter audit report lag or even competitive audit fees, on the contrary, they charge clients with higher audit fees than non-big N. May be Big N firms in Egypt charge higher fees to compensate risk premium of potential legal liability cost that may be charged to them and consider that their reputation internationally is a good competitive advantage to attract clients. On the contrary, Big N auditing firms in the UK attract clients by offering more efficient auditing services with shorter audit report lag with no mark-up fees than their counterparts of non-big N. According to the sample of this study, the results of this different marketing strategies and decisions is that Big N auditing firms in Egypt constitutes only 39% of the sample Egyptian companies, while in UK Big N share is more than 98% of the UK audit market.

Industry specialized auditors in Egypt offer efficient auditing processes of lower audit fees and shorter audit report lag than non-specialized auditors. On the other side, in the UK, industry-specialized auditors do not offer neither lower audit fees nor shorter audit report lag for their clients.

Moreover, during the global financial crisis, decisions of auditors in the UK regarding pricing audit services or adjusting audit effort or lag have not been affected. However, in Egypt, the audit market suffered recession which in response made the auditors shorten audit lag and offer audit fees discount for clients.

In sum, differences in auditors' responses, decisions and choices in the two countries towards different variables and events could highlight why there are mixed results concerning audit fees and report lag models in the literature. Market characteristics, culture, economy, political events and even legal strength difference between countries present different combinations of decisions and responses in the auditing process.

8.5 Summary

In general, client size, risk, complexity and corporate governance increase audit fees charged by the client. However, audit firm size effect on audit fees differ between Egypt and UK, and affect the domination of Big N auditing firms in these audit markets. Auditor specialization decrease auditing fees for clients. Global financial crisis effect on audit fees differs from one country to another, as auditors in Egypt offered discount during this recession period, while in UK it has no effect on audit fees.

Audit report timeliness depend on the procedures and risk assessments made by auditors during the auditing process. Differences between Egypt and the UK in determinants of audit report lag may exist because of audit market domination and characteristics, and professional scepticism attitude of the auditors especially in cases of instability in the political and economic environment. That explains why results of prior literature for most determinants of audit report lag are mixed.

Chapter 9 Conclusion, implications and future research

9.1 Introduction

This chapter summarizes this research study and its major findings and conclusion. It will be organised as follows:

- Research findings summary and conclusion
- Significance and contribution of the study
- Implications of this research
- Potential research limitation and directions for future research

9.2 Research findings summary and conclusion

Using Prais-Winsten panel data analysis for samples from the Egyptian and UK contexts during the sample period from 2008 to 2013, empirical results have been concluded. The results of this study have answered the research questions and fulfilled the research objectives previously mentioned in chapter one in section 1.3. A summary of the results of hypotheses of audit fees and report lag models in both the Egyptian and UK contexts will be summarized in the next few sub-sections. Then the conclusion will be briefly discussed.

9.2.1 Research findings summary -audit fees determinants

Consistent with hypothesis (H_1) audit fees are higher for larger clients than smaller ones. Results show a significant positive coefficient for log of total assets (as a proxy of client size) and audit fees in Egypt and UK. This is because more accounts and transactions

compromising financial information of larger clients, require more time and effort by auditors. Thus, larger clients are expected to be charged higher audit fees.

Consistent with hypothesis (H_{2a}), there is a positive relationship between receivables ratio and audit fees in both samples Egypt and UK. As expected, clients with more complex and risky balance sheet components are expected to be charged a premium to compensate auditors for the increased effort and audit risk assumed.

Inconsistent with hypothesis (H_{2b}), the coefficient of the inventory ratio is negatively associated with audit fees in both samples. A possible explanation for this result is that an increased inventory ratio is an indicator of economic recession affecting the client, and auditors may offer discount in audit fees when recession consequences are affecting the client.

Consistent with hypothesis (H_{2c}) quick ratio has a negative effect on audit fees in both samples. The better the client's liquidity position, the less risk the client is and the less audit risk assumed and so the audit fees are less.

Because the more complex a client is, the harder it is to audit and the more time-consuming the audit is likely to be. Results document audit fees premium for companies with foreign subsidiaries, which supports hypothesis (H_3) of a positive effect of client complexity on audit fees in both countries, however, it is a non-significant positive coefficient in Egypt.

Auditors charge higher audit fees to clients when they seem more wealthy. Consistent with hypothesis (H_4), a positive coefficient for client profitability is reported in both countries despite that the UK sample report a non-significant positive coefficient.

Inconsistent with hypothesis (H_4), tourism industry was not reported to have a significant effect on audit fees in both countries.

Consistent with hypothesis (H_{6a}), CEO duality tend to positively affect audit fees in Egypt, however in the UK, it has a non-significant negative coefficient. While, board of directors' independence tend to have a positive insignificant effect in the Egyptian sample, and positive significant one in the UK sample. This is consistent with hypothesis (H_{6b}). This confirms that corporate governance is a significant determinant of audit fees.

A significant big N audit fee premium is reported in the Egyptian sample, consistent with our hypothesis (H_7), however, it is a non-significant positive coefficient in the UK sample. This premium could be justified because of the more audit hours and effort invested by big N, or because of the higher rate per hour charged.

A significant industry specialist audit fee discount is reported in the Egyptian sample, consistent with hypothesis (H_8), however, it is a non-significant negative coefficient in the UK sample. An advantage of decreased audit costs due to economies of scale could be realized when auditors specialize in a certain industry. These decreased audit costs are passed to the client in the form of audit fees discount.

Despite the insignificance of initial engagements coefficient in both countries, but the coefficients still have a negative sign consistent with hypothesis (H_9).

Busy season tend to differ in its effect on audit fees between both countries. As in Egypt, it is a non-significant negative coefficient, while in the UK it is a significant positive coefficient. This difference between the two countries on the effect of busy season on audit fees is due to the difference in big N domination between the two countries.

Consistent with hypothesis (H_{11}), audit opinion other than standard opinion tend to have a positive effect on audit fees in the Egyptian sample. Because a non-standard audit opinion may indicate potential problems raised during the auditing process that required more effort and time exerted by the auditors.

Global financial crisis has no effect on pricing auditing services in the UK sample, however it led to a decrease in audit fees in the Egyptian context. Auditors in Egypt tend to cut their fees due to the recession and bad financial conditions influencing the world, this is consistent with our hypothesis and with prior literature in the US auditing market. This is also observable on quick ratio and busy season coefficients that indicated audit fee discount offered to clients during this period.

Consistent with our hypothesis (H_{12b}), during the Egyptian revolution, audit fees in the Egyptian audit market tend to increase. Higher audit fees are reported after the revolution, especially for clients that are considered risky with higher receivables ratio or bad corporate governance mechanisms, or in the tourism industry that was highly affected after the revolution.

9.2.2 Research findings summary -audit report lag

Mixed results for hypothesis H1, as we can find client size increase audit report lag in Egypt while it does not have any effect on audit report lag in UK. This could be explained that auditing firms in UK hire more auditors and therefore the required human resources are always adequate during auditing large companies in the UK.

Inconsistent with hypothesis H2, we can notice a non-significant negative effect of client complexity on audit report lag in Egypt and a significant negative coefficient in the UK.

This means that lower audit delay is observed for companies with foreign subsidiaries. This may be because of the strong internal controls of companies with foreign subsidiaries or because they need their financial statements to be audited in a timely manner to give time for consolidated financial statements to be prepared and issued.

Consistent with our hypothesis H3, companies with high leverage ratio tend to take longer time to be audited by Egyptian auditors due to the higher risk associated with these companies. However, different results are observed from UK results, as we can find that higher leverage clients enjoy shorter report lag. This could be justified by the trust of auditors in the UK in the monitoring procedures of creditors and banks on the client which lead them to lower the audit risk and finish auditing as soon as possible.

Companies achieving loss tend to positively affect audit report lag model as expected in H4 in Egypt and UK. Despite the non-significance of the coefficients, it may give indication that client achieving loss may be considered risky clients that auditors doubt and increase their auditing procedures and thus audit delay.

Inconsistent with hypothesis H5, tourism industry seems to not differ from other industries in the time of auditing and procedures needed in both countries Egypt and UK.

Board of directors' independence tend to increase audit procedures needed and audit delay. This is noticeable in the positive coefficients in the results of audit report timeliness in Egypt and UK. However, it seems that CEO duality does not much affect audit report timeliness in both countries.

Big auditing firms tend to offer a good competitive advantage of quicker and timely auditing procedures in UK than in Egypt. That also affected their high dominance in the

UK audit market than in Egypt. However, specialized auditors in Egypt offer this timeliness advantage to clients than in the UK.

Despite its non-significant coefficient in Egypt, but still auditor tenure has a negative coefficient in both Egypt and UK. This indicates that when auditors spend more years with the company, they became more knowledgeable about its processes and controls which lead to shorter report lag.

In UK sample at which work load is divided between only four auditing firms, busy season is characterized by a longer audit report lag. However, in Egyptian sample, where small and medium sized auditing firms are competing with Big N, this makes work load in busy season is divided by a large number of auditing firms, leading to non-significant coefficient of busy season in audit report lag model in Egyptian sample.

Consistent with our hypothesis H11, in the Egyptian sample, non-standard audit opinion gives a signal of problems associated with more audit procedures and longer audit report lag.

In Egyptian context, during the global financial crisis, auditors tended to finish the auditing process faster in order to publish relative financial information to investors in a timely manner. However, in the UK context, it is a non-significant variable but still has a negative coefficient. Also, the Egyptian revolution tend to have a non-significant effect on audit report lag.

9.2.3 Conclusion

Concerning pricing of audit services. Results document that client size, risk and corporate governance tend to significantly increase audit fees in the Egyptian and UK context. Also, client complexity and profitability have positive coefficients in both contexts.

Big N auditing firms tend to charge their clients with audit fee premium in Egypt, that have enabled medium sized and small auditing firms to penetrate the Egyptian auditing market and increase their market share. On the other side, in the UK context, Big N auditing firms do not charge such premium, which helped them in dominating the UK auditing market. However, dominance increase work load during busy season, which put pressures on UK Big N auditing firms to charge higher audit fees during the busy season.

Different auditor responses to global financial crisis have been documented in both countries, as auditors in Egypt decreased their audit fees to face the economic recession accompanied with the GFC. However, pricing of auditing services was not affected in the UK audit market.

During the Egyptian revolution, auditors increased their audit fees to face higher risk of audit failure during this political and economic instability. This is also apparent in the effect of some variables on pricing decision during the revolution period. As we can find that clients working in the tourism sector, or clients with higher receivable ratio, or those of weak corporate governance seem to alert the auditors of potential risks during the revolution period and lead them to pay special attention and may charge these clients higher audit fees.

A one-size-fits-all approach cannot be generalized in audit report lag determinants. As a lot of differences exist between the audit report lag determinants in the Egyptian and UK context. Efficient planning and allocation of audit staff by auditing firms in the UK result in timely audit reports for larger and more complex clients, while in Egypt client size tend to increase audit report lag. Higher professional scepticism attitude by Egyptian auditors result in more detailed audit procedures for clients with higher leverage ratio. This may reflect that the more cautious Egyptian auditors are or the culture effects of not trusting the clients with higher liabilities and loans from banks and creditors due to the non-efficiency of the Egyptian banking system. This is completely different for UK auditors who tend to decrease audit tests and shorten report lag for companies with higher leverage ratio because of the monitor of creditors to the client that mitigates the audit risk.

Big N auditing firms in the UK have a competitive advantage of a shorter audit report lag and therefore a more timely audit report than non-big N. This increase the demand of Big N in the UK and increase their dominance, however during the busy season, due to the higher work load on them, that may increase audit report lag. On the other side, in Egypt, Big N auditing firms do not offer the advantage of timely audit reports more than non-big N, and thus their dominance is not high.

Again, another example of different responses of auditors to the global financial crisis, in the UK context, audit report lag did not differ during the GFC. However, in Egypt, auditors tend to have shorter audit report delay than other years. This may be because during global financial crisis, investors in Egypt tend to be anxious about the performance of their companies during that economic recession, and management tend

to make pressures on auditors to finish auditing as fast as possible to publish relative financial information to investors in a timely manner.

9.3 Significance of the study

This study provides a novel contribution to the auditing literature in a number of ways:

- Prior literature focuses mainly on the pricing of audit services and audit delay in the developed countries, scarcity in previous research exists in the developing countries especially the Middle East. Even if some literature exists concerning the Middle East, it includes short sample period that does not fully capture the full behaviour of determinants of audit fees and report timeliness. This research explores the determinants of audit fees and audit delay in Egypt in a period of six years (2008-2013). No previous study has tried to examine the determinants of audit fees and audit delay in Egypt during that period. This study contributes to the literature by investigating auditors' reaction in the Middle East context where very little literature has explored.
- There is no single published research that addressed the effect of Arab Spring or revolutions happened in the Middle East on the auditing profession. In this regard, this study makes a significant contribution towards understanding how political changes could affect auditors' attitude in assessing client risks, pricing audit services and in performing audit procedures and the possible audit delay. As this study is the first to apply political theory besides the agency theory to examine the effect of unstable political and economic conditions on the auditing profession. Consistent with political theory and agency theory, this study offers evidence that auditors tend to increase their fees in periods of severe political instability after the revolution which is another contribution for this study. This can be interpreted by the more professional skepticism acted by the auditors and

the higher assessed litigation risk they try to mitigate in such instable conditions by increasing their fees.

- Very limited literature has investigated the effect of global financial crisis on pricing audit services and audit delay. To the best of researcher's knowledge, no study published has investigated the effect of global financial crisis on the pricing of audit services and the audit report timeliness in Egypt or in UK. Therefore, this study is considered the first study to capture its effects on determinants of audit fees and audit delay.
- Tourism industry is one of the very important industries in both Egypt and the UK. Economic and political interruptions have severe effects on this industry and the companies working in this sector and therefore the auditing process concerning the clients in this industry can be affected. No study was interested in this sector, despite its importance and sensitivity. This study is the first study to investigate whether or not the auditing of this industry differs from other industries especially during the instability in political and economic events.
- This study also contributes to the literature by presenting a comparison between determinants of audit fees and audit delay in Egypt and the UK. To argue that one-size-fits-all approach used by researchers in generalizing determinants of auditing pricing and delay is considered inappropriate. As according to the political theory, political and social environment affects companies, and the nature of agency costs depends on the political and social pressures in a country. Therefore, auditing as an agency cost will differ from one country to another. Also, political changes add more riskiness to companies that lead auditors to act differently in assessing risks and in not trusting managers and in doubting the going concern of some clients.
- Audit market characteristics and dominance affects the determinants of audit fees and audit report lag. The study presents a comparison between a competitive market at which medium and small sized auditing firms have large market share in Egypt and UK market at which the Big 4 dominant more than 95% of the audit market. This comparison highlights how Big 4 dominance could affect some determinants of audit fees and audit report timeliness.

