University of Southern Queensland

Identifying Determining Factors That Impact on the Extent of Harmonisation with International Financial Reporting Standards: Analysis of Listed North African Companies

A dissertation submitted by

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ABSTRACT

In the last decades, international accounting harmonisation has become the objective of many accountants in both academic and professional fields. With increased pressure from the globalisation of businesses in financial reporting, stock exchange, and international transactions, accounting information (produced by local accounting system) is not likely to meet users' requirements. Many countries around the world have noticed the importance of accounting harmonisation in their regional financial markets. Despite problems of reliability of accounting information, developing countries (such as North African countries) have not paid enough attention to adopting international standards.

Appropriate literature was covered in this study such as: obstacles to and benefits of harmonisation, interested bodies (historical view), uniformity of standards, harmonising accounting practices, the globalisation effects on the accounting environment, and firm characteristics effects over the accounting environment. Despite the existence of substantial literature about harmonisation around the world, there appears to be a lack of assessment of harmonisation in developing countries, also previous research is not likely to pay enough attention in testing the relationship between firm characteristics and both types of harmonisation (de jure and de facto) especially in developing countries. Therefore, this study was designed to fill these gaps.

This study attempted to answer the following questions: Has (de facto and de jure) harmonisation between North Africa's financial reporting and International Financial Report Standards (IFRS) increased between 2005 and 2010? To what extent does de jure harmonization impact de facto harmonization? And to what extent do firm characteristics (firm size, firm age, leverage, the profitability (ROA), institutional ownership, insider ownership, sector, and language of disclosure) impact on the level of both type (de jure and de facto) of harmonisation? A variety of approaches were used to answer these questions. De facto harmonisation was measured by C index, whereas de jure harmonisation was measured by using a compliance index. In addition, the impact of firm characteristics on harmonisation was analysed by using multivariate models (regression) tests.

The result showed that overall de jure harmonisation has been increased from 46% in 2005 to 54% in 2010. Moreover, overall compliance of accounting practise (de facto) has also increased from 36% in 2005 to 50% in 2010. The results reveal that the level of compliance with IFRSs (de jure harmonisation) increases with a company size, institutional ownership, industry and language of disclosure, whereas firm age, leverage, ROA, and Insider ownership were insignificant factors. In addition, the results show that firm characteristics are insignificant in predicting the level of de facto harmonisation. The result also indicates no association between de jure harmonisation and de facto harmonisation.

CERTIFICATION OF DISSERTATION

I certify that the ideas, research works, results, analyses and conclusions reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for another award, except where otherwise acknowledged.

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Signature of Candidate Date

ENDORSEMENT

Signature of Principal Supervisor Date

Signature of Associate Supervisor Date

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Dedicated to

My late father, my mother, my wife, my sons Obaida and Hudhaifah
and my daughter Rafidah and to all my family

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LIST OF ABBREVIATION

CASE	: Cairo and Alexandria Stock Exchanges
CMA	: Capital Market Authority
CMF	: Financial Market Council
CML	: Capital Market Law
De facto	: Harmonising Accounting Practices
De jure	: Harmonising Accounting Standards
EAS	: Egyptian Accounting Standards
EMA	: Euro-Mediterranean Agreements
EU	: European Union
FASB	: Financial Accounting Standards Board
FTA	: Free Trade Agreement
GAAP	: Generally accepted accounting principles
IAS	: international accounting standards
IASB	: International Accounting Standards Board
IASC	: International Accounting Standards Committee
IASC	: International Accounting Standards Committee
IFAC	: International Federation of Accountants
IFRIC	: International Financial Reporting Interpretations Committee
IFRS	: International Financial Reporting Standards
INSIOWNERSHIP	: insider ownership
INSTOWNERSHIP	: institutional ownership
IOSCO	: International Organisation of Securities Commissions
MENA	: Middle East and North Africa region
NA	: North African
NIS	: Neo-institutional Theory
OECD	: Organization for Economic Cooperation and Development
PW	: Price Waterhouse
ROA	: Profitability
ROSC	: Reports on the Observance of Standards and Codes
SD	: Standard Deviation
SEC	: Securities and Exchange Commission
SIC	: Standing Interpretations Committee

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Chapter 1 INTRODUCTION

1.0 Introduction

Accounting as a tool of communication for business is likely to be applied dissimilarly around the world (Macve 2014). This may be because of the differences in environments in terms of history, politics, economy and other aspects. Global demand for improving accounting information - to be comparable - may arise from the different needs of a broad range of users around the world. To a large extent also, developing global securities markets, the spread of multinational companies and growing transactions around the world have internationally increased the need for comparable information in annual reports (Boumediene et al. 2014; Bruno, A. 2014; Nobes & Parker 2010; Shroff et al. 2014). This in turn has led to increasing demands for accounting uniformity. In the same vein, the need for a single set of financial reporting standards- which is deemed the approach to achieving international harmonisation of accounting - has become inevitable (Qu & Zhang 2010).

1.1 Background

In the last four decades, international accounting harmonisation has become the objective of many accountants in both academic and professional fields. From 1973 when the International Accounting Standards Committee (IASC) was constituted, the interest of international accounting harmonisation has increased and accountants began to study the reasons behind the differences among accounting practices. In some areas (such as European countries), the aim of reaching harmonisation is likely to be achieved since all corporations with shares listed on securities exchanges were forced (in 1/1/2005) to prepare their annual reports in accordance with international standards (IFRS) (de jure harmonisation is likely to be achieved in this area) as an attempt to reduce differences in financial reports prepared by enterprises (Baker & Barbu 2007; Wehrfritz & Haller 2014).

Harmonisation can be defined as an instrument of a coordination that is used to tune two or more matters (Canibano & Mora 2000; Faure 2000; van der Tas 1988). Tay and Parker (1990, p. 73) describe the position as follows: "Harmonisation (a process) is a movement away from total diversity of practice.... Standardization (a process) is a movement towards uniformity". In addition, harmonisation can be defined as agreement between companies about one or a few of the obtainable methods; whereas standardisation in regards to decrease the number of existing methods (Tay & Parker 1990). Also, harmonisation can be defined as a situation of growing the degree of the compatibility of accounting practices by establishing limitations to the differences of these practices (Rahman et al. 2002; Wallace 1990). It is also important to note that there is a difference between "**de jure**" and "**de facto**". While **de jure** relates to harmony or uniformity of regulations (law, accounting standards),

de facto is associated with real accounting applications of the companies (Canibano & Mora 2000; Rahman et al. 2002; Ríos-Figueroa & Staton 2014; Schultz & Lopez 2001; Strouhal J et al. 2011; Tay & Parker 1990; Trabelsi 2010; Van der Tas 1992). While harmonisation can be defined in many ways, there are two common types of harmonisation.

It is against this background, that harmonisation can facilitate the communication process between a company and its users. Providing accounting information (which can be compared by users) is the one aim of harmonisation's objectives that allows investors, creditors and other stakeholders (in both domestic and foreign decision makers) to obtain the same opportunity of the firm's investments and credit decisions (Beke 2010; Walton 1992). To achieve this aim, some significant sources have been published such as international accounting standards (IAS)(which have become important source around the world) by the International Accounting Standards Board (IASB)(Zeghal & Mhedhbi 2006). Many states around the world have recognized the importance of harmonisation. Therefore, as an attempt to facilitate their dealing with international markets, these countries have used IASC's accounting standards (IASs) as national standards (Brown & Tarca 2001). In fact, it is noticed that, world-wide over 100 nations apply IAS/IFRS standards for their listed companies (Carmona & Trombetta 2008; Prather-Kinsey et al. 2008).
In the light of the above discussion, it is likely to be clear that harmonisation may play a major role (for both companies and their users) in enhancing global markets in both developed and developing countries.

1.2 Research Problem and Questions

Nowadays harmonisation seems to be important. With increased pressure from the globalisation of businesses in financial reporting, stock exchange, and international transactions, accounting information (produced by local accounting system) is not likely to meet users' requirements. As a result of this pressure, harmonisation and the need for adapting domestic accounting systems to international society may have become important to offer appropriate information for economic decision makers (Bruno 2014; Street & Shaughnessy 1998; Zeghal & Mhedhbi 2006). The importance of accounting harmonisation derives from the credibility of accounting information. For instance, in 1992, an Australian company, News Corporation, reported its profit under Australian standards as A$502 million, while under USA standards it was reported as A$241 million (Schweikart et al. 1996). Some countries such as Australia and New Zealand have noticed the importance of accounting harmonisation in their regional financial markets. Therefore, these countries have taken some steps to harmonize their accounting standards (Rahman et al. 2002). On the other hand, despite increasing international interest in improving and applying international accounting standards, developing countries (such North African countries) have not paid enough attention to adopting these standards and accounting information in these countries is likely to be unreliable (Zeghal & Mhedhbi 2006). Therefore, the importance of harmonisation in improving accounting information (in North African countries) may not be denied. Especially, in recent years, some countries from this area (including Egypt, Morocco, and Tunisia) have signed agreements under the European Neighbourhood Policy that include, among other issues, the adoption of (EU compatible) IFRS (Kolster et al. 2012). These countries (Egypt, Morocco, and Tunisia) have attempted to liberalize their economics in order to find trading partner in developed countries. In this respect, they entered the Euro-Mediterranean Agreements (EMA) that are currently in force in Egypt, Morocco, and Tunisia (Dennis 2006b; Maur 2005).

Based on the above discussion, the questions which this study addresses are: has (de facto and de jure) harmonisation between (NA) North Africa's financial reporting and International Financial Report Standards (IFRS) increased between 2005 and 2010? And to what extent does de jure harmonisation has an impact on de facto harmonisation? Also to what extent do underlying factors (firm characteristics) impact on the level of both types of harmonisation?

Furthermore, the study also formulates research questions (**RQ**) and research sub-questions (**RSQ**). Chapter 4 (Research Design and methodology) explains more detailed formulations of the **RSQ**.

1.3 Motivation of the Study

Over the last two decades or so years, many researchers have pointed out that harmonisation needs major efforts. It remains a valid observation that there is an interest in measuring the differences between countries is likely to be true (Walton 1992). Tay and Parker (1990) point out that, "evaluations of the work of the IASC and the E.C. in achieving greater comparability of financial statements produced by companies in different countries have been incomplete". Also, or it is recommended that harmonisation needs more effort (Rahman, A. et al. 2002). It is generally accepted that understanding variations in accounting practices in less developed countries can be essential for academics and professionals (Anandarajan & Hasan 2010), especially after the World Bank's report which argued that traditional accounting in developing countries is an inappropriate instrument for serving multiple users (Saravanamuthu 2004). Therefore, many countries in this area (NA) are trying to liberalise their economies via many commercial agreements (such as the Agadir Agreement signed in 2004) (Dennis 2006b; Maur 2005).

Although many researchers have focused on studying this issue in various regions around the world (especially in developed countries), studying this issue in developing countries seems to be less common. Therefore, this study may be important to help to fill this gap. This study will focus on North Africa (NA) because the incorporation of NA economies into the international economy through flows of cross-border investment may be necessary for development, and many other aspects. With increasing internationalisation of business and international financial transactions, the demand for harmonisation (from companies, investors and lenders who ignore national boundaries) has increased (Maur 2005; Wallace 1990). Furthermore, there are brain drains of talent from the region and it may take too long for the region to establish its own accounting infrastructure that can develop its own standards. Thus, harmonising accounting in NA appears to be important (for both NA countries and foreign investors).

1.4 Research Objective

Relying on the problem statement and the main research questions of this study, the research objectives are as follows:

a. To investigate the process of (de jure and de facto) harmonisation in North Africa region.
b. To examine the impact of de jure harmonisation on the level of de facto harmonisation.
c. To examine the impact of firm characteristics (firm size, firm age, leverage rate, profitability, institutional ownership, insider ownership, the type of sector, and language of disclosure) on the level of both types of harmonisation.

1.5 Brief Overview of Methodology

This study is mainly explanatory. Quantitative methods were used to collect data, measure, and analyse variables to obtain more understanding about accounting harmonisation in NA region. This study uses only secondary data (annual reports). The three NA countries (Egypt, Morocco, and Tunisia) were chosen for this study. Moreover, it might be also appropriate to draw samples from companies listed on UK and France stock markets, as their practices represent internationally accepted standards. Companies listed on UK and France stock exchange (as foreign companies) are chosen for the comparison. To measure harmonisation, annual reports for 2005 and 2010, the latter was chosen to represent the most recent year when data is collected. 2005 was chosen as the starting point because by that year all European listed companies (including UK and France companies which were chosen for the comparison) were requested to adopt IFRS.

The target population comprises all companies (607 companies) that are listed in the stock exchange of three North Africa countries- 482 Egyptian, 74 Moroccan, and 51Tunisian stock exchanges. The sample consists of all listed companies whose annual reports are available (121 annual reports) at the NA Stock Exchange. And the same number of companies (121 annual reports) listed at the European stock exchanges; specifically London and Paris were collected.

De jure harmonization was measured by using a compliance index, whereas, de facto harmonization was measured by using C index. Moreover, regression was employed to analyse data obtained from annual reports.

1.6 Expected Contribution

1.6.1 To the Literature

This study intends to enrich the literature about the assessment of accounting harmonisation in North Africa. This region appears to have not previously been investigated. In addition, the study provides a model that explains the relationship between some determinants- such as the firm size, firm age, leverage rate, profitability, institutional ownership, insider ownership, the type of sector, and language of disclosure, and two types of harmonisation (de jure and de facto).

1.6.2 To Practice

Harmonising accounting information may improve the quality of financial information (internationally comparable information), and this can be beneficial for different users. Also harmonisation plays a key role, in developing countries, in supporting a position of these countries in capital markets. The study results intend to offer current and prospective foreign and local investors an objective evaluation of the compliance degree with international accounting society in terms of harmonising standards and accounting practices. This study also intends to provide local and international accounting organisations with valuable information about the compliance level with international standards and practices in a particular area and the issues associated with it.

1.7 Scope and Delimitation

The study is limited to three NA countries namely Egypt, Morocco, and Tunisia because they represent more than 90% from the total listed companies in NA markets. In relation to the sample, the study covers all companies (whose annual reports are available) listed in the stock exchanges of these countries. In measuring de jure harmonisation, the checklist consists of thirteen standards, whereas seven accounting methods were used for measuring de facto harmonisation, and the study focuses mainly on two points of time (2005, 2010). Eight independent variables are tested to investigate the relationship between firm characteristics and both types of harmonisation.

1.8 Structure of the Remaining Chapters

The remaining Chapters are organised as follows; Chapter Two explains the features of the North Africa region in terms of culture, political system, legal system, economy system, and stock exchange. Chapter Three reviews the literature relevant to this study. Research design, and methodology used in this study are presented in Chapter Four. Chapter Five describes harmonisation findings (Analysis and interpretation). Hypotheses testing findings are provided in Chapter Six. Conclusions, limitations and suggestions for how the line of this research could be extended are presented in Chapter Seven.

Chapter 2 Features of the North Africa region

2.0 Introduction

This Chapter presents the business environment background in the North Africa region. Section 2.1 discusses overall background of region; section 2.2 discusses the business environment background of Egypt; section 2.3 discusses the business environment background of Morocco; section 2.4 discusses the business environment background of Tunisia, which is followed by the Chapter summary and Conclusion in Section 2.5.

2.1 Background

North Africa (hereafter NA) is an important area in the world with a population of around 157 million, the majority being Muslims who speak Arabic as the official language. As the colonial powers long ago understood, NA has a strategic location which links Africa (source of raw materials) and Europe (industrial force). This strategic location continues to make NA a suitable market for foreign investors (Roudi-Fahimi & Kent 2007). Furthermore, its location adjoining the North Mediterranean Sea, Atlantic Ocean, and Western Sahara provides it with a strategic position in world commerce. Although Arabic is the region's official language, English and French are widely spoken (Boulanouar 2011; world, c. o. t. 2010). NA is also considered a rich region owning black gold (Jaffe et al. 2011). Recent financial reforms in this region have endeavoured to follow the global neo-liberal model and, although the financial markets of the region remain small, they have rapidly grown and are important parts of several national economies (Kenny Todd & Charles 1998). For these reasons, this region was chosen for investigation in this study. In this paper we consider the contextual factors (cultures, political systems, economies, legal systems, and stock exchanges) of this region. The three countries under the study are Egypt, Morocco, and Tunisia that are home to more than 90% of the total listed companies in NA (Alnaas et al. 2013; Mlambo & Biekpe 2007; Smimou & Karabegovic 2010).

2.2 Business Environment Background of Egypt

Egypt, historically based around the River Nile, is one of the oldest civilizations in the world (Williams 2006). The Arab Republic of Egypt is also one of the largest countries in NA being 1,001,450 sq km in size. It is considered as a main economic power in both the Arab World and Africa (Attia et al. 2011). The population living in this country is 78,866,635 people, the majority of whom are Muslim and speak Arabic as the official language (world, c. o. t. 2010). The country has witnessed important events in the past few decades.

2.2.1 **Egyptian Culture**

People of Egypt consider family as the most important part of society, and relatives represent a key element in almost all public relationships. Furthermore, continuing the family is regarded as the major reason for getting married. In spite of the ideal of the extended family in Egyptian society, the nuclear family is common in practice (Zahran 2011). In Egypt, as an Islamic country and despite some liberal practices, the relationship between genders revolves around either marriage or blood relationships (Omair 2009).

Although some Islamic Egyptian groups have tried to force a separation between genders, co-education is widely practiced in the country (Pratt 2005). Food is a mixture of Greek, Turkish, Syrian, Palestinian, Lebanese, and local food (Wright 2003). As Islam instructs, pork is forbidden and Ramadan is the annual fasting month (Drumm 2008). In this country consumption of alcohol is banned and the role of Islam in public life is essential (Pratt 2005). For clothes, the *"hijab"* is known and widespread. In fact, people generally perceive women wearing the *hijab* as being more respectable than those without it (Omair 2009). Removing shoes is important before entering mosques because religious values are essential in Egyptian life (Drumm 2008). The cafe are full of males who play, drink and talk with each other (Garson 2005). It should be noticed that Egyptian people welcome others and deal with others kindly regardless of who they are (Williams 2006). In short, there are factors which clearly impact the direction of cultural practices such as faith, history, and the ethos of the people (Garson 2005).

2.2.2 **Egyptian Political System**

Egypt saw a period of stagnation prior to the revolution of 1952. The reasons for this difficult stage for the country were mismanagement, inherent instability, and economic crises. In the first steps, after the revolution of 1952, independent external policy was adopted, and the remnants of British hegemony were removed by the new Government, which also denied the previous mistakes and promised a new era. It should be noticed that this Government strongly encouraged scientific research. Despite some disagreements with various Western countries and the perspectives of some Egyptians, many people considered Nasser, the leader of the revolution of 1952, as a hero and wonderful President. His Government achieved great successes including improving the situation of the peasants.

Although, at the beginning, Anwar Sadat, who became President at the end of Nasser's era in 1970, seemed to follow Nasser's way, he changed direction completely by trying to re-build relationships with the Western world. Furthermore, he adopted the policy of *infitah* (opening up of the economy). After the war with Israel during Sadat's era, Egypt signed a peace agreement with Israel. As a result of this agreement and the oppression of internal opposition, local dissatisfaction with the regime increased at a steady pace (Johnson & Johnson 2006).

After President Sadat was killed (at the end of 1981) Mubarak became President of Egypt and he controlled the country for around three decades. He tried to reform the political situation of the state and awarded freedom to a great number of political prisoners. Furthermore, in his era, Egyptian journalists undoubtedly experienced less surveillance and control (Najjar 2010). In other words, during Mubarak's age, a kinder approach was adopted to encourage personal liberty and local community institutions but this was balanced by strict policies against any actions which might threaten the Government or its leader (Rowe 2009). On 25 January 2011, the Mubarak regime was overthrown by a revolution of the Egyptian people in the broader NA movement generally now referred to in the West as the Arab Spring. Certain political and social issues (high levels of corruption, high unemployment rates, bureaucratic lawlessness, and regular encroachments upon human rights) were the factors which ignited revolutionary fervour (Attia et al. 2011). During the past 25 years Egypt has been considered both the most crowded and the most politically important state in NA if not in the Arab World taken as a whole (Blaydes 2008).

2.2.3 **Legal System in Egypt**

Egypt has faced many events throughout its history that have impacted, in certain ways, not only upon its political system but also upon its legal system. The legal system at the time of the existence of the Ottomans was affected by Ottoman laws which were usually modified to be made suitable for the Egyptian setting (Fahmy & Peters 1999). In Egypt the legal system is now based on two main sources: Islamic law (after the Islamic conquests) and French law (which was received during the period of French occupation) (World 2010). Many commentators perceive that, in spite of changes in some Egyptian laws, for a long time the Islamic law has been dominant and widely practiced (Dupret 2007). Prior to the year of 1952 (the revolution), the code of personal status, such as marriage, divorce, and legacy, was upheld by a detached structure of religious courts. The Islamic people had their particular courts, whereas Coptic (Orthodox Christian) people had their own courts. In the Nasser era, despite the religious influence upon many decisions, religious law was officially cancelled and its tasks were given over to secular law.

During the Sadat era, the laws of personal status were altered to give women more rights. Furthermore, the magistrates were widely esteemed. Despite his personal dissatisfaction with some of their judgments on political issues, Sadat avoided any removal of judges and created extraordinary courts for political crimes (world, c. o. t. 2010). During the end of Sadat's era and the first years of Mubarak's rule, the judges were encouraged by receiving social benefits (Wolff 2009). The rise of secularisation and the decreased influence of Islamic law have led to reforms of the legal system. For example, the civil and commercial laws were established based on secular French ideology. To sum up, the 19th century and the beginning of the 20th century witnessed many secular changes in the laws of Egypt and in its practices (Moustafa 2010).

2.2.4 **Egyptian Economy**

Prior to the revolution of 1952 the free market and the private sector played important roles in Egypt's economy. Therefore, this sector (private) contributed to the majority of GDP and provided around 95% of the workplaces, whereas the public sector had important limited functions such as providing water, electricity, and transportation. However, the economy (because of two main reasons) in time transformed itself from private sector into public sector. The first one is the unstable military situation in the region. Another reason is the move toward socialism. It can be seen from the economic experiments of the 1950s that the new Government (installed by the revolution of 1952) did not have fixed plans about the future economic direction of the country. The new regime focused mostly upon agricultural reforms. Furthermore, it paid its attention to increasing local investments and tried to use them to improve the situation of the society and to build good infrastructure. Even though it remained under a system of private ownership, agriculture was limited by the Government to (for personal property) no more than 200 feddans. From 1957 the nationalisation of foreign property led to the expansion of the public sector (Kenawy 2009).

Although, for a long time, the development of the economic sector in Egypt was affected by the government, which significantly intervened in the product, labour, and stock markets, the main reason for the considerable growth of the Egyptian economy during the 1960s was foreign direct investment and especially aid from the former Soviet Union and from the USA.

However, during the period between 1960 and 1973, because of the control of the central bank, there was a significant decrease in economic growth (Abu-Bader & Abu-Qarn 2008). The openness policy (consumption phase) was adopted in the early-1970s by Egypt. Furthermore, supporting the private sector to play a significant role in improving the economy was being increasingly seen as important. This policy (open door) did not have enough institutional features and was not incorporated into an overall plan for economic development (Kenawy 2009). Despite Sadat's new economic policy (open door), the economy of Egypt in its structure did not alter significantly during the 1970s and in the first years of the 1980s (Beinin 2005).

In the 1980s the economy of Egypt underwent a critical stage and faced some problems, such as increased rates of inflation and taxes and an unsuccessful stock exchange (Kenawy 2009). In the early-1990s liberalisation of the economy has been seen as a major driver of economic growth (Abu-Bader & Abu-Qarn 2008). Whilst the Egyptian economy is more stable than others in the NA area, this is simply because supply has tended to respond to demand. The economy may have been slow in terms of its movement, regardless of what the former Government had been doing in regards international economic development (Topol 2009).

2.2.5 **Egyptian Stock Exchange**

Cairo and Alexandria are the two centres for trading but they represent one unified Egyptian stock market (Fawzy 2003). Financial information plays an essential role in this market. This information is considered a major source of reliability. As result of this, local and international investors rely mainly on this information in making their decisions. For this reason, financial information has been improved and developed by various interested parties. The Egyptian Government is responsible for establishing and enforcing accounting standards (Ebaid 2011). Furthermore, the former regime attempted to organise the stock exchange by enforcing a law for all listed companies in the market (Ragab & Omran 2006; Wakayeh 1997). During the 1990s the then Government made some attempts to help local investors in investing and raising of capital and, at the same time, attracted foreign investors who might assist in economic growth and development. One of these attempts was moving the economy to a free market economy and starting the program of privatisation. In addition, reopening the stock exchange, in 1992, was another step in the same direction (Ebaid 2011). In general, accounting in Egypt has been impacted by all of these developments.

Egypt recognized the fundamental importance of the capital market in the program of economic reform in 1991. In this respect, in 1992, a new law (the *Capital Market Law 95/1992*) was issued to encourage private investors, increase protection of investors, and improve the role of banks in motivating financial markets and improving the reliability of the stock exchange (Ragab & Omran 2006; Wakayeh 1997). By this law, listed companies must apply the rules of *Capital Market Law (CML) 95/1992* in terms of disclosures in annual reports which are considered the most important tool for companies in disclosing their financial information (Hassan et al. 2009).

This law in turn has led to the establishment of a new organisation in the market named Capital Market Authority (CMA) that is interested in the regulation and supervision of the financial markets. The function of this organisation is similar to that of the Securities and Exchange Commission (SEC) in the USA. This function includes control over the registration and disclosure of listed companies in the market. Moreover, another function of the CMA is to supervise the behaviour of brokers and enforce the law of transactions (Ebaid 2011). It is responsible for developing transparency and also working to maintain the security market for investors on the Egyptian stock exchange (Dahawy & Conover 2007). In addition, CMA focuses on monitoring the market’s activity, facilitating the growth of capital, and promoting trading securities to build public confidence that may contribute to obtaining new investment. It is also important to note that CMA is responsible for enforcing the Capital Markets Law and related decisions (Dahawy & Conover 2007). In 1996 *Decree No. 323* was enacted by the then Head of Economy to constitute a permanent commission to issue standards for both accounting and audit. The commission offered suggestions about accounting standards and introduced drafts to the concerned entities to obtain their approval. This step was considered as the first step towards establishing comprehensive accounting standards.

It is also important to note that the International Financial Reporting Standards (IFRS) are generally perceived in Egypt to be high-quality. At the same time, the former Government attempted to harmonise Egyptian Accounting Standards (EAS) with IFRS (Ebaid 2011). Egypt adopted the IFRS in 1996 (Dahawy & Conover 2007). The plan in Egypt was to gradually implement IFRS. In this respect, the Minister of Economics issued in October 1997 *Decree No. 503* that drew extensively upon IFRS (whilst also considering local conditions) to establish 24 EAS. By 1998 all companies on the Egyptian stock exchange were required to follow these new standards. However, *Decree No. 503/1997* was replaced in late 2006. In that year, *Decree 243* of EAS (which includes 35 EAS based on IFRS) was issued by the then Minister of Investment to be enforced upon all listed companies in the Egyptian financial market by 2007 (Ebaid 2011). Furthermore, Egyptian standards were to be followed by listed companies in the financial market, and so Egyptian financial statements were to essentially conform to IFRS (with some trivial exceptions). In addition, when Egyptian standards were absent for specific accounting issues, applying IFRS was compulsory for listed companies. It is important also to note that the CMA was able to suspend any non-compliant company (Hassan et al. 2009).

In 2002 important accounting rules were launched in the Egyptian market. These rules have had significant impact upon the market (Elsayed 2010). In consequence of applying new and strict listing policies from July 2002, the number of firms listed on Cairo and Alexandria Stock Exchanges (CASE) declined significantly from 1,148 firms in 2002 to 595 firms in 2006 (Berg & Capaul 2004; Elsayed 2010).

On the other hand IFRS adoption has brought with it some drawbacks. Although adopting IFRS has helped some developing countries (such as China and Romania) to move from communism to capitalism, this adoption of IFRS has created some conflicts between these standards and local cultural values in some states (Dahawy & Conover 2007). For example, disclosure requirements of IFRS, in certain key respects, do not satisfy local users' needs in Egypt, and this disclosure (unlike in some other states) has been low (Dahawy & Conover 2007). Despite enforcing rules in financial Egyptian market such as EAS and IFRS, complying with the disclosure requirements of these standards has not been the norm (Abd-Elsalam 1999; Dahawy et al. 2002; Hassan et al. 2009). The reason behind this has been Egyptian culture. IFRS may be inconsistent with the socio-economic needs of local investors (Dahawy & Conover 2007). Users may well be sceptical of accounting information regardless of IFRS adoption (Ebaid 2011). If adopting IFRS does not consider local conditions and expertise (or the lack of it) problems may be increased by such adoption.

In Egypt, although the company law system was determined predominantly by French civil law, influences of the Anglo-American common law system can be noticed in the capital market and its transactions. For instance, *Corporate Law (No. 159/1981)* regulates joint stock firms, whereas the *Capital Market Law (No. 95/ 1992)* governs the financial market and defines the structures of both the Cairo and Alexandria Stock Exchanges (CASE) (Elsayed 2010; Fawzy 2003). Many Egyptian firms are held by comparatively few shareholders because of tax laws which encourage listing (Berg & Capaul 2004; Elsayed 2010). In 2005 a code, guidelines, and standards of company governance were launched by the Egyptian Institute of Directors. These were to be followed by Egyptian firms (Elsayed 2010). It is essential also to note that providing copies of their semi-annual and annual reports to CMA and ESE were necessary for these companies, and a summary of these reports were to be published in two daily newspapers (Hassan et al. 2009).

In short, the Egyptian market is still considered to be a less efficient market by world standards. Furthermore, the disclosure and transparency of accounting information have not been adequate despite formal IFRS adoption (Elsayed 2010; Wahba 2005). The Egyptian stock exchange has a small number of listed companies and low trading volume (Ebaid 2011). In addition, the Egyptian stock exchange has not yet received significant foreign institutional investment (Elsayed 2010). It will be interesting to observe the new Government's attitude to CASE.

2.3 Business Environment Background of Morocco

Morocco adjoins both the North Mediterranean Sea and the Atlantic Ocean and it is located between Algeria and the Western Sahara. This gives it a strategic position. The country has both long coasts and large desert regions. The national population is more than 32 million people with 1.61 million people being added to this total annually (Njoku 2006).

2.3.1 **Moroccan Culture**

As an Islamic state, Islam in Morocco is a way of life. The Arabic language is spoken as the mother tongue whereas political and business people generally speak French. Furthermore, English and Spanish are both widely used while some Berber dialects are still used in the media (*HilalPlaza.com* 2003-2007; Orlando 2011). It is easy to notice that religious and familial values are very important for Moroccans. Moroccan people are friendly and social people. They usually maintain good relationships with one another. Moroccans may welcome guests by hugging, kissing, and shaking hands (Njoku 2006). It is not normal for Moroccans to enter their houses with shoes on. Furthermore, the giving of gifts to their host's children is a common practice in Morocco.

2.3.2 **Moroccan Political System**

The Moroccan constitution was constituted as a kingly system with a parliament and an independent judiciary. The King is considered as a symbol of the country and other political actors should continue to respect his position (Cherkaoui & Ben Ali 2007).

Since Morocco obtained its independence, the regal family has strongly controlled the state (Cavatorta 2007). Despite a dominant monarchy, the Moroccan constitution after independence adopted a policy of *"authoritarian pluralism"* (multiparty). Although Islamist groups represented a real challenge to the Moroccan Government during the 1980s, Morocco, benefiting from its neighbours' experiences, took preventive policies to deal with these organisations (Willis 2006). Furthermore, nearly all the time the Government has allowed the other parties to play some roles in the political sphere. This movement into democracy has occurred because the Government of Morocco wants to provide a good image about itself to the external world. In addition, Morocco was widely considered as a state that had a stable constitution.

In the first years of the 1990s Hassan II (who is the president of the country) offered the Socialist Party, from the opposition, the chance to rule the country. After accepting this offer in 1997, many people considered this change as a serious step towards democracy. However, many people perceived that real democracy was still some years away. At the beginning of Mohamed's VI era, Morocco enjoyed a stable period for both ordinary people and political organizations. These people and organizations had for a long time asked for increased liberalisation that the King was in fact now encouraging. The political regime in Morocco has worked relatively successfully with the opposition parties, since independence, being alternately lured and intimidated. This policy still works to some extent. However, its internal stability has undoubtedly declined because of broader societal changes (Cavatorta 2007).

2.3.3 **Legal System in Morocco**

Morocco has been long impacted by both Islamic heritage and French law. After obtaining its independence from French occupation (1956), the state chose the French form, which gives the Government more opportunity to control the legal system, instead of religious law. However, the Government left family law to follow customary Islamic (Maliki jurist) law. In the year 2004 Morocco created a new family rule changing status of women by giving them more rights in social life such as marriage, divorce, and keeping children. These changes put Moroccan women close to the position of Tunisian women.

Despite some exceptions, all people are equal according to the Moroccan Constitution which also abides by international human rights (Tamanna 2008). On the other hand, sometimes rules can be broken. For example, although there is the principle which says that the judicial authority is independent from the legislature and from the executive, the King presides over the Superior Council of Magistrates (Sater 2009). In general, in Morocco, the legal system relies on Islamic rules and French and Spanish civil code systems ('Morocco' 2005).

