THE FACTORS INFLUENCING HIDDEN ECONOMY INVOLVEMENT IN LIBYA

MOHAMMED F H MUSSA

801936

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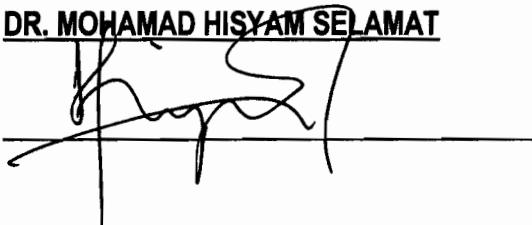
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801936

College of Business

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ABSTRACT

This paper aims to examine the influence of the demographic and attitudinal variables (tax rate and social burden, Islamic values, working experience, penalty, fairness of the government, age, gender, education, occupation, income level, and marital status) on hidden economy involvement in Libya. The questionnaire was developed and distributed in order to collect the data for the purpose of this study. From the correlation and regression analysis, it is found that tax rate and social burden, penalty and Islamic values variables are positively related to hidden economy involvement. For the demographic factors, the variable of occupation has a relationship with hidden economy involvement.

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ABBREVIATIONS

GDP = Gross Domestic Product

OECD = Organization for Economic Co-operation and Development

HE = Hidden Economy Involvement.

TR = Tax Rate and Social Burden.

EX = Working Experience.

P = Penalty.

IV = Islamic Values.

FG = Fairness of the Government.

1.0 CHAPTER ONE

1.1 Introduction

This chapter introduces the background of this research. As an introductory, this research investigates the involvement in the hidden economy activities in Libya. Various definitions and taxonomies of the concept of hidden economy, proposed by several researchers, are highlighted. It also stresses the importance of knowing the factors that have an influence towards hidden economy activities.

1.2 Research Background

Any economic activity that does not appear in the statistics of the national income and gross domestic product (GDP) is considered to be part of the hidden economy (Craigwell & Maurin, 2005). Many people think that hidden economy is an illegal activity; however, this opinion is not necessarily right. Although it might be true that all illegal activities lie within the hidden economy but there are many legal ones (Carolina & Pan, 2007). This research considers hidden economy as an illegal activity due to its negative impact to the economic growth.

The growth of hidden economy creates a problem to the governments and policy makers around the world (O'Neill, 1983). This phenomenon is contributed by several identifiable reasons such as the increase of tax burdens and social security contributions, the increase of rigidity in economic regulations. As stated by Greenidge, Holder, and Mayers (2005), the problems of hidden economy are always a manifestation of the refusal of practitioners in the field to evade the application of rules which include taxes especially in the labour markets. They further argued that hidden economy is the unethical practice that has eroded and deprived the economy

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of the required ingredient of growth. This phenomenon will continue to plaque the economy unless a long term solution is proposed. One important way to solve these problems is the mandatory eradication of corruption through good governance and ethical standard.

The countries that have more economic regulations face serious hidden economic problems (Johnson, Kaufmann & Shleifer, 1997). The regulations are such as licensing requirements, labour market regulations, restrictions for foreigners, and trade barriers. The enforcement of those regulations results in the increase of labour cost and as a consequence motivates many people to shift to the hidden economy (Schneider & Enste, 2002). It is often the case that the employers react to that high costs by reducing the number of employees. The involved employees then find other sources of income through hidden economy activities. Rigidity in rules and regulations is also causing the employers to involve in the hidden economy to avoid higher and non-transferable authorized burdens (Johnson *et al.*, 1997). On the other hand, the countries that have low rigidity in rules and regulations face smaller hidden economy activities such as Ireland, the Netherlands, France, Germany and Great Britain (Shende, 2002; Mayers, 2005). This is because most of the economic activities are considered as legal.

There is an increase in the growth of the hidden economy in societies where the governments do not effectively and fairly carry out their tax laws and regulations (Lucian & Albu, 1995). This leads to an evasion of the tax, a decrease in tax receipts and an increase in the budget deficit (Mayers, 2005). This scenario is not good for a systematic development in an economy.

The hidden economy is mostly associated with hidden employment (Lacko, 2007). This hidden employment, however, exists not only among the officially inactive and unemployed people, but also among the self-employed people and the employees as well (Lacko, 2007). Some workers in the hidden economy take on second job after or even during their regular hours in official employment (Schneider & Enste, 2002). People involve in the hidden economy either because they find it more profitable to do so or because they are barred from the official economy, as the case of illegal immigrants (Schneider & Enste, 1998).

As hidden economy has a potential to influence revenue collection and in turn infrastructure development, there is a need for the government to understand the factors that motivate people to participate in it. This understanding can assist in the process of organizing and controlling hidden economy. Thus the purpose of this study is to examine the factors that influence the growth of hidden economy.

1.3 Problem Statement

Based on the website of Aljamaheria and Libya events Libya suffers from hidden economy as well and thus deteriorates its economy, tax system and ultimately infrastructure development (Aljamaheria website). According to Aljealani (2009), economic researcher in the Administration of Statistics and Research of Central Bank of Libya, the percentage of hidden economy in 1982 was 2.6% which equals to 123.5 million dinar and in 2006 it has reached 3.1% of total (GDP) of the state which estimated around 707.1 million Libyan dinar. Furthermore, Alhouni (2008) stated that the problem has emerged from the following unexpected increase in the percentage of hidden economy in Libya which was arranging between 30% and 40%. This has created an opaque economy system in Libya. If this scenario is not

controlled and contained, the economy, especially taxation and infrastructure development may facing serious downturn and as such could lead to eventual decrease in Libya's competitive advantage in the world.

Hidden economy is also related to crime activities. The willingness to maximize income amongst the participants of hidden economy encourages them to utilize extreme and radical approaches in marketing and selling goods and services. In addition, as stated by Torgler and Schneider (2008), illegal behaviours are associated with higher moral costs (due to higher tax burden). Florea and Schiop (2008) argued that the increase of hidden economy is the sign that the democracy works badly whereby the citizens condemning government policies and protesting the law and regulations. Inability to control those crimes and issues can tarnish the image of Libya and ultimately affect foreign direct investment and tourism sector.

To recapitulate there is a need to understand the factors that influence the intention to participate in the hidden economy activities. Being equipped with this understanding enables Libyan government to control the growth of hidden economy and to curb the increase of crime activities.

1.4 Research Questions

Based on the above discussions, it can be concluded that this research intends to answer the following research question:

1. What are the factors that influence the involvement in the hidden economy in Libya?

1.5 Research Aim and Objective

As stated above, the aim of this research is to examine the factors that influence the involvement in the hidden economy activities. This aim can be achieved by achieving the following research objectives:

1. To examine the factors that influence the involvement and the participation in Libyan hidden economy activities.

1.6 Significance of the Study

For those who are not aware of the hidden economy or informal economy, this study can instil the awareness of it and create the sensitivity toward hidden economy issues. Being equipped with this understanding enables governments to improve the performance of its economy system and tackles the problems arising from hidden economy activities. Thus this research has good merit of investigation.

1.7 Dissertation Outlines

This dissertation has five chapters. The first chapter gives a background of the study and indicates the need for studying hidden economy in Libya. In the second chapter, the literature review about hidden economy and the proposed conceptual framework are presented. The research methodology is presented in the third chapter. The fourth chapter discusses the finding of the survey. The conclusion and recommendations are suggested and proposed in the fifth chapter.

1.8 Summary

The hidden economy is an actual phenomenon with important implications that deserve attention and study. This study was conducted to determine the factors that are related to hidden economy involvement. The focus of this research is hidden

economy activities in Libya. The findings of this research can assist Libyan government and policy makers to combat hidden economy activities.

2.0 CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature review of this study. From the literature review, one conceptual framework is developed. The elements of the framework are age, gender, education, occupation, income level, marital status, religion, penalty, experience, tax rate, and fairness of the government

2.2 Defining Hidden Economy

The phenomenon of hidden economy is an unusual one and continues to be a topic of debate on many of its features, nomenclature, definition and components. Studies on the hidden economy in developing economies have concluded that, on the one hand, this economy is a lifeline to the poor, while on the other it impedes government revenues (Sookrama, Schneider & Watson, 2006). One way to determine the extent to which the hidden economy helps alleviate poverty or hinders government revenues in any given country is to determine its structure and characteristics.

Various labels have been used by scholars to define and describe hidden economy. It has been called as the shadow economy (Frey, Weck, & Pommerehne, 1982; Cassel & Cichy, 1986), the underground economy (Simon & Wittte, 1982; Houston, 1987), the black economy (Dilnot & Morris, 1981), the irregular economy (Ferman, 1973), the subterranean economy (Gutmann, 1977), and the informal economy (McCrohan & Smith, 1986). The popular media uses terms such as invisible, hidden, submerged, shadow, irregular, non-official, unrecorded, or clandestine (Department of Labour, United States of America, 1992). The common

thread is that these activities are not recorded or imperfectly reflected in official national accounting systems.

Since hidden economy takes so many forms, defining hidden economy is a challenge. Perhaps the only way to define it is to identify its characteristics. The following presentation discusses four key characteristics that are widely accepted:

- Legal vs Illegal: Within the category of hidden economy, activities may be legal or illegal. Economic activities can be distinguished by the manner in which goods or services are produced or exchanged (Castells & Portes, 1989; Sassen-Koob, 1987; Stepick, 1989).