- Most previous literature used cross-section analysis in exploring the audit pricing and audit delay models. This study contributes to the literature by applying panel data analysis. Panel data analysis can better detect certain effects that could not be measured by cross-section analysis only or time series analysis only. It gives more informative data with lower collinearity among variables and more efficiency.

9.4 Implications of the research

In spite of the research limitations, these results have implications for regulators, investors and shareholders. They are also relevant to policy-makers and companies in the Arab countries, as they attempt to show the consequences political and economic interruptions on companies and auditing profession.

This study is relevant for auditing firms in analysing how the effect of different decisions and choices by the auditor can affect the auditing firm dominance in the audit market.

These results also have implications for audit researchers that adopt a one-size-fits-all approach on determinants of auditing pricing and delay. As these determinants is affected by other perspectives associated with the nature of the environment and the related macro variables concerning the political stability, the economic conditions and even the dominance and characteristics of audit markets.

9.5 Potential research limitation and directions for future research

Despite the efforts undertaken in this thesis, a number of research limitations will be discussed with recommendations for future research.

As previously discussed in section 5.5, the study only used quantitative data, due to difficulty in collecting qualitative data concerning auditors opinion regarding the various determinants and decisions concerning audit timeliness and pricing decisions. Mixing qualitative and quantitative data analysis could have enriched the results, and this can be addressed by future researchers.

Similar to most multivariate analysis, results reported in the thesis are constrained by research design and variables used in this study. This thesis is also constrained by data availability. Ownership, internal control and non-audit fees data were not available to be collected especially for the Egyptian companies. Moreover, data about initial audit fees agreed upon before the beginning of the audit engagement, and whether this agreement change by the end of the engagement, is data never available in reports and therefore, could not be reached by the researcher. So, future studies could add these variables and data, in cases they are available, to find out its effect in the Egyptian and UK context.

This study sample consisted of non-financial institutions, therefore, future researchers could address how economic and political events could affect auditing pricing and delay for the financial sector.

This study has been interested in investigating tourism industry because it is easily affected by political and economic changes which can make it differs from other industries in the audit delay or during pricing auditing services. Other industries could be explored by future studies. For example, to the best of researcher's knowledge, no study other than Leventis et al. (2013), has addressed audit fees for industries that are considered against social norms (such as: alcohol, firearms, gambling, tobacco and nuclear power). Special interest by researchers could be given to explore auditors' response to industries in countries where religion beliefs are against these sectors, e.g. alcohol and gambling industries in Islamic countries.

Research on the effect of political changes of revolutions and Arab spring could be extended in a number of directions. A good extension is the study of their effect on the performance of the companies and stock prices. Also, a possible area for future research is to replicate the tests of the thesis to other countries especially Arab countries where revolutions affected their stability and economic conditions to check whether revolution effect on auditing is sensitive to the Egyptian setting.

Concerning the sample time period, this thesis has depended on data from 2008 to 2013. This period covers three years before and after the Egyptian revolution. Additional research could be extended when new data becomes available to cover recent years after the revolution.

Macro-economic events across the world affect the companies and the auditing profession. Global financial crisis has not taken much of the attention of researches, and thus more research could be extended on its effect in different countries. A possible area for future research could be extended in other countries with different economic events

like the withdrawal of some European countries from the European union. Consequences of such events on the stock exchange market, company performance and how auditors respond to such events could be explored by future researchers.

This study aimed to compare auditors' response to events changes in one of the countries that is considered developed with stable economy (UK) with another country considered developing with non-stable economic and political events (Egypt). Future research could address comparison of similar countries in the assessment of auditors for fraud risk.

Individual characteristics of auditors might be a core determinant in the whole engagement process between the client and audit firm, as it could affect engagement planning, negotiation skills, risk preference. Very few literature has explored this issue, and therefore more research in this area may be needed to uncover its effects. That is why further investigation could be addressed on how auditing process is affected by audit partner individual attributes; i.e. gender (especially in highly discriminated countries), years of experience, post graduate degrees obtained, CPA certificate obtained.

There is also another good research question could be addressed by future researchers about the use of developed accounting systems and programs, as well as the good presentation of financial data using XBRL. Whether such developments have facilitated the auditing process and therefore reduced audit time and costs? Or have that increased audit time costs due to training and learning required by auditors to cope with such progress? Not much literature was interested in this issue, which is considered a new research opportunity for future researchers.

9.6 Summary

This chapter presents a summary and the conclusions of this research. The main findings of the research are summarized, conclusion is presented. Significance and implication of the study is highlighted. The potential limitations of this research and potential avenues for future research are discussed.

References

Abbass, D. a. and Aleqab, M.M. 2013. Internal Auditors' Characteristics and Audit Fees: Evidence from Egyptian Firms. *International Business Research*. [Online]. **6**(4),pp.67–80. [Accessed 27 April 2013]. Available from: http://www.ccsenet.org/journal/index.php/ibr/article/view/25623.

Abbott, L.J., Parker, S. and Peters, G.F. 2012. Internal audit assistance and external audit timeliness. *Auditing A Journal of Practice Theory: A Journal of Practice & Theory*. **34**(4),pp.3–20.

Abdel-latif, H. and Mishra, T. 2016. *Asymmetric growth impact of fiscal policy : A post-shock policy scenario for Egypt*.

Abed, S. and Al-badainah, J. 2013. The Impact of Auditor's Gender on Audit Fees : Case of Jordanian Auditors. *International Journal of Business and Management*. **8**(14),pp.127–134.

Abernathy, J.L., Barnes, M., Stefaniak, C. and Weisbarth, A. 2017. An International Perspective on Audit Report Lag : A Synthesis of the Literature and Opportunities for Future Research. *International Journal of Auditing*. [Online]. **127**(1),pp.100–127. [Accessed 1 May 2017]. Available from: http://doi.wiley.com/10.1111/ijau.12083.

Abidin, S., Beattie, V. and Goodacre, A. 2010. Audit market structure, fees and choice in a period of structural change: Evidence from the UK – 1998–2003. *The British*

Accounting Review. [Online]. **42**(3),pp.187–206. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0890838910000272.

Adams, M.B. 1994. Agency theory and the Internal Audit. *Managerial Auditing Journal*. **9**(8),pp.8–12.

Afify, H. a. E. 2009. Determinants of audit report lag. *Journal of Applied Accounting Research*. [Online]. **10**(1),pp.56–86. Available from: http://www.emeraldinsight.com/doi/abs/10.1108/09675420910963397.

Ahmed, K. and Goyal, M.K. 2005. A Comparative Study of Pricing of Audit Services in Emerging Economies. *International Journal of Auditing*. [Online]. **9**(2),pp.103–116. Available from: http://doi.wiley.com/10.1111/j.1099-1123.2005.00236.x.

Al-Harshani, M.O. 2008. The pricing of audit services: evidence from Kuwait. *Managerial Auditing Journal*. [Online]. **23**(7),pp.685–696. [Accessed 21 March 2014]. Available from: http://www.emeraldinsight.com/10.1108/02686900810890643.

Alexeyeva, I. and Svanström, T. 2015. The impact of the global financial crisis on audit and Evidence from Sweden. *Managerial Auditing Journal*. **30**(4/5),pp.302–323.

Allen, A. and Woodland, A. 2010. Education Requirements, Audit Fees, and Audit Quality. *AUDITING: A Journal of Practice & Theory*. [Online]. **29**(2),pp.1–25. [Accessed 23 April 2013]. Available from: http://aaajournals.org/doi/abs/10.2308/aud.2010.29.2.1.

André, P., Broye, G., Pong, C. and Schatt, A. 2016. Are Joint Audits Associated with Higher Fees? *European Accounting Review*. **25**(2),pp.245–274.

Apadore, K. and Noor, M.M. 2013. Determinants of Audit Report Lag and Corporate Governance in Malaysia. *International Journal of Business and Management*. [Online].

8(15),pp.151–163. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=89867849&site=ehost-live.

Arafa, I. 2012. Evaluating the impact of institutional logic on the corporate Internet reporting by Egyptian listed companies. Available from: http://eprints.aston.ac.uk/20080/.

Arens, A.. and Loebbecke, J.K. 2000. *Auditing: An integrated approach* 8th ed. Englewood Cliffs, NJ: Prentice-Hall.

Ashton, R.H., Graul, P.R. and Newton, J.D. 1989. Audit delay and the timeliness of corporate reporting. *Contemporary Accounting Research*. **5**(2),pp.657–673.

Ashton, R.H., Willingham, J.J. and Elliott, R.K. 1987. An Empirical Analysis of Audit Delay. *Journal of Accounting Research*. **25**(2),pp.275–292.

Audousset-coulier, S. 2015. Audit Fees in a Joint Audit Setting. *European Accounting Review*. [Online]. **24**(2),pp.347–377. Available from: http://dx.doi.org/10.1080/09638180.2014.892787.

Austine, O.E., Chijioke, O.M. and Henry, S.A. 2013. Audit Firm Rotation and Audit Report Lag in Nigeria. *Journal of Business and Management*. [Online]. **12**(4),pp.13–19. Available from: http://www.iosrjournals.org/iosr-jbm/papers/Vol12-issue4/C01241319.pdf?id=4052.

Bae, G.S., Choi, S.U. and Rho, J.H. 2016. Audit Hours and Unit Audit Price of Industry Specialist Auditors: Evidence from Korea. *Contemporary Accounting Research*. **33**(1),pp.314–340.

Baltagi, B. 2008. *Econometric analysis of panel data* Fourth ed. John Wiley & Sons.

Bamber, E.M., Bamber, L.S. and Schoderbek, M.P. 1993. Audit structure and other determinants of audit report lag: An empirical analysis. *Auditing A Journal of Practice Theory*. **12**,pp.1–23.

Bandyopadhyay, S.P. and Kao, J.L. 2004. Market Structure and Audit Fees: A Local Analysis. *Contemporary Accounting Research*. [Online]. **21**(3),pp.529–562. Available from: http://doi.wiley.com/10.1506/4A05-11UF-1MQA-57JE.

Barua, A. and Smith, A.L. 2013. SEC enforcement releases and audit fees. *Managerial Auditing Journal*. [Online]. **28**(2),pp.161–177. [Accessed 27 April 2013]. Available from: http://www.emeraldinsight.com/10.1108/02686901311284559.

BBC 2015. Economy tracker. [Accessed 2 November 2016]. Available from: http://www.bbc.co.uk/news/10613201.

BBC 2009. UK in recession as economy slides. [Accessed 2 November 2016]. Available from: http://news.bbc.co.uk/1/hi/business/7846266.stm.

Beattie, V., Goodacre, A. and Fearnley, S. 2003. And then there were four: a study of UK audit market concentration - causes, consequences and the scope for market adjustment. *Journal of Financial Regulation and Compliance*. **11**(3),pp.250–265.

Beattie, V., Goodacre, A., Pratt, K. and Stevenson, J. 2001. The determinants of audit fees - evidence from the voluntary sector. *Accounting and Business Research*. **31**(4),pp.243–274.

Beck, N. and Katz, J.N. 1995. What to do (and not to do) with time-series cross-section data. *American Political Science Review*. **89**(3),pp.634–647.

Bedard, J.C. and Johnstone, K.M. 2004. Earnings Manipulation Risk, Corporate Governance

Risk, and Auditors' Planning and Pricing Decisions. *The Accounting Review*. [Online]. **79**(2),pp.277–304. Available from: http://www.jstor.org/stable/3203245.

Behn, B.K., Searcy, D. and Woodroof, J.B. 2006. Expected Future Audit Lag Determinants. *Journal of Information Systems*. **20**(1),pp.65–86.

Behn, B.K., Wha, J., Hua, L., Lee, J.W. and Jin, L.H. 2009. An empirical analysis of audit fee price competition after the Korean 1999 Omnibus Cartel Repeal Act. *Journal of International Accounting, Auditing and Taxation*. [Online]. **18**(2),pp.132–140. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S1061951809000123.

Bekheit, M. 2008. The Performance of Privatised and Private Firms : Empirical Evidence From Egypt.

Bell, T., Doogar, R. and Solomon, I. 2008. Audit Labor Usage and Fees under Business Risk Auditing. *Journal of Accounting Research*. [Online]. **46**(4),pp.729–760. [Accessed 21 March 2013]. Available from: http://doi.wiley.com/10.1111/j.1475-679X.2008.00291.x.

Bell, T., Landsman, W.R. and Shackelford, D.A. 2001. Auditors' Perceived Business Risk and Audit Fees: Analysis and Evidence. *Journal of Accounting Research*. [Online]. **39**(1),pp.35–43. Available from: http://doi.wiley.com/10.1111/1475-679X.00002.

Blankley, A.I., Hurtt, D. and MacGregor, J. 2015. Are Lengthy Audit report Lags a Warning Signal? *Current Issues in Auditing*. [Online]. **9**(2),pp.19–28. Available from: http://aaajournals.org/doi/10.2308/ciia-51215.

Blankley, A.I., Hurtt, D.N. and MacGregor, J.E. 2014. The relationship between audit report

lags and future restatements. *AUDITING: A Journal of Practice & Theory*. **33**(2),pp.27–57.

Breusch, T.S. and Pagan, A.R. 1980. The Lagrange Multiplier test and its applications to model specifications in econometrics. *Review of Economic studies*. **XI**(VII),pp.239–253.

Bronson, S.N., Ghosh, A. Al and Hogan, C.E. 2017. Audit Fee Differential, Audit Effort, and Litigation Risk: An Examination of ADR Firms. *Contemporary Accounting Research*. **34**(1),pp.83–117.

Brooks, L.Z., Cheng, C.S., Johnston, J.A. and Reichelt, K.J. 2017. Estimates of Optimal Audit Firm Tenure across Different Legal Regimes. *Journal of accounting, auditing and finance*. [Online]. **32**(1),pp.3–39. Available from: http://www.af.polyu.edu.hk/files/cafr2015/36_Estimates of optimal audit firm tenures across difference legal regimes.pdf.

Bryan, D.B. and Mason, T.W. 2016. Extreme CEO pay cuts and audit fees. *Advances in Accounting , incorporating Advances in International Accounting*. [Online],pp.1–10. Available from: http://dx.doi.org/10.1016/j.adiac.2016.02.001.