2.3.4 **Moroccan Economy**

Despite having access to abundant natural resources, about 20 percent of Moroccan people continue to live in poverty and unemployment is widespread (Shachmurove 2004). Although the economy in Morocco has much potential, its performance has not been strong. Compared to its NA neighbours, Morocco has had minimum rates of growth and generally weak performance from the time of independence up until the present. The weakness of the Moroccan economic system is due to many factors such as the ineffectiveness of the labour market; the system of exchange rates; poor information for decision-makers; difficulty of the coordination between private and public sectors; weather conditions; and mismanagement of economic plans (Cherkaoui & Ben Ali 2007). On the other hand, the Moroccan Government has pursued some key socio-economic improvements, such as privatisation, the focus on civil rights, and the crackdown upon corruption. The Government constituted local investment centres to reduce bureaucracy and suggest new investment through different motivations (Shachmurove 2004).

Morocco has witnessed many important structural reforms from the 1980s in the economic sector, in infrastructure, in privatisation, and in the stock market. By the beginning of 2000, many economic developments and improvements had become readily apparent. These improvements are as a result of the King's (Mohammed VI) policy which has combined economic liberalisation, increased democratisation, and efforts to decrease poverty (Cherkaoui & Ben Ali 2007). Despite certain Government actions, prices are usually liberalized. Morocco also is considered a good place for foreign investments because of Moroccan policy which has treated local and foreign investors similarly (Shachmurove 2004).

2.3.5 **Moroccan Stock Exchange**

Morocco has witnessed fundamental changes in its political sector over past decades (Zemni & Bogaert 2011). In the economic sector also, over the last ten years or thereabouts, Morocco has put in major efforts to reform its financial system. There have been two main areas of reforms: improvement of the stock exchange and, at the same time, privatisation of public companies. This reform program was driven by the realization that the Moroccan economy had been sluggish and the stock exchange weak (Casablanca Stock Exchange had not been particularly active) (Smith et al. 2002).

Although the Moroccan financial market is ranked third in Africa, it does not play a vital role in the economy commensurate with its trading volume (El bouhadi 2010). In this market, incentives are probably insufficient, particularly when these incentives accrue to small shareholders (El bouhadi 2010). This financial market has been supported by deregulation and privatising public sectors (Smith et al. 2002). These reforms have aimed to decrease direct intervention of government and to support the position of the free market in distributing financial resources (Jbili et al. 1997).

Reforming or establishing stock markets has been considered as one of the important steps in Africa's economic development. It is noticed that these markets offer some benefits such as attracting and enhancing investments and improving the processes of the local financial system generally and the capital market especially (Kenny Todd & Charles 1998; Smith et al. 2002). Morocco has opened its market to foreign contributions since it embarked on its program of economic reform (Sourial 2004). Establishing interbank foreign exchange markets (in 1994 and 1996 in Tunisia and Morocco respectively) was considered a significant step into the decentralization of management of foreign exchange. In addition, this step permits market forces to play a greater role in determining the exchange rate (Jbili et al. 1997).

In Morocco for around seventeen years, the stock exchange was organized by multiple laws (Sourial 2004). In the Casablanca Stock Exchange, the majority of listed firms are likely to be controlled by Moroccan and/or overseas holding firms (El bouhadi 2010). Observing the quality of financial information and enforcing accounting standards for listed companies on the Morocco Stock Exchange is the responsibility of the Securities Commission (Rahman, M. Z. et al. 2002). In fact, this Commission is likely to ensure that financial information from public firms are prepared and publicised in line with legal and regulatory frameworks (Rahman, M. Z. et al. 2002). It is beneficial also to notice that this framework particularly relies on laws for the securities commission (general principles governing the accounting framework and practical matters) and on organisations' law for collective investment in securities (Rahman, M. Z. et al. 2002). Moreover, financial companies (banks and insurance firms) play important roles in organising these companies. Also, it is not necessary for holding companies to be listed on the exchange market (El bouhadi 2010). In the stock exchange, Moroccan listed companies rely mainly on the organisational structure within its premium trades (El bouhadi 2010).

In Morocco, reliable accounting information is needed. Although the IFRS has been globally adopted, many organizations in the Middle East and North Africa region (MENA) (23% of banks and 42% of other listed companies) have not yet adopted (Rocha et al. 2011). As a result of inefficient information in the Casablanca Stock Exchange, the governance of listed firms has frequently been substandard (El bouhadi 2010). Despite the fact that there are no limitations on foreign ownership, foreign contributions to the stock exchange have not been high (Smith et al. 2002).

Although Morocco has made significant efforts to improve its financial sector over the past three decades, additional work remains to be done (Abed & Davoodi 2003). Marashdeh (2005) examined some stock exchanges in the MENA region and examined the integration between some developed world stock exchanges and these markets. The results of his study confirm the notion that international investors may have opportunities to gain long-term benefits through varying their portfolio in the MENA region. A penalty/reward system can help in promoting the efficiency of emerging markets (El bouhadi 2010).

2.4 Business Environment Background of Tunisia

Tunisia is a relatively a small country by the standards of the NA region (163,610 sq km). It is located between Libya and Algeria (bordering the Mediterranean Sea). The population of this country is 10,486,339 people. The majority of them are Muslim and speak Arabic as the mother tongue (world, c. o. t. 2010).

2.4.1 **Tunisian Culture**

In Tunisia, different cultures such as Arabic, African, and European work together and impact upon each other. For this reason, Tunisia has tended to be a secular country. Although Tunisian culture has experienced Turkish influence in the area of clothes and French influence in the area of language (which is considered to be a second language), the most important features of culture are derived from Islamic and Arabic cultures (Bleasdale 2006). Arabic people represent the majority of the population (98%), while Europeans and Jews make up the remainder (2%). Islam, particularly the Sunni branch, is followed as the official religion by about 98% of the population. Although Arabic is the official language in Tunisia, the French language is also widely used ('Tunisia' 2005; Carmona & Trombetta 2010).

2.4.2 **Tunisian Political System**

Many changes were seen in Tunisia after it was no longer under French dependence. Firstly, between 1956 and 1970, many political and communal reforms were implemented that later led to some economic problems. During the 1970s, the main move was from socialism to ultra-liberalism. The 1980s was a difficult decade for President Bourguiba who tried to combine a plan of renewal with appreciation for customs. In the year 1987, via a bloodless coup, authority was taken by Ben Ali who established the second Republic which differentiated itself by returning to tradition, encouraging economic liberalism, and strong policies against rebels (Contreras 2007). In the initial years of the 1980s Tunisia took formal steps to treat the problem of religious extremism that came to the fore as a national problem after the broad unrest that had occurred at the tail end of the 1970s. These events were considered the primary major existential threat to the Tunisian regime.

Bourguiba’s regime followed the theories of Marxism. The attempt to undertake some reforms at the beginning of the 1980s did not stop the social problems completely. Despite multiple parties existing in Tunisia, in reality these parties were not independent. In other words, no opposition party was able to win in the elections. During the eras of Bourguiba and Ben Ali, the ruling party had won overpowering majorities in elections (sometimes more than 99% of the vote) (Willis 2006). Furthermore, it should be noticed that in Tunisia some rights were not visible such as press freedoms, independent elections, respect for human rights, and others. For these reasons, the Tunisian political system pre-2011 could not have been considered to be a truly democratic system (Powel 2009).

In January 2011 hundreds of thousands, and then millions, of Tunisians went into the streets and demanded change within the context of what has come to be termed in the West “The Arab Spring” (Alterman 2011). On 14 January 2011 the Tunisian revolution forced the President of Tunisia to flee the state, after four weeks of mass popular demonstrations (Attia et al. 2011).

2.4.3 **Legal System in Tunisia**

First of all, it is important to note that the Tunisian legal system relies on Islamic rules and the French civil code ('Tunisia' 2005; Ding et al. 2007). In 1956, after independence, the Government closed the Shari’a courts. After this a unified judiciary was appointed in Tunisia. The leader of the state was responsible for nominating magistrates upon the suggestions of the Superior Judicial Council.

The courts in many regions (51 regions) represented the judicial structure of Tunisia. One judge heard each case separately. The function of these courts was to look at cases relating to civil situations, labour unrest, private lands actions, and other issues (Touchent 2002). In the period after independence (1956) the new Government of Tunisia stage by stage developed the law of Personal Status. Great changes revolving around social reforms and the position of women in society were made. Men and women were equal according to Tunisian law especially in social life. For example, both genders had the same responsibilities in terms of founding the family and divorce rights. Despite some disagreements surrounding aspects of Islamic law, Tunisian law has been impacted by Islamic rules. Tunisians are not likely to totally refuse Islamic standards but they try to find new and somewhat flexible understandings of these rules (Tamanna 2008).

2.4.4 Tunisian Economy

After the time of French power, logically, the Tunisian Government began to Exercise French control over its possessions. Despite the announced independence, Tunisia had some problems in its infrastructure and resources in its journey towards real independence. During the 1960s and 1970s socialist theory was adopted for almost a decade. After the finish of the socialist era the door was opened to global trade that revealed the extant economic weaknesses of the country. At the beginning of the 1980s Tunisia’s economy suffered major setbacks as a result of France and Italy’s drawbacks on some Tunisian goods, the workers’ problem in Libya, and decreases in oil prices. Furthermore, these problems and their impacts during the 1980s pushed the economy further towards a free market economy (Kaboub 2007).

In the middle of 1995 Tunisia, before any of its NA neighbours, decided to enter a Free Trade Agreement (FTA) with the European Union (EU) (Ghali & Mohnen 2005). Other than in the period between 1992 and 1997, the economy in Tunisia sometimes faced important decreases in its real purchasing power (Ghali & Mohnen 2010). Although Tunisia, to some extent, has a stable economy, the percentage of unemployment is approximately 15% many of whom are postgraduates (Kaboub 2007). In recent years Tunisia has adopted a long-term economic plan, which was originally intended (before The Arab Spring) to last from 2007 to 2016, to treat the problem of unemployment and to increase individual incomes (Chailloux et al. 2009).

2.4.5 Tunisian Stock Exchange

The Tunisian Stock Exchange was constituted in 1969. This market had 38 listed companies by the end of the 1990s (Loukil et al. 2010; Sioud & Younes 2010; Tunisia 2010). During the past two decades several reforms have been enacted in the Tunisian financial markets. The reforms have included: focusing on privatisation; liberalising trade; establishing a Tunisian SEC; introducing new financial tools; and introducing an electronic system. All these reforms increased the capital in the market from 610 million dinars to 2,632 million dinars between 1991 and 1997 (Klai & Omri 2011; Naceur & Goaied 2002). These reforms aimed to renew the stock market and to hasten development and to attract investors to the market. The Tunisian Stock Exchange was upgraded to be in accord with international standards in 1994 (Loukil et al. 2010). In this market, positive pictures of investment and minority shareholder protection are apparent.

The Tunisian financial market has been mainly driven by an automated system (without market makers) since 1996 (Hmaied et al. 2006). From that time transferring the Tunisian market from manual trading to automated trading has happened gradually (Sioud & Hmaied 2003). Furthermore, this market is considered to have been the first Arab market to accept the SUPERCAC UNIX technology (Loukil et al. 2010; Sioud & Younes 2010). Introduction of the electronic system for transactions and IFRS are considered to have been important steps forward for the Tunisian market (Ben Naceur et al. 2006). In the market trading, volume has importantly increased after the adoption of the automatic trading system (Loukil et al. 2010; Sioud & Mezzez Hmaied 2003). Development of security markets has been done by the deregulation of the financial sector. Compared to other MENA countries financial development in Tunisia has been somewhat faster and more complete (Mehdi 2007).

Despite these reforms and improvements, some negative factors cloud the financial market. For a long period the delay of economic growth may have been because of weak finance in Tunisia. With market liberalization, the banking sector has not been able to meet the needs of firms facing strong international competition (Sioud & Hmaied 2003). Although Tunisia has achieved developments, some challenges must be faced (Mehdi 2007). Despite the reforms, the rate of growth in the number of listed firms on the market has not been high (from 34 companies in 1998 to 48 companies in 2006). The Tunisian market is not strongly flexible compared to markets in developed countries (Loukil et al. 2010). It has been argued that ownership structures of some Tunisian Stock Exchange companies have not been transparent (Ben Naceur et al. 2006). It is also noted that there are some limitations placed upon foreign investors such as limitations on ownership (Tunisia 2010).

Some rules should be followed in the Tunisian financial market. Two pressures on Tunisian companies have appeared. Initially, the corporate law legally determined the framework that Tunisian firms had to abide by. Secondly, the listing requirements were also applied to all listed companies on the Stock Exchange. For example, firms had to comply with *The Financial Act 94-117*, The Securities Commission regulations, *The Commercial Code* and *The Tunisian Stock Exchange Code* (Mehdi 2007). *The Investment Incentives Law* was adopted for the Tunisian Stock Exchange in January 1994 to help foreign investors in terms of providing a broad range of incentives (Tunisia 2010). In the USA, the Securities and Exchange Commission (SEC) was created to organise the market. Similarly, in Tunisia, the Financial Market Council (CMF) was established (Loukil et al. 2010; Sioud & Hmaied 2003). In addition, over the last few years, significant progress has been made in the direction of improving the quality of company governance in Tunisia. In fact, Tunisian stock exchange is more and more growing. This market adopted numerous reform programs to be modernized. For example, it promotes the foreign investment, privatizes the public firms and liberalizes the trade. In spite of an embryonic stage of the corporate governance concept, the Tunisian regulators confirmed the necessity of disclosing reliable and relevant information by the listed companies (Klai & Omri 2011). At the end of 2005 a new draft law (on financial and accounting disclosure information) was adopted by the then Government, which is similar to the Sarbanes-Oxley Act (SOX) (Mehdi 2007). Indeed, listed companies are regulated by many laws in the market.

Tunisian regulators in the future (post-The Arab Spring) are likely to emphasise the need for disclosing reliable information by listed companies (Klai & Omri 2011). In reality, investors rely on financial information in making their decisions on the stock exchange market (Klai & Omri 2011). Klai and Omri (2011) note that the Tunisian Stock Exchange is capable of attracting foreign investors. This will motivate companies to enhance the quality of their financial reporting. Furthermore, the former Government attempted to reorganise the market by reducing company income tax (from 35% to 20%) for a period of five years for new listed companies. Foreign investors were freely able and without restriction to buy to a maximum of 50% of shares of listed or unlisted Tunisian companies. In fact, in the Tunisian stock market, foreign investors received many benefits under the former regime. For example, they were not taxed (Loukil et al. 2010).

2.5 Summary

This Chapter of the study has discussed the contextual factors (culture, political, legal, economic system, and stock exchanges) in three North Africa countries (Egypt, Morocco, and Tunisia). It showed that the contextual factors of these countries are very similar being Islamic culture and French law. These countries have similarities in their recent histories as well. In line with international society, an Openness Policy has been adopted and many reforms have been made in the stock exchange of these countries. However, much work remains to be done. Although contextual factors are similar, each country is in a slightly different place today in regards to economic and capital markets' development.

Chapter 3 Related Literature

3.0 Introduction

Over the past century there has been a dramatic increase in accounting harmonisation. The global demand for improving accounting information- to be comparable- may arise from the different needs of a broad range of users around the world. Researching accounting harmonisation mostly relates to some important features such as compliance with IFRS (de jure harmonisation), material harmonisation (de facto), and factors that can impact harmonisation. This Chapter aims to review the literature to classify research gaps. The review begins in Section 3.1 with obstacles to and benefits of harmonisation; Section 3.2 discusses interested bodies in harmonisation by providing historical view about their effort in this subject; Section 3.3 focuses on studies that provide theoretical explanations for uniformity of standards; Section 3.4 focuses on providing explanations for harmonising accounting practices (de facto); in Section 3.5 focuses on the globalisation effects over accounting environment; firm characteristics effects over accounting environment are discussed in Section 3.6. Section 3.7 illustrates the study's gaps. Section 3.8 concludes the Chapter.

3.1 Obstacles to and Benefits of Harmonisation

There remains some disagreement as to whether harmonisation has been beneficial or unbeneficial. The first school of thought believes that considering specific environmental factors of each country is necessary in the process of founding a national accounting system (Zeghal & Mhedhbi 2006). Let alone, some countries may attempt to maintain their local identity such as cultural values and the related traditions in accounting (Cătălina et al. 2008). They claim that, the expected outcome of harmonisation may not be obtained under different legal and market structure (Narktabtee & Patpanichchot 2011). There are other problems that may stand in the way of the harmonisation such as disagreements about optimal reporting practice and the difference of priority of accounting's aims from country to country. In other words, which direction should harmonisation go (Walton 1992) ? In the same line, some believe that international accounting harmonisation is impossible and unnecessary. Not only are there many countries that have tried to maintain their own standards and practices, but there is also the absence of official organizations- that are able to force the adoption of international standards. Furthermore, there is already a strong global capital market- without uniformity of accounting standards- which relies on the optimal use of data rather than uniform accounting standards (Goeltz 1991).

Although there are some arguments to the contrary, harmonisation is likely to be inevitable (Bradshaw & Miller 2007; Zeghal & Mhedhbi 2012). With the increasing pressure of economic globalisation, global stock markets, and increasing the flows of cross-border investments, accounting information produced in one country may be used in different other countries. This information produced under a domestic accounting system may not be appropriate for foreign users (Zeghal & Mhedhbi 2006). In other words, the reliability and comparability of financial statements from different countries need to be trusted by different users (Ray 2011). As a result, adapting a domestic financial system to international society has become essential to provide suitable information for economic decision makers (Urasaki 2014; Zeghal & Mhedhbi 2006). As a response to this trend, the need for applying a single set of global accounting standards has increased which may assist to internationally solve many problems in financial reporting and to lead to a more prosperous and stabilized world economy (Fosbre et al. 2009).

Additionally, with harmonisation, companies and their investors can operate under the same set of international accounting rules, regardless of geographic location (Stoltenberg et al. 2011). Harmonising accounting around the world can bring great advantages to the investors and may decrease the cost of accessing new capital markets. Furthermore, harmonisation can be valuable for companies that wish to obtain foreign investors by issuing their shares outside the country (Christopher & Robert 2008). It can also result in efficient capital markets and enhanced financial reporting in terms of comparability and transparency (Cătălina et al. 2008). Another benefit of harmonisation is that it may help to present financial information on time and improve the accuracy of this information. It can also help small investors to compete better with professional investors (Ball, R. 2006). Wang (2011) confirmed the notion that harmonisation can improve financial statements. By providing better-prepared standards, international accounting harmonisation can be beneficial for less developed countries as well (Zeghal & Mhedhbi 2006). Furthermore, harmonisation might help developing countries' governments to control and understand the operations of multinationals if their annual reports are prepared under the same rules (Nobes & Parker 2010). It is noticed that harmonisation can have many benefits that encouraged many global organizations to pay attention to this issue.

3.2 Interested Bodies (Historical View)

3.2.1 Main International Organizations

Global demand for improving accounting information- to be comparable- may arise from the different needs of a broad range of users around the world. As a response to this demand, much attention has been given and many activities have been performed by agencies concerned with international harmonisation. The demand increased sharply at the beginning of 1970s, when the International Accounting Standard Committee (IASC) was constituted. Moreover, developing international stock exchange has boosted the requirement of comparable accounting information (Weetman et al. 1998). This organisation (IASC and later IASB) is considered to be the most successful body involved in world-wide harmonisation efforts and the key players in standard-setting activities for international accounting (Doğan et al. 2010). The transactions and financial events, which may occur in different countries, are probably the same. Therefore, the task of IASC is to remove or at least limit the differences in measuring and evaluating accounting practices (Wallace 1990). While an official aim of IASC is to publish accounting standards to those who are interested in accounting practices, the implicit aim of this committee is harmonising accounting between countries (Outa 2013; Wallace 1990).

The IASC was set up in 1973 by professional accountancy organisations of nine nations: Canada, France, Australia, Japan, Mexico, the Netherlands, the United States, the United Kingdom with Ireland, and West Germany (Flower 1998; Nobes & Parker 2010). From the time when IASC was formed in 1973, great progress has been made in developing its standards - International Accounting Standards (IAS). These standards have become popular and have been used widely (Flower 1998; Masoud 2014). It is noticed that, world-wide over 100 nations apply IAS/IFRS standards for their listed companies (Carmona & Trombetta 2008; Prather-Kinsey et al. 2008). Initially the IASC worked independently. However from 1983 a close association was established with the International Federation of Accountants (IFAC). By 2001, over 150 accountancy bodies from over 110 countries had membership of both IASC and the IFAC. The interest of these organizations is a slightly different. For instance, IFAC focuses on matters such as coordinating management accounting, auditing, and the International Congresses of Accountants, whereas the IASC focuses only on formulating and publishing international accounting standards to be followed in preparing and presenting financial statements and to encourage their global acceptance (Nobes & Parker 2010).

In 1990, the IASC was chosen to enhance compatibility and remove differences between national accounting and IASs. From that time, IASC has started working with groups of national standard setters (the majority of them from the US, UK, Australia, and Canada). To facilitate the process of harmonisation, there was cooperative effort by this group (Street & Shaughnessy 1998). IASC's work is probably impacted by the Anglo-American accounting model (Street & Shaughnessy 1998). The differences in accounting among nations have also become obvious for IOSCO (International Organisation of Securities Commissions) who noticed, in 1988, that differences in national accounting can cause a major setback to multinational firms in having security outside their own country (Weetman et al. 1998). It is also probable noticed that the wide range of allowable alternative accounting methods included in published standards can be an obstacle to further development of the work of the IASB (Botzem & Quack 2005; Gordon & Gallery 2011). Specifically, the International Organization of Securities Commissions (IOSCO) called for the elimination of accounting alternatives to prompt the SEC to follow IASs for the financial reporting of foreign firms listed on the stock exchanges (Zeff, S. 2011). After considering this problem, the IASB attempted to reduce these alternative methods and internationally develop high quality accounting standards (Paananen & Lin 2010; Zeff, S. A. 2011). That is why, both The IOSCO and IASC worked together to find appropriate methods which help companies to enter into any foreign stock market (Weetman et al. 1998). In 1995, an agreement was signed between the IASC and the International Organization of Securities Commissions (IOSCO) (Flower 1998). According to this agreement, harmonisation was important to enhance the operations of international financial markets (Weetman et al. 1998). In 1997, the IASC decided to establish a Standing Interpretations Committee (SIC). The function of this new organisation (SIC) is to set out and explain the IASC's viewpoint on certain issues that were not given enough details or clarity by IASs. When the IASB was founded, The SIC was replaced by the International Financial Reporting Interpretations Committee (IFRIC) with the same basic task (Larson 2007; Schipper 2005).

As the successor to the International Accounting Standards Committee (IASC), in 2001, the IASB was founded (Fosbre et al. 2009; Whittington 2008a). This new organization is responsible for issuing and developing (IFRS) International Financial Reporting Standards (the new name for International Accounting Standards -IASs), and encouraging the use of these standards (Goldberg et al. 2006; Nobes & Parker 2010). Although all the standards of the IASC were adopted by the IASB in 2001, major adjustments and additions were made from 2003. The IASB also adopted the conceptual framework published by The IASC as a guide when preparing standards (Nobes & Parker 2010). This framework is likely to be somewhat similar to that of the FASB (Camfferman & Zeff 2007; Le Manh & Ramond 2011; Whittington 2008b). The strong similarities can also be noticed between the IASC's conceptual framework and the British and Australian frameworks (Nobes & Parker 2010). The most familiar with setting accounting regulations in this way are the countries that were impacted by the Anglo-American tradition (Hoarau 1995; Street & Shaughnessy 1998; Trabelsi 2010). Therefore, it is unsurprising that English is an important language in issuing international standards.

3.2.2 Other International Organizations

Over four decades, other bodies have paid much attention to the international aspects of accounting. Some of them are accounting organisations and others are non-accounting bodies. For example, G4+1 group, EU and FASB represent some accounting bodies that are interested in harmonising international accounting. The G4+1 group consisted of the standard-setters of Canada, the UK, the US and Australia (and later the New Zealand standard-setter), with the IASC. The G4+1 adopted and shared similar conceptual frameworks. In 2001, after the IASB was established, the G4+1 group was longer necessary. The reason behind that is that many standard-setters are former Anglo-Saxon who became IASB members (Nobes & Parker 2010). Arguably, the EU may also play an important role in the process of accounting harmonisation. Especially as by 2005, all European listed companies were required to use IFRS for preparing and disclosing their annual reports (Nobes & Parker 2010). Furthermore, the FASB and the IASB have worked closely together to achieve convergence. For example, as an attempt to eliminate as many differences as possible by 2005, in September 2002, the FASB and the IASB announced a harmonisation project (the Norwalk Agreement). It is obvious that excessive efforts have been made by these two standard-setters to eliminate differences. In 2007, consequently, the SEC accepted the IFRS (Goldberg et al. 2006). There are, moreover, other non-accounting bodies around the world who are interested in the subject of harmonisation such as the Organization for Economic Cooperation and Development (OECD), and the United Nations (Van Hulle 1993). It appears that great attention has been paid to obtaining a common accounting language by harmonising standards among countries.

3.3 Uniformity of Standards

Accounting as a tool of communication for business is likely to be applied dissimilarly around the world. This may be because of the differences in environments in terms of history, politics, economy and other aspects. This in turn has led to increasing demands for accounting uniformity. In the same vein, the need for a single set of financial reporting standards - which is deemed the approach to achieving international harmonisation of accounting- has become inevitable (Qu & Zhang 2010). For over four decades or so, this has been generally understood. All people who are in direct contact with CPA (when they were asked about the need for uniformity in annual reports) agreed that uniformity in financial reporting is needed (Alhashim & Garner 1973). In addition, many accounting standards setters suggest that a number of countries should adopt similar accounting methods (Bromwich 1980). Harmonisation's proponents also believe that obtaining accounting information which can be compared is very useful for both makers and users of financial information. Makers can avoid the cost of translation of their accounting information, whereas users may face lower risk in financial markets. Some studies supported this point of view. For example, by using a sample from 30 countries, Ding et al. (2007) studied differences between domestic accounting standards and International Accounting Standards (IAS) by creating two indices, absence (missing rules concerning accounting issues in domestic accounting standards but these rules exist in IAS), and divergence (different rules about the same accounting issue in domestic and international standards). Some of their results revealed that the equity market is negatively associated with the absence of domestic accounting standards and divergence, whereas the level of economic development is positively associated with divergence. In fact, international harmonisation has been the aim of some important organizations (as mentioned above) such as the European Union (EU) and the IASC as global organisations of standards setting or regulations (Brown & Tarca 2001). Furthermore, Bryan Carsberg who is a secretary-General of the International Accounting Standards Committee stated -when he was interviewed by Schweikart et al. (1996) - that not only uniformity of accounting has been essential, but also pressure for uniform accounting has become irresistible.

Arguably, in many countries, there are some underlying reasons for increasing the need for harmonisation. On the whole, international transactions, the inflows of global direct investments, developing the international financial markets, the growth of the European Union and the direction into privatisation are deemed to be the most important elements which can cause the pressure for uniform accounting (Schweikart et al. 1996). To a large extent also, developing global securities markets, the spread of multinational companies and growing transactions around the world have internationally increased the need for comparable information in annual reports (Nobes & Parker 2010). To that end, adopting a single set globally may increase the opportunity for comparing accounting information across countries which have different economies, politics, and cultures (Bradshaw & Miller 2007). In other words, uniformity may be achieved when each firm provides one set of accounts to be used for investment decisions irrespective of the country of investors (Baker & Barbu 2007). Moreover, understanding the differnces in accounting practices amongst countries can be the key to achieve international harmonisation of financial accounting standards (Alhashim & Garner 1973; Baker & Barbu 2007).

Many states around the world have known the importance of harmonisation. Therefore, as an attempt to facilitate their dealing with international markets, these countries have used IASC's accounting standards (IASs) as national standards (Brown & Tarca 2001). In both developed and developing countries, many researchers have revealed that local standards have become close to IFRS during the last thirty years (Chen & Cheng 2007; Doupnik, Timothy S. 1987; Street & Gray 1999). In developing countries, despite the different pressure of individual and institutional investors, the reliability of accounting information is not likely to be strong (Quinn 2004; Zeghal & Mhedhbi 2006). Additionally, the lack of financial and technical resources to build high-quality accounting standards and also the lack of ability to set one's own standards themselves may represent problems for developing countries (Boolaky 2006; Wallace 1990). As a way of solving this problem, some of these countries (such as Cyprus, Zimbabwe, Pakistan and Malawi) have recognized the importance of adopting international standards, so they have accepted IFRS as national rules of accounting practices (Van Hulle 1993; Wallace 1990). These countries have adopted (with or without adjustments) IAS to improve their financial information in terms of its quality and reliability and to enhance the movement of foreign investment. Furthermore, some argue that this may be a good solution for contact with international capital markets and to improve domestic economies (Bowrin 2007).

Adopting IFRS can have many benefits. Alhashim and Garner (1973) assumed some related postulates to uniformity. For example, they assumed that the need for uniformity would be necessary for countries with a centralized economy, lower level of education, and with a need to develop their economy. In Europe, the main justification for harmonising accounting between European countries is often to establish free business in society. For this reason, uniformity of firm law is very important in offering this freedom to companies (Walton 1992). Applying uniform rules by many countries can be essential for supporting the competition in capital markets (Čepinskis & Legenzova 2005; Gimžauskienė & Valančienė 2006; Schweikart et al. 1996). When he studied this issue in the EC, Van Hulle (1993) suggested some steps which may help the EU to reach international harmonisation as follows: relying on IASC to achieve this process;

allowing the American trend to play a major role in the harmonisation process; and calling upon the EC to be more active in this process. Brown and Tarca (2001) (when they studied the future of Australian accounting standards) suggested that because of the globalisation of accounting standards, adopting international standards would be the best option for Australia to follow. In light of the above points, despite some valid arguments to the contrary, uniformity has become a global issue and its benefits to improve national and international markets are obvious.

With an increase in all these pressures, the uniformity of international accounting has become an interest in accounting research (Hellmann et al. 2010). Over past decades, harmonisation has been studied in many countries. Since the 1980s, many researchers have measured de jure harmonisation. They have obtained different results in terms of the level of harmonisation achieved. Early studies of de jure harmonisation had been conducted during the 1980s and 1990s. Several researchers used the Price Waterhouse (PW) accounting surveys. For instance, Nair and Frank (1981) studied 37 countries by analysing data from PW's 1973,1975, and 1979 surveys. Their results confirmed that increasing harmonisation coincided with the period of the IASC's existence. Nobes (1981) criticised the Price Waterhouse (PW) survey in terms of the reliability of its data. In the1980s, by analysing his own 1983 survey and also 1975 PW survey, Doupnik, T.S. (1987) pointed out that the quality of financial reporting (compared with IASCs) has internationally increased over the period 1975 to 1983. In 1988, IASC studied 54 countries by surveying its members. It found that the majority of countries (especially in previous UK colonies) were using IASs. However, this survey has also been criticised by some researchers, including Meek and Saudagaran (1990) and Boolaky (2006). In their view, this survey is closer to fiction. In 1991, the United Nations studied some African countries by surveying 37 countries in this region. It found that 25 African countries out of 37 used IASs (with or without modifications). Larson and Kenny (1999) investigated the progress of de jure harmonisation (in many countries) by using data from other studies. Overall, they found that de jure harmonisation was likely to increase from 1991 to 1993. It is noticed that the survey was the main tool for the majority of these studies (in this period) and was criticised by some researchers in terms of the reliability of data.

During the period after the 1990s and to date, the empirical studies (both domestic and foreign) focused on evaluating and measuring the degree and process of de jure harmonisation (whether at points of time or over time). With the increasing attention paid to this type of research, many studies have been conducted in different places around the world. Although these studies were conducted in different circumstances (different countries and times), their results are likely to be similar in terms of the direction of de jure harmonisation. Arguably, these studies can be divided into several groups. The first group has measured de jure harmonisation over time. For example, Garrido et al. (2002) used a new methodology to evaluate the IASC achievement. They found that de jure harmonisation increased over time (which confirms the success of IASC). By studying 43 accounting issues in IASs and in the

Portuguese Accounting Standards, Fontes et al. (2005) used three methods to measure harmonisation and they found also that de jure harmonisation increased over time. Furthermore, John (2006) investigated the convergence of U.S. GAAP and IFRS by analysing some Chinese firms listed on the New York Stock Exchange. The results of his research confirmed increasing de jure harmonisation over time. In the Gulf Cooperation Council, Al-Shammari et al. (2008) also provided considerable evidence of increasing de jure harmonisation over time (from 68% in 1996 to 82% in 2002). Peng and Van Der Laan Smith (2010) emphasised the increase in the level of de jure harmonisation between Chinese standards and IFRS (from 20% in 1992 to 77% in 2006). On the other hand, in China, Peng et al. (2008) evaluated whether the Chinese efforts have been successful for harmonising their domestic standards with IAS. They found some variances between Chinese GAAP and IAS. In addition, by using 134 European companies listed in the US, Gray et al. (2009) examined whether 'European' and US GAAP measures of income and equity converged under IFRS. They found that IFRS and US GAAP have not fully converged.