- Cash as most common medium of exchange: Another key aspect of the hidden economy is that cash is most commonly exchanged between parties rather than a check, payroll statement, or credit card. The purpose of using currency rather than bank credit is to avoid creating a record of the activities (McCrohan, Smith & Adams, 1991: 22-23).

- Unreported income or wages: As noted above, the nature of the exchange is cash or bartering so there is no record of the transaction; therefore, the income is not reported for taxation. Both the individuals who work informally and the companies who employ them follow this arrangement (McCrohan, Smith & Adams, 1991).

- Conditions of labour: A final characteristic of hidden economy is the conditions under which workers are employed - labour laws, health conditions, safety hazards, or the location of activities that disregard zoning laws (Castells & Portes, 1989:13).

Economic theorists differ in their views of how the hidden economy came into being, what functions it serves, and who participates in it. The earliest work focusing on the hidden economy is from studying the phenomenon in underdeveloped countries. According to De Soto (1989), Fields (1975), Marshall (1987), Sethuraman (1981) and Reed (1985), the economists have traditionally associated informal economic activities with developing countries and have emphasised its negative tax implications. Some theorists believe that informal economy can be understood by considering fringes of the mainstream economy (Todaro, 1969). The implication is that hidden economy is done principally by people of low socioeconomic status and serves as a safety net for the poor (Ferman, Henry, & Hoyman, 1987).

Eilat and Zinnes (2002) defined hidden economy as "backstage" economy activities or unrecorded statistic. They argued that the characteristics of hidden activities include the activities that evade taxes (either as part of general fiscal collections or as specific service charges), avoid regulatory requirements (e.g. "licensing"), ignore currency requirements (e.g. local currency as the only legal tender) and misappropriate statistical information (e.g. drug dealing).

In another study, Karanfil and Ozkaya (2007) defined hidden economy as a market-based production of goods and services, either legal or illegal that escapes from the official detection. This definition is supported by Nastav and Bojnec, (2007) whereby they define hidden economy as all productive activities, which are legally conducted but deliberately concealed from the authorities, for personal gains (e.g. tax avoidance, non-compliance).

As can been seen from the above discussion people have engaged in hidden economy for a variety of reasons. People may respond to the lack of economic opportunities in the formal economy by creating new activities in the informal sector or by joining any existing informal businesses (OECD, 2009). For some it is a necessity, the only resort that they have, or the best alternative to low-wage formal employment (Huitfeld, Sida, & Jutting, 2009). There are also other reasons such as personal fulfilment, social obligation, and free from an organization's rules and regulations (Raijman, 2001).

So what is hidden economy? According to Carillo and Pugno (p 258, 2004), in their simple definition *"hidden economy are economic activities that are not registered, taxed or regulated"*. Unregistered economic activities are one of the most critical problems, especially in developing countries. Since the size of unrecorded economy is not known exactly, the determination and implementation of macroeconomic and social policies become very critical.

Although there is considerable discussion about who is most likely to involve in the hidden economy, information on the socioeconomic characteristics of workers who engage in the hidden economy is somewhat sparse (Renooy, Ivarsson, & Meijer 2004). This research aims to fill the gap. Having defined the hidden economy but not its advantages and disadvantages, the following sections will describe and define the advantages and disadvantages of hidden economy.

2.3 Advantages and Disadvantages of Hidden Economy

Along with the assumption that policy makers can make accurate decisions when being equipped with the knowledge of hidden economy, there are several advantages and disadvantages to both the individual and the society from the

presence of hidden economy. The first advantage of hidden economy is that it encourages entrepreneurship and creativity (Greenidge, Holder, & Mayers, 2005). In this case, it gives displaced workers the opportunity to generate their own income rather than relying on government benefits. The income that is earned in the hidden economy is then spend in the official sector. This means that hidden economy able to spur domestic demand and in turn GDP in one country.

The second advantage is that hidden economy creates price war in the market (Greenidge *et al.*, 2005). This results in the price of established products or services decreasing in order to remain competitive. In turn the customer can get more value from their money.

Last but not least, hidden economy provides employment, especially in times of scarce work opportunities, and gives families an avenue through which they can meet their needs and improve their way of life (Greenidge *et al.*, 2005). This highlights that hidden economy can contribute to high productivity and encourage economic growth. In turn, hidden economy can be used as an outlet to contain frustration and tension among the public.

In contrast, its main disadvantage is that it takes away valuable government revenue (Greenidge *et al.*, 2005). This causes increased tax rates in order to replenish budget deficits. The lost revenue also entails a fall in the provision of public services and creates a problem to policy makers due to distorted economic information. This results in overstating unemployment and inflation rates, and understating growth rate. The consequent policies are often erroneous and cause adverse reactions.

Additionally, hidden economy encourages unfair competition against the official economy (Greenidge *et al.*, 2005). The competition lowers the official

economy income. This worsens employment rate whereby little or even no benefit can be gained by official labour force. This phenomenon eventually leads to corruption and political lobbying.

2.4 Hidden Economy Determinants

Being equipped with the understanding of hidden economy advantages and disadvantages, it is argued that there is a critical need to understand its determinants. This is to ease the process of managing and controlling hidden economy growth through relevant policies and rules.

Based on the previous studies, it is observed that there are two main determinants of hidden economy involvement, namely, attitudes and demographic factors (Maurin, Sookram, & Watson, 2003; Feige, 1990). The definitions and descriptions of the determinants are offered in subsections 2.4.1 and 2.4.2.

2.4.1 Attitude

The first determinant of hidden economy involvement is attitude. This is because behavioural characteristics are the alternative approach to define and describe hidden economy activities (Shende, 2001).

Attitudes can be defined as behaviour that motivates individuals to engage in economic activities (OECD, 2004). Ndubisi (2004) defined the attitude as an individual's positive or negative feeling (evaluative effect) about performing the targeted behaviour. This research considers five attitudes to be included in the conceptual framework, which are as follows: (1) tax and social burden; (2) working experience; (3) penalty; (4) Islamic values; and (5) fairness of the government. The descriptions of each sub-element are dealt with the following five subsections.

2.4.1.1 Tax rate and Social Burden

Shneider and Enste (2000) stated that, according to the model related to individualism, only individuals can choose to participate or not participate in the hidden economy activities. The individual decision was deeply influenced by the tax and social security burden (Alm, Sanchez, & De Juan, 1995; Schneider, 2007). Tax is considered as the main factor that motivates people to participate in the hidden economy activities (Shneider, 2004, 2007). There are several empirical studies that investigate the relationship between tax and hidden economy involvement (Schneider, 2007; Katsios, 2006).

Schneider, Braithwaite and Reinhart (2001) stated that people who have fear of being caught by the tax authorities will be less likely to work in hidden economy. Those who earn more money in the official economy will also be less likely to work less in hidden economy (Ardington & Leibbrandt, 2004). This is further evident from the recent major studies that found that higher tax rate is an important reason for the individuals and firms to involve in hidden economy (Friedman, Johnson, Kaufmann, & Zoido-Lobatón 2000; Schneider & Enste, 1999). Nevertheless, higher tax rate is inevitable as it is associated with more tax revenue, stronger legal environment, and less unofficial activity (Friedman, & Johnson, 2000). Katsios (2006) stated that this phenomenon is depending on how the tax system is administrated.

It can be argued that it is not merely statutory tax rate that influence the decision to behave criminally but relatively its application, exceptions or concessions, which affect individuals decisions (Friedman *et al.*, 2000). Torgler and Shneider (2008) did not find evidence that higher direct or indirect tax rate is associated with larger hidden economy. On the contrary, they found some evidence

that higher direct tax rate was associated with smaller hidden economy. This scenario is also supported by Dreher and Schneider (2006).

To recapitulate, it is argued that tax and social burden has a significant influence on the intention to engage and not engage in the hidden economy activities. Thus, it is included in this research conceptual framework as the first subelement of attitude.

2.4.1.2 Working Experience

Previous studies uncovered conflicting evidences regarding the association between experience and hidden economy. Usually, business owners have different opinion with the employees (Hindriks & Myles, 2006; McGee, 2006). As there is a potential relationship between working experience and hidden economy activities, it is embedded in this research conceptual framework as the second subelement of attitude.

2.4.1.3 Penalty

Normally, human beings perform tasks due to the provided incentives or the penalty if not completed (Renooy, Ivarsson, Gritsai, & Meijer, 2004). The authority resorts to penalty to ensure compliance to rules or to reduce hidden economy (Williams & Renooy, 2008). Therefore, the compliance is a result of punishment and detection (Cherry, 2006; Schneider *et al.*, 2006). It is argued that higher penalty leads to lower hidden economy activities. This is because the people do not want to pay the penalty and in turn avoid the involvement in hidden economy activities. Thus, this element is included in this research conceptual framework as the third subelement of attitude.

2.4.1.4 Islamic Values

There is a lack of information about the influence of Islamic values on hidden economy. According to Friedman (2000), the religion is the significant influencing factor in the hidden economy participation. Religious people always incline to do one thing according to rules and regulations (Porta, 1999; Weber, 1958; Putnam, 1993; Landes, 1998). Thus an individual that observes Sharia will avoid from participating in hidden economy activities than those who are not. Islamic religion is chosen in this research because almost all Libyans are Muslim. In short, it is declared that Islamic value is included in this research conceptual framework as the fourth subelement of attitude.