Cahan, S.F. and Sun, J. 2015. The Effect of Audit Experience on Audit Fees and Audit Quality. *Journal of Accounting, Auditing & Finance*. **30**(1),pp.78–100.

Calderon, T.G., Wang, L. and Klenotic, T. 2012. Past control risk and current audit fees. *Managerial Auditing Journal*. [Online]. **27**(7),pp.693–708. [Accessed 27 April 2013]. Available from: http://www.emeraldinsight.com/10.1108/02686901211246813.

Cameran, M. 2005. Audit Fees and the Large Auditor Premium in the Italian Market.

International Journal of Auditing. [Online]. **9**(2),pp.129–146. Available from: http://doi.wiley.com/10.1111/j.1099-1123.2005.00205.x.

Cameran, M. and Perotti, P. 2014. Audit Fees and IAS / IFRS Adoption : Evidence from the Banking Industry. *International Journal of Auditing*. **18**,pp.155–169.

Cameron, A. and Trivedi, P. 2010. *Microeconometric using STATA* Revised ed. Texas, US: STATA Press Publication.

Campa, D. 2013. ' Big 4 fee premium ' and audit quality : latest evidence from UK listed companies. *Managerial Auditing Journal*. **28**(8),pp.680–707.

Carcello, J. V., Hermanson, D.R., Neal, T.L. and Riley Jr., R. a. 2002. Board Characteristics and Audit Fees. *Contemporary Accounting Research*. [Online]. **19**(3),pp.365–384. Available from: http://doi.wiley.com/10.1506/CHWK-GMQ0-MLKE-K03V.

Carcello, J. V. and Nagy, A.L. 2004. Client size, auditor specialization and fraudulent financial reporting. *Managerial Auditing Journal*. **19**(5),pp.651–668.

Causholli, M., De Martinis, M., Hay, D. and Knechel, W.R. 2010. Audit markets, fees and production: Towards and integrated view of empirical audit research. *Journal of Accounting Literature*. **29**,pp.167–215.

CFR, C. on F.R. 2009. Issue Guide: Britain and the Global Financial Crisis. [Accessed 30 October 2016]. Available from: http://www.cfr.org/world/issue-guide-britain-global-financial-crisis/p19516.

Chan, K.H., Luo, V.W. and Mo, P.L.L. 2016. Determinants and implications of long audit reporting lags: evidence from China. *Accounting and Business Research*. [Online]. **46**(2),pp.145–166. Available from:

http://www.tandfonline.com/doi/full/10.1080/00014788.2015.1039475.

Chaney, P.K., Jeter, D.C. and Lakshmanan, S. 2004. Self-selection of auditors and audit pricing in private firms. *The Accounting Review*. **79**(1),pp.51–72.

Charles, S.L., Glover, S.M. and Sharp, N.Y. 2010. The Association between Financial Reporting Risk and Audit Fees before and after the Historic Events Surrounding SOX. *AUDITING: A Journal of Practice & Theory*. [Online]. **29**(1),pp.15–39. [Accessed 27 April 2013]. Available from: http://aaajournals.org/doi/abs/10.2308/aud.2010.29.1.15.

Chen, C.J.P., Su, X. and Wu, X. 2007. Market competitiveness and Big 5 pricing: Evidence from China's binary market. *The International Journal of Accounting*. [Online]. **42**(1),pp.1–24. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0020706306001038.

Chen, Y., Smith, A.L., Cao, J. and Xia, W. 2014. Information Technology Capability, Internal Control Effectiveness, and Audit Fees and Delays. *Journal of Information Systems*. **28**(2),pp.149–180.

Cheng, J.-C., Lu, C.-C. and Kuo, N.-T. 2016. R&D capitalization and audit fees: Evidence from China. *Advances in Accounting , incorporating Advances in International Accounting*. [Online]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0882611016301183.

Choi, J.-H., Kim, J.-B., Liu, X. and Simunic, D. a 2008. Audit Pricing, Legal Liability Regimes, and Big 4 Premiums: Theory and Cross-country Evidence. *Contemporary Accounting Research*. [Online]. **25**(1),pp.55–99. Available from: http://doi.wiley.com/10.1506/car.25.1.2.

Choi, J., Kim, J., Liu, X. and Simunic, D. a. 2009. Cross-Listing Audit Fee Premiums: Theory and Evidence. *The Accounting Review*. [Online]. **84**(5),pp.1429–1463. Available from: http://aaajournals.org/doi/abs/10.2308/accr.2009.84.5.1429.

Chow, C.W. 1982. The demand for external auditing: size, debt and ownership influences. *The Accounting Review*. **57**(2),pp.272–291.

Chung, S. and Narasimhan, R. 2002. An International Study of Cross- sectional Variations in Audit Fees. *International Journal of Auditing*. **6**,pp.79–91.

Clatworthy, M.A. and Peel, M.J. 2007. The Effect of Corporate Status on External Audit Fees: Evidence From the UK. *Journal of Business Finance & Accounting*. [Online]. **34**(1–2),pp.169–201. [Accessed 27 April 2013]. Available from: http://doi.wiley.com/10.1111/j.1468-5957.2006.00658.x.

Cobbin, P.E. 2002. International Dimensions of the Audit Fee Determinants Literature. *International Journal of Auditing*. **6**,pp.53–77.

Corbin, J. and Strauss, A. 2008. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. London, UK: Sage.

Cosgrove, S.B. and Niederjohn, M.S. 2008. THE EFFECTS OF THE SARBANES-OXLEY ACT OF 2002 ON AUDIT FEES. *Journal of Business Strategies*. **25**(1),pp.31–52.

Courtis, J. 1976. Relationships between timeliness in corporate reporting and corporate attributes. *Accounting and Business Research*. [Online]. [Accessed 1 May 2017]. Available from: http://www.tandfonline.com/doi/pdf/10.1080/00014788.1976.9729085.

Craswell, A., Francis, J. and Taylor, S. 1995. Auditor brand name reputation and industry

specializtion. *Journal of Accounting and Economics*. **20**(3),pp.297–322.

Creswell, J.W. 2003. *Research design: Qualitative, Quantitative, and mixed methods approaches* Second Edi. London, UK: SAGE Publications.

Crotty, M. 1998. *The foundations of social research*. London: Sage.

Cullinan, C.P. 2003. Competing size theories and audit lag: Evidence from mutual fund audits. *The Journal of American Academy of Business*. **3**(1),pp.183–189.

Davis, E. 2007. Blair's surprising economy legacy. [Accessed 7 November 2016]. Available from: http://news.bbc.co.uk/1/hi/uk_politics/6643601.stm.

Defond, M.L., Francis, J.R. and Wong, T.J. 2000. Auditor Industry Specialization and Market Segmentation: Evidence from Hong Kong. *AUDITING: A Journal of Practice & Theory*. **19**(1),pp.49–66.

Dickins, D.E., Higgs, J.L. and Skantz, T.R. 2008. Estimating Audit Fees Post-SOX. *Current Issues in Auditing*. [Online]. **2**(1),pp.A9–A18. [Accessed 27 April 2013]. Available from: http://aaajournals.org/doi/abs/10.2308/ciia.2008.2.1.A9.

Ding, R. and Jia, Y. 2012. Auditor mergers, audit quality and audit fees: Evidence from the PricewaterhouseCoopers merger in the UK. *Journal of Accounting and Public Policy*. [Online]. **31**(1),pp.69–85. [Accessed 27 April 2013]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0278425411000755.

Dyer, J.C. and McHugh, A.J. 1975. The Timeliness of the Australian Annual Report. *Journal of Accounting Research*. [Online]. **13**(2),pp.204–219. Available from: http://www.jstor.org/stable/2490361.

Easterby-Smith, M., Thorpe, R. and Lowe, A. 2008. *Management Research - An*

Introduction 3'' ed. London, UK: SAGE Publications.

Ebaya, A. 2015. The impact of abnormal fees on audit quality: An empirical study on joint stock companies listed on the Egyptian Exchange.

EgID, "Egypt for information dissemination" 2014. egID "Egypt for information dissemination". [Accessed 17 July 2014]. Available from: http://www.egidegypt.com.

Egx, 'Egyptian Stock Exchange' 2014. No Title. [Accessed 17 July 2014]. Available from: www.egx.com.eg.

Egyptian Ministry of Tourism 2009. *Unpublished Monthly Statistics*.

El-diasty, M. 2008. Factors affecting pricing of audit services: An empirical study on Egyptian joint stock companies. *Journal of business school research papers*. **45/1**,pp.1–28.

El-Gammal, W. 2012. Determinants of Audit Fees: Evidence from Lebanon. *International Business Research*. [Online]. **5**(11),pp.136–146. [Accessed 22 April 2013]. Available from: http://www.ccsenet.org/journal/index.php/ibr/article/view/21419.

El-Safty, M. 2009. Auditing in Electronic Environments from an Actor-Network Theory Perspective : Case of Egypt.

Elmassri, M.M., Harris, E.P. and Carter, D.B. 2016. Accounting for strategic investment decision-making under extreme uncertainty. *The British Accounting Review*. [Online]. **48**,pp.151–168. Available from: http://dx.doi.org/10.1016/j.bar.2015.12.002.

Enofe, O., Ph, D., Mgbame, O., Ph, D. and Abadua, S. 2013. Audit Firm Rotation and Audit Report Lag in Nigeria. . **12**(4),pp.13–19.

Ettredge, M., Li, C. and Sun, L. 2006. The impact of SOX Section 404 internal control quality assessment on audit delay in the SOX era. *AUDITING: A Journal of Practice & Theory*. **25**(2),pp.1–23.

Ettredge, M.L., Scholz, S. and Li, C. 2007. Audit Fees and Auditor Dismissals in the Sarbanes-Oxley Era. *Accounting Horizons*. [Online]. **21**(4),pp.371–386. Available from: http://aaajournals.org/doi/abs/10.2308/acch.2007.21.4.371.

Ettredge, M.L., Xu, Y. and Yi, H.S. 2014. Fair Value Measurements and Audit Fees: Evidence from the Banking Industry. *AUDITING: A Journal of Practice & Theory*. **33**(3),pp.33–58.

Evans Jr., L. and Schwartz, J. 2013. The effect of concentration and regulation on audit fees: An application of panel data techniques. *Journal of Empirical Finance*. [Online]. **27**,pp.130–144. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0927539813000741.

Ezat, A. 2010. The key determinants of the voluntary adoption of corporate internet reporting and its consequence on firm value: Evidence from Egypt. *PhD thesis*.

Felix JR., W.L., Gramling, A.A. and Maletta, M.J. 2001. The Contribution of Internal Audit as a Determinant of External Audit Fees and Factors Influencing This Contribution. *Journal of Accounting Research*. **39**(3),pp.513–534.

Ferguson, A., Francis, J.R. and Stokes, D.J. 2003. The Effects of Firm-Wide and Office-Level Industry Expertise on Audit Pricing. *The Accounting Review*. **78**(2),pp.429–448.

Ferguson, A. and Stokes, D. 2002. Brand Name Audit Pricing , Industry Specialization , and Leadership Premiums post-Big 8 and Big 6 Mergers. *Contemporary Accounting*

Research. [Online]. **19**(1),pp.77–110. Available from: http://doi.wiley.com/10.1092/30F8-3MCH-WV7B-2CGV.

Field, A. 2013. *Discovering Statistics using IBM SPSS statistics* Fourth ed. London: SAGE.

Fields, L.P., Fraser, D.R. and Wilkins, M.S. 2004. An investigation of the pricing of audit services for financial institutions. *Journal of Accounting and Public Policy*. [Online]. **23**(1),pp.53–77. [Accessed 27 April 2013]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0278425403000826.

Foster, B.P. and Shastri, T. 2016. Determinants of going concern opinions and audit fees for development stage enterprises. *Advances in Accounting , incorporating Advances in International Accounting*. [Online]. **33**,pp.68–84. Available from: http://dx.doi.org/10.1016/j.adiac.2016.05.001.

Francis, J.R. 1984. The effect of audit firm size on audit prices: A study of the Australian Market. *Journal of Accounting and Economics*. **6**,pp.133–151.

Francis, J.R., Ke, Æ. Bin and Ke, B. 2006. Disclosure of fees paid to auditors and the market valuation of earnings surprises. *Review of Accounting Studies*. [Online]. **11**(4),pp.495–523. [Accessed 26 March 2013]. Available from: http://www.springerlink.com/index/10.1007/s11142-006-9014-z.

Francis, J.R., Reichelt, K. and Wang, D. 2005. The Pricing of National and City-Specific Reputations for Industry Expertise in the U.S. Audit Market. *The Accounting Review*. [Online]. **80**(1),pp.113–136. Available from: http://aaajournals.org/doi/abs/10.2308/accr.2005.80.1.113.

Francis, J.R. and Stokes, D.J. 1986. Audit Prices , Product Differentiation , and Scale

Economies : Further Evidence from the Australian Market. *Journal of Accounting Research*. **24**(2),pp.383–394.

Fung, S.Y.K., Gul, F. a. and Krishnan, J. 2012. City-Level Auditor Industry Specialization, Economies of Scale, and Audit Pricing. *The Accounting Review*. [Online]. **87**(4),pp.1281–1307. [Accessed 21 March 2014]. Available from: http://aaajournals.org/doi/abs/10.2308/accr-10275.

GAO 2003. *Public accounting firms: Required Study on the Potential Effect on Mandatory Audit Firm Rotation*.

De George, E.T., Ferguson, C.B. and Spear, N. a. 2013. How Much Does IFRS Cost? IFRS Adoption and Audit Fees. *The Accounting Review*. [Online]. **88**(2),pp.429–462. [Accessed 26 March 2013]. Available from: http://aaajournals.org/doi/abs/10.2308/accr-50317.

Ghosh, A. and Lustgarten, S. 2006. Pricing of Initial Audit Engagennents by Large and Small Audit Firms. *Contemporary Accounting Research*. **23**(2),pp.333–68.

Ghosh, A. and Pawlewicz, R. 2009. The Impact of Regulation on Auditor Fees : Evidence from the Sarbanes-Oxley Act. *Auditing: A Journal of Practice Theory*. **28**(2),pp.171–197.

Giroux, G. and Jones, R. 2007. Investigating the audit fee structure of local authorities in England and Wales. *Accounting and Business Research*. [Online]. **37**(1),pp.21–37. [Accessed 21 March 2014]. Available from: http://www.tandfonline.com/doi/abs/10.1080/00014788.2007.9730056.