Other studies have measured de jure harmonisation at one point of time. For instance, by using Content Analysis, Boolaky (2006) studied three African countries (South Africa, Mauritius and Tanzanian). He found that the domestic accounting standards of South Africa were most in harmony with IFRS, followed by Mauritius. Moreover, by using new methods to measure the convergence level of national accounting standards with International Financial Reporting Standards IFRS, Qu and Zhang (2010) focused on measuring formal accounting harmonisation at a point of time by analysing 33 standard. They found that the harmonisation level of Chinese Accounting Standards with IFRS is larger than 0.7. In Tunisia, Trabelsi (2010) conducted a qualitative study to investigate how easy/difficult it was for Tunisia to switch to the Anglo-Saxon accounting culture. He found that it (de jure) was perfectly harmonized with the international ones. In Indonesia, Lasmin (2011) studied 43 accounting methods of 18 accounting standards, and he found that the formal harmonisation is high. In Vietnam, Nguyen and Gong (2014) focused on measuring formal accounting harmonisation at a point of time by analysing 24 cases. They found that the overall convergence level of VAS with IAS/IFRS is 0.6572. Despite increasing international attention paid to harmonize standards, obtaining de facto harmonisation (material harmonisation) is not necessary to be obtained.

3.4 Harmonising Accounting Practices (De facto)

Around the world, accountants may use different methods to treat a similar accounting event. The flexibility of accountancy, by offering many alternative acceptable methods, sometimes leads to major differences in practices and results of these methods (Ding et al. 2007; Kollaritsch 1965). Expressed in a different way, it is probably noticed that differences in accounting practices among nations can be because of the differences in disclosure requirements and offering many alternative accounting options to treat the same accounting issue (Ashbaugh & Pincus 2001; Ding et al. 2007). For instance, there are many acceptable methods for valuating inventory such as: Cost (FIFO, LIFO or weighted average) (used by some Japanese companies); the lower of FIFO and net realisable value (used by general IFRS practice in the UK); the lower of LIFO and current replacement cost (used by common US practice). Adopting different methods can result in differences in accounting practices. All the variances together can significantly impact upon accounting information (Nobes & Parker 2010). These differences in accounting practice may appear between companies when the user (shareholders, creditors, auditing firms, taxation authorities, managements, and harmonising agencies) purposes of financial reporting of these companies are different (Nobes & Parker 2010; Nobes 1983).This brings some difficulties for those who (inside or outside the country) deal with published financial statements. In other words, the need for understanding financial reports of overseas firms may have become important for investors and financial analysts who might want to buy shares of these companies. Carmona and Trombetta (2010) suggested that, with the increasing pressure of the world economy and with having investments abroad, U.S accountants- who are forced to deal with different financial accounts prepared by subsidiaries in different countries when a lot of them have already adopted IAS/IFRS standards - should understand the accounting standards of these countries. Recognising the differences in practices and procedures between nations is probably important for both underdeveloped countries which may be helped by establishing modern accounting systems (Zeghal & Mhedhbi 2006), and developed countries that have many investors and financial analysts who wish to be able to understand financial statements from different nations (Nobes & Parker 2010).

From prior research, although achieving de jure harmonisation usually induces harmonisation of accounting practices, this type of harmonisation (Material harmonisation) may be not achieved by harmonising accounting standards (Chen & Cheng 2007). Harmonisation of accounting practices may be obtained without furthering formal harmony (Van der Tas 1992). For instance, material harmonisation can be achieved without harmonising accounting standards if companies apply the same accounting methods which are chosen from many optional methods. When companies apply similar accounting methods, under the same conditions, the degree of comparability between financial reports will increase (van der Tas 1988). Arguably, from the discussion above, it is noticeable that recognising the differences between accounting practices is important to achieving de facto harmonisation.

International attention has been paid, and many studies have been conducted to discover differences in accounting practices. Early studies were started in 1970s. For example, Benston (1976) explored the differences between two systems of disclosure- the United States was based on public regulation (SEC), while the United Kingdom was based on private regulation (Stock Exchange) - and he recommended that the United States should be closed to the U.K system by decreasing the power of SEC. In the same year, by focusing upon two particular dimensions (the overall extent of financial disclosure and the degree of comprehensiveness of firms' financial statements) which are reflected in annual reports from seven countries (United States, United Kingdom, Japan, Sweden, Netherlands, Germany, and France), Barrett (1976) emphasized the broad belief which says there is a relationship between the degree of quality in accounting practices and the degree of efficiency of national securities markets. Street and Shaughnessy (1998) studied the extent of similarities and differences in accounting practices among the IASC and national standard setters in the Anglo-American countries (US, UK, Canada, and Australia), and revealed that there were many differences (in the early 1990s) between IASs and these countries regardless of consensus in very few areas such as funds flow statement and leases during the prior period.

With increasing economic pressures of international society, many researchers in Europe, have paid attention to this issue. Some focused on analysing and proposing methodologies to measure de facto harmonisation (See: Archer et al. 1995; Krisement 1997; McLeay et al. 1999; Rahman et al. 1996; Taplin 2004; Tay & Parker 1990; van der Tas 1988). Others were interested in measuring de facto harmonisation whether over time or at points of time. For measuring de facto harmonisation, results obtained from these studies were different. Although the majority have found that de facto harmonisation decreased over time or was low at points of time, few have found the contrary. For example, Barrett (1976) analysed annual reports of 103 firms for the years 1963 to 1972 of eight countries (United States, United Kingdom, Japan, Sweden, Netherlands, Germany, and France) and he found that although the general level of company disclosure improved in the 1963 to 1972 period, there is a wide variance between the general level of disclosure of American and British firms, on the one hand, and the companies from the other five countries. By focusing on some areas (such as depreciation, goodwill, stock valuation, extraordinary/exceptional items valuation bases for fixed assets) Emenyonu and Gray (1992) found a lack of de facto harmony between Germany; France and UK. Archer et al. (1996) pointed out that the process of de facto harmonisation between countries (Netherlands; Switzerland; Sweden; Ireland; Germany; France; and Belgium) from 1986-7 and 1990-1 was low. Decreasing harmonisation of goodwill between some European countries (Netherlands; UK; Luxembourg; Ireland; Germany; France; Denmark; Austria; Belgium; Finland; Spain; Switzerland; and Sweden) was found in another study (McLeay et al. 1999). Moreover, the results of (Gray et al. 2009; Mechelli 2009) studies supported this direction. On the other hand, Van der Tas (1992) studied the 1979-1988 annual reports from 154 firms in eight Europe states (Netherlands; UK; Luxembourg; Ireland; Greece; Germany; France; Denmark) by focusing on deferred taxation, similarly Canibano and Mora (2000) focusing on four accounting issues (deferred taxation, goodwill, leasing and foreign currency translation), provided evidence about the increase de facto harmonisation. Other studies have provided different results about specific issues. For instance, Herrmann and Thomas (1995) found high levels of harmony in some accounting issues (accounting for foreign currency translation of assets and liabilities; treatment of translation differences; and inventory valuation), and a low level of harmony about other issues (fixed asset valuation, depreciation, and goodwill). Archer et al. (1995) measured the processes of de facto harmonisation (deferred tax and goodwill) over time (a four-year period) between eight countries (Belgium, France, Germany, Ireland, the Netherlands, Sweden, Switzerland and the UK). His results indicated that harmonisation between countries improved from 14.94 to 21.63; whereas within-country comparability did not significantly increase over 1986/87. Apart from these results, it is obvious that much attention has been paid to this theme in Europe.

In recent years, some attention has been paid to the issue in other parts of the world. In China, by analysing the 1999 and 2002 annual reports of 79 Chinese listed firms, Peng et al. (2008) found effective harmonisation between Chinese listed firms' accounting practices and IFRS. Lasmin (2011) measured the level of material harmonisation at a point of time in Indonesia, and he found that material harmonisation was high. In Africa, Trabelsi (2010) conducted a qualitative study by using a questionnaire to investigate this issue. He pointed out that accounting practices did not follow the international ones. In Europe, recently, Andreea and Alexandra-Carmen (2013) studied financial statements of 30 groups listed on three different stock exchanges some disclosure aspects regarding consolidated financial statements. The result revealed a high degree of material harmonization. It is important to notice that the dearth of research in this part of the world (especially in Africa). Thus, along with international society, the need for this type of research in developing countries is likely to be important.

3.5 The Globalisation and Accounting Environment

The quality of business decision-making depends on the quality of information available. A lot of this information is found in annual reports that are a very important source and major instrument of communication between companies and investors. In view of that, the quality of information in annual reports has to be considered to help users in making informed decisions (Romlah et al. 2007). This quality can be impacted by some elements. Although, the international society of accounting usually considers that accounting practices are largely affected by its environment such as economic situation, social and cultural background, the legal and political system (Elitas & Üç 2009); external factors- foreign investment, multinational companies and global accounting firms- may play a major role in enhancing local accounting. Expressed in a different way, any major change in internal elements can impact the accounting regulations and practices.

3.5.1 The Globalisation and Accounting Measurement Methods

Over the last thirty or so years, researchers have considered culture, political system, and the colonial history of the country as important factors affecting accounting, the level of sophistication in accounting among different countries, and the selection of accounting system (Samuel & Manassian 2011). Studying internal factors in explaining differences in accounting practices and differences in the level of disclosure has been of interest to some researchers for a long time (Hope 2003a). The variation in accounting practices among countries has been interpreted according to differences in culture and the economy (Baker & Barbu 2007). Ali and Hwang (1999) pointed out that inter-country differences can impact information in financial reports. By using a large number of companies from more than 39 countries, Hope (2003b) investigated the function of legal origin and national culture in interpreting differences in the level of disclosure among these firms. He found that although both factors did not fully interpret variations, they are significant in explaining company disclosure. Examining similarities and differences in environmental issues was also the topic of Ali and Ahmed's work in 2007. They studied three Asian countries: Bangladesh, India and Pakistan- by focusing on two factors (legal and institutional environments). They found that, despite slight differences, these countries have similar social, political, economic and other environmental aspects. These factors may play a role in facilitating the process of regional accounting harmonisation (Jahangir Ali & Ahmed 2007). Moreover, improvement of (the system and practices of) accounting is likely to be driven by societal culture (Doupnik & Tsakumis 2004; Gray 1988; Ngwakwe 2011). In other words, differences among countries in environmental elements, business structure and other internal issues may lead to different accounting treatments (Cole et al. 2011). For instance, choosing the accounting policy is probably affected by some environmental factors such as legal and market factors (Narktabtee & Patpanichchot 2011). Thus, the deep role of political and economic factors in impacting and shaping actual accounting practice cannot be denied (Ball, Ray 2006). On the other hand, in Romania, Deaconu and Buiga (2011) found a weak correlation between the accounting choice and the level of economic development. Not only is accounting affected by environmental factors, but also it may be impacted by any changes in these elements.

The view that globalisation can impact economics has shown itself to be true in today's world. This phenomenon intensifies the need for a common accounting language, and expanding the requirements of capital markets such as the need for analysing financial accounting information prepared under different standards. The absence of common financial statements may increase the risk of an investment, and affect the free flow of world capital (Cătălina et al. 2008). For around twenty years, the surge of financial globalisation contributed to the move in capital flows among developed countries and more notably between developed and less developed nations (Prasad et al. 2007). As a result of the globalisation phenomenon, changes in the characteristics of different nations environments and the spread of IFRS can be noticed (Deaconu & Buiga 2011). Changing internal elements can influence the accounting regulations and practices. Thereby, politics and social values of a country have played a major role in developing and diffusing IFRS (Chua & Taylor 2008). For example, opening the economic system of a particular country into the international economy can change the accounting system by strongly motivating the adoption of international accounting standards (Zeghal & Mhedhbi 2006). Some accounting policies have already been changed because of the pressure of globalisation of business. For example, some European countries (such as the Czech Republic, Estonia, Lithuania, Poland, Romania, and Slovakia) have changed from historical cost accounting towards fair value measurement (Bonaci & Strouhal 2011). It is therefore noticed that the international development of accounting systems may be due to the international economic integration and the globalisation of financial markets. With globalisation underway, it is important to have a common accounting language around the world (Beke 2010). This thought (common accounting language for presenting financial statements) was encouraged by the signed agreement, regarding the harmonisation between US GAAP and IAS/IFRS in 2002, between the FASB (Financial Accounting Standards Board) and the IASB (International Accounting Standards Board) (Cătălina et al. 2008). Regardless of national circumstances, the impact of globalisation (applying IFRS across the world) has become obvious (Cătălina et al. 2008). Hoping to improve comparability, transparency and quality of the financial information, the European Commission, for example, has approved IFRS to be applied to listed companies starting from 1st January of 2005 (Baker & Barbu 2007; Cătălina et al. 2008). Not only accounting methods may be changed by globalisation, but also external forces can shape the level and quality of disclosure.

3.5.2 Financial Disclosure and Market Forces

Rational economic decisions should be made by using good financial information (Romlah et al. 2007). This financial information should be appropriate and enough for different users (present and potential investors, creditors and other users) to help them make discreet investment decisions (Aljifri & Khasharmeh 2006; Dahawy & Conover 2007; McEnroe & Martens 2001; Schipper 2007). Using international standards can probably improve the comparability and reliability of financial information and make it more dependable (Aljifri & Khasharmeh 2006). In fact, the financial disclosure (both mandated and voluntary) of the company is strongly impacted by financial accounting rules and undergoing processes of accounting harmonisation (Čepinskis & Legenzova 2005). For instance, the disclosure level made by European companies has been improved since adopting IFRSs 2005 (Čepinskis & Legenzova 2005).

Market forces might influence the amount of disclosure. It is noticed that the level of disclosure made by companies is affected directly by important users such as stakeholders and others participants (multinational corporations and international investors) in the stock markets (Boesso & Kumar 2009; Core 2001). Companies (especially large ones) suffer from other financial market pressures (stock exchange requirements) that may encourage them to raise their disclosure in terms of the level and quality of disclosure. This is especially evident amongst companies converting to international standards (Daske & Gebhardt 2006; Jaafar & McLeay 2007; Tarca 2004). In fact as well as in theory, corporate disclosure is likely to have an association with the efficiency of financial markets which can be obtained when information in that stock market is accessible to users who are interested in this information at relatively low cost (Alzarouni et al. 2011). As practiced in the industrialized nations, the disclosure can be one of the essential tools for the effective capital markets (Gbenedio et al. 1998).

Barrett (1976) asserted that the association between the degree of quality in accounting practices and the degree of efficiency of national securities markets is obvious. Indeed, the availability of financial information can be necessary to gain access to global capital markets (Meek et al. 1995). Many global organisations (such as IASC/IASB) attempt to facilitate the capital market. As one of these attempts, full disclosure, according to international standards, is compulsorily provided by firms to help the primary suppliers of capital to make rational decisions (Dahawy & Conover 2007). Market forces can play a role in determining the right level of disclosure. The reason behind this is companies will be punished in the capital markets by the downgrade of its' share value, if they do not disclose enough information about themselves (Bewley & Magness 2012; Macey 2003). In other words, in financial markets, the value of a firm is impacted by the level and the quality of disclosure presented by this company (Alzarouni et al. 2011). Firm disclosure can be influenced by both forces of supply and demand for information in the financial markets and by the required information contained in several forms of legislation (Choi 1973). Under these pressures, organisational changes (such as changes in the domestic accounting system) can be explained by neo-institutional theory and Agency Theory.

The influence of global markets for information and capital on economic systems occupies one of the most hotly debated issues in the field of social sciences nowadays (Ahmadjian & Robbins 2005). Considerable discussion in the literature has been generated by the organisational changes over many years (Townley 2002; Tsamenyi et al. 2006). According to institutional and neo-institutional frameworks, companies may be able to continue in their activities and gain resources and stability when these companies establish their norms from their institutional environments (Chizema & Buck 2006; DiMaggio & Powell 1983; Meyer & Rowan 1977). The behaviours of organisations, which are caused by the pressures of environments, may be described as a constraining process that enforces one organisation in society to be like others that work in the similar environments (Chizema & Buck 2006; DiMaggio & Powell 1983). Neo-institutional Theory argues that phenomena in the institutional environment shape organisations and gradually these organisations become symmetric with their environments (Hu et al. 2007; Meyer & Rowan 1977). These organisations will obtain their success and survival from this process of isomorphic change (Hu et al. 2007). Neo-institutional theory can explain the change which associates organisational context with intra-organisational dynamics (Greenwood & Hinings 1996). The change in a company may be driven by the institutional factors and market forces (Tsamenyi et al. 2006). This theory consists of significant components (the process of institutionalisation and the process of isomorphism) (Hu et al. 2007). It is also important to notice that this theory (NIS) has been adopted in many previous studies to clarify accounting choice (Collier 2001; Hussain & Hoque 2002; Mir & Rahaman 2005; Modell 2002; Tsamenyi et al. 2006; Whitley 1999). For example, in Bangladesh, Mir & Rahaman (2005) pointed out that the decision of adopting IASs may be driven by institutional legitimisation. Based on the above discussion, New Institutional Sociology (NIS) theory (DiMaggio & Powell 1983) and Agency Theory will be adopted in this study to understand and explain the dynamics of the alteration in accounting information and system. Thus the study will focus on explaining how the change in accounting is driven by internal and external forces (firm characteristics and globalisation of world economy).

3.6 Firm Characteristics and Accounting Environment

3.6.1 **Firm Features Affecting Harmonisation**

Harmonisation can be affected by company characteristics. Some prior research has sought to understand the characteristics of firms that impacts on their level of harmonisation (Street & Bryant 2000). Since the 1970's, these studies (both domestic and foreign) can be divided into different types (these studies are outlined in Appendix 1). Many researchers focused on the relationship between firm characteristics and de jure harmonisation (see Al-Shammari et al. 2008; Aljifri & Khasharmeh 2006; Dumontier & Raffournier 1998; El-Gazzar et al. 1999; Floropoulos 2006; García Benau & Zorio Grima 2002; Guerreiro et al. 2008; Jaafar & McLeay 2007; Murphy 1999). It is noticed that the most characteristics studied were size, internationality, listing status, ownership diffusion, auditor, leverage, capital intensity, profitability, market value, foreign operations and its financing policy, EU member, type of industry, English language, country differences, and company age. Regardless of some cases, these characteristics were found to have significant impacts on de jure harmonisation. For example, in the United Arab Emirates environment, Aljifri and Khasharmeh (2006) found that publishing financial reports in the English language was strong factor for adopting IASs. In Portugal, by studying the impact of some firms characteristics on de jure harmonisation, Guerreiro et al. (2008) found that size, commercial internationalisation, auditor type, and profitability are significant factors, whereas leverage, financial, and internationalisation are insignificant.

On the other hand, some have focused on the impact of firm features on de facto harmonisation. For example, by using a sample from six countries (Australia; Hong Kong; Malaysia; Philippines; Singapore and Thailand), Tower et al. (1999) examined the effect of a number of company characteristics on the level of compliance. They found that the country of location is the clear driving force in adopting IASs. Rahman et al. (2002) focused on comparing harmonisation between two countries (Australia and New Zealand), and they found the significant effect of some company aspects such as auditor type, size, leverage, ownership concentration, type of industry, and the level of decentralization on practices harmonisation. They suggest that firm aspects in improving the comparability of accounting should not be overlooked. While firm aspects can affect de jure and de facto harmonisation, they also can influence the level and quality of disclosure.

3.6.2 **Firm Features Affecting Financial Disclosure**

In most cases, it should be borne in mind that the differences in accounting practices (de facto) may be the result of the differences in the level of disclosure (Ashbaugh & Pincus 2001; Ding et al. 2007). This level of disclosure can be impacted by some elements (such as firm characteristics). In this regards, many researchers have considered associations between firm characteristics and disclosures (see Alsaeed 2006; Buzby 1975; Chow, C. W. & Wong-Boren, A. 1987; Cooke 1989, 1992; Firth 1979; Raffournier 1995; Street & Bryant 2000; Uyar et al. 2013; Wallace & Naser

1995; Wallace et al. 1994). In fact, the majority of firm characteristics are likely to be tested in these studies and their impacts were different depending on circumstances of these studies (such as the methodologies used and the country of companies selected). The association between firm features and the level of disclosures can be interpreted by Agency theory.

An agency relationship is defined as a contract between the principals – shareholders- and the agents- managers (Whittington 2008b). Under this contract, mangers are commissioned by principals to perform some service on their behalf to the agent including decision-making authority. This agency relationship (the relationship between the managers and the shareholders) is associated with the separation of ownership and control. This separation is closely associated with the general problem of agency (Jensen & Meckling 1976; Safieddine 2009). Because of information asymmetry, managers, who have the authority in business decision making, might attempt to maximize their self-benefit even at the expense of the shareholders (Baydoun & Willett 1995; Gbenedio et al. 1998). In other words, the priority of benefits of both parties to the relationship is not the same. From this point, it is reasonable to believe that the actions of the agent are not always in the best interests of this principal. Consequently, owners (shareholders) could wish to prevent manager's misbehaviours (Watts 1986). As an attempt to limit differences in the interests, the principal may constitute appropriate incentives for the agent and incur monitoring costs to limit unusual activities of the agent. Additionally, in some conditions the agent will be paid to expend resources (bonding costs) to guarantee that the principal would not be harmed or that he will be compensated if he does face such actions (Jensen & Meckling 1976; Whittington 2008b).

Agency theory analyses the problems of controls and incentives based on the asymmetrical distribution of information (Whittington 2008b). Jensen and Meckling (1976) suggest (in their framework of agency-theory) that decreasing information differences between managers of corporation and supplier of capital reduces expenditures of agency such as monitoring and bonding. It is obvious that accounting and reporting can be used as an instrument to reduce information differences by monitoring contractual performance (Watts 1986). In fact, company disclosures have long been a main instrument for owners to evaluate the accountability of management and to make discreet business decisions (Camfferman & Zeff 2007). Under the contractual arrangement, Agency theory suggests that management would be rewarded for providing the required and voluntary disclosures with the purpose of minimizing the agency costs that they might have to bear. This reduction of agency costs offers a motivation to adopt IFRS, which (adopting these standards) may lead to more disclosure and additional intelligibility compared to the condition under national standards (Al-Shammari et al. 2008; Ashbaugh & Pincus 2001; Barth et al. 2008). It is noticed that IFRS requirements typically lead to increase disclosure and restrict choices of management of alternative measurement methods (Ashbaugh & Pincus 2001; Lont & Scott 2014).

Indeed, corporation-specific characteristics (as internal incentives) are probably essential in determining the level and quality of disclosure and the accounting policy choices (Chamisa 2000). Agency theory explains the association between many firm characteristics and the level of disclosure. A positive relationship between ownership diffusion from one side and the extent of disclosure and de jure harmonisation from another side has been explained by Agency theory. This theory proposes firms with widely held ownership are likely to disclose more information than firms with narrowly held ownership. The increase of disclosure may be because of the demand of outsiders for publicly available information. The size of the firm is another essential determinant, and considerable evidence reveals that larger firms might provide more voluntary disclosures (see for example, Ashbaugh & Pincus 2001; Cooke 1992; Meek et al. 1995). Since larger corporations normally have a higher level of analyst following, higher political costs caused by higher public exposure, and higher agency costs by more broadly dispersed ownership, similarly result in larger companies voluntarily making more disclosures (Jaafar & McLeay 2007; Lang & Lundholm 1993). Agency theory also suggests that more highly leveraged companies disclose more information (Meek et al. 1995). By the same token, many researchers have determined that the company-level and industry-level factors should be considered in determining financial reporting practices and financial disclosure (Cooke 1992). It is probably seen that firms are motivated to increase their disclosure by some external and internal factors.

3.7 Research Gaps

There are some studies which have investigated the impact of company's characteristics on harmonisation (Aljifri & Khasharmeh 2006; Dumontier & Raffournier 1998; El-Gazzar et al. 1999; García Benau & Zorio Grima 2002; Guerreiro et al. 2008; Jaafar & McLeay 2007; Murphy 1999; Rahman et al. 2002). These studies are outlined in Appendix (1). Although the majority of these studies have focused on the influence of firm characteristics on de jure harmonisation, no one (to our knowledge) has studied the relationship between the language of disclosure and insider ownership from one side and de jure harmonisation from other side. Even though a few researchers tested the impact of some company features on de facto harmonisation, these did not include all factors. It seems that the relationship between insider ownership, language of disclosure and company age from one side and de facto harmonisation from other side have not been studied previously. This relationship is included in this study. Moreover, the researcher is not aware of any research published (let alone in NA countries) that has studied the relationship between firm characteristics (such as firm size; firm age; leverage rate; profitability; institutional ownership; insider ownership; the type of sector; and language of disclosure) and both types of (de jure and de facto) harmonisation at the same time. Moreover, despite the existence of substantial literature about harmonisation around the world, the majority of previous studies focused on industrial companies. There appears to be a lack of assessment of harmonisation in developing states as well (see Appendix 2and Appendix 3). Therefore, this study is designed to assess gaps between North Africa's financial reporting (rules and practices) and IFRS over a fixed period by focusing on financial and non-financial companies and to test the relationship between some firm characteristics and both types of harmonisation.

3.8 Summary

This chapter has detailed presented theoretical explanations for harmonisation. It has described the literature reviewed for the study. The chapter has started with the obstacles to and benefits from harmonisation. Interested bodies efforts spent in the harmonisation process were also presented in this chapter. It has also discussed studies that provide theoretical explanations for uniformity of standards (de jure) and accounting practices (de facto). Moreover, it has outlined the globalisation effects over the accounting environment and firm characteristics effects over this environment. Finally, the gaps in the literature which this study aims to fill are illustrated. The study methodology and design are discussed in next chapter.

Chapter 4 Research Design and Methodology

4.0 Introduction

In previous chapters (chapters 2 and 3), the review of the related literature has provided background for the concept of accounting harmonisation, the differences between both types of accounting harmonisation (de jure and *de facto*), and the efforts spent to measure these types. Chapter 2 also highlighted that many environmental factors in NA countries are likely to be similar and these factors are impacted by economic globalisation. Chapter 3 pointed out that firm characteristics affect the level of both types of harmonisation and the level of disclosure as well. This present study aims to measure both types of harmonisation in the NA region and also the study aims to examine the relationship between firm characteristics and both kinds of harmonisation. To be specific: Has harmonisation between North Africa's financial reporting and IFRS increased between 2005 and 2010? Also, to what extent do the firm characteristics impact on the level of (de jure and de facto) harmonisation? Therefore, this chapter highlights the research design and research methodologies adopted to methodically collect and analyse suitable data to answer the research questions. The Chapter starts with formulating the research questions (stated in Chapter1) into a number of testable hypotheses. The conceptual model is also presented in this Chapter. It also discusses measurement of the dependent and independent variables, data collection instruments and procedures, and samples. Moreover, it outlines the methods used in this research and the justifications for selecting these methods.

4.1 Research Design

4.1.1 Research Questions

The literature emphasized that accounting harmonisation and the adoption of IFRS have become important for economic decision-making and the level of harmonisation and the level of disclosure are affected by firm characteristics. It also reveals that developing countries (such North African countries) have not paid enough attention to adopting these standards and the accounting information in these countries is likely to be unreliable. Therefore, this study aims to discover the harmonisation process between (NA) North Africa's financial reporting and International Financial Report Standards (IFRS). In order to reach this goal the following study questions are addressed:

RQ1: Has harmonisation between North Africa's financial reporting and IFRS been increased between 2005 and 2010?

- **RSQ1a:** Has De jure harmonisation between North Africa's financial reporting and IFRS been increased between 2005 and 2010?

- **RSQ1b:** Has De facto harmonisation between North Africa's financial reporting and IFRS been increased between 2005 and 2010?

RQ2: To what extent does de jure harmonisation impact de facto harmonisation?

RQ3: To what extent do the underlying factors (size, age, leverage rate, profitability, institutional ownership, insider ownership, the type of sector, and language of disclosure) impact on the level of (de jure and de facto) harmonisation?

To answer the RSQ3, the following questions will be addressed:

- **RSQ3a:** To what extent do the underlying factors (firm characteristics) impact on the level of de jure harmonisation?
- ✓ RSQ3a1**:** Is de jure harmonisation higher in companies that are larger than small size?
- ✓ RSQ3a2**:** Is level of compliance with IFRSs (de jure) positively associated with firm age?
- ✓ RSQ3a3: Is de jure harmonisation positively associated with the leverage ratio?
- ✓ RSQ3a4: Is level of compliance with IFRSs (de jure) positively associated with profitability?
- ✓ RSQ3a5: Is de jure harmonisation positively associated with institutional ownership?
- ✓ RSQ3a6**:** Is the level of de jure harmonisation not independent of insider ownership?
- ✓ RSQ3a7: Do non-financial companies have higher level of de jure harmonisation than financial firms?
- ✓ RSQ3a8**:** Is de jure harmonisation higher in companies that publish their financial information in the English language than companies that publish their financial information in other languages?
- **RSQ3b:** To what extent do the underlying factors (firm characteristics) impact on the level of de facto harmonisation?
- ✓ RSQ3b1**:** Is de facto harmonisation higher in large-sized companies than small-sized firms?
- ✓ RSQ3b2**:** Is the level of facto harmonisation positively associated with firm age?
- ✓ RSQ3b3: Is de facto harmonisation positively associated with the leverage ratio?
- ✓ RSQ3b4: Is the level of de facto harmonisation positively associated with profitability?
- ✓ RSQ3b5: Is de facto harmonisation positively associated with institutional ownership?

- ✓ RSQ3b6: Is the level of de facto harmonisation not independent of insider ownership?
- ✓ RSQ3b7: Do non-financial companies have higher level of de facto harmonisation than financial firms?
- ✓ RSQ3b8: Is de facto harmonisation higher in companies that publish their financial information in the English language than companies that publish their financial information in other languages?

4.1.2 Conceptual Model and Hypotheses Development

- **Conceptual Model**

It is important (in this Chapter) to summarise the relationships among study variables within an integrated conceptual model. Figure 4.1 illustrates these relationships. The hypotheses developed in the next section. Figure 4.1 shows the relationship between firm characteristics and both types of harmonisation, and between de jure and de facto harmonisation.
Using Agency Theory, Neo-institutional Theory, and also using some relationships from the literature review; a conceptual model has been developed of this study.

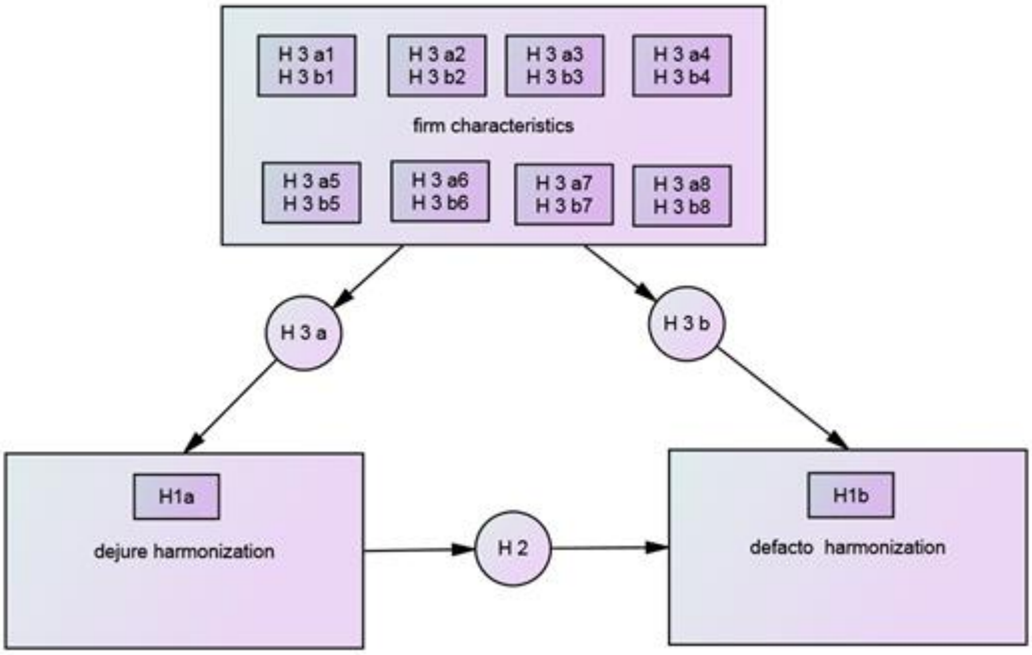

Figure 4-1 Relationship among Study Variables

As it was mentioned previously, Neo-institutional theory can explain the change which associates organisational context with intra-organisational dynamics (Greenwood & Hinings 1996). The change in company may be driven by the institutional factors and market forces (Tsamenyi et al. 2006). It is also important to note that Agency Theory can explain the relationship between many of the firm characteristics and harmonisation.

- **Hypotheses development**

A hypothesis is an untested statement about a phenomenon that is studied by a researcher. The hypothesised model of this study is presented in Figure 4.1. This model consists of three hypotheses that test the relationships between the study variables. Chapter Three discussed studies that focused on these factors. To test this model the following hypotheses are postulated.