2.4.1.5 Fairness of the Government

Maurin *et al.* (2003) stated that direct and indirect tax burden, government regulation and tax system complexity are the factors that motivate people to participate in the hidden economy. The participation is higher if the government system is corrupt, if the government is spendthrift, if the tax system is considered to be unjust, if the government engages in human rights abuses, if the tax rates are too high, and if the government discriminates on the basis of religion or race (Katsios, 2006; Lacko, Semjen, Fazekas, & Janos, 2008). Johnson (1997, 1998) argued that the involvement in shadow economy was higher when there are more regulations and government officers' discretion. Thus, it is declared that the fairness of the government system has a potential to influence the involvement in hidden economy activities. In turn, it is included in this research conceptual framework as the fifth subelement of attitude.

2.4.2 Demographic Factors

The second element of this research conceptual framework is demographic factors. This study examines the influence of six demographic factors on hidden economy that are as follows: (1) age; (2) gender; (3) education; (4) income level; (5) occupation, and (6) marital status (Sverko & Galic, 2007). The definition and description of each factor are offered in the following five subsections.

2.4.2.1 Age

Previous studies found that younger people are less likely to be compliant to rules and regulations (Christian & Gupta, 1993a; Martinez-Vazque & Torgler, 2006). Title (1980) stated that young people are more willing to take risk and less sensitive to sanction. Warneryd and Walerud (1982) opined that significant difference in compliance is attributable to the sensitivity of the younger generation. They found that younger people incline to be risk taker. As hidden economy activities are not free from the risk, age has a potential to influence an individual's intention to participate or not to participate in it.

Peter (2004) found that older people are less likely to engage in the hidden economy than younger people. This is because older people respect the rules more than younger people (Wenzel, 2006; Andreoni, Erard, & Feinstein, 1998). Furthermore, young people are more willing to take risk and penalty (Mc Gee, 2007; Christian & Gupta, 1993). Thus, it is declared that age has a potential to influence an individual's involvement in hidden economy activities. It is included as the first subelement of demography.

2.4.2.2 Gender

A study conducted in Bulgaria discovered that a female was found to engage in hidden economy due to limited work in formal sector (Dimova & Radeva, 2004). In addition, female respondents involve in hidden economy more than male respondents due to gender discrimination (Frey & Pommerehne, 1984). On the contrary, it was found that males tend to be less tolerant in hidden economy (Medved, Caplanova, & Orviska, 2006). However, the involvement of females in hidden economy is not serious (Akaah, 1989; Boyd, 1981; Hoffman, 1998; Giese & Antje, 1999; Torgler, 2002; Flathmann & Steven, 2003; Gerxhani, 2002; Hanousek & Filip, 2002; Gerxhani & Arthur, 2006; Feige, 1989). This is because female is more conservative than male (Tittle, 1980). All these contradict findings lead to the assumption that there is a potential relationship between gender and hidden economy involvement. Thus gender is included in this research conceptual framework as the second subelement of demography.

2.4.2.3 Education

Based on previous studies, the effect of education on hidden economy is not clear. The reasons given for these conflicting findings are varied. The main one is the difficulty in determining what aspect of education that is going to be measured (Ray, 1998). In other words, the relationship between education and hidden economy is insignificant (Jendov, 2003). This suggests that an individual's educational level does not affect his or her decision to participate in hidden economy activities. This finding is similar to Schneider *et al.* (2001) study in which they found that education variable had no effect on the demand or supply of hidden work. On the contrary, Stulhofer (1997) and Marcelli (1999) found that the level of education and the supply of hidden work are positively related. Isachsen and Strom (1980) confirmed this

positive relationship whereby they found that the demand for hidden labour increases when the level of education increases. The above findings lead to the assumption that there is a potential relationship between education level and hidden economy. Thus it is included in this research conceptual framework as the third sub element of demography.

2.4.2.4 Occupation

The relationship between occupation and hidden economy is also not clear. This is because different studies employed different occupational categories. The occupational categories are ranged from specific occupational stratums to broad occupational stratums (Hasseldine, 1994). Overall, the involvement of employees in hidden economy is associated with the satisfaction in the workplace (Bieler, 2009). Thus, occupation is embedded in this research conceptual framework as the fourth subelement of demography.

2.4.2.5 Personal Income Level

Prior researches presented conflicting evidences regarding the association between income and noncompliance. According to Sookram *et al.* (2006), 48% of the hidden economy workers thought that income from their official jobs was low. The most common reason cited by the respondents was that they wanted to have more disposable income (84%). Allingham and Sandmo (1972), Thomas and Ferrier (2003) and Yizhaki (1974) uncovered that hidden economy involvement is directly influenced by the ability to spend more. This is supported by Clotfelter (1983) and Young (1994) whereby they found a positive association between income and hidden economy involvement. In contrast, Alm (1992) found that the involvement in hidden economy has negative relationship with income level. In other words, the middle-income individuals are mainly compliant. Finally, Feinstein (1991) found no relation

between income and noncompliance. In short, it could be said that the effect of income level on hidden economy involvement is unclear. Thus, the element of income level is included in this research conceptual framework as the fifth subelement of demography.

2.4.2.6 Marital Status

The category of 'married' was the only statistically considerable coefficient in the hidden economy-based research (Sookrame *et al.*, 2006). In other words, the married persons would most likely not participate in hidden work because of many life commitments. This result is similar to that of Anderson (1998). In his study on Mongolia's hidden economy Gerxhani (2002), however, did not find any relationship between marital status and participation in the hidden economy. As a summary, it can be argued that there is a potential relationship between marital status and participation in the hidden economy. Thus marital status is included in this research conceptual framework as the sixth subelement of demography.

2.5 Theoretical Framework

Having discussed the elements of the conceptual framework but not its diagram, this section illustrates the diagram of the proposed framework. This is illustrated in Figure 2.1.

Independent Variables

Attitudes

Tax and social burden

Working experience

Penalty

Islamic values

Fairness of the government

Demographic factors

Age

Gender

Education

Occupation

Income Level

Marital Status

Dependent Variables

Hidden Economy Involvement
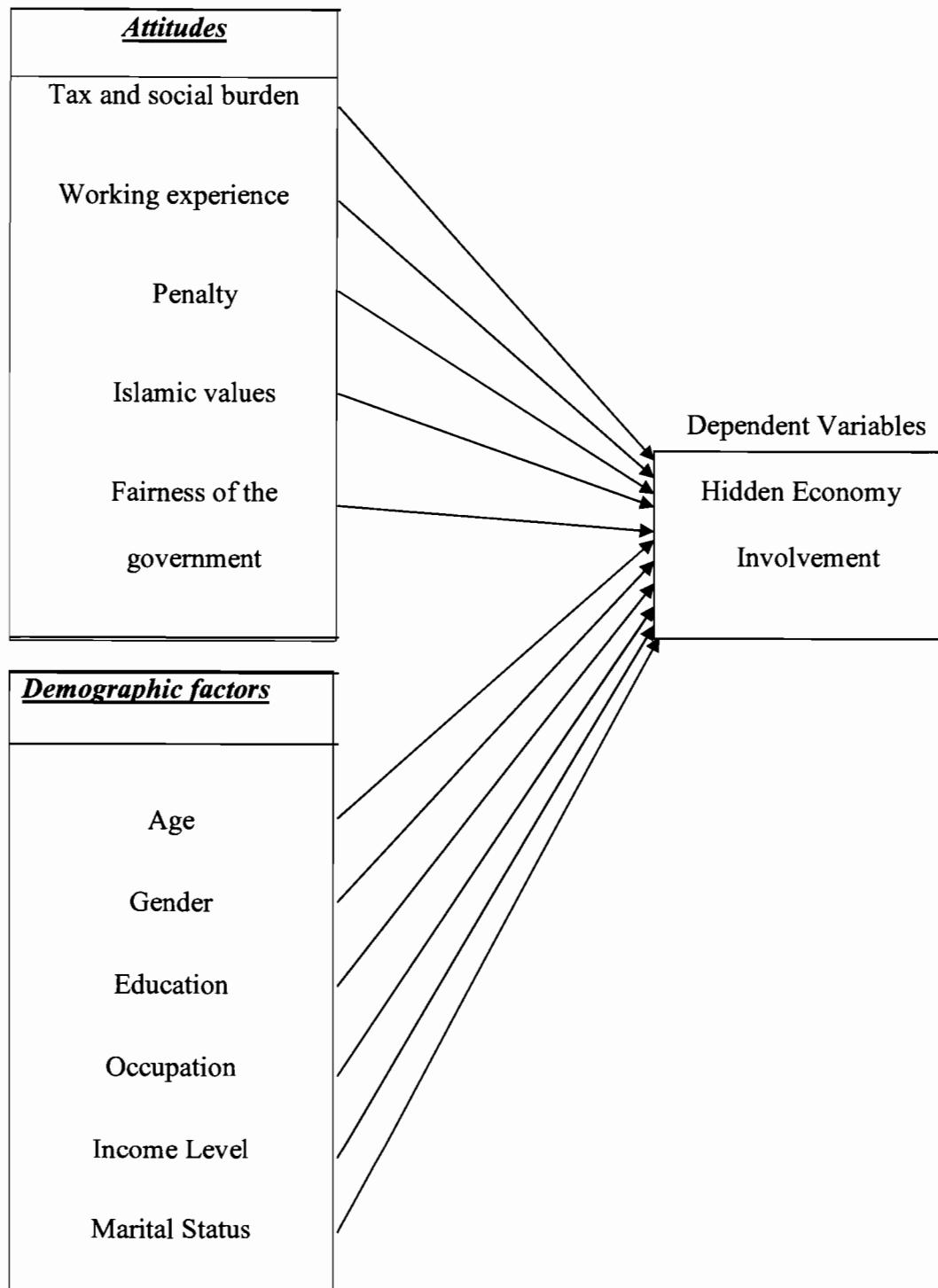
Figure 2.1 The theoretical framework of hidden economy influencing factors.