Givoly, D. and Palmon, D. 1982. Timeliness of Annual Earnings Announcements: Some

Empirical Evidence. *The Accounting Review*. [Online]. **57**(3),pp.486–508. Available from: http://www.jstor.org/stable/246875.

Glaesser, D. 2003. *Crisis Management in the Tourism Industry*. Oxford: Butterworth Heinmann.

Goodwin-stewart, J. and Kent, P. 2006. Relation between external audit fees , audit committee characteristics and internal audit. *Accounting and Finance*. **46**,pp.387–404.

Gourevitch, P.A. 2003. The Politics of Corporate Governance Regulation. *The Yale Law Journal*. **112**,pp.1829–1880.

Griffin, P.A. and Lont, D.H. 2007. An Analysis of Audit Fees Following the Passage of Sarbanes-Oxley. *Asia-Pacific Journal of Accounting & Economics*. **14**,pp.161–192.

Griffin, P. a. and Lont, D.H. 2011. Audit fees around dismissals and resignations: Additional evidence. *Journal of Contemporary Accounting & Economics*. [Online]. **7**(2),pp.65–81. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S1815566911000142.

Griffin, P. a., Lont, D.H. and Sun, Y. 2009. Governance regulatory changes, International Financial Reporting Standards adoption, and New Zealand audit and non-audit fees: empirical evidence. *Accounting & Finance*. [Online]. **49**(4),pp.697–724. [Accessed 18 April 2013]. Available from: http://doi.wiley.com/10.1111/j.1467-629X.2009.00310.x.

Gujarati, D. 2003. *Basic econometrics* 5th ed. New York: McGraw-Hill/ Irwin.

Gujarati, D. and Porter, D. 2009. *Basic Econometrics* Fifth ed. New York: McGraw-Hill.

Habib, A. 2011. Audit firm industry specialization and audit outcomes: Insights from academic literature. *Research in Accounting Regulation*. [Online]. **23**(2),pp.114–129.

[Accessed 21 March 2014]. Available from: http://dx.doi.org/10.1016/j.racreg.2011.06.008.

Habib, A. 2015. The New Chinese Accounting Standards and Audit Report Lag. *International Journal of Auditing*. **14**,pp.1–14.

Habib, A. and Bhuiyan, B.U. 2011. Audit firm industry specialization and the audit report lag. *Journal of International Accounting, Auditing and Taxation*. [Online]. **20**,pp.32–44. Available from: http://dx.doi.org/10.1016/j.intaccaudtax.2010.12.004.

Habib, A., Gong, R. and Hossain, M. 2013. Overvalued equities and audit fees : a research note. *Managerial Auditing Journal*. **28**(8),pp.755–776.

Hamad, S. 2016. Study of the Relationship between Corporate Governance Mechanisms and External Audit Fees in the Egyptian Business.

Hassan, Y. 2016. Determinants of audit report lag: evidence from Palestine. *Journal of Accounting in Emerging Economies*. **6**(1),pp.13–32.

Hay, D. 2013. Further Evidence from Meta-Analysis of Audit Fee Research. *International Journal of Auditing*. [Online]. **17**(2),pp.162–176. [Accessed 20 March 2014]. Available from: http://doi.wiley.com/10.1111/j.1099-1123.2012.00462.x.

Hay, D. and Jeter, D. 2011. The pricing of industry specialisation by auditors in New Zealand. *Accounting and Business Research*. **41**(2),pp.9–24.

Hay, D. and Knechel, W.R. 2010. The effects of advertising and solicitation on audit fees. *Journal of Accounting and Public Policy*. [Online]. **29**(1),pp.60–81. [Accessed 21 March 2013]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0278425409000830.

Hay, D.C., Knechel, W.R. and Wong, N. 2006. Audit Fees: A Meta-analysis of the Effect of Supply and Demand Attributes. *Contemporary Accounting Research*. [Online]. **23**(1),pp.141–191. Available from: http://doi.wiley.com/10.1506/4XR4-KT5V-E8CN-91GX.

Henderson, B.C. and Kaplan, S.E. 2000. An examination of audit report lag for banks: A panel data approach. *AUDITING: A Journal of Practice & Theory*. **19**(2),pp.159–174.

Ho, S. and Hutchinson, M. 2010. Internal audit department characteristics / activities and audit fees : Some evidence from Hong Kong firms. *'Journal of International Accounting, Auditing and Taxation'*. [Online]. **19**,pp.121–136. Available from: http://dx.doi.org/10.1016/j.intaccaudtax.2010.07.004.

Hoag, M.L. and Hollingsworth, C.W. 2011. An Intertemporal Analysis of Audit Fees and Section 404 Material Weaknesses. *AUDITING: A Journal of Practice & Theory*. [Online]. **30**(2),pp.173–200. [Accessed 19 March 2013]. Available from: http://aaajournals.org/doi/abs/10.2308/ajpt-50005.

Hogan, C.E. and Wilkins, M.S. 2008. Evidence on the Audit Risk Model: Do Auditors Increase Audit Fees in the Presence of Internal Control Deficiencies? *Contemporary Accounting Research*. [Online]. **25**(1),pp.219–42. [Accessed 28 March 2013]. Available from: http://doi.wiley.com/10.1506/car.25.1.9.

Holland, K. and Lane, J. 2012. Perceived auditor independence and audit firm fees. *Accounting and Business Research*. **42**(2),pp.115–141.

Hosny, A., Kandil, M. and Mohtadi, H. 2014. What does Egypt's Revolution Reveal about its Economy? *International Economic Journal*. [Online]. **28**(4),pp.589–611. Available from: http://www.tandfonline.com/doi/abs/10.1080/10168737.2014.907581.

Huang, H., Raghunandan, K. and Rama, D. 2009. Audit Fees for Initial Audit Engagements. *AUDITING: A Journal of Practice & Theory*. **28**(1),pp.171–190.

Huang, T.-C., Chang, H. and Chiou, J.-R. 2016. Audit Market Concentration, Audit Fees, and Audit Quality: Evidence from China. *AUDITING: A Journal of Practice & Theory*. [Online]. **35**(2),pp.121–145. Available from: http://aaajournals.org/doi/10.2308/ajpt-51299.

Huang, T., Chiou, J., Huang, H. and Chen, J. 2015. Asia Paci fi c Management Review Lower audit fees for women audit partners in Taiwan and why. *Asia Pacific Management Review*. [Online]. **20**. Available from: http://dx.doi.org/10.1016/j.apmrv.2015.02.001.

Hussey, J. and Hussey, R. 1997. *Business Research: A Practical Guide for Undergraduate and Postgraduate Students* First ed. London: MACMILLAN PWESS LTD.

Imam, S., Ahmed, Z.U. and Khan, S.H. 2001. Association of audit delay and audit firms' international links: evidence from Bangladesh. *Managerial Auditing Journal*. [Online]. **16**(3),pp.129–134. Available from: http://dx.doi.org/10.1108/02686900110385669.

ISA200 2010. *International Standard On Auditing 200*.

ISA210 2010. *International Standard on Auditing 210*.

ISA700 2012. *International Standard on Auditing 700*.

Ittonen, K. and Peni, E. 2012. Auditor's Gender and Audit Fees. *International Journal of Auditing*. [Online]. **16**(1),pp.1–18. [Accessed 18 April 2013]. Available from: http://doi.wiley.com/10.1111/j.1099-1123.2011.00438.x.

Jensen, M.C. and Meckling, W.H. 1976. Theory of the firm: managerial behavior, agency

costs and ownership structure. *Journal of Financial Economics*. **3**(4),pp.305–360.

Jeong, S.W., Jung, K. and Lee, S.-J. 2005. The effect of mandatory auditor assignment and non-audit service on audit fees: Evidence from Korea. *The International Journal of Accounting*. [Online]. **40**(3),pp.233–248. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0020706305000506.

Johnson, L.E., Davies, S.P. and Freeman, R.J. 2002. The effect of seasonal variations in auditor workload on local government audit fees and audit delay. *Journal of Accounting and Public Policy*. **21**,pp.395–422.

Johnson, P. and Clark, M. 2006. *Business and Management research methodolgies*. London: Sage.

Kausar, A., Taffler, R.J. and Tan, C.E.L. 2017. Legal Regimes and Investor Response to the Auditors Going-Concern Opinion. *Journal of Accounting, Auditing & Finance*. [Online]. **32**(1),pp.40–72. Available from: http://jaf.sagepub.com/lookup/doi/10.1177/0148558X15602390.

Kealey, B.T., Lee, H.Y. and Stein, M.T. 2007. The Association between Audit-Firm Tenure and Audit Fees Paid to Successor Auditors: Evidence from Arthur Andersen. *AUDITING A Journal of Practice Theory*. [Online]. **26**(2),pp.95–116. Available from: http://aaajournals.org/doi/abs/10.2308/aud.2007.26.2.95.

Khlif, H. and Samaha, K. 2016. Audit committee activity and internal control quality in Egypt: Does external auditor's size matter? *Managerial Auditing Journal*. **31**(3),pp.269–289.

Khlif, H. and Samaha, K. 2014. Internal control quality, Egyptian standards on auditing and

external audit delays: Evidence from the Egyptian stock exchange. *International Journal of Auditing*. **18**,pp.139–154.

Kim, J., Liu, X. and Zheng, L. 2012. The Impact of Mandatory IFRS Adoption on Audit Fees: Theory and Evidence. *The Accounting Review*. [Online]. **87**(6),pp.2061–2094. [Accessed 8 March 2013]. Available from: http://aaajournals.org/doi/abs/10.2308/accr-50223.

Knechel, W.R. and Payne, J.L. 2001. Additional evidence on audit report lag. *AUDITING: A Journal of Practice & Theory*. **20**(1),pp.137–146.

Knechel, W.R. and Sharma, D.S. 2012. Auditor-Provided Nonaudit Services and Audit Effectiveness and Efficiency: Evidence from Pre- and Post-SOX Audit Report Lags. *AUDITING: A Journal of Practice & Theory*. **31**(4),pp.85–114.

Kohlbeck, M., Mayhew, B.W., Murphy, P. and Wilkins, M.S. 2008. Competition for Andersen's Clients. *Contemporary Accounting Research*. **25**(4),pp.1099--136.

Kopliku, E. 2010. The Impact of the Global Financial Crisis on Southeastern European Economies. Available from: http://www.emeraldinsight.com/doi/book/10.1108/S1569-3759%282011%2993.

Krishnan, G. V. and Yu, W. 2011. Further evidence on knowledge spillover and the joint determination of audit and non-audit fees. *Managerial Auditing Journal*. [Online]. **26**(3),pp.230–247. [Accessed 21 March 2014]. Available from: http://www.emeraldinsight.com/10.1108/02686901111113181.

Krishnan, G. and Zhang, Y. 2014. Is there a relation between audit fee cuts during the global financial crisis and banks ' financial reporting quality ? *Journal of Accounting and*

Public Policy. [Online]. **33**,pp.279–300. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0278425414000192.

Kwon, S.Y., Lim, Y. and Simnett, R. 2014. The Effect of Mandatory Audit Firm Rotation on Audit Quality and Audit Fees: Empirical Evidence from the Korean Audit Market. *AUDITING: A Journal of Practice & Theory*. **33**(4),pp.167–195.

La-Porta, R., Lopez-de-SIlanes, F., Shleifer, A. and Vishny, R.W. 1998. Law and finance. *Journal of Political Economy*. **106**(6),pp.1113–1155.

Lapré, M.A. and Tsikriktsis, N. 2006. Organizational learning curves for customer dissatisfaction: Heterogeneity across airlines. *Management Science*. **52**(3),pp.352–366.

Lee, H.-Y., Mande, V. and Son, M. 2009. Do Lengthy Auditor Tenure and the Provision of Non-Audit Services by the External Auditor Reduce Audit Report Lags? *International Journal of Auditing*. [Online]. **13**,pp.87–104. Available from: http://doi.wiley.com/10.1111/j.1099-1123.2008.00406.x.

Leventis, S., Hasan, I. and Dedoulis, E. 2013. The cost of sin: The effect of social norms on audit pricing. *International Review of Financial Analysis*. [Online]. **29**,pp.152–165. [Accessed 21 March 2014]. Available from: http://dx.doi.org/10.1016/j.irfa.2013.03.006.

Leventis, S., Weetman, P. and Caramanis, C. 2005. Determinants of Audit Report Lag : Some Evidence from the Athens Stock Exchange. *International Journal of Auditing*. **9**,pp.45–58.

Li, W. and Shi, D. 2012. Audit Quality , Audit Fees and Gender *In*: *2012 International Conference on Information Management, Innovation Management and Industrial*

Engineering., pp. 340–343.

Lin, H.-L. and Yen, A.-R. 2016. The Effects of IFRS Adoption on Audit Fees for listed companies in China. *Asian Review of Accounting*. **24**(1),pp.43–68.

Lin, Z.J. and Liu, M. 2013. The Effects of Managerial Shareholding on Audit Fees: Evidence from Hong Kong. *International Journal of Auditing*. [Online]. **17**(3),pp.227–245. [Accessed 21 March 2014]. Available from: http://doi.wiley.com/10.1111/ijau.12000.

Liu, L. and Subramaniam, N. 2013. Government ownership, audit firm size and audit pricing: Evidence from China. *Journal of Accounting and Public Policy*. [Online]. **32**(2),pp.161–175. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0278425412000981.

Lowensohn, S., Johnson, L.E., Elder, R.J. and Davies, S.P. 2007. Auditor specialization, perceived audit quality, and audit fees in the local government audit market. *Journal of Accounting and Public Policy*. [Online]. **26**(6),pp.705–732. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0278425407000713.

Lyon, J.D. and Maher, M.W. 2005. The Importance of Business Risk in Setting Audit Fees: Evidence from Cases of Client Misconduct. *Journal of Accounting Research*. [Online]. **43**(1),pp.133–151. [Accessed 27 April 2013]. Available from: http://doi.wiley.com/10.1111/j.1475-679x.2005.00165.x.

Matthews, D. and Peel, M.J. 2003. Audit fee determinants and the large auditor premium in 1900. *Accounting and Business Research*. [Online]. **33**(2),pp.137–155. Available from: http://www.tandfonline.com/doi/abs/10.1080/00014788.2003.9729640.

Mayhew, B.W. and Wilkins, M.S. 2003. Audit Firm Industry Specialization as a

Differentiation Strategy: Evidence from Fees Charged to Firms Going Public. *AUDITING: A Journal of Practice & Theory*. **22**(2),pp.33–52.