H1. Harmonisation between North Africa's financial reporting and IFRS

For around two decades, the surge of financial globalisation contributed to the move in capital flows among developed countries and more notably between developed and less developed nations (Prasad et al. 2007). As a result of the globalisation phenomenon, the spread of IFRS can be noticed (Deaconu & Buiga 2011; Zeghal & Mhedhbi 2012). Regardless of national circumstances, the impact of globalisation (applying IFRS across the world) has become obvious (Cătălina et al. 2008). Hoping to improve comparability, transparency and quality of the financial information, many states around the world have used international accounting standards (IASs) as national standards (Brown & Tarca 2001). With the same line, many countries in the area of NA are trying to liberalize their economies via many commercial agreements (such as the Agadir Agreement signed in 2004) (Dennis 2006a; Maur 2005). In fact, with increasing internationalisation of business and international financial transactions, the demand for harmonisation (from companies, investors and lenders who ignore national boundaries) has increased (Maur 2005; Wallace 1990).

Furthermore, according to institutional and neo-institutional frameworks, companies may be able to continue in their activities and gain resources and stability when these companies establish their norms from their institutional environments (Chizema & Buck 2006; DiMaggio & Powell 1983; Meyer & Rowan 1977). Neo-institutional Theory argues that phenomena in the institutional environment shape organisations and gradually these organisations become symmetric with their environments. The change in a company may be driven by the institutional factors and market forces (Tsamenyi et al. 2006). In the same way, it is logically to expect that NA firms can be impacted by financial globalisation and institutional factors and market forces. The above discussion can lead to the following hypothesis:

- H1a. De jure harmonisation between North Africa's financial reporting and IFRS has increased between 2005 and 2010.

- H1b. De facto harmonisation between North Africa's financial reporting and IFRS has increased between 2005 and 2010.

H2. Association between Practice Harmony and Regulation Harmony

Prior Evidence has shown that formal harmonisation (harmonising accounting standards) do not necessarily lead to material harmonisation (actual harmonisation of accounting practices) among companies (see for example, Bradshaw & Miller 2007;

Cascino & Gassen 2009; Ding et al. 2009; Lasmin 2011; Schultz & Lopez 2001). The reason behind that, many accounting standards and rules offer multiple accepted methods and options for disclosure and measurement accounting issues, and these companies, which apply the standard, may choose different accounting method and these methods will be accepted under this standard. As a result of this choice, accounting practices may be different in these companies (Rahman et al. 2002). In spite of this fact, adopting the same accounting standard by companies can limit the probability differences. Therefore, it is reasonable to expect the relationship between de jure harmonisation and de facto harmonisation. Consequently:

- H2: higher de jure harmonisation would lead to a higher de facto harmonisation.

H3. Association between Accounting Harmonisation and Firm Characteristics

Some conditions were achieved before each characteristic was included in this study:

1. There were theoretical reasons to expect that characteristic is associated with compliance with IFRSs. Chapter 2 and Chapter 3 have reviewed the theoretical and empirical backing for the characteristics that were selected.
2. The availability of data for the characteristics should be enough in the firms' annual reports.
3. The characteristic should be measurable in principle.

According to these preconditions, eight firm characteristics were selected for the study. The characteristics were: (1) company size, (2) AGE, (3) leverage, (4) ROA, (5) Institutional Ownership, (6) Insider Ownership, (7) type of industry, and (8) language of disclosure.

In the following discussion each of the eight characteristics is addressed, leading to a formal statement of the hypotheses:

- **H3.a. Association between de jure Harmonisation and Firm Characteristics**

- ✓ **Size**

Firm size is an influential element in determining the adoption of IFRS. Costs (such as political costs) may not be the same for all companies with different sizes. The magnitude of political costs highly depends on the company size. In other words, political costs are most likely to be higher for larger firms (Watts & Zimmerman 1978). According to the political cost assumption, companies with greater visibility in the political fields will make more disclosure to avoid some government-imposed costs (such as taxation, regulation) and social obligations (Ballas & Tzovas 2010; Yip et al. 2011). This disclosure in financial statements should be enough and credible. Adopting IFRSs can improve such credibility (Čepinskis & Legenzova 2005). Furthermore, previous research (see Al-Shammari et al. 2008; Aljifri & Khasharmeh 2006; Dumontier & Raffournier 1998; El-Gazzar et al. 1999; Floropoulos 2006; García Benau & Zorio Grima 2002; Guerreiro et al. 2008; Jaafar & McLeay 2007; Murphy 1999) found a positive association between firm size and accounting standards compliance (de jure harmonisation). For these reasons, large companies may be more interested in adopting IFRSs than small firms. The hypothesis is therefore:

- H 3. a. 1: de jure harmonisation is higher in companies that are larger than small size.

✓ **Firm age**

The motivation for choosing this variable lies in the possibility that old firms could recognize the significance of adopting IFRS to increase the degree of their financial reports reliability. Additionally, studying this variable can extend the compliance literature scope and contribute to the understanding of compliance variation among companies. The company age might be relevant, as older companies could have built up differential experience to recognise the importance of IFRS adoption in improving their disclosure level over time. Older firms are likely to have various users who need high disclosure level. Therefore, these firms may seek to adopt IFRS to improve their information in the financial reports. Lastly, the cost of IFRS adoption might be more onerous for newly established firms than for older companies. For these reasons, it is possible to expect that firm age can impact the level of compliance with IFRSs. This above discussion can lead to the following hypothesis.

H 3. a2: level of compliance with IFRSs (de jure) is positively associated with firm age.

✓ **Leverage**

Different views can be found regarding the association between levels of firm leverage and IFRS adoption (Guerreiro et al. 2008). The first perspective is that firms with higher leverage ratios may have good relationships with their creditors. These creditors (such as banks) are normally granted direct access to firm information. Therefore, this kind of financing (leverage) requires less public disclosure (Guerreiro et al. 2008). Another view is that firms with relatively higher leverage ratio can have higher agency cost. This cost proposes a positive connotation between the leverage and additional disclosure level (Alsaeed 2006). Since annual reports might be used to monitor the agency relationships, firms with higher leverage ratios will be encouraged positively to adopt IFRS (Guerreiro et al. 2008). According to these competing interpretations, this study adopts a neutral position. Thus, the hypothesis will not indicate the direction of the association between the leverage ratios and the adoption of IFRS.

- H 3. a3: de jure harmonisation is positively associated with the leverage ratio.

✓ **Profitability**

In Germany, the results of Van Tendeloo and Vanstraelen (2005) confirmed the notion that voluntary adopters of IFRS might not be associated with lower profitability. On the other hand, Dumontier and Raffournier (1998) pointed out that the decision to apply IFRS is mainly affected by political costs. Financial information is thus designed to meet different demands to reduce political costs. Political cost argues that firms with high profitability adopt IFRS indicating to capital markets that profit is reliably determined (Guerreiro et al. 2008). High profit can help firm to have greater capacity to absorb increasing costs and support its position in the market (Singhvi & Desai 1971). Therefore, investors can have greater confidence in the firm for its survival. Organisations with more profit may be strongly interested in conferring credibility on disclosed financial information. They might achieve this by adopting IFRS.

H3. a4: level of compliance with IFRSs (de jure) is positively associated with profitability

- ✓ **Institutional Ownership**

With increases in the flows of cross-border investing, the demand of outsiders for publicly available information has been increased. As a response to this demand, firms should increase their disclosure level. IFRSs can allow firms to provide their users with more wide-ranging information (as proved in some cases, see Čepinskis & Legenzova 2005) than that provided under domestic standards. In fact as well as in theory, IFRS requirements typically lead to increase disclosure and restrict choices of management of alternative measurement methods (Ashbaugh & Pincus 2001). Agency theory predicts that managers of firms whose ownership is diffuse may have an incentive to provide more disclosure to assist shareholders in terms of monitoring their behaviour (Oyelere et al. 2003; Raffournier 1995). By increasing the level of disclosure provided, firms can reduce agency costs (Alsaeed 2006). This reduction of agency costs also offers a motivation to adopt IFRS (Al-Shammari et al. 2008; Ashbaugh & Pincus 2001; Barth et al. 2008). Since, the level of disclosure provided by companies depends on the type of ownership (dispersed ownership and shareholder concentration); the motivation to adopt IFRS may be different among firms with different ownership structure. The hypothesis is thus:

- H 3. a5: De jure harmonisation is positively associated with institutional ownership

- ✓ **Insider Ownership**

Once insider ownership levels are high, an information-asymmetry problem can increase between the inside and outside investors (Chau & Gray 2010). Considering the fact that insider ownership is likely to be positively associated with company social responsibility (Johnson 1999), increasing the level of disclosure can help mitigate the problem of information asymmetry between insiders and outsiders investors (Healy & Palepu 2001; Hope 2003b). The information asymmetry problem can be solved by regulation that should be followed by managers to disclose their private information (Healy & Palepu 2001). Companies may attempt to provide a good picture to their users. In this respect, the credibility of management disclosures can be improved by standard setters, auditors, regulators, and other capital market intermediaries (Healy & Palepu 2001). Therefore, companies with high insider ownership may seek to adopt high quality standards (such as IFRS) to achieve this credibility. In line with above discussion, it is reasonable to expect that there is a relationship between insider ownership and de jure harmonisation. The hypothesis is therefore:

- H 3. a6: De jure harmonisation is positively associated with insider ownership

✓ **Industry**

Different industry organisations may have a different level of de jure harmonisation. Although previous studies indicated mixed results about the relationship between de jure harmonisation and industry type (see Al-Shammari et al. 2008; Aljifri & Khasharmeh 2006; Floropoulos 2006; Jaafar & McLeay 2007), the notion that institutional isomorphism can be significant has shown itself to be true in the age of globalisation. This notion suggests that organisations may tend to accept and follow the same practices (standards) over time in responding to common institutional forces from similar industries (Rodrigues & Craig 2007). In different industries, this response is not expected to be the same. Consequently, it can be expected that firms in a given industry will probably comply closely with a specific applicable IFRSs to their activities. For that reason, different industry bodies can have a different level of compliance with IFRSs. This above discussion can lead to the following hypothesis:

- H 3. a7: Non-financial companies have higher level of de jure harmonisation than financial firms.

✓ **Language of disclosure**

With globalisation underway, it is important to have a common accounting language around the world (Beke 2010). This thought was encouraged by the signed agreement, regarding the harmonisation between US GAAP and IAS/IFRS in 2002, between the FASB and The IASB. It is important to note that the majority of these organisations were from English speaking countries. This leads to making the English language the most likely to be used worldwide in this field. In NA, Arabic is the region's language, whereas English and French are widespread (Boulanouar 2011; world, c. o. t. 2010). In business, the French language is used in some countries such as Morocco and Tunisia, whereas English is more common in others such as Egypt. Generally, the most familiar with setting accounting regulations in this way are the countries that were impacted by the Anglo-American tradition (Hoarau 1995; Street & Shaughnessy 1998; Trabelsi 2010). Therefore, it is unsurprising to find English is an important language in issuing international standards. For facilitating the flows of cross-border investment, firms may disclose their financial information by using a comparable and understood international language. This can lead to adopting international standards (IFRSs) to meet foreign investors' requirements. In the United Arab Emirates environment, Aljifri and Khasharmeh (2006) confirmed this notion. He found that publishing financial reports in English language was a strong factor for adopting IASs. For these reasons, companies that publish their financial information in the English language may be more interested in adopting IFRSs than others. Therefore, the hypothesis is:

- H3. a8: de jure harmonisation is higher in companies which publish their financial information in the English language than companies that publish their financial information in other languages

  - **H3.b. Association between de facto Harmonisation and Firm Characteristics**

- ✓ **Size**

At the same time, firm size is an important factor in determining the level of disclosure. Evidence from prior research has supported the positive relationship between company size and the level of disclosure (see Alsaeed 2006; Buzby 1975; Chow, C. W. & Wong-Boren, A. 1987; Cooke 1989, 1992; Firth 1979; Raffournier 1995; Uyar et al. 2013; Wallace et al. 1994). Considerable evidence reveals that larger firms might provide more voluntary disclosures (Ashbaugh & Pincus 2001; Cooke 1992; Meek et al. 1995). Since larger corporations normally have a higher level of analyst following, higher political costs caused by higher public exposure, and higher agency costs caused by more broadly dispersed ownership, similarly result in larger companies voluntarily making more disclosures (Jaafar & McLeay 2007; Lang & Lundholm 1993). In other words, in large companies, shareholders are widespread; consequently, extra disclosure will reduce the possible agency cost (Watts & Zimmerman 1983). Large corporations are likely to reveal more information to allow themselves to gain new financial sources at a lower cost (Botosan 1997). It is noticed that disclosing additional information will increase the degree of de facto harmonisation (van der Tas 1988). Therefore, one can expect that large companies are most likely to disclose more information and then to have higher de facto harmonisation. The hypothesis is thus:

- H 3. b1: de facto harmonisation is higher in companies with larger size than smaller size.

- ✓ **Firm age**

As mentioned previously, material (de facto) harmonisation will increase with a growth in the degree of comparability. Therefore, with more disclosure, this degree of comparability of financial reports will increase, which can lead to a rise in the degree of de facto harmonisation (van der Tas 1988). From this perspective, firms with a high level of disclosure are likely to have a greater level of de facto harmonisation. The company age might be relevant, as older companies could have good experience in terms of providing more information over time (Camfferman & Cooke 2002). In fact, older firms are likely to disclose much more information in their financial reports than younger firms. The reason behind this is that younger firms might suffer from competitive problems if they provide information about some items such as information on product development, capital expenditure, and research expenditure. The competitive problems may come when other competitors use this information disclosed to harm newly established firms. However, older firms might naturally be motivated to provide such information without hurting their competitive position (Owusu-Ansah 1998b). Moreover, the cost of disclosure of financial information might be more onerous for newly established firms than for older companies. Additionally, it can be reasonable to expect that older firms are likely to be more open in their disclosures and more independent than younger firms (Matolcsy et al. 2012). Evidence in previous literature has revealed that young companies are likely to provide unreliable financial reports because they may need strong financing support (Habbash et al. 2014). Additionally, young companies have probably weaker governance structures (Beneish 1999). However, older companies might be helped by their ability to obtain financial resources. Furthermore, older companies might have a more positive efficiency than younger ones (Lundvall & Battese 2000). In line with the above discussion, it is possible to expect that firm age can impact the disclosure and de facto level. The hypothesis is consequently:

H 3. b2: the level of facto harmonisation is positively associated with firm age.

- ✓ **Leverage**

Although some argue that creditors with direct access to firm information do not really require more public disclosure (Guerreiro et al. 2008), an international view is that companies with high leverage have to provide more information to satisfy the creditors' needs for this information (Alsaeed 2006). Agency theory also suggests that more highly leveraged companies disclose more information (Meek et al. 1995; Rahman et al. 2002). Companies with relatively higher debt in their capital structure are most likely to have higher agency cost. This high cost suggests a positive association between more disclosure level and the leverage (Alsaeed 2006). Moreover, monitoring problems between stockholders and creditors can be reduced by increasing financial disclosure in annual reports. These problems can be probably obvious in companies making a large debt in their capital structure (Raffournier 1995). As creditors may be able to protect themselves by having access to their firms information, managements and shareholders have an motivation to raise the disclosure of additional information about the company activities to increase the level of monitoring (Oyelere et al. 2003). In spite of the fact that some empirical evidences do not support this view (Chow & Wong-Boren, A. 1987; Raffournier 1995), the unexpected outcome might increase for the reason that leverage is probably a poor alternate for external financing (Raffournier 1995). Based upon the above discussion, the level of disclosure can be affected by the type of finance (through equity or leverage). Since increasing this level of disclosure can lead to increase the degree of de facto, one can suppose the following hypothesis:

- H 3. b3: de facto harmonisation is positively associated with the leverage ratio.

- ✓ **Profitability**

The profitability impact on voluntary disclosure is likely to be not obvious. Evidences regarding the relationship between profitability and level of disclosure have been mixed (Glaum & Street 2003). Camfferman and Cooke (2002), who studied British firms, found a significantly negative association between the profit margin and the level of disclosure, whereas, Wallace et al. (1994) observed insignificant association between the level of disclosure and the profit margin. However, Singhvi and Desai (1971) argue that higher profitability can motivate managers to provide more information because they feel that greater disclosure can provide affirmation to investors of profitability. As discussed by Singhvi and Desai (1971), if the profitability is high, managers are probably interested in disclosing detailed information in order to boost the continuance of their positions. In other words, the company with a high level of profit might provide more information because it is likely not to be afraid of being squeezed out of the competition, and wishes to assure its users about the its strong position to survival (Singhvi & Desai 1971). By the same token, firms with a higher rate of profit can be induced to provide more information to prove its ability to maximise the value of shareholders and to promote an optimistic impression of its performance (Alsaeed 2006). Not only achieving great profitability can encourage companies to supply additional information to reassure investors, but also it may possibly benefit them in terms of additional managerial compensation (Camfferman & Cooke 2002). It is reasonable to expect that firms with a high level of profitability disclose more information in annual reports than companies with low level of profitability. As mentioned previously, the degree of comparability (de facto harmonisation) increases with an increase in the disclosure level. Therefore, the hypothesis is as following:

- H 3. b4: the level of de facto harmonisation is positively associated with profitability

✓ **Ownership diffusion**

In general, the two kinds of ownership structure are dispersed ownership and shareholder concentration. Shareholder concentration happens when the only largest shareholder owns the majority of the shares, whereas many dispersed investors own other shares. However, dispersed ownership occurs when the majority of the shares are owned by many shareholders (Khan et al. 2012). Due to the principal agent relationship as found by previous research, more voluntary corporate disclosure is most likely to be provided by firms with low shareholder concentration (Khan et al. 2012; Rahman et al. 2002). The reason behind that is, owners of a high proportion of shares are probably able to monitor the management behaviour and the relevant information is accessible to them. Therefore, they do not need additional disclosures. Khan et al. (2012) also supported the previous evidence that companies with lower shareholder concentration may disclose more. Since de facto harmonisation can be strongly impacted by the level of disclosure (Ding et al. 2007; van der Tas 1988), these differences in the level of disclosure may result in differences in accounting practices (de facto). Consequently, one can expect that the type of ownership may impact accounting practices (de facto harmonisation). The hypothesis is therefore:

- H 3. a5: de facto harmonisation is positively associated with institutional ownership

✓ **Insider Ownership**

Agency theory suggests that firms whose shares are predominately held by insiders are likely to disclose less information in their financial statements (Owusu-Ansah

1998a). Moreover, some empirical evidences support this view (Chau & Gray 2002; Coulton et al. 2001). On the other hand, another point of view is that costs of information acquisition may increase with the level of insider ownership (Marston 1997). Therefore, firms might provide voluntary disclosure to decrease the information asymmetry problem, thereby decreasing the company's cost of external financing (Healy & Palepu 2001). The present study depends on the fact that different levels of insider ownership can lead to different level of disclosure provided. Since de facto harmonisation might be strongly influenced by the level of disclosure (Ding et al. 2007; van der Tas 1988), these differences in the level of disclosure can result in the differences in accounting practices (de facto). Thus, one can expect that de facto harmonisation may be impacted by the insider ownership. The hypothesis is therefore:

- H3. b6: De jure harmonisation is positively associated with insider ownership

✓ **Industry**

Industry type is a significant feature in determining the level of disclosure and de facto harmonisation. Many researchers have examined the relationship between industry type and level of disclosure and they obtained mixed results (see Alsaeed 2006; Cooke 1992; Raffournier 1995; Street & Bryant 2000; Wallace et al. 1994). Industry is most likely to impact the nature and amount of disclosure made by firms. This impact of industry has been supposed by signalling theory and political cost theory (Joshi & Gao 2009; Oyelere et al. 2003; Rajab & Handley-Schachler 2009). In this connection, it is important to note that the work of Watts and Zimmerman (1978) was criticized for ignoring industry membership as a key determinant (Ball & Foster 1982; Rahman et al. 2002). The level of disclosure is not likely to be the same among different types of industries. For instance, firms that are environment-sensitive are supposed to disclose more environment-related information than others (Joshi & Gao 2009). Wallace et al. (1994) proposed that additional information disclosed is probably to be different among different industries. Different nature of activities from firm to firm may result in different levels of disclosure and different choices of accounting methods used (Rahman et al. 2002). Companies are deeply impacted by market constraints and the competitive industrial environment. Firms are forced by external investors to provide industry-related information to allow these investors to assess the relative position of the company in an industry (Beretta & Bozzolan 2004). In Japan, Cooke (1992) provided evidence that manufacturing firms disclose more information than other kinds of Japanese firms. It is noticed that there is a strong relationship between the kind of industry and the political importance of this industry (Emadzadeh et al. 2012). Industry type is likely to be more sensitive to political costs than other proxies (Al-Shammari et al. 2008; Ball & Foster 1982). Political cost theory proposes that the type of industry can impact the political sensitiveness of companies. In other words, companies with more political sensitivity are most likely to provide more voluntary disclosure to reduce political costs (Oyelere et al. 2003). Therefore, one can expect that firms that provide more disclosure may have higher level of de facto harmonisation than others. This discussion can lead to the following hypothesis:

- H 3. b7: Non-financial companies have higher level of de facto harmonisation than financial firms.

- ✓ **Language of disclosure**

According to its definition, de facto harmonisation is a rise in the degree of comparability. Using any way to make companies financial reports more comparable can increase the degree of de facto harmonisation (van der Tas 1988). One of these ways may be providing financial information in many languages such as English and French. This can facilitate the process of decision making for foreign investors. It is reasonable to say; a more common language may offer more flexibility and lead to more comparability. There is a trend that English is considered to be a common language (Dahlgren & Nilsson 2012) and allow a more accurate interpretation than French (Evans 2004). Therefore, one can expect that disclosing financial information by using the English language (as a common language) may increase the level of comparability of this information with other international firms. Based on this discussion, the hypothesis is as following:

- H3. b8: de facto harmonisation is higher in companies which publish their financial information in the English language than companies that publish their financial information in other languages

4.2 Research Methodology

This section discusses measurement of the dependent and independent variables, data collection instruments and procedures, and samples. Moreover, it outlines the methods used in this research and the justifications for selecting these methods. Finally, this section ends with outlining the tests used in this research to test its hypotheses.

4.2.1 Data Collection

This study uses only secondary data (annual reports). The data was collected from various stock exchanges. Using annual reports is the appropriate way to measure harmonisation - especially when the aim of measuring is to compare international information (Tay & Parker 1990). The countries chosen and firms selected and the years for which data was collected are discussed below.

- ➢ **Selection of States**

Three NA countries were chosen for this study. These countries are Egypt, Morocco, and Tunisia. There are reasons for choosing this area. These countries (represent more than 90% from the total listed companies in NA market as previously mentioned) have a strategic location which link Southern Africa (source of raw materials) and Europe (industrial force) that makes them suitable markets for foreign investors. In recent years, these three countries have signed agreements under the European Neighbourhood Policy that include, among other issues, the adoption of

(EU compatible) IFRS (Kolster et al. 2012). Moreover, some of these countries publish their annual report in the English language and others publish in other language that allows for testing H3.3. Chapter Two explained that these countries are most likely to be similar in terms of their characteristics. This allows the researcher to measure the concentration of firms in this region and observe the level of compliance in this region as a whole. Furthermore, since these countries are developing countries, the results of this study may help other developing countries in general and African countries specifically.
It might be appropriate to also draw samples from companies listed on UK and France stock markets, as their practices represent internationally accepted standards. The reason behind choosing these two countries is that accounting in the NA region is impacted by the colonial legacy of these countries (Egypt by UK, whereas Tunisia and Morocco by France). In other words, companies listed on UK and France stock markets (as foreign companies) are chosen for the comparison. Because of the colonial legacy, the relationship between these two areas may be found.

- **Time Period**

To measure harmonisation, annual reports for the years 2005 and 2010 are used, the latter represents the most recent year that data is available. 2005 was chosen as the starting point because by that year all European listed companies (companies from UK and France which were chosen for the comparison) are requested to adopt IFRS. In regards to NA companies, two of the three countries, Tunisia (1996) and Egypt (1998), had begun to use IASs. In Morocco, IFRS are required for some entities. For example, banks and similar financial institutions are asked to use IFRS since 1 January 2008, whereas adopting IFRS is optional for non-financial companies listed on the Casablanca Stock Exchange (David & Păiuşan 2010). Additionally, 5 years is a good span of period to compare financial reporting rules and measure de facto harmonisation.

- **Sample description and selection**

The target population comprises all companies (607 companies - see Appendix 4 for more details) that are listed in stock exchange of three North Africa countries - 482 Egyptian, 74 Moroccan, and 51Tunisian stock exchange (Table 4.1).

Table 4-1 The Target Population (all Companies Listed in NA Markets)

Country	The target population		Total
	F	Non-F	
Egypt	178	304	482
Morocco	21	53	74
Tunisia	22	29	51
Total	221	386	607

F = financial
Non-F = non-financial

A main purpose of the sample selection process is to achieve a strict frame of reference both for the NA financial reports and IFRS statements. To achieve the aim of the study, samples were carefully framed and selected from the firms using NA financial reporting standards and rules and IFRS on the NA and international Stock Exchanges.

The sample consists of all listed companies (whose annual reports are available and all their financial information is also available on the OSIRIS database to collect the data for independent variables) at NA Stock Exchanges. In the three countries (Egypt, Morocco, and Tunisia) from two industries (financial and non-financial), samples of published annual reports were selected. The data are collected from different firms for two years 2005 and 2010 from a sample 121 (37, 84 in both years respectively) listed companies at NA Stock Exchanges (table 4.2). And the same number of companies (37, 84 firms in both years respectively) listed at European Stock Exchanges, specifically London and Paris was also collected (table 4.3). It was considered that companies selected had to prepare their financial statements under IFRS. This sample was used for measuring de facto harmonisation by using C index, which can provide the level of comparability (de facto harmonisation) between local NA accounting practices and foreign accounting practise. The situation of harmony

Table 4-2 Distribution of Sample Companies on the NA Stock Exchange

country	2005		2010		*S-size	
	F	Non-F	F	Non-F	2005	2010
Egypt	2	7	14	12	9	26
Morocco	5	8	8	11	13	19
Tunisia	11	4	20	19	15	39
Total	18	19	42	42	37	84
	37		84		121	

F = financial
Non-F = non-financial
*S-size = sample size

is studied both for all countries (as a whole sample) and for each country at two points in time (2005-2010), leading to a valuation of the extent of harmonisation during the study period.

As can be seen from Table 4.2 the distribution of sample into sectors is quite convergent in both years (2005 and 2010). In addition, Table 4.2 shows that Tunisia's firms represent the largest group in the sample in both years (2005 and 2010). On the whole, after sample frames and selection procedure, 121 NA (from stock exchange of Egypt, Morocco, and Tunisia) reports for both years 2005 and 2010, representing NA national practices (Group A), and 121 foreign reports (from stock exchange of Euronext Paris and London) for both years representing IFRS practices (Group B) were available for de jure and de facto examinations.

Table 4-3 Distribution of Sample Firms on the European Stock Exchanges

country	2005		2010		*S-size	
	F	Non-F	F	Non-F	2005	2010
UK	15	10	35	19	25	54
France	3	9	7	23	12	30
Total	18	19	42	42	37	84
	37		84		121	

F = financial
Non-F = non-financial

4.2.2 Measures Study Variables

- **Measuring Independence Variables**

To examine factors that may impact the extent of (de jure and de facto) harmonisation, the study first discovered features of North Africa region (see Chapter 2). Moreover, other related studies were carefully reviewed (Al-Shammari et al. 2008; Aljifri & Khasharmeh 2006; Alsaeed 2006; Buzby 1975; Cooke 1989, 1992; Dumontier & Raffournier 1998; El-Gazzar et al. 1999; Firth 1979; Floropoulos 2006; García Benau & Zorio Grima 2002; Guerreiro et al. 2008; Jaafar & McLeay 2007; Murphy 1999; Raffournier 1995; Rahman et al. 2002; Street & Bryant 2000; Wallace & Naser 1995; Wallace et al. 1994). The result was a set of

Table 4.4 summarises the firm characteristics and their measurements. The firm characteristics effects over accounting environment were discussed in Chapter three.

Table 4-4 Summary of The Independent Variables Measurement

No.	Variable	Measurement
1.	Firm size (LN TA)	Natural log (Total assets)
2.	AGE (LN Age)	Number of years passed since establishment
3.	Leverage	Total debt (long- term + short- term) ÷ Total assets
4.	ROA	EBIT (Earnings before interest and tax) ÷ Total assets
5.	Institutional Ownership	Number of shares owned by institutional investors ÷ total shares at year end of 2010
6.	Insider Ownership	Number of shares owned by insider investors ÷ total shares at year end of 2010
7.	Sector	Dummy variable 1= non- finance industry, 0= finance industry
8.	Language	Dummy variable 1= firm disclose its information in English language, 0 = otherwise

eight variables; namely, a firm size; firm age; leverage rate; profitability; institutional ownership; insider ownership; the type of sector; and language of disclosure. Data for independent variables were collected from the OSIRIS database by using US dollar[1]. This database covers more than 80,000 companies across the world. The data is very organized and includes a lot of details (BvDEP 2006).

- ✓ **Firm size**

Firm size (LN TA) was measured by Natural log (Total assets). This measure was used in many prior studies (see for example, Al-Shammari et al. 2008; Anderson & Reeb 2003; Çekrezi 2013; Chalmers et al. 2006; Low & Chen 2004; Matolcsy et al. 2012; Moon & Tandon 2007)

- ✓ **Firm age**

Firm age (AGE) was measured by the natural log of the years since incorporation. This measure of firm age was also used in previous studies (Alsaeed 2006; Jeong-Bon et al. 2011).

- ✓ **Leverage**

Leverage was measured by total debt (long- term + short- term) / total assets. This measure was used by many researchers previously (Bushee & Miller 2012; Depoers 2000; Guerreiro et al. 2008; Low & Chen 2004; Raffournier 1995; Yung 2001).

- ✓ **Profitability**

Profitability was measured by earnings before interest and tax (EBIT) / total assets. This is consistent with Chalmers et al. (2006), Choi et al. (2010), Ferguson et al. (2011), Walker et al. (2000) and Matolcsy et al. (2012).

- ✓ **Institutional Ownership**

Institutional Ownership was measured by number of shares owned by institutional investors ÷ total shares at year end of 2010. This is consistent with the literature (see for example, Al-Shammari et al. 2008; Ayers et al. 2002; Jiambalvo et al. 2002; Moon & Tandon 2007).

- ✓ **Insider Ownership**

Insider Ownership was measured by number of shares owned by insider investors ÷ total shares at year end of 2010. This is also consistent with many previous studies (Gaio 2010; Hope et al. 2012; Thomas 2012).

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[1] 2010 exchange Rate: one Egyptian pound = 0.17262 US dollar; one Moroccan Dirham = 0.11966 US dollar and one Tunisian Dinar = 0.69541 US dollar.

- ✓ **Sector (Industry)**

The sample companies were assigned to two industries, financial and non-financial (as Morais & Fialho 2008 has done). Sector was measured by a dummy variable coded one if the company was non- finance industry, and zero otherwise (finance industry). It was cosistent with Alsaeed (2006) and Street and Bryant (2000).

- ✓ **Language**

Language was also defined as dummy variable: if the firm disclose its information in English language takes one, otherwise zero. Arguably, there is a surprising omission for this factor in the literature. Aljifri and Khasharmeh (2006) studied this factor by using descriptive statistical analysis (percentages) and did not need to use any other technique to describe this variable. There is a need then, to critically appraise this variable in future work.

- ➢ **Measuring de jure harmonisation**

De jure harmonisation was measured by using a compliance index. In the process of calculating the compliance index, a checklist was developed. This checklist was based on several sources including text of the International Financial Reporting Standards (IFRS) as published by the IASB, International Financial Reporting Standards Compliance questionnaire 2010 (Deloitt 2010), and Reports on the Observance of Standards and Codes, ROSC (WorldBank 2008). This checklist was used by many researchers in prior studies (Al-Akra et al. 2010; Al-Shammari et al. 2008; Glaum & Street 2003; Mutawaa & Hewaidy 2010; Street & Bryant 2000; Street & Gray 2001; Tower, G. et al. 1999).

- ✓ **Selection of International Accounting Standards (IASs)**

Before using the checklist to measure the extent of compliance with IFRS, the set of standards included in this study had to be identified. The standards selection for this study was based on some criteria:

1. Information Availability;
2. Evidence from relevant previous studies that the standard is useful in evaluating the level of compliance.
3. Evidence from relevant prior studies that standards have been found to be among the most significant and controversial standards.

- ✓ **Compliance Checklist**

This checklist takes into consideration standards that have been found to be among the most significant and controversial standards in previous studies (see table 4.5 for more details).

Table 4-5 Controversial Standards in Previous Studies

Previous Studies	Al-Shammari (2005)	(Street et al. 1999)	Street and Bryant (2000)	Cairns (1999)	United Nation's study 1998	Larson and Street (2004)	Street and Gray (2001)			
							Chin	Swiss	France	German
Controversial Standards number	14	8	8	8	14	8	14	16	12	12
	37	16	12	22	32	17	29	23	16	23
		19	17	14		22		29	19	29
		29	19			38			23	33
		22	23						29	
			33							

Therefore, at the first stage the checklist included all significant and controversial standards found in previous studies (Table 4.6). It is also important to notice that some standards (IAS 14-22-29-30) were superseded by IFRS 3-7-8 as shown in the table 4.6. Thus, the checklist was based on thirteen standards. The thirteen IFRS standards (see Appendix 5) applicable to 2005 and 2010 fiscal year ends were tested (IAS 8, IAS 12, IAS 16, IAS 17, IAS 19, IAS 23, IAS 32, IAS 33, IAS 37, IAS 38, IFRS 3, IFRS 7 IFRS 8).