2.6   Summary

As a summary, it can be said that this chapter discusses the literature reviews of this research. Thereafter, a theoretical framework is proposed. The framework consists of demographic factors and attitudes as independent variables and hidden economy involvement as dependent variable.

3.0 CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

As mentioned earlier, this research intends to investigate the perception of the research participants on the factors that influence hidden economy involvement in Libya. A conceptual framework is developed to understand the phenomenon under study. To validate the framework, this chapter discusses the research methodology that was adopted by the researcher. The chapter begins with hypotheses and followed by the research design.

3.2 Research Hypotheses

Previous studies had looked at various aspects of hidden economy and people characteristics. In turn, the hypotheses of this study were derived upon the previous literatures. The proposed hypotheses are discussed in subsections 3.2.1 till 3.2.11.

3.2.1 Tax Rate and Social Burden

Tax rate is the first independent variable in this study. It is believed that tax rate influences hidden economy. This is because the rate that is below personal income tax rate can provide incentives for the self-employed people to incorporate their business (Besfamille, 2008). Mc Gee and Lingle (2006) stated that there is a positive relationship between tax rate and hidden economy. This finding was further confirmed by Mc Gee and Ho (2006) and Mc Gee and Rossi (2006). Thus, the following hypothesis was developed in this research:

H1: There is a significant relationship between tax rate and hidden economy involvement

3.2.2 Working Experience

Working experience is the second independent variable in the conceptual framework. It is expected that there is a significant difference in the hidden economy participation trend between experienced and inexperienced people. For instance, business owners might have different opinions with the employees of business enterprises (Hindriks & Myles, 2006; McGee *et al.,* 2006). In addition, long experience in employment, especially in the tax office, makes employees aware of the weaknesses and strengths of the tax law and thus enables them to exploit the weaknesses for personal gain. This argument leads to the following hypothesis:

H2: There is a significant relationship between working experience and hidden economy involvement.

3.2.3 Penalty

Penalty is the third proposed independent variables in influencing hidden economy involvement. Complying certain law is principally a result of punishment or detection (Cherry, 2006). The possibility of being penalised has a significant negative relationship with compliance (Witte & Woodbury, 1985). However, Pommerehne (1994) stated that there is no relationship between penalty rate and hidden economy involvement. Nourzad (1995) stated that there is a negative relationship between penalty rate and hidden economy involvement. These conflicting findings in turn motivate the researcher to develop the following hypothesis:

H3: There is a significant relationship between penalty and hidden economy involvement.

3.2.4 Islamic Values

Islamic value is the fourth independent variable of this research conceptual framework. As discussed in the previous chapters, it is believed that the Islamic values would influence people's perception on hidden economy involvement. Schneider, (2002) studied the impact of Islamic values on hidden economy involvement and found that the main reason for motivating Muslim to participate in hidden economy is that there is no need for them to pay tax. The only obligation is paying zakat (Murtuza & Ghazanfer, 1998). Thus, the government should not ask Muslim to pay taxes. Failing to do so encourages the Muslim to involve in hidden economy activities. Thus, the following hypothesis is proposed:

H4: There is a significant relationship Islamic values and hidden economy involvement.

3.2.5 Fairness of the Government

Fairness of the government is the fifth proposed independent variable in this research. There are several studies that investigate the relationship between government fairness and hidden economy (Mc Gee, 2006; Mc Gee & Bernal, Mc Gee & Bose, 2007; 2006; Mc Gee & Ho, 2006; Mc Gee & Lingle, 2006; Mc Gee & Rossi, 2006). The results showed that people relate their engagement in hidden economy activities with the government unfairness. In Libya, people always consider their government as a democratic government (Dunne, 2008). In other words, lack of justice in government regulations gives Libyans the right not to carry out their duties in accordance with rules and regulations. This leads to the following hypothesis:

H5: There is a significant relationship between fairness of the government and hidden economy involvement.

3.2.6 Age

Age is the sixth independent variable in this study. It is considered as an important factor that influences hidden economy (Sookram *et al.,* 2006). Previous studies found that old people were less likely to involve in hidden economy activities than younger people (Schneider, Braithwaite, & Reinhart, 2001). This is because older people respect the rules and regulations more than younger people. Thus, the following hypothesis is proposed:

H6: *There is different perception between age and hidden economy involvement.*

3.2.7 Gender

Gender is the seventh independent variable of this research conceptual framework. Previous studies uncovered inconclusive difference between men and women in their perceptions toward ethic of noncompliance (Browning & Zabriskie, 1983; Harris, 1990; Renooy, Ivarsson, Wusten-Gritsai, & Meijer, 2004; Smith, 2006). Some studies found that men are more ethical than women (Barnett & Karson, 1987). Other studies found that women are more compliant than men (Hoffman, 1998; Giese & Hoffman, 1999; Torgler 2002). The involvement of women workers in Libya is very few compared to other countries (Rashad, Nuha, & Maali, 2008). This is due to Libyan custom and tradition. As a consequence, women workers respect the rules imposed by the government and agencies more than men. Therefore, this study develops the following hypothesis:

H7: There is different perception between gender and hidden economy involvement.

3.2.8 Education

Education is the eighth independent variable in this study. It refers to the highest qualification in the academic. The perception of educated and uneducated people toward hidden economy is expected to be much different. Many studies had investigated the influence of education on hidden economy and found that there was a negative association between noncompliance and education (Ritsema, 2003; Tan & Chin, 2000; Stulhofer, 1997). As the illiteracy level in Libya is high (Morgan, 1984), the education can be considered as a major influencing factor in the hidden economy involvement. This is because hidden economy is less among highly educated folks (Renooy *et al.*, 2004). Therefore, this research develops the following hypothesis:

H8: There is different perception between education and hidden economy involvement.

3.2.9 Occupation

Occupation is the ninth independent variable in this research. The white collar employees perceived that hidden economy is an unethical behaviour (Jackson & Milliron, 1986). In addition to this, white collar employees are associated with the overstatement of deduction whereas blue collar workers are associated with illegal income deduction (Westat, 1980). In general, blue collar workers earn low wages than white collar workers. Thus blue collar workers see themselves as the aggrieved group more than white collar workers (Lacko, Semjen, Fazekas, & Toth, 2008). This phenomenon can motivate blue collar workers to involve in hidden economy activities. As a result, the following hypothesis is developed:

H9: There is different perception between occupation and hidden economy involvement

3.2.10 Personal Income Level

Income level is the tenth independent variable in this study. Clotfelter (1983), Young (1994) and Christian and Gupta (1993) stated that there is a positive relationship between income and hidden economy. With regards to Libya, where the level of wages is low, most of the low income earners try to increase their income by engaging in hidden economy activities (Alhuni, 2009). In other words, individuals who earn a high level of income are less likely to engage in hidden economy activities. Thus, the following hypothesis is proposed:

H10: There is different perception between income level and hidden economy involvement

3.2.11 Marital Status

Marital status is the eleventh independent variable of this research. Ritsema (2003), Alm (2006) and Mc Gee (2006) stated that marital status did not influence hidden economy. Other studies however, stated that marital status has a significance influence on hidden economy (Sookrama, Schneider, & Watson, 2006; Ritsema, 2003). Mc Gee (2007) found that the divorcees were the strongest opponent of hidden economy. Clotfelter (1983) found that married people involve in hidden economy more than single people. This was due to more commitments in life. Thus, the following hypothesis is developed:

H11: There is different perception between marital status with hidden economy involvement.

3.3 Research Design

This study utilized survey approach. The data was collected through a five-point scale questionnaire (strongly disagree, disagree, neutral, agree, and strongly agree). This questionnaire was replicated from McGee (2006). The questionnaire was divided into five sections and distributed randomly to 100 respondents in Benghazi (the second capital city in Libya). Distribution of the questionnaire was more focused and considered with some Libyan companies that might engage in shadow economy activities. Moreover, the questionnaire is illustrated in appendix A. The major advantage of this method is the variety of the collected information about the structure of the hidden economy activities, and the factors that have an influence on it. The outcome of such a research relies on the way the questionnaire is formulated and the willingness of the respondents to give honest answers (Mogensen, Kvist, Kormendi, & Pedersen, 1995).

3.3.1 Measurement of Variables

The summary of the measurement of variables is illustrated in Table 3.1.

Table 3.1 Measurement of Variables

Variables	Measurement
Hidden Economy	Through the other independent variables
Tax Rate and Social Burden	Five-point Likert ranged from "strongly disagree" to " strongly agree"
Working Experience	Five-point Likert ranged from "strongly disagree" to " strongly agree"
Penalty	Five-point Likert ranged from "strongly disagree" to " strongly agree"
Islamic value	Five-point Likert ranged from "strongly disagree" to " strongly agree"
Fairness of the Government	Five-point Likert ranged from "strongly disagree" to " strongly agree"
Age	Five-point interval in terms of years
Gender	Nominal (either male or female)
Education	Nominal (with 6 options)
Occupation	Nominal (with 12 options)
Income Level	Six-point interval in terms of Libyan currency
Marital Status	Nominal, (single, married, or other)

Source: McGee (2006).