McMeeking, K.P., Peasnell, K. V. and Pope, P.F. 2006. The determinants of the UK Big Firm premium. *Accounting and Business Research*. [Online]. **36**(3),pp.207–231. Available from: http://www.tandfonline.com/doi/abs/10.1080/00014788.2006.9730022.

Meckfessel, M.D. and Sellers, D. 2017. The impact of Big 4 consulting on audit reporting lag and restatements. *Managerial Auditing Journal*. [Online]. **32**(1),pp.19–49. Available from: http://www.emeraldinsight.com/doi/10.1108/MAJ-02-2016-1321.

MED 2009. *Follow up Report on Economic and Social Development Plan*.

Mehic, E., Silajdzic, S. and Babic-hodovic, V. 2013. The Impact of FDI on Economic Growth : Some Evidence from Southeast Europe. *Emerging Markets Finance & Trade*. **49**(1),pp.5–20.

Miles, M. and Huberman, M. 1994. *Qualitative Data Analysis: An Expanded Sourcebook* 2nd ed. London: Sage.

Mironiuc, M. and Robu, I. 2012. Empirical Study on the Analysis of the Influence of the Audit Fees and Non Audit Fees Ratio to the Fraud Risk. *Procedia - Social and Behavioral Sciences*. [Online]. **62**,pp.179–183. [Accessed 11 April 2013]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S1877042812034696.

Mitra, S. and Hossain, M. 2007. Ownership composition and non-audit service fees. *Journal of Business Research*. [Online]. **60**(4),pp.348–356. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0148296306002335.

Mitra, S., Hossain, M. and Deis, D.R. 2007. The empirical relationship between ownership characteristics and audit fees. *Review of Quantitative Finance and Accounting*. [Online]. **28**(3),pp.257–285. [Accessed 19 April 2013]. Available from: http://www.springerlink.com/index/10.1007/s11156-006-0014-7.

Mitra, S., Song, H. and Yang, J.S. 2015. The effect of Auditing Standard No. 5 on audit report lags. *Accounting Horizons*. **29**(3),pp.507–527.

Mohamed, Z., Zain, M.M., Subramaniam, N. and Wan Yusoff, W.F. 2012. Internal Audit Attributes and External Audit's Reliance on Internal Audit: Implications for Audit Fees. *International Journal of Auditing*. [Online]. **16**,pp.268–285. [Accessed 15 April 2013]. Available from: http://doi.wiley.com/10.1111/j.1099-1123.2012.00450.x.

Moore, G. and Ronen, J. 1990. External audit and asymmetric information. *AUDITING: A Journal of Practice & Theory*. **9**.

Moradi, J., Valipour, H. and Pahlavan, Z. 2012. Earnings Management, Board Independence And Audit Fees Considering The Firm's Profitability Level. *Asian Economic and Financial Review*. **2**(2),pp.358–366.

Morakabati, Y. 2007. Tourism, travel risk and travel risk perceptions: a study of travel risk perceptions and the effects of incidents on tourism.

Mukhtaruddin, Oktarina, R., Relasari and Abukosim 2015. Firm and Auditor Characteristics, and Audit Report Lag in Manufacturing Companies Listed on Indonesia Stock Exchange during 2008-2012. *Expert Journal of Business and Management*. [Online]. **3**(1),pp.13–26. Available from: http://business.expertjournals.com/23446781-303/.

Munsif, V., Raghunandan, K. and Rama, D. V. 2012. Internal control reporting and audit

report lags: Further evidence. *AUDITING: A Journal of Practice & Theory*. **31**(3),pp.203–218.

Munsif, V., Raghunandan, K., Rama, D. V. and Singhvi, M. 2011. Audit Fees after Remediation of Internal Control Weaknesses. *Accounting Horizons*. [Online]. **25**(1),pp.87–105. [Accessed 26 April 2013]. Available from: http://aaajournals.org/doi/abs/10.2308/acch.2011.25.1.87.

Nachmias, C. and Nachmias, D. 2008. *Research Methods in the Social Sciences* Third ed. New York: Worth.

Nan-wei, H., Wen-si, O. and Ning-jiao, D. 2014. Research on Auditors ' Gender and Audit Fees *In*: *2014 International Conference on Management Science & Engineering (21th)*., pp. 1307–1312.

Naser, K. and Nuseibeh, R. 2007. Determinants of audit fees: empirical evidence from an emerging economy. *International Journal of Commerce and Management*. [Online]. **17**(3),pp.239–254. Available from: http://www.emeraldinsight.com/10.1108/10569210710833635.

Niemi, L. 2005. Audit effort and fees under concentrated client ownership: Evidence from four international audit firms. *The International Journal of Accounting*. [Online]. **40**(4),pp.303–323. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0020706305000786.

Niemi, L. 2002. Do Firms Pay for Audit Risk? Evidence on Risk Premiums in Audit Fees after Direct Control for Audit Effort . *International Journal of Auditing*. **6**(1),pp.37–51.

Novak, J. and Cañas, A. 2007. Theoretical Origins of Concept Maps, How to Construct

Them and Use in Education. *Reflection Education*. **1**,pp.29–42.

Onder, G. and Karal, Z. 2013. DETERMINANTS OF FOREIGN DIRECT INVESTMENTS OUTFLOW FROM A DEVELOPING COUNTRY : THE CASE OF TURKEY. *BUSINESS, MANAGEMENT AND EDUCATION*. **11**(2),pp.241–255.

Owens-jackson, L.A., Robinson, D. and Shelton, S.W. 2009. The Association Between Audit Committee Characteristics , the Contracting Process and Fraudulent Financial Reporting. *American Journal of Business*. **24**(1),pp.57–65.

Owusu-Ansah, S., Leventis, S. and Caramanis, C. 2010. The pricing of statutory audit services in Greece. *Accounting Forum*. [Online]. **34**(2),pp.139–152. [Accessed 27 April 2013]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S015599821000013X.

Pagano, M. and Volpin, P. 2005. *The Political Economy of Corporate Governance*.

Palmrose, Z.-V. 1986. Audit Fees and Auditor Size: Further Evidence. *Journal of Accounting Research*. [Online]. **24**(1),pp.97–110. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=6440003&site=ehost-live.

Payne, J.L. and Jensen, K.L. 2002. An examination of municipal audit delay. *Journal of Accounting and Public Policy*. **21**,pp.1–29.

Picconi, M. and Reynolds, J.K. 2013. *Audit fee theory and estimation: A consideration of the logarithmic audit fee model*.

Pizzini, M., Lin, S. and Ziegenfuss, D.E. 2015. The impact of internal audit function quality and contribution on audit delay. *AUDITING: A Journal of Practice & Theory*.

34(1),pp.25–58.

Raghunandan, K. and Rama, D. V. 2006. SOX section 404 material weakness disclosures and audit fees. *AUDITING: A Journal of Practice & Theory*. **25**(1),pp.99–114.

Rainsbury, E. a., Bradbury, M. and Cahan, S.F. 2009. The impact of audit committee quality on financial reporting quality and audit fees. *Journal of Contemporary Accounting & Economics*. [Online]. **5**(1),pp.20–33. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S1815566909000046.

Robson, C. 2002. *Real world research* 2nd ed. Oxford: Blackwell Publishing, Inc.

Roe, M.J. 2003. Political Determinants of Corporate Governance: Political Context, Corporate Impact.

Rubin, B. 2015. *The Middle East: A Guide to Politics, Economics, Society and Culture*. Routledge.

Rusmanto, T. and Waworuntu, S.R. 2015. Factors influencing audit fee in Indonesian Publicly Listed Companies applying GCG. *Procedia - Social and Behavioral Sciences*. [Online]. **172**,pp.63–67. Available from: http://dx.doi.org/10.1016/j.sbspro.2015.01.336.

Salman, F.M. and Carson, E. 2009. The Impact of the Sarbanes-Oxley Act on the Audit Fees of Australian Listed Firms. *International Journal of Auditing*. [Online]. **13**(2),pp.127–140. Available from: http://doi.wiley.com/10.1111/j.1099-1123.2009.00399.x.

Samaha, K. and Hegazy, M. 2010. An empirical investigation of the use of ISA 520 'analytical procedures' among Big 4 versus non-Big 4 audit firms in Egypt. *Managerial Auditing Journal*. [Online]. **25**(9),pp.882–911. Available from:

http://search.proquest.com/docview/761430299?accountid=26357%5Cnhttp://www.emeraldinsight.com/journals.htm?issn=0268-6902&volume=25&issue=9&articleid=1891148&show=pdf.

Santos, C., Cerqueira, A. and Brandao, E. 2015. *Audit Fees , Non-Audit Fees and Corporate Performance*.

Saunders, M., Lewis, P. and Thornhill, A. 2012. *Research Methods for Business Students* Sixth ed. London, UK: Pearson Education Limited.

Schelleman, C. and Knechel, W.R. 2010. Short-term accruals and the pricing and production of audit services. *AUDITING: A Journal of Practice & Theory*. **29**(1),pp.221–250.

Schwartz, K.B. and Soo, B.S. 1996. The Association Between Auditor Changes and Reporting Lags. *Contemporary Accounting Research*. **13**(l),pp.353–370.

Scott, W.D. and Gist, W.E. 2013. Forced auditor change, industry specialization and audit fees. *Managerial Auditing Journal*. [Online]. **28**(8),pp.708–734. [Accessed 21 March 2014]. Available from: http://www.emeraldinsight.com/10.1108/MAJ-11-2012-0779.

Seetharaman, A., Gul, F. a and Lynn, S.G. 2002. Litigation risk and audit fees: evidence from UK firms cross-listed on US markets. *Journal of Accounting and Economics*. [Online]. **33**(1),pp.91–115. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0165410101000465.

Shan, Y.G. and Troshani, I. 2016. The effect of mandatory XBRL and IFRS adoption and audit fees: Evidence from the Shanghai stock exchange. *International journal of Managerial Finance*. **12**(2),pp.109–135.

Shan, Y.G., Troshani, I. and Richardson, G. 2015. An empirical comparison of the effect of

XBRL on audit fees in the US and Japan. *Journal of Contemporary Accounting & Economics*. [Online]. **11**(2),pp.89–103. Available from: http://dx.doi.org/10.1016/j.jcae.2015.01.001.

Sharma, D.S., Tanyi, P.N. and Litt, B.A. 2017. Costs of Mandatory Periodic Audit Partner Rotation: Evidence from Audit Fees and Audit Timeliness. *AUDITING: A Journal of Practice & Theory*. [Online]. **36**(1),pp.129–149. Available from: http://dx.doi.org/10.2308/ajpt-51515.

Shin, I.-H., Lee, H.-Y., Lee, H.-A. and Son, M. 2016. How does human resource investment in internal control affect audit reporting lag? *Asia-Pacific Journal of Accounting & Economics*. [Online],pp.1–21. Available from: http://dx.doi.org/10.1080/16081625.2015.1135751.

Simnett, R., Aitken, M., Choo, F. and Firth, M. 1995. The determinants of audit delay. *Advances in accounting*. **13**,pp.1–20.

Simunic, D.A. 1980. The Pricing of Audit Services: Theory and Evidence. *Journal of Accounting Research*. [Online]. **18**(1),pp.161–190. Available from: http://links.jstor.org/sici?sici=0021-8456(198021)18:1%3C161:TPOAST%3E2.0.CO;2-#&origin=crossref.

Simunic, D.A. and Stein, M.T. 1996. The Impact of Litigation Risk on Audit Pricing : A Review of the Economics and the Evidence. . **15**.

Singh, H., Woodliff, D., Sultana, N. and Newby, R. 2014. Additional Evidence on the Relationship between an Internal Audit Function and External Audit Fees in Australia. *International Journal of Auditing*. [Online]. **18**(1),pp.27–39. [Accessed 21 March 2014]. Available from: http://doi.wiley.com/10.1111/ijau.12009.

Soltani, B. 2002. Timeliness of corporate and audit reports: Some empirical evidence in the French context. *The International Journal of Accounting*. **37**,pp.215–246.

Sonu, C.H., Ahn, H. and Choi, A. 2017. Audit fee pressure and audit risk : evidence from the financial crisis of 2008. *Asia-Pacific Journal of Accounting & Economics*. [Online]. **1625**(March),pp.1–18. Available from: http://dx.doi.org/10.1080/16081625.2016.1208574.

Spence, M. 1973. Job Market Signalling. *Quarterly Journal of Economics*. **87**,pp.355–374.

Srinidhi, B., Hossain, M. and Lim, C.Y. 2012. The Effect of Arthur Andersen's Demise on Clients' Audit Fees and Auditor Conservatism: International Evidence. *Journal of International Financial Management & Accounting*. [Online]. **23**(3),pp.208–244. Available from: http://doi.wiley.com/10.1111/jifm.12001.

Srinidhi, B., Lim, C.Y. and Hossain, M. 2009. Effects of country-level legal, extra-legal and political institutions on auditing: A cross-country analysis of the auditor specialization premium. *Journal of Contemporary Accounting & Economics*. [Online]. **5**(1),pp.34–46. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S1815566909000022.

Sultana, N., Singh, H. and Zahn, J.W.M. Van Der 2015. Audit Committee Characteristics and Audit Report Lag. *International Journal of Auditing*. **19**,pp.72–87.

Sundgren, S. and Svanström, T. 2013. Audit office size, audit quality and audit pricing: evidence from small- and medium-sized enterprises. *Accounting and Business Research*. [Online]. **43**(1),pp.31–55. [Accessed 21 March 2014]. Available from: http://www.tandfonline.com/doi/abs/10.1080/00014788.2012.691710.

Tang, F., Ruan, L. and Yang, L. 2017. Does regulator designation of auditors improve independence?: The moderating effects of litigation risk. *Managerial Auditing Journal*. [Online]. **32**(1),pp.2–18. Available from: http://www.emeraldinsight.com/doi/10.1108/MAJ-03-2016-1334.

Taylor, M.H. and Simon, D.T. 1999. Determinants of audit fees: the importance of litigation, disclosure, and regulatory burdens in audit engagements in 20 countries. *The International Journal of Accounting*. [Online]. **34**(3),pp.375–388. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0020706399000175.

Teddlie, C. and Tashakkori, A. 2009. *Foundations of mixed methods Research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. London: Thousands Oaks, CA: Sage.

Thakor, A. V. 2015. The Financial Crisis of 2007-2009: Why Did It Happen and What Did We Learn? *Review of Corporate Finance Studies*. [Online]. **4**(2),pp.155–205. Available from: http://rcfs.oxfordjournals.org/content/4/2/155.abstract?etoc%5Cnhttp://rcfs.oxfordjournals.org/content/early/2015/04/12/rcfs.cfv001.abstract?papetoc.