Table 4-6 First Stage the Checklist and Their Alternative

N	Standard		Superseded by
1.	IAS	8	
2.	IAS	12	
3.	IAS	14	IFRS 8
4.	IAS	16	
5.	IAS	17	
6.	IAS	19	
7.	IAS	22	IFRS 3
8.	IAS	23	
9.	IAS	29	IFRS 7
10.	IAS	30	IFRS 7
11.	IAS	32	
12.	IAS	33	
13.	IAS	37	
14.	IAS	38	

For measuring de jure harmonisation, information items (in checklist) were equally weighted. This is consistent with many previous compliance studies (Al-Shammari et al. 2008; Camfferman & Cooke 2002; Owusu-Ansah 1998b; Owusu-ansah &

Yeoh 2005; Wallace & Naser 1995). Depending on their perceived importance, information items can be weighted; but equal weighting was chosen for the following reasons:

1. Giving equally weight can avoid introducing subjectivity and bias (Canibano & Mora 2000; Cooke 1989; Herrmann & Thomas 1995; Owusu-Ansah 1998b).
2. There is disagreement on the relative importance of each item among different user groups (Camfferman & Cooke 2002; Owusu-Ansah 1998b).

3. Many previous studies have pointed out that the outcomes of the equal weighting process are likely to be similar to those of other systems of weighting (Chow & Wong-Boren, A. 1987; Prencipe 2004)

Annual reports were carefully scrutinised for compliance with IASB rules. On the whole, 65 (5 points for each standard) data points of compliance information are compared from each report (7865[2] from all companies). Each information item on the checklist was assigned a value of 20% if it was matched with the standard, zero if was not matched. In other words, as in many previous studies (Al-Shammari et al. 2008; Camfferman & Cooke 2002; Owusu-Ansah 1998b; Owusu-ansah & Yeoh 2005; Wallace & Naser 1995), the information items in checklist were equally weighted. For example, if the company matched just one information item from five points of particular standard, this means that the level of compliance of this company for this standard is 20%. If the company matched three information items from five points of this standard, this means that the level of compliance of this company for this standard is 60% and so on.

- **Measuring de facto harmonisation**

In the subject of measuring de facto harmonisation, different statistical methodologies have been used by many researchers to investigate formal harmonisation (Garrod & Sieringhaus 1995; Laínez Gadea et al. 1996; Nair & Frank 1981; Rahman et al. 1996). However, the majority of the empirical research has investigated de facto harmonisation at a point in time (Archer et al. 1996; McLeay et al. 1999; Van der Tas 1992; van der Tas 1988; Walton 1992). In this field, Indices and statistical models are two different methodologies for measuring the level of de facto harmonisation. Van der Tas (1988) and (1992) suggested an 'H' (Herfindahl) index to measure harmonisation at the national level, an 'I' index for measuring harmonisation at international level, and a 'C' index as comparability index. Tay & Parker (1990) pointed out that the main problem of using H index is coping with several reporting and additional information in the notes concerning the use of accounting alternative measurement methods. However, the 'C' index (developed by Van der Tas) is able to deal with multiple reporting and additional data (Canibano & Mora 2000). The 'C' index suggested by van der Tas (1988) measures the degree of comparability of annual reports. In other words, the index can provide to what extent can accounting information disclosed by companies be comparable.

[2] 65 * 121 sample size = 7865 information items

Archer et al. (1995) divided this index (C index) into a within-country 'C' index and between-country 'C' index. As a case study, Aisbitt (2001) measured the harmonisation in the Nordic region between 1981 and 1998, and examined the benefits of 'C' index. She suggests that qualitative study may be better than complex statistics. Taplin (2004) investigated previous used indices and suggested that choosing the appropriate way (for measuring harmonisation) based on four criteria: namely the weighting given to companies/countries, international focus - with country, between countries or overall, the treatment of multiple accounting methods, the treatment of non-disclosure.

The concept of harmony and the purpose of the study should be considered to choose a suitable method. The objective of this study is not to investigate the level of harmonisation between countries (which a statistical model may be more appropriate for testing the level of harmonisation between the countries) (Canibano & Mora 2000), but the level of harmonisation between these types of companies. For that reason, from among the different ways for measuring the harmonisation, the 'C' index was used in this study. This index was used by many researchers in previous studies (Canibano & Mora 2000; Gray et al. 2009; Halbouni 2010; Lasmin 2011; Taplin 2003; Van der Tas 1992). 'C' index is supposed as appropriate method. For the same reason, the index was not broken down in the between-country 'C' index and the within-country 'C' index as others have done (Archer et al. 1995). However, the results are expressed per countries in Chapter 5.

It should be considered that there is a difference between accounting harmony (a state) and accounting harmonisation. Accounting harmony is the state of the compliance at a point of time, whereas harmonisation (as process) the change in the value of the compliance level over time or between two points of time (Archer et al. 1995; Canibano & Mora 2000). When considering both the desirability of international comparability of financial reports and the operational problems involved in measuring harmonisation as processes rather than states, the most appropriate concept for measurement appears to be de facto harmonisation, in the form of studying de facto harmony over time (Canibano & Mora 2000). Thereby, it is possible to measure the level of harmonisation by comparing the values of the indices longitudinally to quantify harmonisation as process (Aisbitt 2001; Canibano & Mora 2000).

Therefore, this study used C index to measure the harmony (as stage) at two points of time (2005, 2010). Then the study measured the harmonisation (as process) by comparing the values of the indices longitudinally to quantify harmonisation. The index was calculated in the following way (van der Tas 1988):

$$\mathbf{C\ index} = \frac{\sum_{j=1}^{l}(a_j^2 - a_j) - \sum_{j<k}\sum(a_{jk}^2 - a_{jk}) + \sum_{j<k<l}\sum(a_{jkl}^2 - a_{jkl}) - \cdots + (-1)^{i+1}\sum\ldots\sum(a_j^2 - a_{j\ldots})}{n^2 - \mathrm{n}}$$

Where a_j is the number of companies supplying information based on accounting method 'j'. Where a_{jkl} is the number of companies supplying information based on accounting methods ‘j’, ‘k’, and ‘l’ etcetera and ‘j’, ‘k’, and ‘l’ are parameters fluctuating between ‘1’ and ‘i’.

‘n’ = the total companies in the sample.

The value of the index would increase when companies select one or only a few numbers of accounting methods. Thus, the value of the index would be ‘1’ when all the companies select the same accounting method (see, van der Tas 1988, p. 168 for more information). ‘C’ index was run for each firm pair for similarity in practices and also it was run for all in the sample company as a whole.

It is obviously not possible to compare every item of accounting issue, nor did it seem meaningful to use a very long list, such as the long list of the Price Waterhouse (1979) study. The list had to achieve the study objectives and to be reasonable and comprehensive. Therefore, for choosing the accounting issues, some criteria were created for including any accounting issue in this study. First, the method selected must considerably impact measures of net assets and/or profits. Secondly, information availability, the annual reports must be comparable to determine the accounting method choice selected. This criteria was used by Herrmann and Thomas (1995). It is also notable that these particular issues have largely been considered as among the most controversial accounting issues in terms of comparability. As a perfect example of this importance, the attention paid by some accounting bodies to these matters. IASC has revised the standards related to these issues, in some cases, several times.

- ✓ **Items Checklist**

In this respect, annual reports from NA firms and international firms (121 annual reports from firms listed in NA exchange markets and also 121 annual reports from companies listed in international exchange markets- London and Paris exchange markets) were collected. These financial reports were scrutinised and analysed with regard to seven accounting issues (Income tax; financial leases; goodwill; asset revaluation; depreciation; foreign currency translation and inventory). This is consistent with many similar previous studies (Archer et al. 1996; Canibano & Mora 2000; Emenyonu & Gray 1992; Herrmann & Thomas 1995; McLeay et al. 1999; Strouhal 2012; Van der Tas 1992). The data was used to calculate the value of the ‘C’ index. For each of the accounting issues, it was considered there were five alternatives (as shown in Appendix 6).

Then, each NA firm was compared with the same data of each foreign company by using the global industry classification standard (MSCI 2010) to determine suitable pairs. This process is consistent with Rahman et al. (2002) who used the Jaccard coefficient to measure accounting practice harmony. This technique (Jaccard coefficient) is commonly employed in the analyses of the similarity of data with binary patterns (Kosman & Leonard 2005) as Rahman et al. (2002) has done. In most cases, the Jaccard coefficient is inappropriate for requirements that have more than two options (such as the present study). For example, if a requirement has three choices, firms can select two different options and still have another option that can match (between companies) because both firms did not choose that option (both firms will get 0 for that option). However, the Jaccard coefficient will consider it as a match, which would give misleading results. The present study had more than two options (five for every accounting issue). Therefore, Rahman's technique was inappropriate for this study. Since, the study aims to measure the degree of comparability; de facto harmonisation for every company was also measured by C index (see, van der Tas 1988). To improve the reliability of the comparison, the researcher determined that specific activities for each firm to be a good partner to particular one. For example, it was considered that banks in NA were compared with banks in foreign sample, and insurance companies were compared with similar companies from foreign sample and so on. In fact, foreign sample companies are likely to be similar, because all of them are forced to adopt IFRS in preparing their financial reports. Thus, one can argue that each foreign company could be the partner to a local company and will not lead to any problem (this was later confirmed by the empirical result[3]- see Chapters 5and 6).

4.2.3 Descriptive Analyses

Descriptive analyses aims to describe quantitatively the main features of the data in a study. Descriptive Statistics are normally used to provide quantitative descriptions in a manageable form. More specially, data are shown in the form of tables. Descriptive statistics summarises patterns of data in terms of the mean, median, SD (Standard Deviation), minimum, and maximum. It can help the reader to simplify large amounts of data in a reasonable way.

4.2.4 Multivariate Regression Analysis

- **Diagnostic Checks**

Noticeably, data screening can be a necessary stage in the research process before conducting data analysis. Thereby, the process of data screening aims to ensure that data collected have appropriate quality. Data quality problems can lead to bias in outcomes from analysis. Therefore, conducting data screening is essential to provide high quality research. For this reason, several diagnostic checks were performed to confirm that the assumptions of multiple regression analysis were not violated. Theses diagnostic checks focused on multicollinearity, normality, heteroscedasticity and endogeneity.

[3] The degree of de facto harmonization obtained by C index for a simple as whole = 50 % (by putting all local and foreign companies in the equation of C index);

At the same time, de facto for each firm was obtained by using C index between every pair of companies (one by one). The mean of de facto of all companies = 50 %, conforming the result of a whole simple and indicating the reliability of selecting the partner for each company.

- ✓ **Multicollinearity**

Multicollinearity indicates to high correlation levels among the explanatory (independent) variables. In previous literature, it is argued that the 'rule of thumb' for testing multicollinearity problems by using a correlation matrix is that multicollinearity becomes a problem once the correlation is high (> 0.8 see for example, Gujarati 2003; Li et al. 2012), whereas it is debated that multicollinearity becomes a serious concern where VIFs exceed 10 (Agbejule & Saarikoski 2006; Byrne & Flood 2008; Darnall et al. 2009; Goodhue et al. 2011; Li et al. 2012; Maiga et al. 2013; Oliveira et al. 2010; Rashid 2013; Street & Bryant 2000). Multicollinearity test was presented in Chapter 6.

- ✓ **Normality**

In the population, observations should have normal distribution. Although the normality is likely not to cause any problem with large simple size - more than 30 (Coakes 2005; Prasad et al. 2009; Rashid 2013), the study undertook some tests to conform the normality of data. For example, Histogram-Normality Test was performed to see whether the data distribution is a 'Bell Shape' or not.

- ✓ **Heteroscedasticity**

Heteroscedasticity assumption requires that the residuals have equal variances across all levels of the predictor(s). It is known that heteroscedasticity is not desirable in an estimated regression model. For this reason, the study also checked for heteroscedasticity using the plot of standardised residuals (ZRESID) against the standardised predicted value (ZPRED) of the all the models. In addition, Breusch-test and Koenker test Pagan (see for example, Luger 2010; Montes-Rojas & Sosa-Escudero 2011; Vandenbulcke et al. 2011) were also performed for heteroscedasticity.

- ✓ **Endogeneity**

The endogeneity problem occurs when the independent variable is associated with the error term in a regression model (Wooldridge 2002). This indicates that the regression coefficient in an Ordinary Least Squares (OLS) regression is biased (Bound et al. 1995). When endogeneity is extant, some techniques such as instrumental variable should be used to deal with this problem. Examination for this issue was performed.

- ✓ **Outlier**

An outlier can be defined as an observation considered being different from the remainders (He et al. 2003). In other words, the case that differs significantly from the overall trend of the data is recognised as an outlier (Field 2009). This study examined outlier problems, and it was not found to be any considerable concern related to this issue.

- **Correlation**

To identify relationships among study variables, the study conducted correlation and regression analyses. This study uses Pearson and Spearman-rank Correlation coefficients to discover whether or not each independent variable is a significant predictor of the dependent variable. It is important to note that this study uses interval or ratio data. For this reason, using Pearson correlation is appropriate for the study, since it requires interval or ratio data (Field 2009). However, the study used also Spearman-rank Correlation.

- **Regression**

The study employs Multivariate Regression Analysis to identify the impact of firm characteristics on de jure harmonisation, and to exam the relationship between firm characteristics and de facto harmonisation as well. This technique was used by many similar previous studies (Al-Shammari et al. 2008; Alsaeed 2006; Cooke 1989, 1992; Morais & Fialho 2008; Raffournier 1995; Tower et al. 1999).

- **Empirical models for tests of hypotheses**

All hypotheses that were developed in Chapter 4 were tested using multi regression. Thus, the section outlines the regression models used to exam these hypotheses.

To test these hypotheses, which address the relationship between firm characteristics and de jure and de facto harmonisation, the following models were developed in this study:

Model (1) $Y1= \alpha + \beta1\ \text{size} + \beta2\ \text{AGE} + \beta3\ \text{Leverage} + \beta4\ \text{ROA} + \beta5\ \text{INSTOWNERSHIP}$

$+ \beta6\ \text{INSIOWNERSHIP} + \beta7\ \text{Sector} + \beta8\ \text{Language} + \varepsilon$

Model (2) $Y2= \alpha + \beta1\ \text{size} + \beta2\ \text{AGE} + \beta3\ \text{Leverage} + \beta4\ \text{ROA} + \beta5\ \text{INSTOWNERSHIP}$

$+ \beta6\ \text{INSIOWNERSHIP} + \beta7\ \text{Sector} + \beta8\ \text{Language} + \varepsilon$

Where:
Y1 is de jure harmonisation; Y2 is *de* facto harmonisation, Firm size is the natural logarithm of total assets; firm age (AGE) is the natural logarithm of the number of years a firm has been established; Leverage is total debt (long- term + short- term) / total assets; Profitability (ROA) is earnings before interest and tax (EBIT) / total assets; institutional ownership (INSIOWNERSHIP) is the number of shares owned by institutional investors / total shares at year end of 2010; insider ownership (INSTOWNERSHIP) is number of shares owned by insider investors/total shares at year end of 2010; sector is defined as dummy variable: one if company is from the non-finance industry, otherwise takes zero; language is also defined as dummy variable: if the firm disclose its information in English language takes one otherwise zero.

4.3 Summary

This Chapter has presented the Research Design and Methodology employed in this study. It has described the quantitative components of the study. The Chapter has started with formulating the research questions (stated in Chapter1) into a number of testable hypotheses. The conceptual model was also presented in this Chapter. It has also discussed measurement of the dependent and independent variables, data collection instruments and procedures, and samples. Moreover, it has outlined the methods used in this research and the justifications for selecting these methods. Finally, regression models used to test the research hypotheses are formulated. The primary results of this study are discussed in Chapters 5 and 6.

Chapter 5 Harmonisation Findings- Analysis and Discussion

5.0 Introduction

The chapter provides the key results from measuring (de jure and de facto) harmonisation. This chapter is organised as follows: harmonisation findings for the full sample are provided in sections 5.1. Section 5.1.1 discusses findings on de jure harmonisation for full sample; Section 5.1.2 discusses findings on de facto harmonisation for full sample. The Chapter also provides the key results from measuring (de jure and de facto) harmonisation for sub-sample in 5.2 sections. Section 5.2.1 clarifies the results obtained from measuring de jure harmonisation from sub-sample; section; 5.2.2 presents the results from measuring de facto harmonisation from sub-sample. Section 5.3 explains the findings obtained from two types of harmonisation measurements. Section 5.4 summarises the main themes of this chapter.

5.1 Harmonisation Findings for Full Sample

5.1.1 Findings on De jure Harmonisation

Subjects on de jure harmonisation of North Africa's financial reporting with IFRS are presented in the first research hypothesis (**H1a)**. Therefore the first hypothesis is stated in the following form:

H1a: De jure harmonisation between North Africa's financial reporting and IFRS has increased between 2005 and 2010.

As described in Chapter 4, the harmonisation degree with IFRSs was measured by a compliance index. This index was used in many similar prior studies (see for example, Al-Shammari et al. 2008; Glaum & Street 2003; Street & Bryant 2000; Street & Gray 2001; Tower, G. et al. 1999). The index was based on a checklist instrument that was developed for the purpose of assessing the first question of the research. The checklist based on the 13 IFRSs mentioned previously. Data from annual reports was gathered for this index.

Table 5.1 illustrates the compliance level based on standard-by-standards and overall de jure harmonisation degree for two years 2010-2005. As shown in Table 5.1 overall percentage of de jure harmonisation increased from 46% in 2005 to 54% in 2010. This de jure harmonisation increase may be a logical result of intense efforts made by North African countries to integrate with the European market (Kolster et al. 2012). Scores range between Zero and 1.00, indicating significant differences between fully compliance with IFRS requirements and no compliance with these requirements. A review of Table 5.1 reveals that the level of compliance increased for all standards without any exceptions. Also the table shows that IAS 16 obtained the highest level of compliance for both years (2005, 2010).

Table 5-1 Compliance Level Based on Standard-by-Standards (Full Sample)

No.	Standards	Mean	Median	Std. Dev.	Min	Max
Panel A: *Compliance level based on standard-by-standards for 2005* **(N** 37**)**						
1.	IAS 8	0.70	0.80	0.25	0	1
2.	IAS 12	0.37	0.40	0.38	0	1
3.	IAS 16	0.77	0.80	0.21	0	1
4.	IAS 17	0.28	0.00	0.39	0	1
5.	IAS 19	0.24	0.00	0.37	0	1
6.	IAS 23	0.49	0.60	0.33	0	1
7.	IAS 32	0.34	0.20	0.38	0	1
8.	IAS 33	0.24	0.00	0.37	0	1
9.	IAS 37	0.49	0.40	0.33	0	1
10.	IAS 38	0.66	0.80	0.28	0	1
11.	IFRS 3	0.64	0.80	0.32	0	1
12.	IFRS 7	0.42	0.40	0.34	0	1
13.	IFRS 8	0.32	0.20	0.35	0	1
overall 2005		**0.46**	0.38	0.27	0	1
Panel B: *Compliance level based on standard-by-standards for 2010 (N 84)*						
1.	IAS 8	0.78	0.8	0.18	0	1
2.	IAS 12	0.46	0.4	0.43	0	1
3.	IAS 16	0.85	0.8	0.14	0	1
4.	IAS 17	0.36	0	0.42	0	1
5.	IAS 19	0.33	0.2	0.41	0	1
6.	IAS 23	0.60	0.6	0.31	0	1
7.	IAS 32	0.39	0.3	0.42	0	1
8.	IAS 33	0.34	0.2	0.4	0	1
9.	IAS 37	0.52	0.5	0.35	0	1
10.	IAS 38	0.73	0.8	0.24	0	1
11.	IFRS 3	0.75	0.8	0.25	0	1
12.	IFRS 7	0.48	0.4	0.38	0	1
13.	IFRS 8	0.41	0.2	0.34	0	1
Overall 2010		**0.54**	0.42	0.27	0	1

* Sample size

A review of Panels A and B of Table 5.2 report the compliance level based on countries for two years 2010-2005. These reveal that the level of compliance with IFRS exhibited by companies domiciled in Egypt has dropped down from 68% in 2005 to 63% in 2010, whereas the level of compliance exhibited by companies domiciled in Morocco has dramatically increased from 44% in 2005 to 79% in 2010. The lowest compliance levels (for two years 2005 and 2010) with IFRS requirements were exhibited by companies domiciled within Tunisia (34% and 35% respectively).

The Tunisian market is not strongly flexible compared to markets in developed countries (Loukil et al. 2010). In regard to Egyptian companies, the possible explanation for decreasing the level of compliance of Egyptian companies is that, Decree No. 503 (issued in October 1997) was replaced in late 2006. In that year, Decree 243 of EAS (which includes some EAS based on IFRS) was issued by the then Minister of Investment to be enforced upon all listed companies in the Egyptian financial market by 2007 (Ebaid 2011). This may bring with it some drawbacks. For example, disclosure requirements of IFRS, in certain key respects, do not satisfy local users' needs in Egypt, and this disclosure (unlike in some other states) has been low (Dahawy & Conover 2007). Despite enforcing rules in financial Egyptian market such as EAS and IFRS, complying with the disclosure requirements of these standards has not been the norm (Abd-Elsalam 1999; Dahawy et al. 2002; Hassan et al. 2009). The reason behind this has been Egyptian culture. IFRS may be inconsistent with the socio-economic needs of local investors (Dahawy & Conover 2007). Users may well be sceptical of accounting information regardless of IFRS adoption (Ebaid 2011). Egyptian companies may recognize that IFRSs do not satisfy local users' needs in Egypt. If adopting IFRS does not consider local conditions and expertise (or the lack of it) problems may be increased by such adoption. It is also essential to note that the harmonisation degrees have increased for all countries by comparing the same sample size, 37 firms (Table 5-8).

Panels A and B of Table 5.3 reveal that although the lowest compliance levels with IFRS requirements for two years (2005,2010) were found in the financial industry, the level of this sector has increased from 31% in 2005 to 49% in 2010. However, the level of compliance was the highest in the non-financial companies (60% and 59%). Tunisian companies represent the largest percentage of the non-financial sample. Therefore, the possible explanation for slight decline in this sector is that the Tunisian market is not strongly flexible (Loukil et al. 2010). On the other hand, the deregulation of the financial sector , in Tunisia, might be the reason behind the increase of compliance in this sector, since Tunisian companies represent the largest percentage of the financial sample as well (Mehdi 2007). It is also important to note that the harmonisation degrees have increased for both sectors by comparing the same sample size, 37 firms (Table 5. 9).

In the light of the above discussion, it is clear that overall de jure harmonisation has been increased from 46% in 2005 to 54% in 2010, providing the evidence to support H1a. Therefore, H1a is accepted.

Table 5-2 De jure Based on Countries by Compliance Index (Full Sample)

country	*S-size	IAS 8	IAS 12	IAS 16	IAS 17	IAS 19	IAS 23	IAS 32	IAS 33	IAS 37	IAS 38	IFRS 3	IFRS 7	IFRS 8	De jure %
***Panel A**: Compliance level based on countries and based on standard-by-standards for 2005*															
Egypt	9	0.78	0.73	0.84	0.47	0.62	0.6	0.69	0.64	0.8	0.62	0.64	0.71	0.67	0.68
Morocco	13	0.54	0.52	0.68	0.37	0.25	0.32	0.45	0.22	0.57	0.54	0.49	0.49	0.26	0.44
Tunisia	15	0.79	0.03	0.8	0.09	0.01	0.57	0.03	0.01	0.23	0.79	0.77	0.19	0.17	0.34
***Panel B**: Compliance level based on countries and based on standard-by-standards for 2010*															
Egypt	26	0.74	0.76	0.88	0.48	0.48	0.5	0.64	0.55	0.75	0.55	0.68	0.72	0.49	0.63
Morocco	19	0.82	0.79	0.87	0.77	0.74	0.76	0.79	0.72	0.83	0.84	0.77	0.81	0.73	0.79
Tunisia	39	0.79	0.11	0.82	0.07	0.04	0.58	0.02	0.02	0.22	0.79	0.78	0.15	0.2	0.35

* Sample size

Table 5-3 De jure Based on Sectors by Compliance Index (Full Sample)

sector	S-size	IAS 8	IAS 12	IAS 16	IAS 17	IAS 19	IAS 23	IAS 32	IAS 33	IAS 37	IAS 38	IFRS 3	IFRS 7	IFRS 8	De jure %
Panel A: Compliance level based on sector and based on standard-by-standards for 2005															
financial	18	0.63	0.16	0.69	0.09	0.03	0.39	0.12	0.07	0.29	0.60	0.60	0.20	0.20	0.31
non-financial	19	0.76	0.58	0.84	0.46	0.44	0.59	0.54	0.40	0.67	0.72	0.68	0.63	0.44	0.60
Overall %	37	0.70	0.37	0.77	0.28	0.24	0.49	0.33	0.23	0.48	0.66	0.64	0.42	0.32	0.46
Panel B: Compliance level based on sector and based on standard-by-standards for 2010															
financial	42	0.75	0.44	0.82	0.27	0.28	0.49	0.35	0.30	0.47	0.67	0.69	0.45	0.36	0.49
non-financial	42	0.82	0.49	0.88	0.44	0.39	0.70	0.42	0.38	0.57	0.79	0.81	0.51	0.46	0.59
Overall %	84	0.78	0.46	0.85	0.36	0.33	0.60	0.39	0.34	0.52	0.73	0.75	0.48	0.41	0.54

5.1.2 Findings on De facto Harmonisation

Subjects on de facto harmonisation of North Africa's financial reporting with IFRS are presented in the first research hypothesis (**H1b)**. Therefore the hypothesis is stated in the following form:

H1b: De facto harmonisation between North Africa's financial reporting and IFRS has increased between 2005 and 2010.

As described in Chapter 4, the de facto harmonisation degree with IFRSs was measured by a C index. This index has been widely used in accounting literature (see for example, Canibano & Mora 2000; Halbouni 2010; Lasmin 2011; Taplin 2003; Van der Tas 1992). Unlike other indexes (such as H index) the C index (developed by Van der Tas) is able to deal with multiple reporting and additional data (Canibano & Mora 2000). The index was calculated in the following way (van der Tas 1988): more references

$$\mathbf{C}\text{ index} = \frac{\sum_{j=1}^{l}\left(a_j^2 - a_j\right) - \sum_{j<k}\sum\left(a_{jk}^2 - a_{jk}\right) + \sum_{j<k<l}\sum\left(a_{jkl}^2 - a_{jkl}\right) - \cdots + (-1)^{i+1}\sum\ldots\sum\left(a_j^2 - a_{j\ldots}\right)}{n^2 - \text{n}}$$

Where a_j is the number of companies supplying information based on accounting method 'j'. Where a_{jkl} is the number of companies supplying information based on accounting methods 'j', 'k', and 'l' etcetera and 'j', 'k', and 'l' are parameters fluctuating between '1' and 'i'.

n = the total companies in the sample.

The value of the index would increase when companies select one or only a few numbers of accounting methods.

Thus, the value of the index would be '1' when all the companies select the same accounting method (see, van der Tas 1988, p. 168 for more information).

Data from annual reports also was gathered for the C index.

Table 5.4 illustrates de facto level based on accounting methods for two years 2010-2005.

Table 5-4 De facto (by C index) Based on Accounting Methods (Full Sample)

S-size	Year of compliance	A = Income tax	B = Financial leases	C = Goodwill	D = asset revaluation	E = depreciation	F = Foreign currency translation	G = inventory	Overall De facto
37	Compliance 2005 level	0.31	0.35	0.27	0.45	0.46	0.28	0.39	**0.36**
84	Compliance 2010 level	0.48	0.47	0.41	0.50	0.70	0.44	0.50	**0.50**

As shown In Table 5.4, 1 overall percentage of de facto harmonisation increased from 36% in 2005 to 50% in 2010. For the same reason behind *de* jure harmonisation increase, de facto harmonisation may be a logical increased (Kolster et al. 2012). A review of table 5.4 reveals that the level of compliance increased for all accounting methods without any exceptions. Also the table shows that depreciation methods got the highest level of compliance for both years (2005, 2010) with IFRS (% 46 and % 70 respectively).

Table 5-5 De facto (by C index) According to countries (Full Sample)

Year	country	S-size	A = Income tax	B = Financial leases	C = Goodwill	D = asset revaluation	E = depreciation	F = Foreign currency translation	G = inventory	De facto
Panel A: Compliance level based on countries for 2005										
2005	Egypt	9	0.61	0.29	0.39	0.37	0.47	0.46	0.32	0.42
	Morocco	13	0.38	0.42	0.38	0.62	0.56	0.41	0.44	0.46
	Tunisia	15	0.41	0.57	0.30	0.76	0.70	0.31	0.70	0.54
Panel B: Compliance level based on countries for 2010										
2010	Egypt	26	0.75	0.35	0.44	0.54	0.68	0.61	0.48	0.55
	Morocco	19	0.47	0.39	0.42	0.50	0.63	0.50	0.43	0.48
	Tunisia	39	0.41	0.68	0.40	0.63	0.74	0.37	0.54	0.54

A review of Panels A and B of Table 5.5 report the compliance level (de facto) based on countries for two years 2010-2005. These reveal that the level of compliance with IFRS exhibited by companies domiciled in Tunisia has remained the same in two years (2005, 2010) with 54%, whereas the level of compliance with IFRS requirements has increased in Morocco (from 46% to 48%) and Egypt (from 42% to 55%).

Panels A and B of Table 5.6 reveal that although the lowest compliance levels with IFRS requirements for two years (2005,2010) were found in the non-financial companies, this sector achieved reasonable increase in the level of de facto harmonisation during two years (from 44% in 2005 to 49% in 2010). However, in the financial industry, the increase of the level of compliance was lower (from 52% in 2005 to 53% in 2010) than in the non-financial sector.

Table 5-6 De facto According to Sectors by C index (Full Sample)

Year	sector	S-size	A = Income tax	B = Financial leases	C = Goodwill	D = asset revaluation	E = depreciation	F = Foreign currency translation	G = inventory	De facto
Panel A: Compliance level based on sector for 2005										
2005	Financial sector	18	0.38	0.42	0.37	0.74	0.53	0.29	0.89	0.52
	Non-financial	19	0.39	0.47	0.32	0.49	0.65	0.44	0.31	0.44
Panel B: Compliance level based on sector for 2010										
2010	Financial sector	42	0.46	0.45	0.42	0.49	0.65	0.41	0.80	0.53
	Non-financial	42	0.51	0.50	0.40	0.51	0.74	0.47	0.34	0.49

As shown in the above tables, it is clear that the degree of de facto harmonisation has increased for all accounting methods as whole. Also according to the countries measurements, the de facto has increased for two countries Egypt and Morocco, whereas the degree reminded the same for Tunisia. Moreover, it is noticed that the level of compliance based on sectors has increased for both sectors over two years (2005 and 2010). In short, overall compliance of accounting practise (de facto) has increased from 36% in 2005 to 50% in 2010, confirming hypothesis set in H1b. Thus, H1b is also accepted.

5.2 Harmonisation Findings for Sub-sample

5.2.1 Findings on De jure Harmonisation

Although the comparison was done for full sample (84 firms in 2010, and only 37 firms in 2005- because of the problems in data availability), the situation of de jure harmonisation of North Africa's financial reporting with IFRS is measured also by comparing the degree of compliance in two years (2005 and 2010) for the same companies that have data in both years. In other words, the comparison was done by comparing 2005 annual reports of 37 companies with the annual reports of the same companies in 2010.

Table 5.7 illustrates the compliance level based on standard-by-standards and overall de jure harmonisation degree for two years 2010-2005. As shown in Table 5.7 overall percentage of de jure harmonisation increased from 46% in 2005 to 62% in 2010. This harmonisation increase confirms the results obtained previously.

Table 5-7 Compliance Level Based on Standard-by-Standards (Sub-sample)

No.	Standards	Mean	Median	Std. Dev.	Min	Max
Panel A: *Compliance level based on standard-by-standards for 2005 (N 37)*						
14.	IAS 8	0.70	0.80	0.25	0	1
15.	IAS 12	0.37	0.40	0.38	0	1
16.	IAS 16	0.77	0.80	0.21	0	1
17.	IAS 17	0.28	0.00	0.39	0	1
18.	IAS 19	0.24	0.00	0.37	0	1
19.	IAS 23	0.49	0.60	0.33	0	1
20.	IAS 32	0.34	0.20	0.38	0	1
21.	IAS 33	0.24	0.00	0.37	0	1
22.	IAS 37	0.49	0.40	0.33	0	1
23.	IAS 38	0.66	0.80	0.28	0	1
24.	IFRS 3	0.64	0.80	0.32	0	1
25.	IFRS 7	0.42	0.40	0.34	0	1
26.	IFRS 8	0.32	0.20	0.35	0	1
overall 2005		**0.46**	0.38	0.27	0	1
Panel B: *Compliance level based on standard-by-standards for 2010 (N 37)*						
14.	IAS 8	0.83	0.80	0.21	0	1
15.	IAS 12	0.58	0.80	0.44	0	1
16.	IAS 16	0.86	0.80	0.18	0	1
17.	IAS 17	0.50	0.40	0.46	0	1
18.	IAS 19	0.45	0.20	0.47	0	1
19.	IAS 23	0.69	0.60	0.33	0	1
20.	IAS 32	0.46	0.40	0.46	0	1
21.	IAS 33	0.45	0.20	0.46	0	1
22.	IAS 37	0.59	0.60	0.38	0	1
23.	IAS 38	0.78	0.80	0.25	0	1
24.	IFRS 3	0.79	0.80	0.26	0	1
25.	IFRS 7	0.54	0.40	0.41	0	1
26.	IFRS 8	0.51	0.40	0.42	0	1
Overall 2010		**0.62**	0.49	0.32	0	1

* Sample size

Scores range between Zero and 1.00, indicating significant differences between fully compliance with IFRS requirements and no compliance with these requirements. A review of table 5.7 reveals that (also the same result of full sample comparison) the level of compliance increased for all standards without any exceptions. Also the table shows that IAS 16 [4] obtained the highest level of compliance for both years (2005, 2010).