This survey was utilized as a method to obtain the data from the primary source. In this method of data collection, the sample of Libyan individuals has been asked to fill in the self-administered questionnaire. It was adapted from the previous studies conducted to measure the perceptions toward hidden economy activities, and

designed using a five-point Likert scale (strongly disagree, disagree, neutral, agree and strongly agree).

3.3.2 Research Equation

Based on the conceptual framework (figure 2.1), the following research equation is developed:

$$HE = \beta_0 + \beta_1 \text{ Tax Rate} + \beta_2 \text{ Experience} + \beta_3 \text{ Penalty} + \beta_4 \text{ Islamic value} + \beta_5 \text{ Fairness} + \beta_6 \text{ Age} + \beta_7 \text{ Gender} + \beta_8 \text{ Education} + \beta_9 \text{ Occupation} + \beta_{10} \text{ Income level} + \beta_{11} \text{ Marital status} + E$$

3.4 Data Collection

The sample of this research consisted of 100 respondents. These respondents were chosen from different groups such as private and governmental sectors, businessmen, students, jobless and self-employed individuals that involve in hidden economy activities. The sample was selected based on the stratified random sampling technique as recommend by Sekaran (2006).

3.5 Data Analysis

The data was firstly analyzed using descriptive statistics to infer from the sample data what the population might think (Sookram, Schneider, & Watson, 2006). Descriptive statistics such as frequency, mean and percentage were used to measure the percentage of returned questionnaire and to describe the respondents' profile such as their age, gender, education level, occupation, income level, and marital status. This enables the researcher to understand the background of hidden economy participants.

The second undertaken analysis is reliability and validity test. Reliability is the extent to which an experiment, test, or any measuring procedure yields the same result on repeated trials (Writing Guides, 2009). Reliability could be defined as the degree to which measures are free from error and therefore yield consistent results (Zikmund, 2003). Validity ensures the ability of a scale to measure the intended concept (Sekaran, 2003). There are a number of different reliability and validity coefficients such as Split half reliability, Guttman, Parallel, Strictly parallel and Cronbach's alpha. One of the most commonly used is Cronbach's alpha because it can be interpreted as a correlation coefficient and ranges in value from 0 to 1 (Coakes & Steed, 2003). Therefore, in this study, Cronbach's alpha was used as a measurement of reliability and validity for each variable.

The third undertaken analysis is multicollinearity. According to Hair (1995), one of the ways that is used to check whether there is any relation among independent variables is multicolinearity which describes the degree to which any variable effect can be predicted by the other variable. The existence of multicollinearity, i.e. high correlation between the independent variables, is a serious problem in multiple regressions because the effect of each independent variable on the dependent variable becomes difficult to identify. A widely used method to detect for and measure multicollinearity is the Variance Inflation Factor (VIF) for each independent variable (Naser, 2002). In situation where the VIF is above 10, the independent variables are considered highly correlated, causing a multicollinearity problem (Silver, 1997). Thus, the multicollinearity diagnostics command to include the VIF was selected when running the multiple regression models.

The fourth undertaken analysis is assumption test. It consists of normality, linearity, histogram and independence of residuals. It was utilized to measure the

quality of this research data (Coakes & Steed, 2003). The fifth undertaken analysis is Pearson correlation analysis. It was used to measure the significance of linear bivariate between the independent and dependent variables thereby achieving the objective of this study (Schneider, Braithwaite & Reinhart, 2001).

The sixth undertaken analysis is multiple regression. It was used to determine the relationship between independent and dependent variables, the direction of the relationship, the degree of the relationship and strength of the relationship (Sekaran at el. 2006). The primary objective of this analysis was to test the hypotheses, based upon the conceptual framework of this study.

The seventh analysis is t-test. It was used to determine if there is a significant relationship between gender and hidden economy in Libya (Henley, Arabsheibani & Carneiro, 2009). The eighth undertaken analysis is ANOVA. It was used to indicate the influence of variation (Chery & Bernard, 2009) in age, education, occupation, income level and marital status on hidden economy involvement.

3.6 Summary

This chapter explained the methods and techniques in this research. It includes research design, population, research instruments, data collection procedure, and data analysis procedure. It is also a systematic process, which has guided the researcher to develop a strong foundation in data analysis in the next chapter.

CHAPTER FOUR

DATA ANALYSIS AND RESEARCH FINDINGS

4.1 Introduction

This chapter discusses the results that are generated from the analysis. The discussion of the research findings is based on the research objectives and conceptual framework of this study.

4.2 Profile of Respondents

A total of 100 questionnaires were gathered from the survey. All the respondents in this survey were Libyan. The characteristics of the respondents are illustrated in Table 4.1

Table 4.1: Profile of respondents

Demographic Variables	Frequency (n=100)	Percent %
Age (years)		
Below 20	05	5%
21-30	36	36%
31-40	22	22%
41-50	23	23%
More than 50	14	14%
Gender		
Male	79	79%
Female	21	21%
Education		
Certificate	03	3%
Diploma	14	14%
Bachelor degree	18	18%
Master degree	31	31%
PhD	28	28%
Others,	06	6%
Occupation		
Administration	14	14%
Civil servants	20	20%
Creative arts and design	15	15%
learning	05	5%
Engineering, manufacturing and production	09	9%
Information technology	08	8%
Media and broadcasting	04	4%
Retailing, buying and selling	07	7%
Social care and guidance work	05	5%
Transport, logistics and distribution	06	6%
White-collar occupation or Blue-collar occupation	06	6%
Others	01	1%
Income level		
L.D 150 and below	14	14%
L.D 150 and below	21	21%
L.D 251-500	25	25%
L.D 501 - 750	16	16%
L.D 751-1000	12	12%
L.D 1001 and above	12	12%
Marital status		
Single	51	51%
Married	46	46%
Other	03	3%

From the table above, it can be noted that 79% of the respondents were males, and 21% were females. The largest group of age was those aged between 21 and 30 (36%). 23% of respondents aged between 41-50, while 22% aged between 31 and 40. In terms of marital status, the majority of the respondents (51%) were single whereas 46% were married. Another 3% were either divorced or widowed.

Regarding the education, the profile is as follows: (1) master degree – 31%; (2) PhD – 28%; (3) bachelor degree - 18%; (4) diploma - 14%; (5) others - 6%; and (6) certificate – 3%. In terms of level of income, 25% of the respondents received monthly salary ranging from L.D 251-500, 21% received L.D 150 and below, 16% received L.D 501 – 750, 14% received L.D 150 and below, and 12% received L.D 751-1000 and also L.D 1001 and above.

4.3 Descriptive Statistics

The results of the mean are illustrated in Table 4.2

Table 4.2 Mean of variables

	N	Minimum	Maximum	Mean	Std. Deviation
TR	100	1.33	5.00	3.4267	.96525
EX	100	1.33	5.00	3.3833	.77904
P	100	1.00	5.00	3.1233	.93282
IV	100	1.00	4.50	2.8083	.75670
FG	100	1.00	4.33	2.7700	.69944
HE	100	1.00	5.00	3.0760	.87469
Valid N (listwise)	100				

The above table describes the mean, maximum and minimum values of the TR, EX, P, IV, FG and HE. The mean values for TR, EX, P and HE are more than 3.00. This shows that the respondents were slightly agreed with TR, EX and P in hidden economy involvement. However the respondents were not agreed with IV and FG because their mean values are less than 3.00.

4.4 Reliability and validity Analysis Test

The second analysis is reliability test and its results are illustrated in Table 4.3. The value of Cronsbach's Alpha is 0.609 in all instances. This indicated high internal consistency for the items in the questionnaire. Thus it could be said that the utilized instruments are highly reliable.

Table 4.3 Reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.609	.660	6

4.5 Multicollinearity

The third analysis is multicollinearity. The results of VIF to explain multicollinearity in Table 4.4. It can be observed that there is no multicollinearity problem because the VIF for each independent variable is less than 10.

Table 4.4 Variance Inflation Factor

| Variables	VIF
Tax Rate and Social Burden	1.224
Working Experience	1.110
Penalty	1.160
Islamic Value	1.245
Government Fairness	1.148

4.6 Assumption Test

The fourth analysis is assumption test. Normality, linearity, histogram and independence of residuals are the platform to test the assumption (Coakes & Steed, 2003). Their results are illustrated in Figurers 4.1, 4.2 and 4.3. It can be concluded that the data are normal.