Thinggaard, F. and Kiertzner, L. 2008. Determinants of Audit Fees: Evidence from a Small Capital Market with a Joint Audit Requirement. *International Journal of Auditing*. [Online]. **12**(2),pp.141–158. Available from: http://doi.wiley.com/10.1111/j.1099-1123.2008.00377.x.

Thomas, A., Spataro, L. and Mathew, N. 2014. Pension funds and stock market volatility : An empirical analysis of OECD countries. *Journal of Financial Stability*. [Online]. **11**,pp.92–103. Available from: http://dx.doi.org/10.1016/j.jfs.2014.01.001.

UNWTO 2010. *UNWTO Tourism Highlights 2010*.

UNWTO 2009. *World Tourism Barometer*.

Valentinetti, D. and Rea, M.A. 2013. XBRL for Financial Reporting : Evidence on Italian GAAP versus IFRS. *Accounting perspectives*. **12**(3),pp.237–259.

Vermeer, T.E., Raghunandan, K. and Forgione, D. a. 2009. Audit Fees at U.S. Non-Profit Organizations. *AUDITING: A Journal of Practice & Theory*. [Online]. **28**(2),pp.289–303. Available from: http://aaajournals.org/doi/abs/10.2308/aud.2009.28.2.289.

Villiers, C. De, Hay, D. and Zhang, Z. (Janice) 2013. Audit fee stickiness. *Managerial Auditing Journal*. [Online]. **29**(1),pp.2–26. [Accessed 21 March 2014]. Available from: http://www.emeraldinsight.com/10.1108/MAJ-08-2013-0915.

Wallace, W.A. 1980. The economic role of the audit in free and regulated markets. *Touche Ross: New York*.

Wang, D. and Zhou, J. 2012. The Impact of PCAOB Auditing Standard No. 5 on Audit Fees and Audit Quality. *Accounting Horizons*. [Online]. **26**(3),pp.493–511. [Accessed 27 April 2013]. Available from: http://aaajournals.org/doi/abs/10.2308/acch-50183.

Wang, J. and Fan, N.M. 2014. Audit Fee Premiums : Pre and Post the Andersen Scandal and SOX. *International Research Journal of Applied Finance*. **V**(10),pp.1235–1260.

Wang, K., O, S. and Iqbal, Z. 2009. Audit pricing and auditor industry specialization in an emerging market: Evidence from China. *Journal of International Accounting, Auditing and Taxation*. [Online]. **18**(1),pp.60–72. [Accessed 21 March 2014]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S1061951808000505.

Watts, R.L. and Zimmerman, J.L. 1983. Agency problems, auditing, and the theory of the

firm: Some Evidence. *Journal of Law and Economics*. **XXVI**,pp.613–633.

Whisenant, S., Sankaraguruswamy, S. and Raghunandan, K. 2003. Evidence on the Joint Determination of Audit and Non-Audit Fees. *Journal of Accounting Research*. [Online]. **41**(4),pp.721–744. Available from: http://doi.wiley.com/10.1111/1475-679X.00121.

Whitworth, J.D. and Lambert, T.A. 2014. Office-level characteristics of the Big 4 and audit report timeliness. *AUDITING: A Journal of Practice & Theory*. **33**(3),pp.129–152.

Xu, Y., Carson, E., Fargher, N. and Jiang, L. 2013. Responses by Australian auditors to the global financial crisis. *Accounting & Finance*. [Online]. **53**(1),pp.301–338. [Accessed 27 April 2013]. Available from: http://doi.wiley.com/10.1111/j.1467-629X.2011.00459.x.

Yan, H. 2012. Do Characteristics of Audit Firm Affect Timeliness of Audit Report? Empirical Evidence from China. *2012 Second International Conference on Business Computing and Global Informatization*. [Online],pp.87–90. Available from: http://ieeexplore.ieee.org/lpdocs/epic03/wrapper.htm?arnumber=6382470.

Yao, D.F., Percy, M. and Hu, F. 2015. Fair value accounting for non-current assets and audit fees : Evidence from Australian companies. *Journal of Contemporary Accounting & Economics*. [Online]. **11**,pp.31–45. Available from: http://dx.doi.org/10.1016/j.jcae.2014.12.003.

Yatim, P., Kent, P., Business, F. and Clarkson, P. 2006. Governance structures, ethnicity, and audit fees of Malaysian listed firms. *Managerial Auditing Journal*. [Online]. **21**(7),pp.757–782. [Accessed 8 March 2013]. Available from: http://www.emeraldinsight.com/10.1108/02686900610680530.

Zaytoun, M., Heiba, A. and Abdel-Hakim, M. 2010. *Implications of the Global Financial and Economic Crisis on the Tourism Sector in Egypt*.

Zeff, S. a 2003. How the U.S. Accounting Profession Got Where It Is Today: Part I. *Accounting Horizons*. [Online]. **17**(4),pp.267–286. Available from: http://www.questia.com/googleScholar.qst?docId=5002561382.

Zerni, M. 2012. Audit Partner Specialization and Audit Fees: Some Evidence from Sweden*. *Contemporary Accounting Research*. [Online]. **29**(1),pp.312–340. [Accessed 10 March 2013]. Available from: http://doi.wiley.com/10.1111/j.1911-3846.2011.01098.x.

Zhang, T. and Huang, J. 2013. The Risk Premium of Audit Fee : Evidence from the 2008 Financial Crisis. *China Journal of Accounting Studies*. **1**(1),pp.47–61.

Zhu, K. and Sun, H. 2012. The reform of accounting standards and audit pricing. *China Journal of Accounting Research*. [Online]. **5**(2),pp.187–198. [Accessed 27 April 2013]. Available from: http://linkinghub.elsevier.com/retrieve/pii/S1755309112000184.

Appendix I Summary of prior studies

Table I-1 Summary of main audit fees literature

Study	Objectives	Results	Sample	Country
(Abidin et al., 2010)	The paper objective is to find evidence on audit market concentration and auditor fee levels in the UK market in the period following PwC merger and demise of Andersen	There is an evidence that audit fee rates increased in UK after Andersen demise.	9006 observations (1998-2003)	UK
(Ahmed and Goyal, 2005)	The paper examines the main factors affect determination of audit fees in three emerging economies within South Asia.	Client size, ownership structure and audit firm size are significant determinants of audit fees. However, client complexity and client financial condition do not significantly affect audit fees	566 observations (1998)	Pakistan India Bangladesh
(Al-Harshani, 2008)	The study investigates the determinants of audit fees in Kuwait	Client size, liquidity ratio and profitability ratio are significant determinants of audit fees in Kuwait. However, the size of audit firm and location do not significantly affect audit fees	49 observations (2005)	Kuwait

(Bandyopadhyay and Kao, 2004)	The study examines the relationship between audit pricing and market structure	The results of the study give empirical evidence of a positive relationship between auditor market concentration and non-Big N audit fees but is not related to Big N audit fees	257 observations (1995)	Canada
(Beattie et al., 2001)	The study investigates audit pricing in charity/voluntary sector	The results prove that, like private sector, determinants like client size, complexity, audit firm location and non-audit fees affect audit fees in charity sector. And also, charity activity and whether charity is grant making or fund raising are specific determinants of audit fees in charity sector.	210 observations (1997)	UK
(Bedard and Johnstone, 2004)	The paper explores auditors' planning and pricing decisions depending on the existence of earnings manipulation risk and corporate governance risk	The paper found no main effect between corporate governance and pricing decisions. But only when both corporate governance risk and earnings manipulation exist, audit fees are affected.	1000 observations (2000-2001)	US
(Behn et al., 2009)	The study examines Korean audit market and how the 1999 Omnibus Cartel Repeal Act affected audit pricing decisions	The results of the study suggest high audit pricing competition and discount after the 1999 Omnibus Cartel Repeal Act	1195 observations (1999-2004)	Korea
(Bell et al., 2008)	The paper explores the relationship between business risk assessment for the auditee and audit labour usage and pricing	The paper provides evidence that total audit fees and audit fees/hour increase with increased assessment of auditee business risk for first year auditees not for continuing auditees	165 observations (2002)	US

(Bell et al., 2001)	The study analyses the relation between client's business risk and audit pricing	The paper provides evidence that higher business risk is associated by higher audit fees due to the increase in number of audit hours not audit fee/hour	422 observations (1989)	US
(Bryan and Mason, 2016)	The study tries to investigate whether CEO compensations reduction could affect auditor's assessment of risk and audit fees or not.	The paper proved a significant positive association between audit fees and CEO pay cuts.	8352 observations (2000-2011)	US
(Cahan and Sun, 2015)	The study examines the effect of audit experience on audit fees and audit quality	Results indicate the existence of a positive relationship between audit experience and audit fees. While a negative relationship exists between audit experience and audit quality	1917 observations (2007-2010)	China
(Cameran, 2005)	The aim of the study is to find out the main determinants of audit fees in Italy.	Client size, client complexity and client risk are the main determinants of audit fees in Italy. Large auditor premium is attributable only to KPMG.	338 observations (1995-1999)	Italy
(Carcello et al., 2002)	The paper investigates the relationship between board of directors' characteristics and audit pricing	The paper gives empirical evidence of a significant positive relationship between board characteristics (independence, diligence and expertise) on audit pricing	258 observations (1992/1993)	US
(Chaney et al., 2004)	The study examines the existence of big 8 premium in pricing of audit services for private firms in UK	The study results show that private firms do not pay premium for Big 8	15484 observations (1994-1998)	UK

(Chen et al., 2007)	The paper makes a comparison between Big N practices in competitive statutory market and the less competitive supplementary market in China	Results of the study indicates that Big N earn audit fee premium in less competitive audit market	434 observations (2000-2003)	China
(Choi et al., 2008)	The paper examines how country's legal environment could affect audit pricing decisions and audit fee charged big N and non-big N	The paper provides evidence that the stronger the country regime, the more audit fee charged by the auditors. And Big N charge audit fee premium given a certain legal liability regime	21559 observations (1996-2002)	15 countries
(Choi et al., 2009)	The paper's main research question is to find out whether auditors charge higher audit fees for cross-listed firms especially those in strong legal regimes countries	The paper provides empirical evidence that auditors charge higher audit fees for cross listed firms in countries with stronger legal environment	17837 observations (1996-2002)	14 non-US countries
(Chung and Narasimhan, 2002)	The study investigates variations in audit pricing across five industries in 12 countries	The results of the study show that companies in developed countries pay higher audit fees than companies in developing countries. Manufacturing sector is charged with the highest audit fees than other sectors. And Big N charge a fee premium.	6198 observations (1989-1993)	12 countries
(Clatworthy and Peel, 2007)	The paper examines the relationship between corporate failure and audit pricing	The paper found that there is no evidence that insolvent companies that failed were charged higher audit fees on the year before the failure	51429 observations (2003)	UK

(Audousset-coulier, 2015)	The paper studies the effect of joint audit setting on audit pricing	Results show that if the joint auditors are big 4, no big 4 premiums are charged compared to the choice of one big 4 and a smaller auditor	254 observations (2002-2003)	France
(Ding and Jia, 2012)	The paper aims to focus on the effect of PwC merger on audit fees and audit quality	There was evidence that post-merger period, there is a significant increase in audit fees and audit quality	5820 observations (1995-2001)	UK
(Ettredge et al., 2007)	The study explores the relationship between audit fees and auditor dismissals in the period post-SOX	The study finds that clients paying higher audit fees are more likely to dismiss their auditors in expectation of lower fees from the succeeding auditor	428 observations (2003)	US
(Evans Jr. and Schwartz, 2013)	The goal of the paper is to estimate how new regulations and market concentration affect audit fees using panel data approach	New regulations have increased audit fees, while market power and concentration do not highly affect audit fees	43413 observations (2000-2010)	US
(Felix JR. et al., 2001)	The study investigates the whether the internal audit contribution affects external audit pricing	The study results show that internal audit is a significant negative determinant affecting pricing of audit fees		
(Ferguson and Stokes, 2002)	The paper investigates the effect of brand name and auditor specialization on audit pricing	No evidence of the presence of industry specialist premiums, and limited support for brand name premium	Observations (per year): 1174 (1990), 965 (1992), 1069 (1994), 1084 (1998)	Australia

(Ferguson et al., 2003)	This study examines the effect of industry expertise on audit pricing	The paper documented audit fees premium if the auditor is industry specialized in both city-level and national-level	1046 observations (2002)	Australia
(Francis et al., 2005)	The purpose of this study is to examine how industry expertise based on joint national and city leadership would affect audit pricing	There is a significant fee premium for auditors that are industry specialist jointly nationally and on city level	3994 observations	US
(Fung et al., 2012)	The paper examines the effects of auditor specialization and economies of scale on audit pricing	The paper provides evidence of audit fees premium by specialist auditors and scale discounts	17207 observations (2000-2007)	US
(De George et al., 2013)	Examining how IFRS adoption affect audit fees	There is a direct and significant increase in audit fees after IFRS adoption	4535 observations (2002-2006)	Australia
(Ghosh and Lustgarten, 2006)	The paper investigates whether auditors make discounts on initial engagements or not	Initial engagements discounts exist for non-big N auditors than in Big N auditors	2113 observations (2000-2003)	US
(Giroux and Jones, 2007)	The study is interested in investigating the audit fee structure of local authorities in England and Wales with particular focus on pricing decisions by Big 4	The study provides evidence for a Big 4 discount for local authority audits	409 observations (2000)	UK

(Griffin and Lont, 2011)	The study analyses the effect of auditor change due to dismissals and resignations on audit fees	The paper finds that dismissals is associated with lower audit fees, while resignations is associated with higher audit fees (before and after auditor change)	12772 observations (2001-2006)	US
(Hay and Knechel, 2010)	The paper examines the effect of advertising and solicitation on audit fees	There was an evidence that advertising is associated with higher audit fees while solicitation is associated with lower audit fees	3329 observations (1980-2001)	New Zealand
(Hogan and Wilkins, 2008)	The study examines the response of auditors to internal control weakness	Results indicate that companies disclosing higher internal control weakness pay higher audit fees.	6735 observations (2003-2004)	US
(Huang et al., 2009)	The paper explores initial audit engagements pricing pre-and post-SOX	The paper found that the big 4 become more conservative towards client accepting and pricing decisions after SOX, and Big 4 clients pay initial year audit fee premium post-SOX	1691 observations (2001) and 1992 observations (2006)	US
(Ittonen and Peni, 2012)	The paper examines the effect of auditor's gender on audit fees	The paper found evidence that female audit engagements partners have significantly higher audit fees	715 observations (2006-2006)	Finland Denmark Sweden
(Jeong et al., 2005)	The paper investigates the relationship between audit fees, mandatory auditor assignment and the non-audit services	The paper finds that under a mandatory auditor-assignment system, auditors charge higher audit fees because of the increase in bargaining power. Also, non-audit fees are positively associated with audit fees.	2025 observations (1999-2002)	Korea