A review of Panels A and B of Table 5.8 report the compliance level based on countries for two years 2010-2005. These reveal that the level of compliance exhibited by companies domiciled in three countries has dramatically increased as a whole. It is important to note that this result is different from previous one (when full sample was compared) that illustrated that the compliance in Egypt has dropped down, the level of compliance exhibited by companies domiciled in Egypt (when comparing the annual report of the same companies) has dramatically increased from 68% in 2005 to 73% in 2010, whereas the level of compliance exhibited by companies domiciled in Morocco has significantly also increased from 44% in 2005 to 82% in 2010. The lowest compliance levels (for two years 2005 and 2010) with IFRS requirements were exhibited by companies domiciled in Tunisia (34% and 37% respectively).

Panels A and B of Table 5.9 reveal that although the lowest compliance levels with IFRS requirements for two years (2005,2010) were found in the financial industry, the level of this sector has increased from 31% in 2005 to 44% in 2010. However, the level of compliance in two years was the highest in the non-financial companies (60% and 78% respectively).

In the light of the above discussion, it is clear that overall de jure harmonisation has increased from 46% in 2005 to 62% in 2010, indicating to acceptation of H1a.

[4] This standard (IAS 16) discusses issues related to property, plant, and equipment (see Appendix 5 for more details).

Table 5-8 De jure Based on Countries by Compliance Index (Sub-sample)

Country	*S-size	IAS 8	IAS 12	IAS 16	IAS 17	IAS 19	IAS 23	IAS 32	IAS 33	IAS 37	IAS 38	IFRS 3	IFRS 7	IFRS 8	De jure %
***Panel A**: Compliance level based on countries and based on standard-by-standards for 2005*															
Egypt	9	0.78	0.73	0.84	0.47	0.62	0.6	0.69	0.64	0.8	0.62	0.64	0.71	0.67	0.68
Morocco	13	0.54	0.52	0.68	0.37	0.25	0.32	0.45	0.22	0.57	0.54	0.49	0.49	0.26	0.44
Tunisia	15	0.79	0.03	0.8	0.09	0.01	0.57	0.03	0.01	0.23	0.79	0.77	0.19	0.17	0.34
***Panel B**: Compliance level based on countries and based on standard-by-standards for 2010*															
Egypt	9	0.87	0.78	0.93	0.64	0.6	0.71	0.64	0.67	0.82	0.69	0.78	0.71	0.69	0.73
Morocco	13	0.85	0.83	0.88	0.83	0.78	0.8	0.83	0.78	0.85	0.85	0.83	0.83	0.77	0.82
Tunisia	15	0.80	0.24	0.81	0.12	0.08	0.57	0.03	0.03	0.23	0.79	0.77	0.17	0.19	0.37

* Sample size

Table 5-9 *De jure* Based on Sectors by Compliance Index (Sub-sample)

sector	S-size	IAS 8	IAS 12	IAS 16	IAS 17	IAS 19	IAS 23	IAS 32	IAS 33	IAS 37	IAS 38	IFRS 3	IFRS 7	IFRS 8	De jure %
Panel A: Compliance level based on sector and based on standard-by-standards for 2005															
financial	18	0.63	0.16	0.69	0.09	0.03	0.39	0.12	0.07	0.29	0.60	0.60	0.20	0.20	0.31
non-financial	19	0.76	0.58	0.84	0.46	0.44	0.59	0.54	0.40	0.67	0.72	0.68	0.63	0.44	0.60
Overall %	37	0.70	0.37	0.77	0.28	0.24	0.49	0.33	0.23	0.48	0.66	0.64	0.42	0.32	0.46
Panel B: Compliance level based on sector and based on standard-by-standards for 2010															
financial	18	0.74	0.38	0.78	0.23	0.24	0.51	0.22	0.24	0.39	0.71	0.69	0.30	0.32	0.44
non-financial	19	0.92	0.77	0.95	0.75	0.65	0.85	0.68	0.64	0.78	0.85	0.89	0.76	0.69	0.78
Overall %	37	0.83	0.57	0.86	0.49	0.45	0.68	0.45	0.44	0.58	0.78	0.79	0.53	0.51	0.61

5.2.2 Findings on De facto Harmonisation

The situation of de facto harmonisation is also measured by comparing the degree of compliance in two years (2005 and 2010) for the same companies that have data in both years. Thus, the comparison of de facto was done by comparing the degree of de facto obtained using annual reports of the same companies in two years.

Table 5-10 De facto (by C index) Based on Accounting Methods (Sub-sample)

S-size	Year of compliance	A = Income tax	B = Financial leases	C = Goodwill	D = asset revaluation	E = depreciation	F = Foreign currency translation	G = inventory	Overall De facto
37	Compliance 2005 level	0.31	0.35	0.27	0.45	0.46	0.28	0.39	**0.36**
37	Compliance 2010 level	0.60	0.43	0.39	0.48	0.76	0.47	0.42	**0.51**

As shown In Table 5.10, overall percentage of de facto harmonisation increased from 36% in 2005 to 51% in 2010. A review of Table 5.10 reveals that the level of compliance increased for all accounting methods without any exceptions. Also the table shows that depreciation methods got the highest level of compliance for both years (2005, 2010) with IFRS (46% and 76% respectively), whereas Goodwill was the lowest degree for both years (.27 and .39 respectively).

Table 5-11 De facto (by C index) According to Countries (Sub-sample)

Year	country	S-size	A = Income tax	B = Financial leases	C = Goodwill	D = asset revaluation	E = depreciation	F = Foreign currency translation	G = inventory	De facto
Panel A: Compliance level based on countries for 2005										
2005	Egypt	9	0.61	0.29	0.39	0.37	0.47	0.46	0.32	0.42
	Morocco	13	0.38	0.42	0.38	0.62	0.56	0.41	0.44	0.46
	Tunisia	15	0.41	0.57	0.30	0.76	0.70	0.31	0.70	0.54
Panel B: Compliance level based on countries for 2010										
2010	Egypt	9	1.00	0.29	0.43	0.53	0.79	0.62	0.30	0.57
	Morocco	13	0.50	0.38	0.42	0.48	0.68	0.51	0.38	0.48
	Tunisia	15	0.52	0.62	0.32	0.52	0.81	0.36	0.56	0.53

A review of Panels A and B of Table 5.11 report the compliance level (de facto) based on countries for two years 2010-2005 for sub-sample. Panels A and B reveal that although the level of compliance with IFRS exhibited by companies domiciled in Tunisia was the highest (0.54), this level has dropped down one degree (to be .53) in 2010. In this respect, the level of compliance has increased in Morocco (from 46% to 48%) and Egypt (from 42% to 57%).

Panels A and B of Table 5.12 reveal that although the lowest compliance levels with IFRS requirements for two years (2005,2010) were found in the non-financial companies, this sector achieved reasonable increase in the level of de facto harmonisation during two years (from 44% in 2005 to 52% in 2010). In the financial industry, the compliance level also increased from 52% in 2005 to 54% in 2010.

Table 5-12 De facto According to Sectors by C index (Sub-sample)

Year	sector	S-size	A = Income tax	B = Financial leases	C = Goodwill	D = asset revaluation	E = depreciation	F = Foreign currency translation	G = inventory	De facto
Panel A: Compliance level based on sector for 2005										
2005	Financial sector	18	0.38	0.42	0.37	0.74	0.53	0.29	0.89	0.52
	Non-financial	19	0.39	0.47	0.32	0.49	0.65	0.44	0.31	0.44
Panel B: Compliance level based on sector for 2010										
2010	Financial sector	18	0.51	0.43	0.39	0.51	0.75	0.37	0.79	0.54
	Non-financial	19	0.69	0.42	0.38	0.49	0.77	0.58	0.32	0.52

As shown in above discussion, it is obvious that the degree of de facto harmonisation has increased for all accounting methods as whole. Also according to the countries measurements, the de facto has increased for two countries Egypt and Morocco. Moreover, it is noticed that the level of compliance based on sectors has increased for both sectors over two years (2005 and 2010). In short, overall compliance of accounting practise (de facto) has been increased from 2005 to 2010, confirming hypothesis set in H1b. Thus, H1b is also accepted.

5.3 Discussion of the Findings of the two Types of Harmonisation

The study findings suggest that overall level of both types of harmonisation have increased during the second half of the 2000s decade (from 2005 to 2010). In specific terms, *de jure* harmonisation has been increased over time, from 0.46 in 2005 to more than 0.50 in 2010, whereas, *de facto* harmonisation has also increased over time, from 0.36 in 2005 to around 0.50 in 2010, indicating that the level of compliance has been improved in the region.

It appears clear from this evidence that NA companies are trying to adapt domestic accounting systems to international society to offer appropriate information (comparable financial statements) for economic decision makers. This may be as a result of increased pressure from the globalisation of businesses in financial reporting, and increased international transactions. Also, as a response of the World Bank's report which argued that traditional accounting in developing countries is an inappropriate instrument for serving several users (Saravanamuthu 2004). The importance of these findings derives from increasing the multiple users trust in accounting information of companies located in NA.

These results are consistent with some related prior research. With reference to overall de facto harmonisation, this de facto increase observed in this study parallels the findings of Lasmin (2011) and Canibano and Mora (2000) who found a similar result while considering some differences in the study methodology. However, this study contradicts the findings of Mechelli (2009) and McLeay et al. (1999) who found decreasing levels of de facto harmonisation.

Additionally, consistent with Peng and Van Der Laan Smith (2010), Al-Shammari et al. (2008), John (2006), Fontes et al. (2005) and (Garrido et al. 2002) but with a different measurement of de jure harmonisation. Overall level of de jure harmonisation have increased over time. This result indicates firms belong to NA region are attempting to improve their financial information in terms of its quality and reliability and enhance the movement of foreign investment by adopting (with or without adjustments) IFRS as a national rules of its accounting practices.

This result is consistent with Neo-institutional Theory that argues that phenomena in the institutional environment shape organisations and gradually these organisations become symmetric with their environments (Hu et al. 2007; Meyer & Rowan 1977). Neo-institutional theory can explain the change (the increase of the degree of both types of harmonisation) which associates organisational context with intra-organisational dynamics (Greenwood & Hinings 1996).

5.4 Summary

This Chapter discusses results of analyses to test hypothesis 1 (H1). The harmonisation degree with IFRSs was measured by a compliance index, whereas the de facto harmonisation degree with IFRSs was measured by a C index. The results show that overall de jure harmonisation has increased between 2005 and 2010 (for both full sample and sub-sample). It also reveals that the level of compliance increased for all standards without any exceptions (for both full sample and sub-sample). For de facto harmonisation, the overall percentage of de facto harmonisation increased between 2005 and 2010. It is noticed that the level of compliance increased for all accounting methods without any exceptions as well (for both full sample and sub-sample). The next chapter draws empirical results for the relationship between firm characteristics and de jure and de facto harmonisation.

Chapter 6 Hypotheses Testing- Analysis and Discussion

6.0 Introduction

The Chapter describes the data and variables utilised to test the hypotheses of this study. It also provides the key results from the statistical tests. This Chapter is organised as follows: Descriptive statistics for dependent and independent variables are provided in sections 6.1. Section 6.2 discusses the bi-variate relationships among the independent variables, before turning to multivariate tests of the hypotheses developed in Chapter Four. The Chapter also provides the key results from the statistical tests. This Chapter, therefore, focus on presenting the correlations and regressions conducted to test the hypotheses of this study. Section 6.2.1 focuses on diagnostic checks; section 6.2.2 discusses empirical results for the relationship between de jure and de facto harmonisation (H2); section 6.2.3 discusses empirical results for the relationship between firm characteristics and *de jure* harmonisation (H3a); section 6.2.4 focuses on empirical results for the relationship between firm characteristics and de facto harmonisation (H3b); section 6.3 provides Hypotheses Testing Summary; and lastly section 6.4 summarises the main themes of this the Chapter.

6.1 Descriptive Analysis

Descriptive statistics of the variables (dependent and independent) are shown in Table 6.1. The descriptive statistics contains the mean, median, SD (Standard Deviation), minimum, and maximum. This description reveals that the mean (median) of de jure harmonisation for all companies is 54% (42%), with a minimum of 0.00 and a maximum of 1.00. Thus, the level of firms' compliance ranges between fully compliant with IFRS requirements and non-compliant with these requirements, indicating significant variation in the level of de jure harmonisation achieved by companies. At the same time, de facto harmonisation has a mean of 50% and a median of 57%. Scores range between 0.00 and 1.00, and the standard deviation for this variable is 23%, indicating significant differences in de facto harmonisation among sample companies. Table 6.1 (***Panel B***) shows descriptive statistics for independent variables (For all companies together and for each country separately) that may have effects (according to the literature) on harmonisation.

Table 6-1 Descriptive Statistics for Independent[5] and dependent Variables[6]

variables	Mean	Median	Std. Dev.	Min	Max
Panel A: *Descriptive statistics for de jure and de facto harmonisation 2010*					
de jure	0.54	0.42	0.27	0.00	1.00
de facto	**0.50**	0.57	0.23	0.00	1.00
Panel B: *Descriptive statistics for independent variables*					
Overall description (N = 84)					
Firm size- LN (Total assets)	13.13	13.28	2.10	8.56	17.42
LN (Age)	3.44	3.53	0.74	1.10	5.05
Leverage	0.43	0.33	0.32	0.00	0.93
ROA	0.05	0.03	0.08	-0.27	0.31
Institutional ownership	0.78	0.86	0.26	0.00	1.00
Insider ownership	0.00	0.00	0.02	0.00	0.22
Sector	0.50	0.50	0.50	0.00	1.00
Language	0.36	0.00	0.48	0.00	1.00
Egypt (N 26)					
Firm size- LN (Total assets)	13.82	14.52	2.11	8.56	16.38
LN (Age)	2.92	2.91	0.88	1.10	5.05
Leverage	0.41	0.33	0.30	0.00	0.91
ROA	0.04	0.03	0.07	-0.27	0.15
Institutional ownership	0.86	0.99	0.23	0.17	1.00
Insider ownership	0.00	0.00	0.00	0.00	0.02
Sector	0.46	0.00	0.51	0.00	1.00
Language	0.88	1.00	0.33	0.00	1.00
Morocco (N 19)					
Firm size- LN (Total assets)	13.95	13.69	1.87	10.59	17.42
LN (Age)	3.93	3.94	0.45	2.71	4.60
Leverage	0.40	0.20	0.35	0.01	0.93
ROA	0.08	0.06	0.08	0.00	0.27
Institutional ownership	0.84	0.87	0.19	0.17	1.00
Insider ownership	0.01	0.00	0.05	0.00	0.22
Sector	0.58	1.00	0.51	0.00	1.00
Language	0.26	0.00	0.45	0.00	1.00
Tunisia (N 39)					
Firm size- LN (Total assets)	12.28	12.05	1.90	8.89	15.44
LN (Age)	3.55	3.53	0.53	2.14	4.84
Leverage	0.45	0.36	0.32	0.01	0.93
ROA	0.06	0.03	0.07	0.00	0.31
Institutional ownership	0.71	0.78	0.29	0.00	1.00
Insider ownership	0.00	0.00	0.00	0.00	0.00
Sector	0.49	0.00	0.51	0.00	1.00
Language	0.05	0.00	0.22	0.00	1.00

[5] Firm characteristics

[6] De jure and de facto harmonisation

Company Size

The distribution of size (measured by total assets) was skewed. Therefore, natural logarithm consistent with many previous studies (see for example: Al-Shammari et al. 2008; Anderson & Reeb 2003; Çekrezi 2013; Chalmers et al. 2006; Low & Chen 2004; Matolcsy et al. 2012; Moon & Tandon 2007) was utilised as methods to decrease and mitigate the influence of outliers. From the above table, the average of size for the sample as a whole is 13.13 and a median is 13.28. On average, companies in Morocco were the largest in the sample (13.95), followed by Egypt (13.82), and Tunisia (12.28). There is no big difference in the average of company size among these countries (Table 6.1 -Panel B).

Company Age

Natural logarithm (consistent with; Alsaeed 2006; Jeong-Bon et al. 2011) was also applied for the firm age to mitigate outlier problems. Firm age has a mean of 3.44 and a median of 3.53; ranging from 1.10 to 5.05 years for the whole sample. The mean in Morocco and Tunisia were 3.93 and 3.55 respectively. On average, Egyptian companies were the youngest in NA, with a mean of 2.92 (Table 6.1 -Panel B).

Leverage

Table 6.1 (Panel B) shows that (for the sample as a whole) the average total debt to total asset ratio is 0.43. This means that the sample companies are applying in their capital structure 43% debt on the average, ranging from zero to 0.93. The figure of 0.93 indicates that some companies do not depends on equity for their finance, while zero percent indicates that some firms had no debt in their capital structure. There is no big deference among three countries in terms of financial sources. The table shows that three countries (Egypt 0.41, Morocco 0.40, Tunisia 0.45) use about more than 0.40 percent debt on their capital structure.

Profitability

Profitability from over the full sample ranged from -0.27 to 0.31, with a mean of 0.05. The table also shows that Moroccan firms had the highest mean (0.08), followed by Tunisian (0.06), and Egyptian (0.04) (see Table 6.1 -Panel B).

Institutional ownership

Table 6.1 (Panel B) shows that institutional ownership (for the whole sample) ranged from zero to 1.00, with a mean of 0.78 and median of 0.86. Tunisia had the lowest institutional ownership (mean 0.71), followed by Morocco (0.29); whereas Egypt had the largest institutional ownership (0.86).

Insider Ownership

Table 6.1 (Panel B) also shows that insider ownership (for the whole sample) ranged from zero to 0.22, with a mean of zero. The figure of zero indicates that insider ownership is not found in NA companies except in Morocco with a mean of 0.01.

Industry

From the Table 6.1 (Panel B), the distribution of companies in the sample as a whole was 50% financial companies and also 50% non-financial. From the above table, the average of non-financial companies in Egypt is 46%, Morocco 58% and Tunisia 49%. This means that companies in the sample are nearly distributed equally between financial and non-financial companies in these countries.

Country

The sample included 26 companies from Egypt (14 financial and 12 non-financial), 19 companies from Morocco (8 financial and 11 non-financial), and 39 companies from the Tunisia (20 financial and 19 non-financial).

6.2 Multivariate Regression Analysis

6.2.1 **Diagnostic Checks**

Prior to conducting analysis, as the first step of model testing, regression analysis requires particular assumptions with regard to providing consistent data with adequate quality. As known, insufficient data quality can lead to bias in research findings. Therefore, conducting data screening plays an important role in providing high quality research (Coakes 2005; Prasad et al. 2009; Rashid 2013).

In other words, in conducting statistical analysis, it is important to meet the statistical analysis assumptions. For this reason, several diagnostic checks were performed to confirm that the assumptions of multiple regression analysis were not violated. Theses diagnostic checks focused on multicollinearity, normality, heteroscedasticity and endogeneity.

- **Multicollinearity**

Multicollinearity indicates high correlation levels among the explanatory (independent) variables. In other words, it can be defined as a condition when the independent variables are considerably correlated with each other. This is not desirable in a regression model. Thus, when multicollinearity is found among the independent variables, this problem must be solved. In previous literature, it is argued that the 'rule of thumb' for testing multicollinearity problems by using a correlation matrix is that multicollinearity becomes a problem once the correlation is high (> 0.8 see for example, Gujarati 2003; Li et al. 2012), whereas it is debated that multicollinearity becomes a serious concern where VIFs exceed 10 (Agbejule & Saarikoski 2006; Byrne & Flood 2008; Darnall et al. 2009; Goodhue et al. 2011; Li et al. 2012; Maiga et al. 2013; Oliveira et al. 2010; Rashid 2013; Street & Bryant 2000).

Therefore, for this issue, examination of the associations among the explanatory (independent) variables was run. As shown in Table 6.2, correlations between explanatory variables are within the acceptability range (the maximum one is below 0.6). This means that multicollinearity is not a problem. Moreover, the variance inflation factors (VIF) for each of independent variables were evaluated. The outcomes revealed the highest VIF was 2.279, which is far below the maximum acceptable threshold of 10.0, signifying that multicollinearity was not a problem.

- **Normality**

In the population, observations should have a normal distribution. Expressed in a different way, a perfect regression model should have a residual, which is normally distributed. When the residual is normally distributed, an estimated model can be accepted. Although the normality are likely not to cause any problem with a large simple size- more than 30 (Coakes 2005; Prasad et al. 2009; Rashid 2013), the study undertook some tests to conform the normality of data.

Firstly, the Residuals (Studentised and Standardised) tests using Kolmogorov-Smirnov test and Shapiro-Wilk test were performed to check for normality. In addition, Histogram-Normality Test was also performed. The findings provided a ‘Bell-Shape’-p-values which are more than 0.05 (Coakes 2005; Dolatabadi et al. 2013; Field 2009) indicating to the normality of data.

Table 6-2 Correlation Matrix of The Explanatory Variables

		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	**VIF**
1	LN (Total assets)	1.00								2.169
2	LN(Age)	0.105	1.00							1.395
3	Leverage	0.586	0.088	1.00						2.279
4	ROA	-0.295	0.127	-0.435	1.00					1.311
5	INSTITUTIONALOWN*	0.281	0.000	0.111	-0.005	1.00				1.111
6	INSIDEROWN**	0.282	0.176	0.179	-0.064	0.000	1.00			1.172
7	sector	-0.432	0.073	-0.624	0.355	-0.115	-0.145	1.00		1.768
8	language	0.384	-0.355	0.075	-0.173	0.156	0.195	-0.050	1.00	1.614

***Institutional ownership**

****Insider ownership**

- **Heteroscedasticity**

Heteroscedasticity assumption requires that the residuals have equal variances across all levels of the predictor(s). In other words, across observations (all levels of explanatory variables), the error variance is approximately constant. It is known that heteroscedasticity is not desirable in an estimated regression model. Therefore, if there is heteroscedasticity in the model, it should be removed from this model. For this reason, the study also checked for heteroscedasticity using the plot of standardized residuals (ZRESID) against the standardized predicted value (ZPRED) for all the models. This method provided that the residuals were randomly (there was not a systematic pattern) plotted (see Figure 6.2) indicating that there is no heteroscedasticity problem in the models. In addition, Breusch- test and Koenker test Pagan (see for example, Luger 2010; Montes-Rojas & Sosa-Escudero 2011; Vandenbulcke et al. 2011) were also performed for heteroscedasticity (see appendix 2) and both tests confirmed the same result (tests did not see any issues) providing an evidence of homoscedasticity.

- **Endogeneity**

The endogeneity problem occurs when the independent variable is associated with the error term in a regression model (Wooldridge 2002). This indicates that the regression coefficient in an Ordinary Least Squares (OLS) regression is biased (Bound et al. 1995). In other words, when endogeneity is extant, the Ordinary Least Square (OLS) estimate will be inconsistent and some techniques such as instrumental variable should be used to deal with this problem. However, the examination for this issue presented that there is no such this problem between study variables.

- **Outlier**

An outlier can be defined as an observation considered being different from the remainders (He et al. 2003). In other words, the case that differs significantly from the overall trend of the data is recognized as an outlier (Field 2009). This study examined outlier problems, and it was not found any considerable concern related to this issue.

6.2.2 The Relationship between De jure and De facto (H2)

To exam the relationship between two types of harmonisation, the hypothesis is postulated as following:

H2: higher de jure harmonisation would lead to a higher de facto harmonisation.

Pearson and spearman-rank Correlations for the connotation between two types of harmonisation (de jure and de facto) are used. The result indicates no association between de jure harmonisation and de facto harmonisation (see Table 6.3) where the relationship was insignificant.

This in turn suggests rejecting the assumption of **H2** (that de facto harmonisation increases with the increase of de jure harmonisation. This finding supports the debate of Lasmin (2011) who found that the improvement of formal harmonisation is not

Table 6-3 Correlation Matrix (Pearson and spearman-rank Correlation)

	Panel A: Correlation coefficients based on **de jure**		**Panel B**: Correlation coefficients based on **de facto**	
	Pearson	**spearman-rank**	**Pearson**	**spearman-rank**
Firm size (LN TA)	.388**	0.467**	0.193	0.179
AGE (LN Age)	0.168	0.151	-0.181	-0.186
Leverage	-0.039	0.053	0.070	0.052
ROA	0.110	0.057	-0.133	-0.142
Institutional ownership	0.301**	0.355**	0.029	0.103
Insider	0.232*	0.253*	0.079	-0.008
sector	0.192	0.124	0.042	0.039
language	0.396**	0.491**	0.266*	0.264*
de facto	0.196	0.199	1	

**,* represent significant levels at 0.01 and 0.05 (two-tailed) respectively.

Variables definition: Firm size measured by the natural logarithm of total assets; firm age (AGE) is defined as the natural logarithm of the number of years a firm has been established; Leverage is defined as total debt (long- term + short- term) / total assets; Profitability (ROA) is defined as earnings before interest and tax (EBIT) / total assets; institutional ownership is number of shares owned by institutional investors / total shares at year end of 2010; insider ownership is number of shares owned by insider investors / total shares at year end of 2010; sector is defined as dummy variable : one if company is from the non- finance industry, otherwise takes zero; language is also defined as dummy variable: if the firm disclose its information in English language takes one otherwise zero and de facto and de jure harmonisation obtained from 2010; annual reports.

followed by that of material harmonisation and, to some extent, consistent with Cascino and Gassen (2009) who pointed out that de facto harmonisation could develop independently from the formal. This study contradicts the findings of Morais and Fialho (2008) and Bowrin (2007) where they contend that a higher de facto harmonisation would lead to a higher de jure harmonisation. The possible explanation for this result is that despite enforcing (to somewhat) IFRS standards in financial NA market, complying with the disclosure requirements of these standards has not been the norm (Abd-Elsalam 1999; Dahawy et al. 2002; Hassan et al. 2009). The reason behind this is likely to be the NA culture and IFRS may not be fully consistent with the socio-economic needs of local investors (Alnaas et al. 2013; Dahawy & Conover 2007). In other words, if adopting IFRS does not consider local conditions and expertise (or the lack of it) problems may be increased by such adoption.

6.2.3 Empirical Results for the Relationship between Firm Characteristics and De jure harmonisation (H3a)

Pearson, spearman-rank Correlations and multi regression are conducted to exam the relationship between firm characteristics and de jure harmonisation. In the following, these tests are presented in details.

- **Correlation Results for Hypothesis 3a**

Looking at the correlation between two variables is a step for running multiple regressions to know whether or not a linear relation exists between each independent variable, one at a time, and dependent variables (Field 2009). It is probably important to note that the levels of significance given for each independent variable indicate whether or not that specific independent variable is a significant predictor of the dependent variable, above and over the other independent variables. For this reason, some independent variables that are significant predictors of a dependent variable in simple linear regression cannot be significant in multiple regression models. This study uses Pearson, Spearman-rank Correlations coefficients to discover whether or not each independent variable is a significant predictor of the dependent variable. It is important to note that this study uses interval or ratio data. For this reason, using Pearson correlation is appropriate for the study, since it requires interval or ratio data (Field 2009). However, Spearman-rank Correlation coefficient was used also.

Table 6.3 displays the Pearson and Spearman-rank Correlations among firm size (LN TA); firm age (LN Age); leverage; ROA; institutional ownership; insider; sector; language; de facto harmonisation; and de jure harmonisation. With regard to de jure harmonisation, as can be seen from Panel A, Pearson and Spearman-rank Correlations show that firm size, institutional and insider ownership and language of disclosure are positively and significantly associated with de jure harmonisation.

- **Regression Results for Hypothesis 3a (De jure)**

The regression results of the association between both types of harmonisation are presented in Table 6.4. The results show that the Model I was overall significant ($F = 7.937$, $p < 0.001$) with R2 (adj.) of 0.401 indicating that de jure harmonisation can be predicted by firm characteristics. However, Model II was overall insignificant ($F = 1.366$, $p > 0.10$) with R2 (adj.) of .034 indicating that de facto harmonisation is likely to be predicted by firm characteristics.

In brief, the results reveal that, as predicted, the level of compliance with IFRSs increases with a company size, institutional ownership, industry and language of disclosure. On the other hand, the results show that firm characteristics are insignificant in predicting the level of de facto harmonisation (Table 6.4).

- H 3. a. 1: de jure harmonisation is higher in companies which are larger than small size.

The results show that the level of compliance with IFRSs was positively associated with size ($p < 0.05$, Table 6.4, Model I). This result lends support to H3.1a, which predicted that companies with a large size would have a higher level of compliance

Table 6-4 The Relationship between Firm Characteristics and both Harmonisation Types

variable	Regression results based on de jure harmonization			Regression results based on de facto harmonization		
	Model I			*Model II*		
	Coefficient	**t-statistic**	***P- value***	**Coefficient**	**t-value**	***P- value***
Intercept (Constant)	-.649	-3.199	.002	.355	1.615	.111
Firm size (LN TA)	.051	3.178	.002*	.022	1.259	.212
AGE (LN Age)	.071	1.951	.055	-.056	-1.416	.161
Leverage	-.108	-.989	.326	.037	.310	.758
ROA	.382	1.097	.276	-.248	-.659	.512
INSTOWNERSHIP	.195	2.099	.039*	-.024	-.235	.815
INSIOWNERSHIP	1.068	1.044	.300	.464	.419	.676
sector	.152	2.508	.014*	.097	1.474	.145
Language	.172	2.841	.006*	.054	.816	.417
Adj.R2	.401			.034		
F-statistic	7.937**			1.366		

This table presents the summary results of the relationship between firm characteristics and two types of harmonization.

**,* represent significant levels at 0.001 and 0.05 (two-tailed) respectively.

Variables definition: Firm size measured by the natural logarithm of total assets; firm age (AGE) is defined as the natural logarithm of the number of years a firm has been established; Leverage is defined as total debt (long- term + short- term) / total assets; Profitability (ROA) is defined as earnings before interest and tax (EBIT) / total assets; institutional ownership (INSIOWNERSHIP) is number of shares owned by institutional investors / total shares at year end of 2010; insider ownership (INSTOWNERSHIP) is number of shares owned by insider investors / total shares at year end of 2010; sector is defined as dummy variable : one if company is from the non- finance industry, otherwise takes zero; language is also defined as dummy variable: if the firm disclose its information in English language takes one otherwise zero, and de facto and de jure harmonization obtained from annual reports.

with IFRSs. Therefore, hypothesis H3.1a was supported, indicating that firm size has impact on de jure harmonisation. These findings are consistent with many studies conducted around the world (see for example, Al-Shammari et al. 2008; Aljifri & Khasharmeh 2006; Dumontier & Raffournier 1998; Floropoulos 2006; García Benau & Zorio Grima 2002; Guerreiro et al. 2008; Jaafar & McLeay 2007) who observed such association between firm size and compliance level with international standards. Based on the study results, in the NA region, larger companies are more interested in adopting international standards (IFRS) than small ones.

An explanation for the findings is that, large companies possess enough resources for collecting, analysing, and presenting extensive amounts of data at minimal cost. In other words, large companies are likely to have the ability in terms of having financial and human resources to adopt IFRSs, which small firms normally do not have.

- H 3. a2: level of compliance with IFRSs (de jure) is positively associated with firm age.

Age, measured by number of years since establishment, was not significant, $p > 0.05$ (Table 6.4). Therefore H3.2a (that level of compliance with IFRSs (de jure) is positively associated with firm age) was not supported. This result is consistent with Al-Shammari et al. (2008), who found no relationship between a compliance level of Gulf Co-Operation Council member states and firms' age.

- H 3. a3: de jure harmonisation is positively associated with the leverage ratio.

Table (6.5) shows that leverage was also not a significant explanatory variable ($p > 0.05$), indicating that the level of compliance with IFRSs was not also associated with leverage. Therefore, H 3.3a (that de jure harmonisation is positively associated with the leverage ratio) was not supported. This outcome is consistent with the literature (Dumontier & Raffournier 1998; García Benau & Zorio Grima 2002; Guerreiro et al. 2008; Murphy 1999), and indicates that debt holders do not exert pressure on companies to adopt IFRS in preparing their information.