Histogram

Dependent Variable: HE

Mean = 3.59E-15
Std. Dev. = 0.974
N = 100
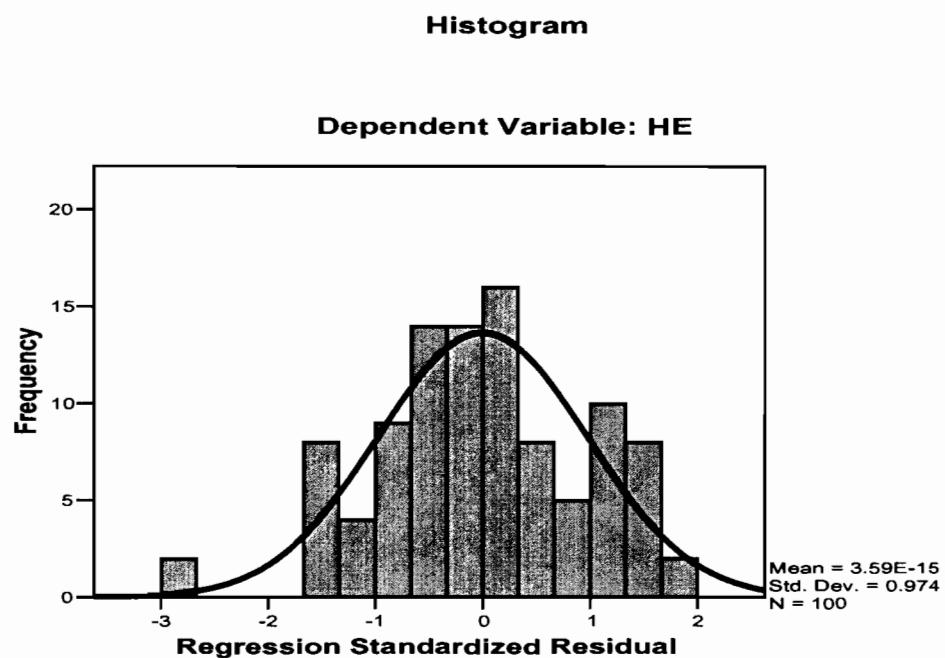
Figure 4.1 Histogram for the dependent variable

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: HE
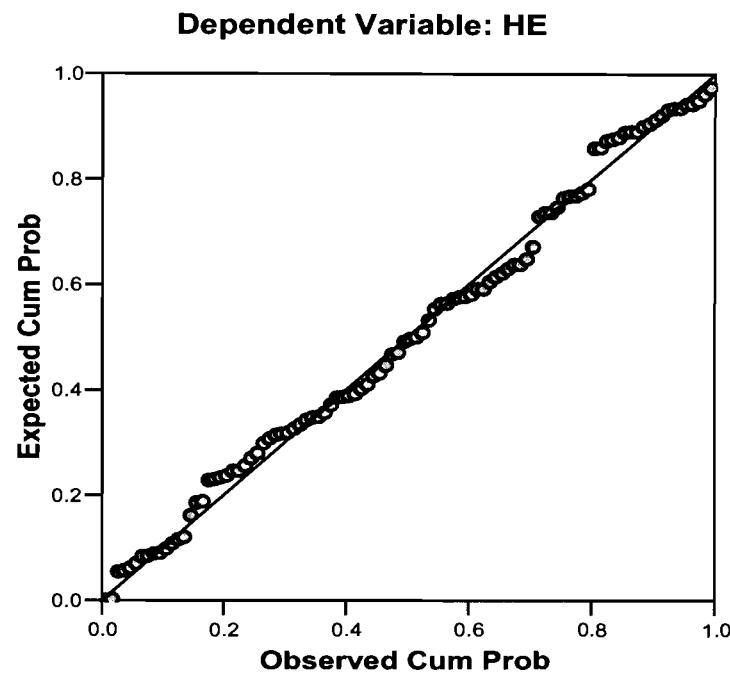
Figure 4.2 Normal P-P Plot of regression standardized residual for the dependent variable

Scatterplot

Dependent Variable: HE
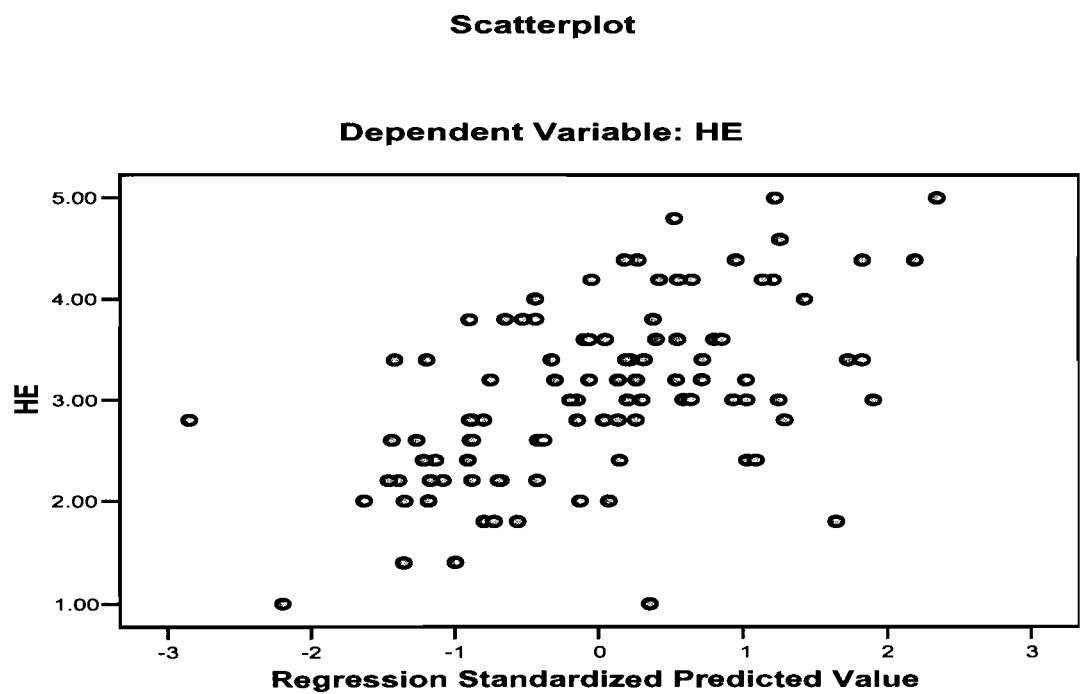
Figure 4.3 Scatterplot for the dependent variable

4.7 Pearson Correlation Analysis

The fifth analysis is correlation analysis. Table 4.5 shows the correlation between dependent and independent variables. It can be observed that the TR, P and IV variables have more influence on HE. However, the variables of EX and FG have weak correlation with HE. This shows that HE is not influenced by EX and FG.

Table 4.5 The correlations between HE and TR, EX, P, IV, & FG factors

		TR	EX	P	IV	FG	HE
TR	Pearson Correlation	1	.298(**)	.307(**)	.174	-.076	.374(**)
	Sig. (2-tailed)	.	.003	.002	.084	.453	.000
	N		100	100	100	100	100
EX	Pearson Correlation		1	.098	.149	.000	.173
	Sig. (2-tailed)		.	.332	.140	.998	.085
	N			100	100	100	100
P	Pearson Correlation			1	.255(*)	.011	.378(**)
	Sig. (2-tailed)			.	.011	.912	.000
	N				100	100	100
IV	Pearson Correlation				1	.330(**)	.383(**)
	Sig. (2-tailed)				.	.001	.000
	N					100	100
FG	Pearson Correlation					1	.107
	Sig. (2-tailed)					.	.289
	N						100
HE	Pearson Correlation						1
	Sig. (2-tailed)						.
	N						100

- ** Correlation is significant at the 0.01 level (2-tailed).
- * Correlation is significant at the 0.05 level (2-tailed).

Table 4.6 shows the correlation between HE and demographic variables. It can be observed that age and income level have more influence on HE. However, HE is not influenced by gender, education, occupation and marital status.

Table 4.6 The correlations between HE and Age, Gender, Education, Occupation, Income Level and Marital status.

		HE	AGE	GENDER	EDUCATIONAL LEVEL	OCCUPATION	ICOME LEVEL	MARITAL STATUS
HE	Pearson Correlation	1	.275(**)	.000	.057	.093	.217(*)	.092
	Sig. (2-tailed)	.	.006	.999	.570	.357	.030	.363
	N		100	100	100	100	100	100
AGE	Pearson Correlation		1	.274(**)	.047	-.085	.830(**)	.579(**)
	Sig. (2-tailed)			.006	.640	.400	.000	.000
	N			100	100	100	100	100
GENDER	Pearson Correlation			1	-.097	-.073	.276(**)	.357(**)
	Sig. (2-tailed)			.	.337	.472	.005	.000
	N				100	100	100	100
EDUCATIONAL LEVEL	Pearson Correlation				1	-.240(*)	.032	.070
	Sig. (2-tailed)				.	.016	.754	.487
	N					100	100	100
OCCUPATION	Pearson Correlation					1	-.032	-.089
	Sig. (2-tailed)					.	.750	.377
	N						100	100
ICOME LEVEL	Pearson Correlation						1	.550(**)
	Sig. (2-tailed)						.	.000
	N							100
MARITAL STATUS	Pearson Correlation							1
	Sig. (2-tailed)							.
	N							100

- ** Correlation is significant at the 0.01 level (2-tailed).
- * Correlation is significant at the 0.05 level (2-tailed).

4.8 Multiple Regression Analysis

The sixth analysis is multiple regression analysis. The results were measured by using R^2 which indicate the impact of the independent variable on dependent variable. Based on the adjusted R^2 25.30% (Table 4.7), it can be said that more than half of the relationship with HE can be explained by the eleven independent variables investigated in this study.

Tables 4.7 summary of regression result

Model 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.540(a)	.291	.253	.75576

a Predictors: (Constant), FG, EX, P, TR, IV

As illustrated in Table 4.8, the significance or P value = 0.000 is less than 0.05. This means that this study was significant.