(Kim et al., 2012)	The study examines the effect of IFRS adoption on audit fees	Mandatory IFRS adoption has led to an increase in audit fees	2860 observations (2004-2008)	European Union Countries
(Krishnan and Yu, 2011)	The study analyses the effect of non-audit services on audit fees determination	There is a strong significant negative relationship between audit and non-audit fees	11899 observations (2000-2006)	US
(Kwon et al., 2014)	The paper examines the effect of mandatory audit firm rotation regulation, that took place in South Korea from 2006-2010, on audit fees and audit quality	Results show that audit fees increased post-regulation period for mandatory firm rotation	6710 observations (2000-2009)	South Korea
(Leventis et al., 2013)	The paper attempt to find evidence if there is a relationship between social norms and audit pricing	The paper found evidence that audit firms charge higher audit fees to companies that deviate from prevailing social norms	1600 observations (2003-2009)	US
(Lin and Liu, 2013)	The paper explores how managerial ownership could affect audit pricing in Hong Kong	The study found that managerial ownership is negatively associated with audit pricing in case of low and high levels of managerial ownership, and positively associated in the intermediate level.	2785 observations (1999-2007)	Hong Kong
(Lin and Yen, 2016)	The paper examines the effect of IFRS adoption on audit fees in China	The paper found a significant positive relationship between IFRS adoption in China on audit fees	4129 observations (2005-2008)	China

(Liu and Subramaniam, 2013)	The study investigates the impact of government ownership on audit pricing based on data from China	The study presents empirical evidence that enterprises owned by government incur lower fees than other enterprises	8116 observations (2001-2008)	China
(Lowensohn et al., 2007)	The study aims to explore the effects of auditor specialization on audit fees and quality	Auditor specialization does not have any effect on audit fees but has positive effect on audit quality	241 survey response	US
(Lyon and Maher, 2005)	The paper focuses on the relationship between audit fees and business risk for bribery-paying clients doing business in developing countries	The paper provide evidence audit fees were higher for bribery-paying clients	82 observations (1974)	US
(Matthews and Peel, 2003)	The study tries to find out whether there is a difference in determinants of audit fees nowadays and in the 1900	Client size, complexity, profitability were the main determinants of audit fees in 1900 in line with contemporary findings. But for Big N in 1900 they did not charge fee premium as the present Big N appear to do.	121 observations (1900)	UK
(McMeeking et al., 2006)	The study investigates whether big auditing firms are able to earn audit fee premium in UK	The study concludes that audit fee premium exists especially in case of provision of non-audit services to audit clients	3240 observations (1985-2002)	UK
(Mitra et al., 2007)	The paper explores the relationship between ownership structure and audit fees	The paper found evidence that there is positive relation between audit fees and diffused institutional stock ownership, while a positive relation exists between audit fees and managerial stock ownership and institutional block-holder	358 observations (2000)	US

		ownership. No evidence that non-institutional block-holder ownership affect audit fees		
(Munsif et al., 2011)	The paper investigates the effect of remediation of internal control on audit fees	The paper found that companies that remediate previously disclosed internal control weaknesses pay less audit fees than companies that continue reporting internal control weakness	1610 observations (2004-2008)	US
(Niemi, 2005)	The paper investigates the influence of various types of client ownership structure on audit fees and effort	The paper provides evidence of lower audit fees and hours for management majority-owned companies, and higher audit fees and hours for foreign majority-owned companies.	200 observations (1996)	Finland
(Owusu-Ansah et al., 2010)	The objective of the study is to explore the main determinants of audit fees in Greece	Client size, audit firm size, client financial condition and auditor change significantly affect audit fees in Greece	145 observations (2000)	Greece
(Rainsbury et al., 2009)	The paper investigates the association between audit committee quality and audit fees in New Zealand	The results show that audit committee quality has little effect on external audit pricing	87 observations (2001)	New Zealand
(Scott and Gist, 2013)	The purpose of this paper is to examine the effect of auditor change and new auditor specialization on audit fees	There is a positive relationship between audit fees and auditor specialization	221 former Andersen audit clients who were absorbed by the remaining Big 4 firms (2002)	US

(Seetharaman et al., 2002)	The paper examines whether audit fees reflect risk differences across liability regimes	The paper find that auditors of UK firms cross listed in US charge higher fees as a risk premium for higher litigation risk in the US	550 observations (1996)	UK
(Shan and Troshani, 2016)	The purpose of the study is to evaluate XBRL and IFRS impact on audit fees in China	The main results of the paper indicate the existence of a positive relationship of IFRS adoption and audit fees and a negative impact of XBRL on audit fees	1798 observations (2000-2011)	China
(Shan et al., 2015)	The study investigates differences between countries of the effect of XBRL on audit fees	Results give empirical evidence of a negative relationship between XBRL use and audit fees	17010 US observations (2005-2012) 7067 Japanese observations (2004-2011)	US & Japan
(Singh et al., 2014)	The paper examines that relationship between internal audit and external audit pricing	Results of the paper indicates a significant positive relationship between internal audit and external audit pricing	272 observations (2005)	Australia
(Srinidhi et al., 2009)	The paper examines the effects of institutions on audit fees and specialist premium	The paper provides evidence that country-level institutional strength increases audit fees and reduces the demand for specialist auditor	29840 observations (2000-2004)	Multi-countries
(Goodwin-stewart and Kent, 2006)	The study investigates how the existence of audit committee and internal audit could affect external audit fees	The study gives empirical evidence that the existence of internal audit and audit committee existence, more committee meetings are associated with higher audit fees.	401 observations (2000)	Australia

(Sundgren and Svanström, 2013)	The paper investigates how audit quality and pricing vary with audit firm size	Results of the study indicate that larger audit firms charge higher fees	4062 observations (2005-2009)	Sweden
(Taylor and Simon, 1999)	The paper aims to investigate macro determinants of audit fees	Increase in litigation, disclosure requirements and regulations increase audit fees	2300 observations (1991-1995)	20 countries
(Villiers et al., 2013)	The paper explores the price behaviour of audit fees in response to changes in the variables that are considered as main determinants of audit fees	Audit fees are sticky (do not immediately adjusted to changes in their determinants)	30298 observations (2000-2008)	US
(Wang and Zhou, 2012)	Investigate the impact of PCAOB Auditing Standard No.5 (AS5) on audit fees and audit quality	Audit fees decrease upon the adoption of AS5, but audit quality was not affected.	4928 observations (2006-2007)	US
(Wang et al., 2009)	The paper examines the audit fees determining and focusing on auditor specialization in China market	Brand name and audit specialization is associated by an audit fee premium	213 observations (2005-2007)	China
(Whisenant et al., 2003)	The study investigates the joint determination of audit and non-audit fees	The results do not support that non-audit fees directly influence audit fees	2666 observations (2000)	US

(Yao et al., 2015)	The paper explores the association between the revaluation of non-current assets and audit pricing	The paper found that there is a significant positive relationship between audit fees and revaluation of non-current assets by fair value	984 observations (2003-2007)	Australia
(Zerni, 2012)	The purpose of the study is to examine the relationship between auditor specialization and audit pricing	The results of the study give an evidence that appointment of a specialist audit partner is associated with higher audit fees	862 observations (2003-2007)	Sweden
(Zhu and Sun, 2012)	The paper focuses on the reform of accounting standards in china impact on audit pricing	Audit fees increased significantly after adopting the new standards of accounting in China	802 non-financial firms (2007)	China

Table I-2 Summary of main audit report lag literature

Study	Objectives	Results	Sample	Country
(Abbott et al., 2012)	The paper investigates how external audit delay is affected by the assistance of internal audit function	The paper found that internal audit assistance is negatively associated with audit delay	134 observations (2005)	US
(Afify, 2009)	The paper purpose is to investigate the main determinants of audit report lag	Company size, industry, profitability, BOD independence, CEO duality and existence of audit committee are the main significant determinants of audit report lag	85 observations (2007)	Egypt
(Apadore and Noor, 2013)	The paper analyses the relationship between audit report lag and corporate governance characteristics in Malaysia	The results give empirical evidence of a significant effect of audit committee size, ownership concentration, client's size and profitability on audit report lag	180 observations (2009-2010)	Malaysia
(Behn et al., 2006)	The paper reports the burdens that may prevent auditors from reducing report lag	The study suggests that insufficient personal resources prevent auditors from timely reporting	217 survey	US
(Blankley et al., 2014)	The paper examines the relationship between future financial restatements and audit report lags	Results give empirical evidence that audit report lag increase with increased probability of financial restatements	2530 observations (2004-2007)	US

(Chan et al., 2016)	The study seeks to explore the determinants of audit report lags in China and examine the consequences of long audit report lags in the subsequent years.	The results indicate that auditor expertise, client risk and complexity significantly affect audit report timeliness. Clients with longer report lag tend to have non-standard audit opinion in subsequent years	4025 observations (2004-2010)	China
(Chen et al., 2014)	The paper investigates how IT capability contributes to internal control and external audit fees and delays post SOX	The paper gives evidence that IT capability mitigates audit fee increases, but not audit delay.	6381 observations (2004-2007)	US
(Enofe et al., 2013)	The study investigates the relationship between audit firm rotation and audit report lag in Nigeria	Results reveal that audit fees, busy season and auditor type positively affect audit report lag. While audit firm rotation and company size negatively affect audit report lag.	50 observations (2011)	Nigeria
(Ettredge et al., 2006)	The paper analyses the effect of internal control quality on audit report lag after SOX implementation	The study provides evidence that audit report lag became longer after the implementation of SOX. Also, higher internal control weakness is associated with longer delays	4688 observations (2003-2004)	US
(Habib and Bhuiyan, 2011)	The paper investigates the relationship between auditor specialization and audit report lag	Results demonstrate that audit report lag is shorter for companies audited by specialised auditors	502 observations (2004-2008)	New Zealand

(Habib, 2015)	The paper examines the effect of the adoption of the new Chinese accounting standards on audit report lag	The paper documents an increase in audit report lag after the adoption of Chinese accounting standards.	9969 observations (2003-2011)	China
(Hassan, 2016)	The study purpose is to identify the determinants of audit report timeliness in Palestine	Client size, performance, complexity, audit committee existence, board size and ownership concentration are the main determinants of audit report lag in Palestine stock exchange.	46 observations (2011)	Palestine
(Henderson and Kaplan, 2000)	The study explores the main determinants of audit report lag in banking sector	Results indicate differences between cross-sectional analysis and panel data, also higher explanatory power of panel data exceeds that of cross-sectional analysis.	558 observations (1988-1993)	U. S
(Imam et al., 2001)	The paper examines how audit firm size could affect audit delay	The study reveals that audit firms associated with international firms have longer report lag in Bangladesh	115 observations (1998)	Bangladesh
(Johnson et al., 2002)	The study explores the effect of fiscal year end on audit delay and audit fees in the US local government sector	Results indicate that December 31 as a fiscal year end showed higher audit fees and audit delay than June 30 fiscal year end	302 observations (1998)	US

(Khlif and Samaha, 2014)	The paper main objective is to investigate the effect of internal control quality and ESA adoption on audit report lag	ESA adoption and internal control quality have reduced audit report lag	344 observations (2007-2010)	Egypt
(Knechel and Payne, 2001)	The purpose of this paper is to examine how incremental audit effort, audit team allocation and the provision of non-audit services affect audit report lag.	Higher audit effort, provision of tax services and allocation of less experienced audit team are positively correlated with audit report lag.	226 observations (1991)	Canada
(Knechel and Sharma, 2012)	The paper examines the effect of providing non-audit services on the effectiveness and efficiency of the audit.	Results reveal that higher non-audit fees are associated with shorter audit report lags-as an indicator of audit efficiency.	11793 observations (2000-2003)	US
(Lee et al., 2009)	The study examines whether auditor tenure and non-audit services affect audit report lag or not	Results show that both auditor tenure and non-audit services negatively affect audit report lag	18473 observations (2000-2005)	US
(Leventis et al., 2005)	The paper explores the main determinants of audit report lag for companies in Athens Stock Exchange	Report lag is reduced if the auditor is Big N or in case of audit fee premium. While report lag increase if there is bad news concerning the company.	171 observations (2000)	Greece

(Mukhtaruddin et al., 2015)	The paper tries to examine how client and auditor characteristic could affect audit report lag in Indonesia.	The study proofed a positive significant relationship of client size and auditor opinion on audit report lag, and a non-significant effect of client complexity.	325 observations (2008-2012)	Indonesia
(Munsif et al., 2012)	The paper examines the association between audit report lag and weakness in internal control	The paper gives empirical evidence that clients with internal control weakness require additional audit effort and longer audit report lag even after remediation	5678 observations (2008-2009)	US
(Payne and Jensen, 2002)	The paper examines the effects of audit firm characteristics on municipal audit delay	The study suggests that municipal size, busy season, auditor opinion significantly increase audit report lag.	410 observations (1992)	US
(Pizzini et al., 2015)	The study explores the effect of SOX section 404 on audit report lag.	The study documented a significant increase in audit report lag after the implementations of SOX section 404	1356 observations (2003-2004)	U. S
(Shin et al., 2016)	The study examines how human resource investment in internal control could affect audit report timeliness	The study reported that experienced personnel responsible for internal control exists help the auditor in completing the audit process more quickly and thus reduce report lag	2702 observations (2006-2010)	Korea

(Sultana et al., 2015)	The study investigates the effect of audit committee characteristics on audit report timeliness	The study documented that audit report delay is shorter if the audit committee is characterised with independence and include a financial expert	2470 observations (2004-2008)	Australia
(Whitworth and Lambert, 2014)	The paper examines how specific attributes of the audit firm could affect audit timeliness	Results indicates that auditor specialization is negatively associated with audit report lags, while audit office size and client importance are positively associated with report delay	14948 observations (2003-2008)	US
(Yan, 2012)	The study's purpose is to examine the characteristics of audit firm could affect audit report timeliness	The paper provides evidence that neither audit frim size nor auditor specialization have significant effect on timeliness of audit report.	4899 observations (2009-2011)	China