- H 3. a4: level of compliance with IFRSs (de jure) is positively associated with profitability

Profitability, as measured by return on equity, was an insignificant factor (see Table 6.4), indicating that the level of compliance with IFRSs was not also associated with Profitability. Thus H3.4a was not supported. This result is congruent with Guerreiro et al. (2008) and García Benau and Zorio Grima (2002) who found no significant association between Profitability and adopting IFRS. The possible interpretation for this result is that less profitable companies are more interested in adopting a core of standards considered less conservative to increase their reported rate of profitability.

- H 3. a5: de jure harmonisation is positively associated with institutional ownership

Institutional Ownership, measured by number of shares owned by institutional investors / total shares at year end of 2010, was significant (see Table 6.4), $p < 0.05$. Thus, H3.5a (that de jure harmonisation is positively associated with institutional ownership) was supported. This result is consistent with Dumontier and Raffournier

(1998) who found a positive influence of ownership diffusion on voluntary compliance with IAS, but with a different measurement of Ownership diffusion.

- H 3. a6: The level of de jure harmonisation is not independent of insider ownership

Insider Ownership, measured by number of shares owned by insider investors / total shares at year-end of 2010, was not significant ($p > 0.05$). Thus, H3.6a (that de jure harmonisation is positively associated with insider ownership) was not supported.

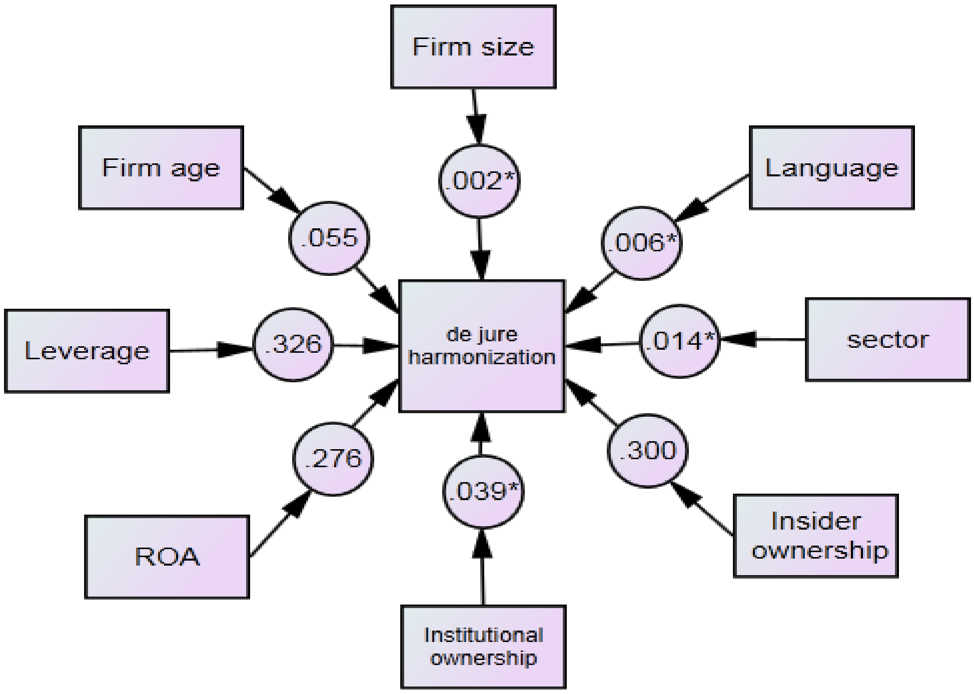
- H 3. a7: Non-financial companies have higher level of de jure harmonisation than financial firms.

Sector, which is defined as a dummy variable (one if company is from the non-finance, otherwise takes zero) was significant. Thus, H 3.7a (that the level of de jure harmonisation is not independent of industry type) was supported, indicating that different industry bodies can have a different level of compliance with IFRSs. Since the influences of institutional forces are significantly different depending on industry type (Cai et al. 2010), this finding is consistent with the notion of institutional isomorphism that suggests that organisations may tend to accept and follow the same standards over time in responding to common institutional forces from similar industries (Rodrigues & Craig 2007).

- H3. a8: de jure harmonisation is higher in companies which publish their financial information in the English language than companies that publish their financial information in other languages

Disclosure language, which is defined as a dummy variable (one if the firm disclose its information in English language takes one otherwise zero) was significant (Table 6.4). Thus, H 3.8a (that de jure harmonisation is higher in companies which publish their financial information in the English language than companies that publish their financial information in other languages) was supported. This result is consistent with the result of Aljifri and Khasharmeh (2006) who found English language was a robust factor for adopting IASs.

To provide a clearer picture, Figure 6.1 shows the relationships between the firm characteristics and de jure harmonisation.



*** represent significant levels at 0.001 and 0.05 (two-tailed) respectively

Figure 6-1 The Relationships between the Firm Characteristics and De jure

6.2.4 Empirical Results for the Relationship between Firm Characteristics and De facto Harmonisation (H3b)

Pearson, and Spearman-rank Correlations and multi regression are conducted to exam the relationship between firm characteristics and de facto harmonisation. In the following, these tests are presented in detail.

➢ **Correlation Results for Hypothesis 3b**

For de facto harmonisation, it is observed that (see Panel B of Table 6.3) the language of disclosure is highly ($p<0.05$) and positively correlated with de facto harmonisation. Once again, this result provides preliminary sign of a significant relationship between language of annual reports and the level of practice compliance (de facto). However, it does not mean that language of disclosure will be surely a good predictor in mutable regression model. In other words, an independent variable, which is a significant predictor of a dependent variable in simple linear regression, could not be significant in multiple regressions.

➢ **Regression Results for Hypothesis 3b**

As mentioned, Model II was overall insignificant ($F = 1.301$, $p > 0.10$) with R2 (adj.) of .032 (see Table 6.4- Model II) indicating that de facto harmonisation is not likely to be predicted by firm characteristics.

In brief, the results show that firm characteristics are insignificant in predicting the level of de facto harmonisation.

- H 3. b1: de facto harmonisation is higher in companies with larger size than small size.

The results show that the level of facto harmonisation was not positively associated with size ($p = .212$, Table 6.4- Model II). This result did not lend support to H3.b1, which predicted that companies with a large size would have a higher level of de facto harmonisation than firms with small size. Therefore, H3.1b was not supported. While many previous studies (Alsaeed 2006; Buzby 1975; Cooke 1989, 1992; Firth 1979; Glaum & Street 2003; Raffournier 1995; Rahman et al. 2002; Wallace & Naser 1995; Wallace et al. 1994) has supported the existence of a positive association between firm size and overall level of disclosure and de facto harmonisation, results of this study suggest a different scenario, indicating that large companies, in NA, did not have a higher level of de facto harmonisation. This outcome is consistent with Street and Bryant (2000) and Tower et al. (1999) who found that there is no statistical support for the contention that large firms are motivated to disclose more information or to have high degree of material (de facto) harmonisation. The possible interpretation for this result is that large companies, consistent with the argument of Jensen and Meckling (1976), may have the incentive for blocking value-relevant information to avoid the political costs in terms of strict regulations, increasing tax, and social obligations.

- H 3. b2: the level of de facto harmonisation is positively associated with firm age.

Age, measured by number of years since establishment, was insignificant ($p = 0.161$). Therefore H3.b2 (that level of de facto is positively associated with firm age) was not supported either. The study confirms previous studies (Alsaeed 2006; Glaum & Street 2003) which provided evidence that firm age was an insignificant factor in explaining the variation of disclosure level or the de facto harmonisation degree.

- H 3. b3: de facto harmonisation is positively associated with the leverage ratio.

Leverage was not a significant explanatory variable ($p > 0.05$), indicating that the level of de facto harmonisation was not also associated with leverage. Consequently, H 3. b3 (that de facto harmonisation is positively associated with the leverage ratio) was not supported. These findings are consistent with some related previous studies. With regard to the variation of disclosure level, this result parallels the results of Rahman et al. (2002), Tower et al. (1999), Raffournier (1995) and Chow and

Wong-Boren, A. (1987) who found a similar result that leverage did not have any influence.

- H 3. b4: the level of de facto harmonisation is positively associated with profitability

Profitability, as measured by earnings before interest and tax (EBIT) / total assets, was also an insignificant factor, indicating that the level of de facto harmonisation was not also associated with profitability. Thus H3.b4 was not supported either. This result is consistent with many prior studies (Alsaeed 2006; Glaum & Street 2003; Raffournier 1995; Street & Bryant 2000; Tower et al. 1999; Wallace et al. 1994) who noticed that Profitability is not statistically significant in interpreting the variation in the level of disclosure or de facto harmonisation. A plausible explanation for this result is that decreasing comprehensive disclosure and de facto harmonisation by high profit companies might be because these firms feel that investors are satisfied with reported high profits and so would not want additional information.

- H 3. b5: de facto harmonisation is positively associated with institutional ownership

Institutional Ownership, measured by number of shares owned by institutional investors / total shares at year end of 2010, was insignificant ($p = 0.815$). Thus, H3.b5 (that de facto harmonisation is positively associated with institutional ownership) was not supported.

This result is consistent with some previous studies (Buzby 1975; Firth 1979; Raffournier 1995), but it contradicts the work of Rahman et al. (2002), who reported the level of material harmony has a positive association with ownership concentration..

- H 3. b6: The level of de facto harmonisation is not independent of insider ownership

Insider Ownership, measured by number of shares owned by insider investors / total shares at year-end of 2010, was insignificant ($p > 0.05$). Thus, H3.b6 (that de facto harmonisation is positively associated with insider ownership) was not supported (see Table 6.4- Model II).

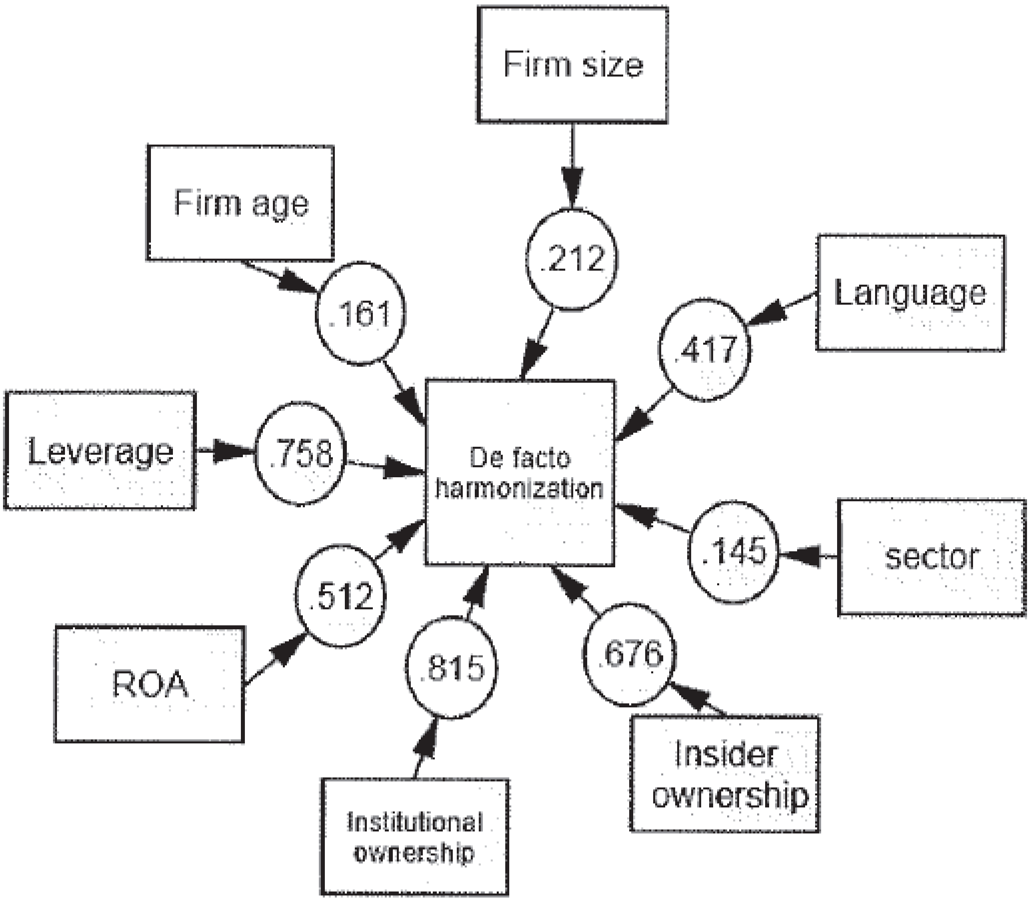
- H 3. b7: Non-financial companies have higher level of de facto harmonisation than financial firms.

Sector, which is a defined as a dummy variable (one if company is from the non-finance, otherwise takes zero) was insignificant. Thus, H3. b7 (that non-financial companies have higher level of de facto harmonisation than financial firms) was not supported. The result, to some extent, consistent with prior studies where some did not find significant associations (see for example, Alsaeed 2006; Glaum & Street 2003; Street & Bryant 2000; Tower et al. 1999; Wallace et al. 1994) and other studies did (see, Rahman et al. 2002; Wallace & Naser 1995).

- H3. b8: de facto harmonisation is higher in companies which publish their financial information in the English language than companies that publish their financial information in other languages

Disclosure language, which is defined as a dummy variable (one if the firm discloses its information in English language takes one otherwise zero) was insignificant. Thus, H3.b8 (that de facto harmonisation is higher in companies which publish their financial information in the English language than companies that publish their financial information in other languages) was not supported either.

To provide a clearer picture for this relationship, Figure 6.2 shows the relationships between the firm characteristics and de facto harmonisation.



*** represents significant levels at 0.001 and 0.05 (two-tailed) respectively

Figure 6-2 The Relationships between the Firm Characteristics and De facto

6.3 Hypotheses Testing Summary

Previous sections describe outcomes of data analyses using Pearson and Spearman-rank Correlations, and Regressions analysis. Lastly, this Chapter provides a summary of test results to illustrate clear pictures on hypotheses testing.

It is noticed that hypothesis 1 (H1a, b) is accepted, whereas H2 is rejected. Similarly, hypotheses related to de facto harmonisation (from H3b1 to H3b8) are rejected with exception of H1b that was accepted. Likewise, hypotheses on the relationship between age, leverage ratio, profitability, and insider ownership as independent

Table 6-5 Summary of Hypotheses

No	Hypothesis	Result	Table	No	Hypothesis	Result	Table
***Panel A: Results of* Hypothesis 1**							
H1a	De jure harmonisation between North Africa's financial reporting and IFRS has been increased between 2005 and 2010	Accepted	5.1	H1b	De facto harmonisation between North Africa's financial reporting and IFRS has been increased between 2005 and 2010	Accepted	5.4
***Panel B: Results of* Hypothesis 2**							
H2	de facto harmonisation increases with the increase of de jure harmonisation					Rejected	6.4
***Panel C: Results of* Hypothesis 3**							
H3a1	De jure harmonisation is higher in companies which are larger than small size	Accepted	6.4	H3b1	*De* facto harmonisation is higher in companies with larger size than small size	Rejected	6.4
H3a2	Level of compliance with IFRSs (de jure) is positively associated with firm age	Rejected	6.4	H3b2	The level of facto harmonisation is positively associated with firm age	Rejected	6.4
H3a3	De jure harmonisation is positively associated with the leverage ratio	Rejected	6.4	H3b3	*De* facto harmonisation is positively associated with the leverage ratio	Rejected	6.4
H3a4	Level of compliance with IFRSs (de jure) is positively associated with profitability	Rejected	6.4	H3b4	The level of de facto harmonisation is positively associated with profitability	Rejected	6.4
H3a5	De jure harmonisation is positively associated with institutional ownership	Accepted	6.4	H3b5	*De* facto harmonisation is positively associated with institutional ownership	Rejected	6.4
H3a6	De jure harmonisation is positively associated with insider ownership	Rejected	6.4	H3b6	*De* facto harmonisation is positively associated with insider ownership	Rejected	6.4
H3a7	Non-financial companies have higher level of de jure harmonisation than financial firms	Accepted	6.4	H3b7	Non-financial companies have higher level of de facto harmonisation than financial firms	Rejected	6.4
H3a8	*De* jure harmonisation is higher in companies which publish their financial information in the English language than companies that publish their financial information in other languages	Accepted	6.4	H3b8	*De* facto harmonisation is higher in companies which publish their financial information in the English language than companies that publish their financial information in other languages	Rejected	6.4

variables and de jure harmonisation (dependent variable) are also rejected. However, hypotheses on the relationship between other independent variables such as size, institutional ownership, sector, and language of disclosure and de jure harmonisation are accepted.

6.4 Summary

This chapter has discussed the data analyses and findings of this study. It begins with a descriptive analysis. Following this discussion, multivariate regression analysis is presented starting with diagnostic checks. In this respect, an examination of multicollinearity shows that there was no problem with this issue. Moreover, an assessment for the normality of data indicates that the data was normally distributed. It was also found that there is no problem related to the heteroscedasticity and Endogeneity issues. Furthermore, the outlier examination found that there was no outlier problem. This chapter discusses and analyses results to answer the study questions by testing the research hypotheses. Pearson and Spearman-rank Correlations and regressions were conducted to analyse data and to revise models. The findings demonstrate that H1a (De jure harmonisation between North Africa's financial reporting and IFRS has increased between 2005 and 2010) is accepted. They suggest that H1b (that de facto harmonisation between North Africa's financial reporting and IFRS has increased between 2005 and 2010) is also accepted, whereas the result shows that the relationship between *de jure* harmonisation and *de facto* harmonisation (H2) is insignificant. Likewise, hypotheses on the relationship between age, leverage ratio, profitability, and insider ownership as independent variables and de jure harmonisation (dependent variable) are also rejected. However, the relationships between other independent variables such as size, institutional ownership, sector, and language of disclosure and de jure harmonisation are significant indicating to accept these hypotheses (H3a1, H3a 5, H3a 7, H3a 8). Finally, the Chapter provides a hypotheses testing summary and a chapter summary. The following chapter concludes with a discussion of future research and current research limitations.

Chapter 7 Conclusions

7.0 Introduction

The Chapter summarises the key conclusions of this study. Section 7.1 summarises the findings, while section 7.2 deals with the study's contributions, section 7.3 deals with the study's limitations. Future research possibilities are set out in section 7.4.

7.1 Summary of Findings

The study aim was to answer the following research questions:

1. Has (de facto and de jure) harmonisation between (NF) North Africa's financial reporting and International Financial Report Standards (IFRS) increased between 2005 and 2010?
2. To what extent does de jure harmonisation impact de facto harmonisation?
3. To what extent do underlying factors (firm characteristics) impact on the level of both types of harmonisation?

7.1.1 **Summary of Research Methodology Used**

To measure the level of de jure harmonisation, a compliance index was constructed. The index was based on a checklist instrument that was developed for the purpose of assessing the first question of the research. The checklist based on the 13 IFRSs (namely, IAS 8, IAS 12, IAS 16, IAS 17, IAS 19,IAS 23, IAS 32, IAS 33, IAS 37, IAS 38, IFRS 3, IFRS 7 IFRS 8). Measurements were done at two points of time (2005, 2010).

To measure the level of de facto harmonisation, C index was used. The index was based on seven accounting issues (Income tax; financial leases; goodwill; asset revaluation; depreciation; foreign currency translation and inventory). The index measured the harmony (as stage) at two points of time (2005, 2010). Harmonisation (as process) was measured by comparing the values of the indices longitudinally to quantify harmonisation.

As a first step to consider which variables might impact the harmonisation in this region, features of North Africa region were studied (see Chapter 2). Moreover, other related studies were carefully reviewed. The result was a set of eight variables; namely, firm size, firm age, leverage rate, profitability, institutional ownership, insider ownership, the type of sector, and language of disclosure. Then, to examine underlying factors that may impact the extent of (de jure and de facto) harmonisation, Multivariate Regression Analysis was used.

7.1.2 The Trend of both Types of Harmonisation

The level of de jure harmonisation has increased from 46% in 2005 to 54% in 2010, providing the evidence to support H1a. Parallel to this, overall compliance of accounting practise (de facto) has increased from 36% in 2005 to 50% in 2010, confirming hypothesis set in H1b. This indicated that both types of harmonisation (de jure and de facto) have improved in the region.

The results reveal that although de jure harmonisation improved in 2005 to 2010 period in this region, the degree of this harmonisation was lower than many other places around the world including both developed and even some devolving countries (see for example, Al-Shammari et al. 2008; Fontes et al. 2005; Peng & Van Der Laan Smith 2010; Tower et al. 1999). By the same token, the findings of this study indicate that in spite of its increase, the degree of de facto harmonisation was low and more effort from the region should be spent.

To summarise, the compliance degree with IFRSs in terms of material and practices has grown between 2005 and 2010, but it stayed lower than in many other areas around the worlds.

7.1.3 The Relationship between De jure and De facto Harmonisation

The evidence from this study also suggests that de facto harmonisation did not increase with the increase of de jure harmonisation. This finding supports the contention of Lasmin (2011) who found that the improvement of formal harmonisation is not necessarily followed by that of material harmonisation. However, this finding is consistent with Cascino and Gassen (2009) who pointed out that de facto harmonisation could develop independently from formal harmonisation.

Taken together, these results suggest that in NA, the effort spent by bodies for monitoring compliance is insufficient. Possible reason for this inadequacy is a lack of pressure by accounting information users in these markets. Another reason is also the lack of firms' awareness about the role that IFRS may play in improving accounting information and in increasing the trust of different users (local and foreign) in this information. Additionally, there might be a lack of governmental bodies, at a policy level, to enforce such these standards.

7.1.4 Impact of Firm Characteristics on both Types of Harmonisation

Another important finding was that the level of compliance with IFRSs increases with a company size, institutional ownership, industry and language of disclosure, whereas firm age, leverage, profitability, and insider ownership were insignificant factors in explaining the change in the level of de jure harmonisation. In regards to de facto harmonisation, the results show that firm characteristics are insignificant in predicting the level of this type of harmonisation.

7.2 Contributions

7.2.1 To the Literature

The present study makes several noteworthy contributions to the current literature. Firstly, this work contributes to a growing body of literature on harmonisation by providing an assessment of accounting harmonisation in North Africa. This region appears to have not previously been investigated. In fact, not much information exists in the international literature on accounting in the NA region. In addition, the study explains the relationship between some determinants - such as the firm size; firm age; leverage rate; profitability; institutional ownership; insider ownership; the type of sector; and language of disclosure, and two types of harmonisation (de jure and de facto). This association has not been properly addressed previously (to the researcher's knowledge), in the NA region. Therefore, the result of this study is of interest because of in insufficient previous NA studies since it has a unique culture and a unique business environment.

7.2.2 To Practice

An implication of this study is the possibility that harmonising accounting information can improve the quality of financial information (internationally comparable information), and this can be beneficial for different users. With regards to capital flows, the results of this study might help facilitate the globalisation of capital markets by improving investors' information on accounting in the NA region. With the findings presented in this study, local and international accounting organisations can be provided with valuable information about the compliance level (material and practice) with international standards and practices in a particular area. The findings of this study may draw the attention of both local firms and governments to this considerable issue (harmony with international society) that can contribute to enhancing the position of these countries in capital markets.

Lastly, an implication of this study is the possibility that the regulators of NA organisations can obtain some advantages that can help them in their efforts to set and improve local accounting standards. The results provide such organisations with potentially beneficial information about the level of compliance with IFRSs and the firm characteristics that are related to higher compliance. This can help the region to be more effective and to become attractive to local foreign investors.

7.3 Limitations

In spite of providing some worthwhile insights into the behaviour of listed firms in the NA region with regard to de jure and de facto harmonisation, a number of important limitations of this study need to be considered.

Firstly, although the sample size was 84 firms in 2010, the sample was only 37 firms in 2005 because of the problems in data availability. Comparing the level of de facto harmonisation at two points of time (2005, 2010) by using the same and sample size (84 firms) would lead to more reliable findings. Moreover, the study did not evaluate unlisted companies. It was just restricted to firms listed on NA stock exchanges. The reason behind this is the lack of information for unlisted firms. This may ignore a part of the business of this region. Although the use of just listed firms may limit the generalisability of the findings, major benefits can be obtained. Data is available and accessible. Another point is that, from an investors' view, the financial information behaviour of publicly listed companies is of more than that of unlisted firms.

In comparing each NA firm with the same data for each foreign company, the current study has only used global industry classification standard (MSCI 2010) to determine appropriate pairs. This may reduce the power of comparison. However, to improve the reliability of this comparison, the researcher determined that the specific activities of each firm were a good match to each other.

Another limitation is that because the IFRS treatment is systematically connected with time this study is, like other studies which have attempted to investigate the IFRS adoption process, incapable of controlling for time in a fully satisfying manner. Considering the study purpose, the current work did not distinguish between disclosure and measurements requirements when the checklist was designed as Al-Shammari et al. (2008) has done. Although the compliance can be different between them (Street & Gray 2001), the study aimed to investigate the harmonisation between NA and IFRS as a whole regardless of the compliance with whether disclosure or measurements requirements.

7.4 Directions for Further Research

It is recommended that further research be undertaken in the following areas: firstly, future work can be broadened to comprise other developing countries, which have security exchanges with enough companies. In order to obtain better results, for measuring de facto harmonisation, further experimental investigations are needed to estimate more areas (such as investment properties) the initial event for disclosures relating to discontinuing operations; and others subjects. In regard to measuring de jure harmonisation, this study focused only on thirteen standards that are controversial. Future research should include some other standards. For comparing each firm with the same data of its partner, a strict criterion can be used with the global industry classification standard (MSCI 2010) to determine suitable pairing.

It would be interesting to assess the extent of compliance by unlisted companies in the NA region that may have different characteristics. Results of the regression model show that firm characteristics are insignificant in predicting the level of de facto harmonisation, indicating that variables other than firm characteristics are at work. Considerably more work will need to be done to determine other factors that remain to be discovered such as: to what extent do the environmental factors (culture, political system, economic system and legal system) impact on the level of harmonisation in NA? Furthermore, future research can extend this study by investigating to what extent are IFRSs appropriate for the local environment in Africa? Additionally, future work can extend this study by investigating the harmonisation benefits for these countries in terms of growth, foreign investment, international recognition for financial reporting, and activities on the stock exchanges. Finally, more research is required on establishing whether de jure harmonisation can moderate or mediate the relationship between firm characteristics and de facto harmonisation.

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Appendixes

Appendix 1 The relationship - Firm Characteristics and Harmonization

N	Author	Location	methodology	Important characteristics tested	The impact type		The impact on
					Significant	insignificant	
1.	(Dumontier & Raffournier 1998)	Switzerland	logistic Univariate analyses	Size	√		De jure
				Internationality	√		
				listing status	√		
				Ownership diffusion	√		
				Auditor	√		
				Leverage		√	
				Capital intensity		√	
				Profitability		√	
2.	(Murphy 1999)	Switzerland	the MANOVA and stepwise discriminant analysis	Financial internationalization	√		De jure
				Commercial Internationalization	√		
				Leverage		√	
				Market value		√	
				Auditor		√	
3.	(El-Gazzar et al. 1999)	world firms	Logit regression	foreign operations and its financing policy	√		De jure
				EU member	√		
				listing status	√		
4.	(García Benau & Zorio Grima 2002)	Europe	Logit regression	Financial internationalization	√		De jure
				Commercial internationalization	√		
				Size	√		
				Profitability	√		
				Auditor	√		
				Capital intensity		√	
				Leverage		√	
5.	(Floropoulos 2006)	Greece	chi-square test	Size	√		De jure
				Listing status	√		
				Type of industry		√	

6.	(Aljifri & Khasharmeh 2006)	United Arab Emirates	analytical descriptive approach and comparative approaches	Size	√		De jure
				English language	√		
				trading status		√	
				Sector		√	
7.	(Jaafar & McLeay 2007)	Europe	the binomial linear logistic regression	International exposure	√		De jure
				Size	√		
				Country differences	√		
				sector differences		√	
8.	(Guerreiro et al. 2008)	Portugal	ordinal regression	Size	√		De jure
				Commercial internationalization	√		
				Auditor type	√		
				profitability	√		
				Leverage		√	
				Financial		√	
				Internationalization		√	
9.	(Al-Shammari et al. 2008)	Gulf Co-Operation Council member states	Regression	size	√		De jure
				leverage	√		
				internationality	√		
				industry	√		
				Ownership diffusion		√	
				Company age		√	
N	Author	Location	methodology	Important characteristics tested	The impact type		N
					Significant	insignificant	
10.	(Tower, G. et al. 1999)	Australia, Hong Kong, Malaysia, Philippines, Singapore and Thailand	multivariate regression techniques	location of country	√		De facto
				Leverage		√	
				Size		√	
				profit		√	
				Industry		√	

11.	(Rahman et al. 2002)	Australia and New Zealand	Jaccard coefficients + Chi-square tests	Auditor type	√		De facto
				Size	√		
				Leverage	√		
				Ownership concentration	√		
				Type of industry	√		
				the level of decentralization	√		
N	Author	Location	methodology	Important characteristics tested	The impact type		The impact on
					Significant	insignificant	
12.	(Buzby 1975)	America	described statistical tests	Size	√		Disclosure
				listing status		√	
13.	(Firth 1979)	UK	Kendall's rank correlation coefficient & Wilcoxon matched-pairs signed-ranks test	Size	√		Disclosure
				Listing status	√		
				Auditors		√	
14.	(Chow, C. W. & Wong-Boren, A. 1987)	Mexico	regression	Size	√		Disclosure
				leverage		√	
				proportion of the firm		√	
15.	(Cooke 1989)	Sweden	multiple linear regression	Size	√		Disclosure
				Listing status	√		
				Foreign regulation	√		
16.	(Cooke 1992)	Japan	regression analysis	Firm size	√		Disclosure
				listing status	√		
				industry type	√		
17.	(Wallace et al. 1994)	Spain	regression	size	√		Disclosure
				listing status	√		
				liquidity	√		
				Industry		√	
				Profit		√	
18.	(Raffournier 1995)	Switzerland	multiple regressions	company size	√		Disclosure
				leverage		√	
				profitability		√	
				ownership structure		√	
				internationality	√		
				auditor's size	√		
				percentage of fixed assets	√		
				industry type		√	

19.	(Wallace & Naser 1995)	Hong Kong	Two OLS regression models	asset size	√		Disclosure
				the scope of business operations	√		
				Profits.	√		
				Type of Independent auditor	√		
				market capitalization		√	
				Liquidity ratios		√	
				earnings return on equity		√	
				outside shareholders' interests		√	
20.	(Street & Bryant 2000)	many countries	Stepwise Regression	Size		√	Disclosure
				Profitability		√	
				Listing status	√		
				Type of industry		√	
				referring to the use of IAS	√		
21.	(Alsaeed 2006)	Saudi Arabia	multiple linear regression	size	√		Disclosure
				Debt		√	
				Liquidity		√	
				Industry type		√	
				Audit firm size		√	
				Ownership dispersion		√	
				Firm Age		√	
				Profit margin		√	
				Return on equity		√	
22.	(Uyar et al. 2013)	Turkish listed companies	(OLS) and (2SLS) regressions	Firm Size	√		Disclosure
				auditing firm size	√		
				proportion of independent directors on the board,	√		
				profitability		√	
				corporate governance	√		
				board size		√	
				listing age		√	
				leverage	√		
				ownership diffusion	√		

Appendix 2 Studies Focused on De jure Harmonisation

N	Author(s) year	Location	methodology	Sample	Focus of Study	outcomes
1.	(Nair & Frank 1981)	Many countries	Surveys (the Price Waterhouse accounting surveys)	37	examined 131 accounting practices	The inference of causation is no easy task. However, authors can state that the period of the IASC's existence has coincided with a growing harmonization of accounting standards.
2.	(Nobes 1981)	-	Criticism	the Price Waterhouse accounting surveys	methodology	Problem with reliability of data
3.	(Doupnik, Timothy S. 1987)		measured by compliance with International Accounting Standards	financial statements of firms in different countries	comparability	the quality of financial reporting (compared with IASCs) has internationally increased over the period 1975 to 1983
4.	(Larson & Kenny 1999)	Many countries	Comparing	Used data from other studies	Measuring de jure	Overall, it Increased between 1991 and 1993
5.	(Garrido et al. 2002)	IASC	New methodology which is based on two different indicators	accounting treatments	The purpose is: 1- a new measure of formal harmonization 2-, to use this methodology to evaluate the IASC achievements over time	introduced a new index that allows for the measurement of formal harmonization over time - increasing de jure ..confirms the success of IASC

N	Author(s) year	Location	methodology	Sample	Focus of Study	outcomes
6.	(Fontes et al. 2005)	Portugal	Euclidean distances, Jaccard's coefficients and Spearman's coefficients	43 accounting issues in International Accounting Standards and in Portuguese Accounting Standards	Exploring three quantitative methods to measure the extent of formal harmonisation of any two sets of accounting standards- over the period 1977–2003	increasing formal harmonisation over time 18% to 59%
7.	(Boolaky 2006)	South Africa, Mauritius and Tanzanian	Content Analysis	The published accounting standards	compare (IFRS)1 with the Local Standards On three areas (the definition of terms, accounting treatment and disclosure requirements in the standards)	the accounting standards of SA are more in harmony with IFRS, followed by Mauritius (point of time)
8.	(John 2006)	China companies listed on the New York Stock Exchange	Gray's index	sample of companies from the People's Republic of China	investigating the convergence of two sets of accounting standards (U.S. GAAP and IFRS)	There is considerable evidence of convergence over time.
9.	(Van der Meulen et al. 2007)	German	R-squared		explore attribute differences between U.S. GAAP and IFRS earnings	results indicate that U.S. GAAP and IFRS only differ with regard to predictability
10.	(Al-Shammari et al. 2008)	Gulf Co-Operation Council	compliance index	137 companies (436 company-years)	Investigating the compliance with (IASs) (over time)	Compliance increased over time, from 68% in 1996 to 82% in 2002

N	Author(s) year	Location	methodology	Sample	Focus of Study	outcomes
11.	(Peng et al. 2008)	China	the compliance will be measured by comparing standards	79 Chinese listed firms + 77 standards	Evaluating whether the efforts for harmonizing their domestic standards with IAS have been successful	variances between Chinese GAAP and IAS
12.	(Gray et al. 2009)	European companies listed in the US	Comparability Index	134 European companies	they examine whether 'European' and US GAAP measures of income and equity converged under IFRS	IFRS and US GAAP have not fully converged,
13.	(Qu & Zhang 2010)	China	fuzzy clustering analysis	33 standard	The study focuses on measuring formal accounting harmonization (point of time)	The harmonization level of CAS with IFRS is larger than 0.7.
14.	(Peng & Van Der Laan Smith 2010)	China	longitudinal analysis	159 key measurement items3	the development of Chinese accounting standards	Increasing the level of convergence with IFRS from 20% in 1992 to 77% in 2006
15.	(Trabelsi 2010)	Tunisia	qualitative study	questionnaire	He investigates how easy/difficult for Tunisia to switch to the Anglo-Saxon accounting culture.	De jure is perfectly harmonized with the international ones.
16.	(Lasmin 2011)	Indonesia	Jaccard's Coefficients, Spearman's Correlation Coefficients, Euclidean Distances, and Chi-square statistics	43 accounting methods of 18 accounting standards	measuring the levels of formal harmonization (point of time)	the formal harmonization is high
17.	(Nguyen & Gong 2014)	*Vietnam*	*fuzzy-based approach*	24 cases	*Assessing the extent of convergence between VAS and IAS/IFRS*	*The results indicate that the overall convergence level of VAS with IAS/IFRS is 0.6572 < 0.7.*

Appendix 3 Studies Focused on De facto Harmonization

No.	Author(s) year	Location	methodology	Sample (Data source)	Focus of Study (Objective)	Outcomes (Main conclusions)
1.	Barrett (1976)	United State, United Kingdom, Japan, Sweden, Netherlands, Germany, and France	measured by reference to seventeen categories.	annual reports of 103 firms for the years 1963 to 1972.	the overall extent of financial disclosure and (2) the degree of comprehensiveness of firms' financial statements.	Although the general level of company disclosure improved in the 1963 to 1972 period, wide variance between the general level of disclosure of American and British firms, on the one hand, and the companies from the other five countries.
2.	(Benston) 1976	US & UK	compare	two systems	This paper explores differences, costs and benefits of the two systems public regulation of financial disclosure in the U.S. and private regulation in Great Britain	private regulation is preferable
3.	(Gray)1980	Europe	conservatism index	72 firms from three countries	international variances in accounting practices on firm profits	He suggested that profits-measurement behaviour is associated with domestic characteristics.
4.	(Van der Tas 1992)	Netherlands ; UK; Luxembourg ; Ireland ; Greece ; Germany; France ; Denmark	C index Chi-square	Annual reports 1979-1988…154 firms and Belgium	Harmonization ….deferred taxation	Increasing the degree of harmony over time, positive impact of Fourth Directive on individual accounts and no significant impact on consolidated accounts
5.	(Emenyonu & Gray 1992)	Germany ; France and UK	I index	Annual reports..1989 from 78 firms	Harmony: Depreciation - Goodwill -Stock valuation - Extraordinary/exceptional items Valuation bases for fixed assets	The lack of harmony (significant differences between three countries in respect of all the practices evaluated.)
6.	(Herrmann & Thomas 1995)	Belgium, Denmark, France, Germany, Ireland, the Netherlands. Portugal and the UK	I index. The chi-square	Annual reports.1986-7 and 1990-2 20 firms	Harmony … fixed asset valuation, depreciation, goodwill, research and development costs, inventory costing, and foreign currency translation of revenues and expenses	High level of harmony: Accounting for foreign currency translation of assets and liabilities, treatment of translation differences, and inventory valuation. and low level of harmony: fixed asset valuation, depreciation, goodwill, research and development costs, inventory costing, and foreign currency translation of revenues and expenses.