Tables 4.8 Significance of FG, EX, P, TR and, IV

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.053	5	4.411	7.722	.000(a)
	Residual	53.690	94	.571		
	Total	75.742	99			

- a Predictors: (Constant), FG, EX, P, TR, IV
- b Dependent Variable: HE

Table 4.9 presents the optimal weights in the regression model. It can be seen the significance values for TR, P and IV are less than 0.05. Thus H1, H3 and H4 are accepted, whereas H2 and H5 are rejected. In turn, the questions and objectives of this research are partly answered. The final research equation is as follows:

Equation: HE= 0.225.TR + 0.216.P + 0.305.IV

Tables 4.9 Coefficients table of FG, EX, P, TR and, IV

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.506	.529		.957	.341
	TR	.225	.087	.249	2.588	.011
	EX	.042	.103	.037	.408	.684
	P	.216	.088	.230	2.462	.016
	IV	.305	.112	.263	2.719	.008
	FG	.046	.116	.036	.391	.696

a Dependent Variable: HE

4.9 T-test

The seventh analysis is t-test. Its result is illustrated in Table 4.10. The result shows that there is no influence of gender on hidden economy involvement. The value of significance or P value is 0.999 and the value exceeds 0.05. Hence, H7 is rejected. In turn, it can be concluded that there is no difference between gender and hidden economy involvement.

Table 4.10   Independent samples test for the gender variable

		Levene's Test for Equality of Variances		t-test for Equality of Means		
						Sig. (2-tailed)
		F	Sig.	t	df	
HE	Equal variances assumed	.663	.418	-.001	98	.999
	Equal variances not assumed			-.001	29.913	.999

4.10 ANOVA

This is the final analysis in this research. Table 4.11 describes the influence of age on hidden economy involvement. The value of significance is 0.056 and the value exceeds 0.05. Consequently, H6 is statistically not accepted. This result leads to the conclusion that there is no different perception between age and hidden economy involvement.

Table 4.11   Significance of the age

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.928	4	1.732	2.391	.056
Within Groups	68.814	95	.724		
Total	75.742	99			

Table 4.12 explains the influence of education on hidden economy involvement. The value of significance is 0.939. For this reason, H8 is not accepted. In turn, it can be concluded that there is no different perception between education and hidden economy involvement.

Table 4.12 Significance of the education

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.995	5	.199	.250	.939
Within Groups	74.747	94	.795		
Total	75.742	99			

Table 4.13 explains the influence of occupation on hidden economy involvement. The value of significance is 0.040. Therefore, H9 is accepted because the significance value is less than 0.05. In turn, it can be concluded that there is different perception between occupation and hidden economy involvement.

Table 4.13 Significance of the occupation

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.000	11	1.364	1.976	.040
Within Groups	60.743	88	.690		
Total	75.742	99			

From Table 4.14 it can be seen that the significance value of income level is 0.598. This shows that there is no influence of income level on hidden economy involvement. The value of significance exceeds 0.05. Hence, H10 is statistically not accepted. In turn, it can be concluded that there is no different perception between income level and hidden economy involvement.

Table 4.14 Significance of the income level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.857	5	.571	.737	**.598**
Within Groups	72.885	94	.775		
Total	75.742	99			

Table 4.15   Significance of the marital status

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.584	2	.792	1.036	.359
Within Groups	74.158	97	.765		
Total	75.742	99			

From Table 4.15 it can be seen that the significance value of marital status is 0.359. This shows that there is no influence of marital status on hidden economy involvement. The value of significance exceeds 0.05. Hence, H11 is statistically not accepted. In turn, it can be concluded that there is no different perception between marital status and hidden economy involvement. The summary of above results is provided in Table 4.16.

Table 4.16   Acceptability of the hypotheses

No	Variable	HYPOTHESES	
01	Tax Rat and Social Burden	*H1: There is a significant relationship between tax rate and hidden economy involvement*	**accepted**
02	Working Experience	*H2: There is a significant relationship between working experience and hidden economy involvement.*	**rejected**
03	Penalty	*H3: There is a significant relationship between penalty and hidden economy involvement.*	**accepted**
04	Islamic Value	*H4: There is a significant relationship Islamic values and hidden economy involvement.*	**accepted**
05	Government Fairness	*H5: There is a significant relationship between the fairness of the government and hidden economy involvement.*	**rejected**
06	Age	*H6: There is different perception between age and hidden economy involvement.*	**rejected**
07	Gender	*H7: There is different perception between gender and hidden economy involvement*	**rejected**
08	Education	*H8: There is different perception between education and hidden economy involvement*	**rejected**
09	Occupation	*H9: There is different perception between occupation and hidden economy involvement*	**accepted**
10	Income level	*H10: There is different perception between income level and hidden economy involvement*	**rejected**
11	Marital Status	*H11: There is different perception between marital status with hidden economy involvement*	**rejected**

By accepting H1, H3, H4 and H9, and rejecting H2, H5, H6, H7, H8 H10 and H11 this research able to answer its question. This in turn achieves the objective of this research.

4.11 Summary

This chapter discusses the results of the analysis that was conducted by using several tools. In summary the relationship between hidden economy involvement and tax rate, penalty, Islamic values and occupation can be obtained in the practical setting. However, there is no relationship between hidden economy involvement and working experience, fairness of the government, age, education, income level and marital status in the practical setting.

CHAPTER FIVE

DISCUSSION AND LIMITATIONS

5.1 Introduction

This chapter discusses the findings of this study. The results of empirical tests are summarized and discussed practically. Additionally, limitations that are inherent in the study and suggestions for future research are mentioned in this chapter.

5.2 Discussion

In recent years a broad arrangement of bright names has been used to explain the phenomenon that discussed in this study. In this project, the demographic factors and attitudes are the major focus and main element of study, and the registration according to national requirements is used as the criterion for what is to be understood as informal economy. This study confirms to a large degree the concept of Feige (1990) that shadow economy activities are a form of non-compliance with the extreme government regulations especially concerning licenses and permissions, tax rate and social burden, taking in consideration if the government policy has not work greatly to keep folks away of the shadow economy.

In general, the results demonstrate that there are significant differences between the attitudes of people engaged in the shadow economy and those who are not. Theoretically, this study has achieved its objectives to examine the factors that influence the involvement and the participation in hidden economy activities in Libyan via investigating the influence of the following variables (tax rate and social burden, working experience, penalty, Islamic value, fairness of the government, age, gender, education, occupation, income level, and marital status). Regarding to the tax rate and social burden it would be expected that if tax rate and social burden

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increases the involvement in the shadow economy activities would be more, therefore there will be a positive correlation. This hypothesis is based on an assumption that if the tax rate and social burden increases the need to engage the shadow economy increase and this finding has been supported by Mc Gee and Lingle (2006). On the other hand, human ambition may drive this relationship more than tax rate and social burden. It could be the case that shadow economy workers want to have a better life and hence increase their shadow economy activities. Thus a positive correlation would also seem probable.

Regarding to working experience, it is found that there is no relationship between working experience and hidden economy involvement, as hypothesized in this study. This finding was supported by Borghi and Kieselbach (2000). Undeniably, people engaged in hidden economy activities recognize that if they are caught by the authorities they will be punished. Awareness of the possibility of detection has been one of the most reliable predictors of the hidden economy involvement (Andreoni, Erard, & Feinstein, 1998; Jackson & Milliron, 1986). For this reason Libyan people who believe that the probability of being detected is high, will be less likely to involve in hidden economy activities.

In terms of the influence of Islamic values, this study found that there is a significant relationship between Islamic values and perception of Libyan. This finding was supported by Schneider (2002).

In terms of fairness of the government, it was hypothesized in this study that there is a significant relationship between the fairness of the government and hidden economy involvement. This hypothesis was not accepted in this study. The analysis shows that there is no relationship between the fairness of the government and

hidden economy involvement As a matter of fact, Libyan people do not take the rigidity or the intensity of the regulation in their consideration or because some people consider that the government do not even intervene in their own business.

As for age, the hypothesis of this study states that there is different perception between age and hidden economy involvement. Although in the majority of the studies, which examined the influence age, concluded that people tend to become more opposed to hidden economy activities when they get older, the analysis of this study showed that this hypothesis is not accepted in Libya. Nevertheless, this finding is similar to that of Feinstein (1991) and Ritsema *et al.* (2003). This is due to the perception at all level of age that it is utmost important to earn money to survive in this world.

As for gender the finding of this study is that there is no different perception between gender and hidden economy involvement. Most of the studies which examined influence of gender on hidden economy support this finding. Those studies conducted by Mc Geeand (2007), Giese and Hoffman (1999), Torgler (2002) Gerxhani (2002), Mc Gee (2007) and Tittle (1980).

Regarding to the education variable, the hypothesis of this study is; there is different perception between education and hidden economy involvement. In the case of Libya, the analysis has not confirmed this hypothesis. Also, this finding is supported by many studies that were done by Witte and Woodbury (1985) and Wallschutzky (1984). In term of income level and marital status this study demonstrated that these two variables do not have an influence on the perception of the participants in the hidden economy activities. On other hand, the hypothesis "There is different perception between occupation and hidden economy

involvement" has been accepted because the analysis confirmed that the occupation has a strong influence on the hidden economy involvement.

5.3   Limitations

This study has several limitations. Firstly, the respondents were asked to response to the questionnaire based on their own opinions and experiences. Thus, the answers were based on several situations such as their marital status or their political trends or enactory approaches. Accordingly, future research might measure the influence of the individuals' characteristics and attitudes with more freedom from such restrictions.