Appendix II Variables Operationalisation

Table II-1 Variables operationalisation in audit fees model

Variable		Sign	Source
Log of total assets		+	(Ahmed and Goyal, 2005; Al-Harshani, 2008; Behn et al., 2009; Bell et al., 2008; Bell et al., 2001; Cahan and Sun, 2015; Cameran, 2005; Carcello et al., 2002; Chaney et al., 2004; Chen et al., 2007; Choi et al., 2008; Clatworthy and Peel, 2007; Audousset-coulier, 2015; Ding and Jia, 2012; Ettredge et al., 2007; Evans Jr. and Schwartz, 2013; Ferguson et al., 2003; Francis et al., 2005; Fung et al., 2012; De George et al., 2013; Ghosh and Lustgarten, 2006; Griffin and Lont, 2011; Hay and Knechel, 2010; Hogan and Wilkins, 2008; Huang et al., 2009; Ittonen and Peni, 2012; Jeong et al., 2005; Kim et al., 2012; Krishnan and Yu, 2011; Kwon et al., 2014; Leventis et al., 2013; Lin and Liu, 2013; Liu and Subramaniam, 2013; McMeeking et al., 2006; Mitra et al., 2007; Munsif et al., 2011; Niemi, 2005; Owusu-Ansah et al., 2010; Rainsbury et al., 2009; Scott and Gist, 2013; Seetharaman et al., 2002; Shan et al., 2015; Singh et al., 2014; Srinidhi et al., 2009; Goodwin-stewart and Kent, 2006; Taylor and Simon, 1999; Villiers et al., 2013; Wang and Zhou, 2012; Wang et al., 2009; Whisenant et al., 2003; Yao et al., 2015)
No. of employees		+	(Sundgren and Svanström, 2013; Zerni, 2012)
Log of revenues		+	(Clatworthy and Peel, 2007; Griffin and Lont, 2011)
Sales		+	(Chaney et al., 2004; Ettredge et al., 2007; Sundgren and Svanström, 2013)
Foreign subsidiaries/sales/operations		+	(Carcello et al., 2002; Chaney et al., 2004; Clatworthy and Peel, 2007; Audousset-coulier, 2015; Ferguson et al., 2003; Francis et al., 2005; Fung et al., 2012; De George et al., 2013; Ghosh and Lustgarten, 2006; Griffin and Lont, 2011; Hogan and Wilkins, 2008; Huang et al., 2009; Ittonen and Peni, 2012; Krishnan and Yu, 2011; Leventis et al., 2013; Mitra and Hossain, 2007; Munsif et al., 2011; Owusu-Ansah et al., 2010;

			Rainsbury et al., 2009; Scott and Gist, 2013; Seetharaman et al., 2002; Shan et al., 2015; Singh et al., 2014; Srinidhi et al., 2009; Goodwin-stewart and Kent, 2006; Sundgren and Svanström, 2013; Villiers et al., 2013; Wang and Fan, 2014; Whisenant et al., 2003)
No. of reportable segments		+	(Behn et al., 2009; Cahan and Sun, 2015; Carcello et al., 2002; Clatworthy and Peel, 2007; Ettredge et al., 2007; Ferguson et al., 2003; Francis et al., 2005; Fung et al., 2012; De George et al., 2013; Ghosh and Lustgarten, 2006; Griffin and Lont, 2011; Hay and Knechel, 2010; Hogan and Wilkins, 2008; Huang et al., 2009; Krishnan and Yu, 2011; Kwon et al., 2014; Leventis et al., 2013; Lin and Liu, 2013; Mitra et al., 2007; Munsif et al., 2011; Rainsbury et al., 2009; Singh et al., 2014; Goodwin-stewart and Kent, 2006; Taylor and Simon, 1999; Villiers et al., 2013; Wang and Zhou, 2012; Whisenant et al., 2003)
Receivables and inventory ratio		+	(Behn et al., 2009; Audousset-coulier, 2015; Ettredge et al., 2007; Hay and Knechel, 2010; Hogan and Wilkins, 2008; Huang et al., 2009; Ittonen and Peni, 2012; Kwon et al., 2014; Lin and Liu, 2013; Niemi, 2005; Rainsbury et al., 2009; Srinidhi et al., 2009; Whisenant et al., 2003; Yao et al., 2015)
Receivables ratio		+	(Cahan and Sun, 2015; Carcello et al., 2002; Chen et al., 2007; Liu and Subramaniam, 2013; Scott and Gist, 2013; Shan and Troshani, 2016)
Inventory ratio		+	(Mitra et al., 2007; Singh et al., 2014)
		-	(Cahan and Sun, 2015; Liu and Subramaniam, 2013; Shan et al., 2015)
Leverage		+	(Chaney et al., 2004; Chen et al., 2007; Choi et al., 2008; Clatworthy and Peel, 2007; Audousset-coulier, 2015; Ettredge et al., 2007; Evans Jr. and Schwartz, 2013; Francis et al., 2005; Hay and Knechel, 2010; Ittonen and Peni, 2012; Jeong et al., 2005; Krishnan and Yu, 2011; Leventis et al., 2013; Scott and Gist, 2013; Shan et al., 2015; Taylor and Simon, 1999; Villiers et al., 2013; Whisenant et al., 2003; Yao et al., 2015)
		-	(Al-Harshani, 2008; Ferguson et al., 2003; Hogan and Wilkins, 2008)
Current ratio		+	(Chaney et al., 2004; Ferguson et al., 2003; Francis et al., 2005; Fung et al., 2012; Krishnan and Yu, 2011; Villiers et al., 2013)

		-	(Evans Jr. and Schwartz, 2013; Ghosh and Lustgarten, 2006; Lin and Liu, 2013; Wang and Zhou, 2012; Yao et al., 2015; Zhu and Sun, 2012)
Loss		+	(Cahan and Sun, 2015; Chaney et al., 2004; Chen et al., 2007; Evans Jr. and Schwartz, 2013; Fung et al., 2012; Hay and Knechel, 2010; Hogan and Wilkins, 2008; Huang et al., 2009; Ittonen and Peni, 2012; Krishnan and Yu, 2011; Kwon et al., 2014; Villiers et al., 2013; Wang and Zhou, 2012; Wang et al., 2009; Whisenant et al., 2003)
Return on assets		+	(Cahan and Sun, 2015; Villiers et al., 2013)
		-	(Ferguson et al., 2003; Francis et al., 2005; Fung et al., 2012; Hay and Knechel, 2010; Ittonen and Peni, 2012; Kwon et al., 2014; Srinidhi et al., 2009; Goodwin-stewart and Kent, 2006; Yao et al., 2015)
Internal control weakness		+	(Munsif et al., 2011; Hogan and Wilkins, 2008; Ettredge et al., 2007; Huang et al., 2009; Wang and Zhou, 2012; Evans Jr. and Schwartz, 2013)
Internal audit reliance		+	(Singh et al., 2014; Goodwin-stewart and Kent, 2006)
BOD independence		+	(Singh et al., 2014; Mitra et al., 2007; Carcello et al., 2002; Goodwin-stewart and Kent, 2006)
CEO duality		+	(Lin and Liu, 2013)
Audit committee meetings		+	(Singh et al., 2014)
Audit committee independence		+	(Mitra et al., 2007; Goodwin-stewart and Kent, 2006)
Managerial majority ownership		-	(Niemi, 2005; Mitra et al., 2007)
Owned by a foreign multinational parent		+	(Ahmed and Goyal, 2005; Niemi, 2005)
Initial engagement		+	(Huang et al., 2009)
		-	(Hogan and Wilkins, 2008; Niemi, 2005; Ghosh and Lustgarten, 2006; Jeong et al., 2005; Krishnan and Yu, 2011; Whisenant et al., 2003; Behn et al., 2009; Evans Jr. and Schwartz, 2013)
Audit firm size		+	(Munsif et al., 2011; Ahmed and Goyal, 2005; Owusu-Ansah et al., 2010; Zhu and Sun, 2012; Singh et al., 2014; Kwon et al., 2014; Hogan and Wilkins, 2008; Ettredge et al.,

			2007; Audousset-coulier, 2015; Yao et al., 2015; Lin and Liu, 2013; Chen et al., 2007; Cahan and Sun, 2015; Liu and Subramaniam, 2013; Shan et al., 2015; Goodwin-stewart and Kent, 2006; Wang et al., 2009; Leventis et al., 2013; De George et al., 2013; Choi et al., 2008; Kim et al., 2012; Choi et al., 2009; Taylor and Simon, 1999; Ghosh and Lustgarten, 2006; Jeong et al., 2005; Whisenant et al., 2003; Behn et al., 2009; Sundgren and Svanström, 2013; Ferguson et al., 2003; Wang and Zhou, 2012; Evans Jr. and Schwartz, 2013; Clatworthy and Peel, 2007; Cameran, 2005)
Auditor specialization		+	(Kwon et al., 2014; Srinidhi et al., 2009; Scott and Gist, 2013; Cahan and Sun, 2015; Zerni, 2012; Leventis et al., 2013; Fung et al., 2012; Francis et al., 2005; Ferguson et al., 2003)
Provision of non-audit fees		+	(Clatworthy and Peel, 2007; Audousset-coulier, 2015; Huang et al., 2009; Griffin and Lont, 2011; Zerni, 2012; De George et al., 2013; Jeong et al., 2005)
		-	(Ittonen and Peni, 2012; Krishnan and Yu, 2011)
Busy season		+	(Hogan and Wilkins, 2008; Ettredge et al., 2007; Lin and Liu, 2013; Griffin and Lont, 2011; Leventis et al., 2013; De George et al., 2013; McMeeking et al., 2006; Francis et al., 2005; Chaney et al., 2004; Evans Jr. and Schwartz, 2013; Clatworthy and Peel, 2007)
Non-standard auditor opinion		+	(Hogan and Wilkins, 2008; Ettredge et al., 2007; Huang et al., 2009; Cahan and Sun, 2015; Liu and Subramaniam, 2013; Griffin and Lont, 2011; Leventis et al., 2013; Ghosh and Lustgarten, 2006; Krishnan and Yu, 2011; Behn et al., 2009; Fung et al., 2012; Francis et al., 2005; Wang and Zhou, 2012; Evans Jr. and Schwartz, 2013)
		-	(Chen et al., 2007; Wang et al., 2009)
Cross-listed client		+	(Audousset-coulier, 2015; Liu and Subramaniam, 2013; Seetharaman et al., 2002; De George et al., 2013)
Restatement		+	(Huang et al., 2009; Leventis et al., 2013; Jeong et al., 2005)
Female auditor partner			(Ittonen and Peni, 2012)
Auditor education and experience		+	(Cahan and Sun, 2015)
Auditor location		+	(Clatworthy and Peel, 2007)

		-	(Chen et al., 2007)
XBRL adoption		-	(Shan and Troshani, 2016; Shan et al., 2015)
IFRS adoption		+	(Zhu and Sun, 2012; De George et al., 2013; Kim et al., 2012)
SOX implementation		+	(Evans Jr. and Schwartz, 2013)(Griffin and Lont, 2011)

Table II-2 Variable operationalisation of audit report lag model

Variable	sign	Source
Log of total assets	+	(Leventis et al., 2005; Afify, 2009; Yan, 2012; Blankley et al., 2014)
	-	(Ettredge et al., 2006; Lee et al., 2009; Habib and Bhuiyan, 2011; Abbott et al., 2012; Knechel and Sharma, 2012; Munsif et al., 2012; Apadore and Noor, 2013; Whitworth and Lambert, 2014; Habib, 2015; Shin et al., 2016)
Foreign subsidiaries/sales	+	(Whitworth and Lambert, 2014)
	-	(Blankley et al., 2014; Khlif and Samaha, 2014)
No. of reportable segments	+	(Ettredge et al., 2006; Lee et al., 2009; Habib and Bhuiyan, 2011; Knechel and Sharma, 2012; Chan et al., 2016)
Loss	+	(Ettredge et al., 2006; Lee et al., 2009; Habib and Bhuiyan, 2011; Abbott et al., 2012; Munsif et al., 2012; Yan, 2012; Blankley et al., 2014; Whitworth and Lambert, 2014; Chan et al., 2016)
ROA	-	(Afify, 2009; Apadore and Noor, 2013; Khlif and Samaha, 2014)
Leverage	+	(Ettredge et al., 2006; Abbott et al., 2012; Knechel and Sharma, 2012; Khlif and Samaha, 2014; Whitworth and Lambert, 2014; Shin et al., 2016)
	-	(Chan et al., 2016)
Extraordinary items	+	(Ettredge et al., 2006; Abbott et al., 2012)
Financial industry	+	(Ettredge et al., 2006)
	-	(Afify, 2009)
High tech industry	-	(Ettredge et al., 2006)
BOD independence	-	(Afify, 2009)
CEO duality	+	(Habib, 2015)
	-	(Afify, 2009)
Audit committee existence	-	(Afify, 2009)

Audit committee size	-	(Apadore and Noor, 2013)
Internal control weakness	+	(Abbott et al., 2012; Munsif et al., 2012; Blankley et al., 2014)
Internal audit	-	(Abbott et al., 2012)
Ownership concentration	+	(Apadore and Noor, 2013)
Audit firm size	+	(Shin et al., 2016)
	-	(Leventis et al., 2005)
Auditor specialization	+	(Blankley et al., 2014)
	-	(Habib and Bhuiyan, 2011; Whitworth and Lambert, 2014)
Auditor tenure	-	(Lee et al., 2009; Habib and Bhuiyan, 2011; Knechel and Sharma, 2012)
Auditor change	+	(Ettredge et al., 2006; Whitworth and Lambert, 2014; Chan et al., 2016)
Non-audit services provision	-	(Lee et al., 2009; Knechel and Sharma, 2012; Blankley et al., 2014)
Busy season	+	(Lee et al., 2009; Habib and Bhuiyan, 2011; Abbott et al., 2012; Whitworth and Lambert, 2014)
	-	(Blankley et al., 2014)
Non-standard audit opinion	+	(Leventis et al., 2005; Ettredge et al., 2006; Lee et al., 2009; Knechel and Sharma, 2012; Yan, 2012; Blankley et al., 2014; Habib, 2015; Chan et al., 2016; Shin et al., 2016)
	-	(Munsif et al., 2012; Khlif and Samaha, 2014)
Restatement	+	(Ettredge et al., 2006; Abbott et al., 2012; Knechel and Sharma, 2012; Blankley et al., 2014)
IFRS adoption	+	(Habib and Bhuiyan, 2011)
SOX implementation	+	(Ettredge et al., 2006; Mitra et al., 2015)