No.	Author(s) year	Location	methodology	Sample (Data source)	Focus of Study (Objective)	Outcomes (Main conclusions)
7.	(Archer et al. 1996)	Netherlands ; Switzerland ; Sweden ; Ireland ; Germany ; France ; and Belgium	Nested hierarchy of log-linear models	annual reports from (1986-7 to 1990-1) 89 firms)	Harmonization … Deferred taxation and Goodwill	in this period , Little progress took place.
8.	(McLeay et al. 1999)	Netherlands ; UK; Luxembourg ; Ireland ; Germany ; France ; Denmark ; Austria ; Belgium ; Finland ; Spain ; Switzerland ; and Sweden	Nested statistical models	annual reports from (1987 to 1993) 286 firms	The proposal of a methodology Goodwill as an example	Decreasing harmonization of goodwill
9.	(Canibano & Mora 2000)	Europe	the C index and a bootstrapping test of the C index as a way of measuring the significance of the change in its value.	financial statements of 85 global players' from thirteen countries	Focusing on four accounting issues (deferred taxation, goodwill, leasing and foreign currency translation).	Their results provide the evidence that de facto spontaneous harmonization of these countries went on in the 1990s
10.	(Rahman et al. 2002)	Australia & New Zealand	Jaccard coefficient	75 Australian firms & 81 firms New Zealand	Measuring de facto and the relationship	practice harmony is also associated with firm-specific characteristics
11.	(Marston & Polei 2004)	German	Descriptive and multivariate analysis	publicly traded German companies listed on the Frankfurt Stock Exchange	This study examines the use of the Internet for the disclosure of financial and investor-related information by German companies between **two points of time**	increasing the overall disclosure level on corporate Web sites. The average total score increased from 55% in 2000 to 68% in 2003, showing that the amount and presentation of information disclosed at corporate Web sites has been increased over time.
12.	(Peng et al. 2008)	China	the compliance will be measured by comparing standards	79 Chinese listed firms + 77 standards	Evaluating whether the efforts for harmonizing their domestic standards with IAS have been successful	effective harmonization
13.	(Mechelli 2009)	Italia	H-Index	101 financial statements	investigate the degree of harmonization in applying IAS 7 (focusing on the cash flow statement)	high degree of noncompliance
14.	(Gray et al. 2009)	European companies listed in the US	Comparability Index	134 European companies	they examine whether 'European' and US GAAP measures of income and equity converged under IFRS	significant de facto divergence

No.	Author(s) year	Location	methodology	Sample (Data source)	Focus of Study (Objective)	Outcomes (Main conclusions)
15.	(Trabelsi 2010)	Tunisia	qualitative study	questionnaire,	He investigates how easy/difficult for Tunisia to switch to the Anglo-Saxon accounting culture.	De facto is not harmonized
16.	(Lasmin 2011)	Indonesia	H index, C index, and Chi-square statistics	2004 and 2008 financial statements of 100 listed Indonesian companies	measuring the levels of material harmonization (point of time) firms‟ choices of accounting policies.	material harmonization are high
17.	(Strouhal 2012)	-	Jaccard's coefficients	big set of IFRS and small standard IFRS for SMEs	(i) intangible assets, (ii) PPE, (iii) investment properties, (iv) financial leases, (v) inventories, (vi) financial assets and liabilities, (vii) financial derivatives, and (viii) financial statements.	IFRS information can help SMEs involved in buying or selling goods or services across national borders
18.	(Andreea & Alexandra-Carmen 2013)	Europe	I Index	financial statements of 30 groups listed on three different stock exchanges	SOME DISCLOSURE ASPECTS REGARDING CONSOLIDATED FINANCIAL STATEMENTS	The result indicates a high degree of material harmonization

Appendix 4 Number of Companies in Each Market by sectors

Country	Name of stock	Number of companies	Number of companies in each sector		
Egypt	The Egyptian Exchange	482	BANKS		14
			Basic Resources		9
			Chemicals		7
			Construction and Materials		27
			Financial Services excluding Banks		34
			Food and Beverage		27
			Healthcare and Pharmaceuticals		14
			Industrial goods and Services and Automobiles		18
			Oil and Gas		3
			Personal and Household Products		12
			Real Estate		28
			Retail		5
			Media		1
			Technology		3
			Telecommunication		3
			Travel & leisure		16
			Utilities		1
			Insurance		28
			Diversified Financial Services		35
			Real Estate		39
			Services		64
			Industrial		94
Morocco	Casablanca stock exchange	74	Oil & Gas		2
			Insurance		3
			Real Estate		4
			Construction & Building Materials		6
			Banks		6
			Distributors		8
			Beverages		3
			Food producers & Processors		6
			Utilities		1
			Chemicals		4
			Transport		2
			Engineering & Equipment Industrial Goods		1
			Holding Companies		4
			Materials, Software & Computer Services		6
			Telecommunications		1
			Mining		4
			Forestry & Paper		1
			Electrical & Electronic Equipment		1
			Leisures and Hotels		1
			Pharmaceutical Industry		2
			Investment Companies & Other Finance		8
Tunisia	Bourse de Tunis	51	financials		**22**
			Banking	11	
			Financial services	9	
			insurance	3	
			Telecommunication		**2**
			consumer services		**5**
			distribution	4	
			Travel and leisure	1	
			Health care		**2**
			Consumer goods		**8**
			Automobiles and parts	4	
			Food and beverage	3	
			Personal and household goods	1	
			industries		**7**
			Construction and materials	5	
			Industrial goods and services	2	
			Basic material		**4**
			chemicals	3	
			Basic resources	1	
			Oil and Gas		**1**

Appendix 5 Standards Compliance Checklist Questions

N	Standard	Text	Answers Yes	Answers No	%
1.	IAS 8	Accounting Policies, Changes in Accounting Estimates and Errors			%
➢	Has the entity selected and applied its accounting policies consistently for similar transactions, other events and conditions?				
➢	Has the entity accounted for any other change in accounting policy retrospectively as if the new policy had always been applied?				
➢	Has the entity changed its accounting policy only if that change is required?				
➢	Does the entity account for a change in accounting estimate prospectively by including its effects in profit or loss of current and future periods?				
➢	Do the financial statements include the disclosures about these points?				
2.	IAS 12	**INCOME TAXES**			%
➢	Is the amount of income taxes payable in respect of the taxable profit for the period (current tax) recognized as a liability to the extent that it is unpaid?				
➢	Is a deferred tax liability recognized for all taxable temporary differences except to the extent that the deferred tax liability arises from the initial recognition of goodwill, or the initial recognition of an asset or liability in a transaction which is not a business combination and at the time of the transaction, affects neither accounting profit nor taxable profit?				
➢	Are deferred tax assets and liabilities not discounted?				
➢	Has the entity reviewed the carrying amount of a deferred tax asset at the end of the reporting period?				
➢	Is current and deferred tax expense included in profit or loss for the period except to the extent that it arises from transactions or events?				
3.	IAS 16	**PROPERTY, PLANT, AND EQUIPMENT**			%
➢	Is the cost of an item of property, plant and equipment only recognised as an asset if it is probable that future economic benefits associated with the item will flow to the entity, and the cost can be measured reliably?				
➢	Are items of property, plant and equipment that qualify for recognition as an asset measured at cost?				
➢	After initial recognition, has the entity chosen either the cost model or the revaluation model as its accounting policy and applied that policy to an entire class of property, plant and equipment?				
➢	Does the cost of an item of property, plant and equipment consist of its purchase price (inclusive of import duties and non-refundable purchase taxes), any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimates of dismantling and removing the item and restoring the site?				
➢	Are revaluations made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the balance sheet date?				
4.	IAS 17	**LEASES**			%
➢	Is a distinction made between finance leases and operating leases?				
➢	Has the entity as lessee recognized operating lease payments as an expense on a straight-line basis over the lease term unless another systematic basis is more representative of the time pattern of the user's benefit?				
➢	Has the entity as lessor presented assets subject to operating leases in the balance sheet according to the nature of the asset (for example, property, plant and equipment)?				
➢	Has the entity as lessor recognized operating lease income on a straight line basis over the lease term unless another systematic basis is more representative of the time pattern in which use benefit derived from the leased asset is diminished?				

N	Standard	Text	Answers		%
			Yes	No	
➢	Has the entity as lessee recognized the assets and liabilities arising under finance lease at the fair value of the leased property or, if lower, the present value of the minimum lease payments?				
5.	IAS 19	**EMPLOYEE BENEFITS**			%
➢	When an employee has rendered service to the entity during an accounting period, has the entity recognized the undiscounted amount of short-term employee benefits expected to be paid in that service as a liability after deducting any amount already paid?				
➢	Does the entity account for both legal and constructive obligations to pay post-employment benefits in respect of defined benefit plans?				
➢	Is the cost of defined contribution plans recognized as a liability and expense when the employee renders service which gives entitlement to the contributions?				
➢	Has the entity used the projected unit credit method to measure the present value of the defined benefit obligation?				
➢	Is past service cost recognized on a straight-line basis over the average period until the benefits become vested?				
6.	IAS 23	**BORROWING COSTS**			%
➢	Has the entity capitalized borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset as part of the cost of the asset?				
➢	Are all other borrowing costs recognised as an expense in the period in which they are incurred?				
➢	Do the financial statements include the disclosures about borrowing costs?				
➢	If borrowing costs are capitalised are these added to the carrying amount of the asset				
➢	Has the amount of borrowing costs capitalized been determined in accordance with IAS?				
7.	IAS 32	**FINANCIAL INSTRUMENTS PRESENTATION**			%
➢	Are financial instruments issued by the entity or its component parts classified as a financial asset, financial liability or equity instrument in accordance with the substance of the contractual management and the definitions of a financial asset, financial liability and an equity				
➢	Are treasury shares deducted from equity with no recognition of any gain or loss in profit or loss?				
➢	Are interest, dividends, losses and gains relating to a financial liability recognized as income or expense in profit or loss?				
➢	Are distributions to holders of an equity instrument debited to equity?				
➢	Are a financial asset and a financial liability offset only when there is a legal right of set off and an intention to settle and realize on a net basis or settle/realize simultaneously?				
8.	IAS 33	**Earnings Per Share**			%
➢	Does the entity calculate basic earnings per share by dividing profit or loss attributable to ordinary equity holders by the weighted average number of ordinary shares outstanding during the period?				
➢	When calculating diluted earnings per share, does the entity assume the exercise of dilutive options and warrants, the issue of shares at average market price and the issue of the remainder of the shares for no consideration?				
➢	Does the entity adjust profit or loss attributable to ordinary shareholders for after-tax amounts of preference dividends and other effects of preference shares classified as equity?				
➢	Does the entity calculate diluted earnings per share by adjusting profit or loss attributable to ordinary equity holders and the weighted average number of shares outstanding for the effects of all dilutive potential ordinary shares?				
➢	Do the financial statements include the enough disclosures about earnings per share?				
9.	IAS **37**	**Contingent Liabilities and Contingent Assets**			
➢	Has the entity not recognised a contingent asset or contingent liability?				

N	Standard	Text	Answers Yes	Answers No	%
➢	Does the entity measure a provision at the best estimate of the amount required to settle the present obligation at the balance sheet date?				
➢	When the effect of the time value of money is material, does the entity measure the provision at the present value of expenditures expected to settle the obligation?				
➢	Are the provisions reviewed at each balance sheet date and adjusted to reflect the current best estimate of the (present value of the) amount required to settle the obligation?				
➢	Do the financial statements include the enough disclosures about above points?				
10.	IAS 38	**INTANGIBLE ASSETS**			**%**
➢	Does the entity recognize intangible assets only when they are separable (i.e. capable of being separated and sold etc.) from the entity or they arise from contractual or other legal rights?				
➢	Are the costs of internally generated goodwill recognized as an expense in the period in which they are incurred?				
➢	Are research costs recognized as an expense in the period in which they are incurred?				
➢	Is an intangible asset with an indefinite useful life tested annually for impairment instead of being amortized?				
➢	Is the depreciable amount of an intangible asset with a finite useful life allocated on a systematic basis over its useful life?				
11.	IFRS 3	**BUSINESS COMBINATIONS**			**%**
➢	Is the entity treated as the acquirer in a business combination whenever it obtains control of the other combining entity?				
➢	Has the entity measured the acquiree's identifiable assets, liabilities and contingent liabilities at their fair values at the acquisition date?				
➢	Has the entity measured goodwill subsequent to the acquisition at cost less any accumulated impairment losses?				
➢	Is the cost of a business combination allocated by recognizing the acquiree's identifiable assets, liabilities and contingent liabilities that satisfy the recognition criteria?				
➢	Do the financial statements include the disclosures about above points?				
12.	IFRS 7	**FINANCIAL INSTRUMENTS DISCLOSURE**			**%**
➢	Does the entity disclose information that enables users of its financial statements to evaluate the significance of financial instruments for its financial position and performance?				
➢	Does the entity disclose for loans or receivables designated as at fair value through profit or loss the maximum exposure to credit risk , and the other risk disclosures				
➢	Does the entity disclose for financial liabilities designated as at fair value through profit or loss.				
➢	Has the entity disclosed total interest income and total interest expense for financial assets or financial liabilities that are not at fair value through profit or loss				
➢	Does the entity disclose the information on designated fair value hedges, cash flow hedges and hedges of net investments in foreign operations?				
13.	IFRS 8	**OPERATING SEGMENTS**			**%**
➢	Does the entity have a debt or equity instruments that are traded in a public market (for example, a domestic or foreign stock exchange or an over-the counter market);				
➢	Must each segment item be measured in accordance with the measure reported to the chief operating decision maker?				
➢	Has the entity disclosed segment information if it has publicly traded equity or debt securities?				
➢	Does the entity choose to disclose voluntary information about segments that is described as segment information?				
➢	Does the entity regularly provide a measure of assets and liabilities for each reportable segment to the chief operating decision maker?				

Appendix 6Alternatives for Each Accounting Issue (Items Checklist)

	A = Income tax
A 1	Deferred tax is not recognised.
A 2	Temporary difference approach (balance sheet liability method): Temporary differences are differences between the carrying amount of an asset or liability recognized in the statements of financial position
A 3	Timing difference approach (the income statement liability method): A timing difference arises when an item of income or expense is recognized for tax purposes but not accounting purposes, or vice versa, and is therefore consistent with a profit and loss approach to deferred tax.
A 4	Applying the method of tax payable.
A 5	No recognition of deferred tax and it is not known whether or not deferred tax accounting is applicable
	B = Financial leases – as lessee
***B* 1**	Capitalization as intangible assets.
***B* 2**	Capitalization as tangible fixed assets
***B* 3**	Non-capitalization except there a reason to classify it as a finance lease such as The lessee has the option to purchase the asset at the end of the period.
***B* 4**	Capitalization as other assets
***B* 5**	The method used and whether it is applicable or not are not specified
	C = Goodwill
C 1	Goodwill Credited to income in the year of acquisition or Goodwill may not be amortised
C 2	Shown as an asset and at least annually reviewed for impairment.
C 3	Shown as an asset and amortized in more than five years
C 4	Shown as an asset and amortized in five years or less
C 5	The method used and whether it is applicable or not are not specified
	D = revaluation of fixed assets
D 1	Indexation= indices are applied to the cost value of the assets to arrive at the current cost of the assets
D 2	Current market price (CMP)= Comparison of assets to most similar types available for sale, new or used, can provide an estimate of value
D 3	the estimated future cash flows
D 4	Selective revaluation= can be defined as revaluation of specific assets within a class or all assets within a specific location.
D 5	The method used and whether it is applicable or not are not specified
	E = depreciation
E 1	Straight-line depreciation
E 2	Declining-balance method (or Reducing balance method)
E 3	Activity depreciation
E 4	Sum-of-years-digits method
E 5	The method used and whether it is applicable or not are not specified
	F = Foreign currency translation
F1	Exchange gains and losses as income/loss for the year
F 2	Differences are recognized in the year or as the capital reserve depending on their nature.
F 3	Exchange losses as period expenses and unrealized gains deferred or no recognition of unrealized gains
F 4	The exchange differences are taken to a component of equity
F 5	The method used and whether it is applicable or not are not specified
	G = inventory
G1	FIFO (First-in first-out method)
G 2	LIFO (Last-in first-out method)
G 3	Weighted average method
G 4	Moving Average Method
G 5	The method used and whether it is applicable or not are not specified

Appendix 7 Individual Result of Compliance Level Based on 2010-Full Sample

				IAS 8	IAS 12	IAS 16	IAS 17	IAS 19	IAS 23	IAS 32	IAS 33	IAS 37	IAS 38	IFRS 3	IFRS 7	IFRS 8	mpliance pe
1	EGS672I2C	Egypt	F	0.8	1	0.8	0.2	0.4	0	0.4	0.6	0.6	0.6	0.8	0.8	0	0.538462
2	EGS60101C010	Egypt	F	0.8	0.4	0.8	0	0.2	0	0	0.6	0.6	0.2	0.6	0.4	0.8	0.415385
3	EGS73541P048	Egypt	F	0.6	0.8	0.8	0	0.6	0.2	0.6	0.6	0.6	0.2	0.6	0.6	0.2	0.492308
4	EGS60121C018	Egypt	F	0.8	0.8	0.8	0.8	0.4	0.6	1	0.6	1	0.6	1	1	0.6	0.769231
5	EGS60041C018	Egypt	F	1.0	0.6	1	0.6	0.4	0.4	0.8	0.4	0.2	0.4	0.8	1	0.6	0.630769
6	EGS69082C013	Egypt	F	0.6	0.4	0.8	0	0	0	0.2	0.2	0.4	0.6	0	0	0	0.246154
7	EGS681I1C015	Egypt	F	0.4	0.4	1	0	0.2	0	0.2	0.4	0.4	0	0.2	0.2	0.2	0.276923
8	EGS60241C014	Egypt	F	0.6	0.8	1	0	0.4	0	0.6	0.6	0.6	0	0	0.8	0.2	0.430769
9	EGS60301C016	Egypt	F	0.8	0.6	0.8	0.2	0.2	0.6	0.6	0.6	0.6	0.4	0.8	0.8	0.4	0.569231
10	EGS69101C011	Egypt	F	0.6	0.8	0.8	0	0.4	0	0.6	0.4	0.8	0.6	0.4	0.8	0.4	0.507692
11	EGS65441C015	Egypt	f	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
12	EGS60142C014	Egypt	F	0.6	0.6	0.6	0.6	0	0	0.6	0.2	0.6	0.6	0.6	0.8	0.6	0.492308
13	EGS60051C017	Egypt	F	0.8	0.8	0.8	0.8	0.4	0	0.8	0.2	0.6	0.6	0.2	0.8	0.4	0.553846
14	EGS691S1C011	Egypt	f	0.6	0.6	0.8	0	0.4	1	0.6	0.2	1	0.4	1	0.4	0.4	0.569231
15	EGS65901C018	Egypt	Non	1.0	0.8	0.8	0.4	0.6	1	0.4	0.4	0.6	0.4	0.8	0.6	0.4	0.630769
16	EGS673T1C012	Egypt	Non	0.4	0.6	0.8	0.4	0.2	0.2	0.6	1	0.8	0.4	0.8	0.6	0.4	0.553846
17	EGS38171C012	Egypt	Non	1.0	1	1	1	1	1	1	1	1	1	1	0.8	1	0.984615
18	EGS72201C014	Egypt	Non	0.6	0.8	1	0.4	0.4	0.8	0.6	0.2	0.6	0.6	0.4	0.6	0	0.538462
19	EGS48011C018	Egypt	Non	0.4	0.8	0.8	0.6	0.4	0.6	0.2	0.2	1	0.6	0.6	0.6	0.4	0.553846
20	EGS48031C016	Egypt	Non	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
21	EGS42051C010	Egypt	Non	0.6	0.8	0.8	0.4	0.4	0.4	0.6	0.4	0.6	0.4	0.6	0.6	0.2	0.523077
22	EGS3C161C0	Egypt	Non	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
23	EGG676K1D011	Egypt	Non	0.8	1	1	0.8	1	0.8	1	0.6	1	0.6	1	1	0.6	0.861538
24	EGS74081C018	Egypt	Non	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
25	EGS690C1C010	Egypt	Non	0.6	0.8	1	0.8	0.4	0.8	0.8	0.4	1	0.4	1	1	0.6	0.738462
26	EGS3G0Z1C014	Egypt	Non	0.8	0.6	1	0.6	0.2	0.6	0.4	0.4	0.8	0.6	0.6	0.6	0.4	0.584615
27	MA0000011835	Morocco	F	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
28	MA0000011884	Morocco	F	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
29	MA0000010811	Morocco	F	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
30	MA0000011926	Morocco	F	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
31	MA0000012007	Morocco	F	0.4	0.2	0.6	0	0.4	0.4	0.4	0	0.6	0.6	0	0.4	0.4	0.338462
32	MA0000011454	Morocco	F	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
33	MA0000010928	Morocco	F	0.4	0.4	0.6	0.4	0	0	0.4	0.2	0.4	0.4	0.4	0.2	0	0.292308
34	MA0000011215	Morocco	F	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	MA0000012049	Morocco	NON	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
36	MA0000010407	Morocco	NON	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
37	MA0000011058	Morocco	NON	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
38	MA0000011140	Morocco	NON	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
39	MA0000010787	Morocco	NON	0.6	0.4	0.8	0.4	0.2	0.4	0.4	0	0.6	0.6	0.4	0.6	0	0.415385
40	MA0000010019	Morocco	NON	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
41	MA0000010506	Morocco	NON	0.6	0.4	0.8	0.4	0.2	0.4	0.4	0.2	0.6	0.6	0.4	0.6	0	0.430769
42	MA0000012122	Morocco	NON	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
43	MA0000012031	Morocco	NON	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1
44	MA0000011611	Morocco	NON	0.6	0.6	0.8	0.4	0.2	0.2	0.4	0.2	0.6	0.8	0.4	0.6	0.4	0.476923
45	MA0000010332	Morocco	NON	1.0	1	1	1	1	1	1	1	1	1	1	1	1	1

46	TN0003400058	Tunisia	F	0.6	0.2	1	1	0.2	0.2	0.4	0.2	0.6	0.8	0.6	0.6	0.4	0.523077
47	TN0003000452	Tunisia	F	0.6	0.2	0.8	0.4	0.2	0.2	0.4	0.2	0.6	0.6	0.4	0.4	0.4	0.415385
48	TN0003600350	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0	0.307692
49	TN0004700100	Tunisia	F	0.8	0	0.8	0.2	0	0.6	0	0	0.2	0.8	0.8	0	0	0.323077
50	TN0001600154	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
51	TN0006610018	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0.2	0.323077
52	TN0001800457	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.4	0.8	0.8	0.2	0.2	0.353846
53	TN0001900604	Tunisia	F	0.8	1	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.415385
54	TN0003100609	Tunisia	F	0.8	1	0.8	0	1	0.6	0	0.2	0.2	0.8	0.8	0.2	0.2	0.507692
55	TN0002200053	Tunisia	F	0.8	0.2	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.353846
56	TN0001300557	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
57	TN0004200853	Tunisia	F	0.8	0.2	0.8	0.2	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.369231
58	TN0007200017	Tunisia	F	0.8	0.2	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.353846
59	TN0001400704	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0	0.8	0.8	0.2	0.2	0.323077
60	TN0004100202	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
61	TN0006060016	Tunisia	F	0.8	0.2	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.353846
62	TN0002600955	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
63	TN0007380017	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0.2	0.323077
64	TN0002400505	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
65	TN0003900107	Tunisia	F	0.8	0	1	0	0	0.6	0	0.2	0.2	0.8	0.8	0.2	0.2	0.369231
66	TN0002300358	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
67	TN0003800703	Tunisia	Non	1.0	0	1	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.369231
68	TN0007140015	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
69	TN0007210016	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0.2	0.323077
70	TN0007130016	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0.2	0.323077
71	TN0003200755	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
72	TN0001000108	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0.2	0.323077
73	TN0006640015	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
74	TN0001100254	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
75	TN0006590012	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
76	TN0004000055	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
77	TN0006670012	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0	0.8	0.8	0	0.2	0.307692
78	TN0007180011	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0.2	0.323077
79	TN0006440010	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
80	TN0006780019	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338462
81	TN0006530018	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0.2	0.323077
82	TN0006580013	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0.2	0.323077
83	TN0006560015	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0.2	0.323077
84	TN0001200401	Tunisia	Non	0.8	1	0.8	1	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.492308
				0.78	0.46	0.85	0.36	0.33	0.60	0.39	0.34	0.52	0.73	0.75	0.48	0.41	**0.54**

Appendix 8 Individual Result of Compliance Level Based on 2005-Full Sample

					IAS 8	IAS 12	IAS 16	IAS 17	IAS 19	IAS 23	IAS 32	IAS 33	IAS 37	IAS 38	IFRS 3	IFRS 7	IFRS 8	2005 DE JURE
1	2	EGS60101C010	Egypt	F	0.6	0.4	0.8	0	0.2	0	0.2	0.6	0.6	0.4	0.8	0.4	0.8	0.446153846
2	6	EGS69082C013	Egypt	F	0.4	0.4	0.6	0	0	0	0	0.2	0.4	0.2	0	0	0	0.169230769
3	15	EGS65901C018	Egypt	Non	0.4	0.4	0.6	0.2	0.6	1	0.6	0.2	1	0.4	0	0.6	0.4	0.492307692
4	17	EGS38171C012	Egypt	Non	1	1	1	1	1	1	1	1	1	1	1	0.8	1	0.984615385
5	20	EGS48031C016	Egypt	Non	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	22	EGS3C161C0	Egypt	Non	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	24	EGS74081C018	Egypt	Non	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	25	EGS690C1C010	Egypt	Non	0.6	0.6	0.8	0	0.6	0	1	0.4	0.6	0.2	1	1	0.2	0.538461538
9	26	EGS3G0Z1C014	Egypt	Non	1	0.8	0.8	0	0.2	0.4	0.4	0.4	0.6	0.4	0	0.6	0.6	0.476923077
10	27	MA0000011835	Morocco	F	0.6	0.6	0.8	0.4	0	0.4	0.4	0	0.4	0.4	0.4	0.6	0.4	0.415384615
11	28	MA0000011884	Morocco	F	0.6	0.6	0.8	0.4	0	0.2	0.6	0	0.4	0.4	0.6	0	0.4	0.384615385
12	29	MA0000010811	Morocco	F	0.6	0.4	0.6	0.4	0.2	0.2	0.6	0.2	0.8	0.8	0.6	0.6	0.2	0.476923077
13	33	MA0000010928	Morocco	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	34	MA0000011215	Morocco	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	36	MA0000010407	Morocco	NON	0.4	0.2	0.6	0	0	0	0.2	0	0.4	0.4	0.2	0.4	0	0.215384615
16	37	MA0000011058	Morocco	NON	0.6	0.6	0.8	0	0.2	0.2	0.4	0	0.8	0.4	0.4	0.6	0	0.384615385
17	38	MA0000011140	Morocco	NON	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	39	MA0000010787	Morocco	NON	0.6	0.4	0.8	0.4	0.2	0.4	0.4	0	0.6	0.6	0.4	0.6	0	0.415384615
19	40	MA0000010019	Morocco	NON	0.4	0.8	0.8	0.4	0.2	0.4	0.4	0.2	0.6	0.6	0.6	0.4	0	0.446153846
20	42	MA0000012122	Morocco	NON	0.6	0.8	0.8	0.4	0.2	0.2	0.4	0.2	0.6	0.6	0.6	0.6	0	0.461538462
21	43	MA0000012031	Morocco	NON	0.6	0.4	0.8	0.4	0.2	0.2	0.4	0.2	0.8	0.8	0.6	0.6	0.4	0.492307692
22	45	MA0000010332	Morocco	NON	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23	47	TN0003000452	Tunisia	F	0.6	0.2	0.8	0.4	0.2	0.2	0.4	0.2	0.6	0.6	0.4	0.4	0.4	0.415384615
24	48	TN0003600350	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0	0.307692308
25	49	TN0004700100	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0	0.323076923
26	52	TN0001800457	Tunisia	F	0.8	0.2	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.353846154
27	53	TN0001900604	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338461538
28	54	TN0003100609	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0	0.2	0.323076923
29	55	TN0002200053	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338461538
30	56	TN0001300557	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338461538
31	57	TN0004200853	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338461538
32	59	TN0001400704	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338461538
33	63	TN0007380017	Tunisia	F	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0	0.323076923
34	66	TN0002300358	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338461538
35	67	TN0003800703	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338461538
36	68	TN0007140015	Tunisia	Non	0.8	0	0.8	0	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.338461538
37	84	TN0001200401	Tunisia	Non	0.8	0	0.8	1	0	0.6	0	0	0.2	0.8	0.8	0.2	0.2	0.415384615
					0.70	0.37	0.77	0.28	0.24	0.49	0.34	0.24	0.49	0.66	0.64	0.42	0.32	0.46