Secondly, the findings are limited to the specific sample. The sample is drawn exclusively from 100 Libyan individuals who live in the eastern region (Benghazi). Thus, generalizing the results may not be valid. Future study might include participants from other Libyan regions, especially those regions with a high number of population including cities like Tripoli, Musrata, Darna, Al-athron, Tarhuna and Sabha. A comparative study between Libya and other countries could provide more accurate explanation of participants' behaviour. It is useful to find out whether location is a significant indicator for hidden economy involvement or not. Then, the current study measured the influence of demographic factors and attitudes of Libyan individuals towards hidden economy by examining the relationship between hidden economy and the eleven variables without measuring the influence of the variables on each other. Further studies might examine the relationship between the variables, and how they influence hidden economy involvement.

One problem is that no person who has sufficient insight into the business accounts will be found in a randomly selected sample; more important, however, is

the lack of willingness to share information about concealed hidden activities with an interviewer. It may be expected that participants are very reluctant to give this sort of information, for one reason because hidden economy activities are strongly condemned in public opinion.

Finally, some respondents who responded on this survey were self reported and could not be verified. As with any study, the environment in which the examination was completed could not be controlled and others may have influenced the respondent opinions. Any conclusions drawn from survey data are subject to these limitations.

However, the researcher emphasized to the respondent in the covering letter that this study is for academic purpose. This effort is made to ensure confidentiality and that it is important that respondents provide well considered answers.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion and Recommendations

It is obviously difficult to get accurate information about hidden (shadow) economic activities because individuals engaged in these activities wish to remain unidentified. Hence there are fewer agreements about the size of the hidden or shadow economy than the total economy and any efforts at quantity, most relevant data and causes may be considered as at least problematic. This study provides evidence of the characteristics of noncompliant participants in the shadow economy. These results also reveal that the participants in the hidden economy motivations may and may not respond to the same motivating factors. Those who think that people involved in hidden economy activities are smart will be expected to be involved in hidden economy activities themselves.

The results provide some guidance to tax administrators who wish to bring higher amounts of tax into the system. Government authorities should use multiple enforcement measures to be able to control a broader spectrum. The government must take care and increase researches especially in the religious perception, and demonstrate the Islamic opinions towards hidden economy involvement by holding seminars with the experts specializing in Islamic economics to explain the perception of legitimacy, and to try to come out with modern solutions. Also, education is a good mechanism for educating people and increasing civilizations.

Those people who are in conflict with the tax office are more likely to be engaged in shadow economy activities. If people feel a high moral obligation to their

laws, they will be less likely to involve in the hidden economy activities, conscience serves as a self regulatory mechanism that delivers voluntary compliance.

Although the result of this study showed that the fairness of government has no influence on hidden economy involvement, satisfaction of people must be taken into consideration. Thus, the government must take into account the feature of fairness, both in its relations with its citizen and in its relations with local and global matters. Furthermore, giving incentives and motivations for compliance must be matched to impose rigorous penalty against non-compliance, so as to create stability in giving positive and negative incentives as well.

The hidden economy diminishes the overall efficiency of the economy, as the business is concentrated on the efforts to avoid the administrative burden rather than to increase productivity. Companies involving in hidden economy also have to desist from some public and private services. This worsens the competitiveness of the economy that is crucial for a small trading country like Libya.

To recapitulate, the issue of hidden economy is considered as a consequence of policy makers ignorance. If they want to fight against hidden economy and to improve the economic situation, the government must increase economic welfare in the country. The welfare are such as incentive in capital and investment and ease the process of obtaining licenses. The government should also reduce the tax rate and reimburse tax in a short period of time. On top of this is that the capability to enforce laws must be upgraded to all level of government agencies.

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Appendix

QUESTIONNAIRE

THE FACTORS INFLUENCING HIDDEN ECONOMY IN LIBYA

Dear Respondents,

I am a master student in Universiti Utara Malaysia (UUM), and doing MSc in International Accounting, now conducting a partial study in regard to the factors influencing hidden economy in Libya. This research is part of fulfilment of completing my MSc.

I would appreciate if you could spare some time and thought in completing the survey questionnaires. I hope that you would co-operate in completing the questionnaire with the best of your ability.

Your response will be treated as confidential and used for research purposes only. There is no right or wrong answer. Thank you for your willingness to participate in this study.

Sincerely,

Muhammad F H Mussa
Email: M_Alsubaihy@yahoo.com
Universiti Utara Malaysia
Tel No: 00218914149400
Malaysia: 0060175936712

Directions: Please complete the following questions. This information is confidential individual identities will not be revealed. Please put a check in the box tick that is appropriate for you.

Introduction: Please read each statement and circle the number next to the response indicating how much you agree or disagree with the statement as a description of you. You should only check one box per statement. By completing this survey, you are providing your consent to participate in this study. How agreed have you on each of the following 5-point rating scales. Indicate your response by circling one of the ranking from 'Strongly Disagree' (1) to 'Strongly Agree' (5) of each statement.

Section A:

- **Tax Rate and Social burden**

(Definition of scale):
1 – (Strongly disagree) 2 – (Disagree) 3 – Neutral 4 – (Agree) 5 – (Strongly agree)

1	Hidden economy is ethical if tax rates are too high	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
2	hidden economy is ethical even if tax rates are not too high because the government is not entitled to take as much as it is taking from me	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
3	Tax rate should be determined according to the level and source of income received by the people.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

- *Experience:*

(Definition of scale):
1 – (Strongly disagree); 2 – (Disagree); 3 – (Neutral); 4 – (Agree); 5 – (Strongly agree)

1	I have significant autonomy in determining how I do my job	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
2	I cannot decide on my own how to go about doing my work	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
3	I have mastered the skills necessary for my job	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

- **Penalties**

1 – (Strongly disagree) 2 – (Disagree) 3 – Neutral 4 – (Agree) 5 – (Strongly agree)

8	Hidden economy is ethical if the probability of getting caught is low	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
1 1	It is worth to engage in the hidden economy if the penalties are high	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
1 2	I believe it is not wrong to engage in the hidden economy if the government does not impose any penalties	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

- __Islamic Values__

(Definition of scale):
1 – (Strongly disagree) 2 – (Disagree) 3 – Neutral 4 – (Agree) 5 – (Strongly agree)

		1	2	3	4	5
1	I believe that Islam encourages me to engage in hidden economy by using any way, even if this way is illegal.	☐	☐	☐	☐	☐
2	I believe that Islam allows me to engage in hidden economy activities when I get the chance to do it	☐	☐	☐	☐	☐
3	Hidden economy is unethical for me as a Muslim	☐	☐	☐	☐	☐
4	Hidden economy is ethical if a large portion of the gevernment money is wasted.	☐	☐	☐	☐	☐
5	Hidden economy is ethical for me as a Muslim if everyone is doing it	☐	☐	☐	☐	☐
6	Hidden economy is ethical for me as a Muslim if I can't afford to pay tax	☐	☐	☐	☐	☐

- __Government Fairness__

1 – (Strongly disagree) 2 – (Disagree) 3 – Neutral 4 – (Agree) 5 – (Strongly agree)

		1	2	3	4	5
1	Government always attends to my business needs.	☐	☐	☐	☐	☐
2	Hidden economy is ethical if the government is fair	☐	☐	☐	☐	☐
3	Government provides business advisory service when I need them.	☐	☐	☐	☐	☐
4	Government provides financial subsidy for my business.	☐	☐	☐	☐	☐
5	A person should not feel guilty to involve in the hidden economy if the government and tax system is unfair.	☐	☐	☐	☐	☐
5	A person should not let his opinion about the fairness of the government influence his willingness toward hidden economy.	☐	☐	☐	☐	☐

Section B: __Demographic factors__

- *Age*

4. Please indicate your age:

   ☐ 1. Less or equal to 20

   ☐ 2. 21-30

   ☐ 3. 31-40

   ☐ 4. 41-50

   ☐ 5. More than 50

- *Gender*

3. Could you specify your gender?

    ☐ 1. Male

    ☐ 2. Female

- *Educational Level:*

5. Please indicate the highest education level of education achieved:

    ☐ 1. Certificate

    ☐ 2. Diploma

    ☐ 3. Bachelor degree

    ☐ 4. Masters degree

    ☐ 5. Ph.D. degree

    ☐ 6. Others, please specify ....

- *Occupation*

Please indicate your occupation:

☐ Administration
☐ Civil servants
☐ Creative arts and design
☐ Education
☐ Engineering, manufacturing and production
☐ Information technology
☐ Media and broadcasting
☐ Retailing, buying and selling
☐ Social care and guidance work
☐ Transport, logistics and distribution
☐ (   ) white-collar occupation, (   ) blue-collar occupation
☐ Others. Please specify ....

- **Monthly gross income**

    (   ) L.D 150 and below   (   ) L.D 501 - 750

    (   ) L.D 151- 250   (   ) L.D 751-1000

    (   ) L.D 251-500   (   ) L.D 1001 and above

- **Marital Status**

    (   ) Single   (   ) Married   (   ) Others, Please specify

    _____

Section C: **Hidden Economy Involvement**

(Definition of scale):
1 – (Strongly disagree); 2 – (Disagree); 3 – (Neutral); 4 – (Agree); 5 – (Strongly agree)

1	Hidden economy involves profound change and paradigm shifts from one bottom line to long-term profit.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
2	The hidden economy contributes to economic development, survival and well-being	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
3	I agree that results of hidden economy are Outcomes for development	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
4	I encourage people to participate in hidden economy activities	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
5	I do not advise people to avoid hidden economy	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

THANK YOU FOR TIME AND COOPERATION