

**Motivations for business start-up: are there any  
differences between disabled and non-disabled people?**

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*This master's thesis is carried out as a part of the education at the University of Agder and is therefore approved as a part of this education. However, this does not imply that the University answers for the methods that are used or the conclusions that are drawn.*

University of Agder, 2014  
School of Business and Law

## **DECLARATION**

I hereby declare that this submission is my own work and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree than that of the master's thesis at the University of Agder, except where due acknowledgement has been made in the text.

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

CIA	- Central Intelligence Agency
GDP	- Gross domestic products
TEA	- Total Early Entrepreneurial Activity Index
GEM	- Global Entrepreneurship Monitor
MFI	- Microfinance Institutions
SMEs	- Small and medium-size enterprises
WHO	- World Health Organisation
OECD	- Organization for Economic Cooperation and Development
UN	- United Nations
CRPD	- Convention on the Rights of Persons with Disabilities
USA	- United States of America
PWDs	- Persons with disabilities
SPSS	- Statistical Package for Social Scientists
STATA	- Statistics and Data
VIF	- Variance inflation factor
ANOVA	- Analysis of variance
NGOs	- Non-Governmental Organisations

## **ABSTRACT**

This master's thesis seeks to investigate whether motivations for business start-up between persons with and without disabilities differ. The motivation for this study is that, disabled entrepreneurs may have unique reasons which need the attention of all stakeholders who advocate for equal human rights. The study uses a unique sample of 273 from Ecuadorian micro-bank. The findings indicate that persons without disabilities are more materialistic than persons with disabilities. Materialism relates to opportunity-driven entrepreneurship where individuals start business as a result of available market opportunities. The results also evident that, persons with disabilities start business largely because of push factors. The explanation for this difference is probably because of discrimination against persons with disabilities in the labour market and job environment as some researchers argue. These empirical findings show that, persons with disabilities more likely to be necessity entrepreneurs but less likely to be opportunity-driven entrepreneurs than those without disabilities. Thus, it can be concluded that, persons with and without disabilities are necessity and opportunity entrepreneurs respectively. Based on the findings, it is recommended that governments should re-enforce/introduce labour laws and regulations to ensure that persons with disabilities get formal employment. Incentives could be given in the form of corporate tax rebate for companies that employ people with disabilities. Helping persons with disabilities to get formal jobs will lead to economic growth since they will no longer resort to self-employment based on necessity (less profitable as literature reveals) but due to opportunity entrepreneurship (more profitable).

**Keywords:** Entrepreneurship, disability, motivations, opportunity, necessity, Ecuador

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## CHAPTER ONE: INTRODUCTION

In this master thesis I compare motivations for business start-up of entrepreneurs with and without disabilities. Are there any significant differences in terms of motivations between these groups? Literature reveals involvement of persons with disabilities (PWDs, hereafter) in entrepreneurial activities. Do they have any special reasons which differ from persons without disabilities?

The motivation for this study is to investigate whether disabled entrepreneurs have any special reasons for starting their own business. If such reasons exist, how can we, as a society help PWDs solve their problems or support their idea? In short, disabled entrepreneurs may have unique reasons which need the attention of all stakeholders advocating for equal human rights. Thus, the study is important to governments and other policy makers in designing policies that will promote entrepreneurship development and also curb some of the negative practices in society that push people especially people with disabilities to start their own businesses. Holub (2001) finds that, PWDs undertake entrepreneurial activities because of disability discrimination in the workforce. Secondly, the study will also be of great importance for further researchers in the field of Entrepreneurship. Future studies could be conducted drawing on useful information in this paper since no study has been conducted regarding this research topic (to the best of my knowledge).

Entrepreneurship has been in existence for some time now. It has contributed to and will continue to contribute to socio-economic development of nations and the world at large. This is done through the creation of businesses. Small and medium-sized enterprises are regarded as the spine of both developed and developing economies (Iqbal, Hussain, Rahman, & Manzoor, 2011). Every now and then, new businesses are created with the entrepreneurs having similar and varying reasons. Obviously, self-employment could be one of the motivations for business start-up especially in countries where unemployment rate is high.

Many researches have been conducted exploring the motivations of entrepreneurs and most authors have viewed motivations from two main angles namely necessity-driven and opportunity-driven factors (Williams & Round, 2009). Necessity-driven motivations are those factors that push entrepreneurs to create businesses because there are no available jobs

or the jobs are not satisfactory enough; opportunity-driven motivations are those factors that pull entrepreneurs to take advantage of market opportunities (Bosma and Harding, 2007; Harding et al., 2006; Maritz, 2004; Minniti et al., 2006; Perunovic', 2005; Reynolds et al., 2002) in Williams and Round (2009). Some researchers use “push” and “pull” for necessity and opportunity respectively (Amit and Mueller (1995); Cooper and Dunkelberg (1986); Solymossy (1997) in Block and Wagner (2010)). However, Williams and Round (2009) note that both the necessity-driven and opportunity-driven motivations are present in entrepreneurs' decisions to start their own businesses and not just either group of drivers happening at a time, as some researchers argue.

Furthermore, drawing on theory of environment, Dubini (1988) argues that the decision to start a new business involves interaction between the entrepreneur and his socio-economic environment. Specifically, family, mentors, friends, previous work experiences, all influence the entrepreneur's decision (Shapero and Sokol 1982; Ronstadt 1984 in Dubini, 1988). Dubini notes three typologies of entrepreneurs and their motivations. They include: self-actualizers - entrepreneurs who start their businesses due to a desire for achievement and a sense of independence and autonomy; discontented entrepreneurs – people who are not happy with their current working conditions, and role models - entrepreneurs who are followers of family tradition (Dubini, 1988).

Similarly, Birley and Westhead (1994) note seven motivations for business start-up. They include: need for approval, need for independence, need for personal development, welfare considerations, perceived instrumentality of wealth, tax reduction and indirect benefits, and role models. Some of these motivations are similar to what Shane, Locke, and Collins (2003) recognise. In addition, Holub (2001) argues that entrepreneurship by people with disabilities is as a result of disability discrimination in the workforce. Many disabled people start their own businesses because they face difficulties in searching for traditional jobs (Holub, 2001) or because of challenges from the workplace. Among other motivations, disabled entrepreneurs are driven by need for independence and freedom from access-related obstacles and flexibility (Holub, 2001).

Pagán (2009) notes that self-employment (as a percentage of total employment) is higher among people with disabilities compared with people without disabilities. This high rate of self-employment could be attributed to lower employment opportunities for PWDs or

discrimination in the labour market as Holub's (2001) argues. Self-employment becomes an option to overcome lack of salaried job or discrimination in the labour market. In addition, self-employment offers PWDs with a lot of advantages. Persons with mobility disability may choose self-employment so that they can be able to work at home or close to home. Aside distance to workplace, the building structure of most firms and organisations may have mobility difficulties for persons with mobility impairment. Self-employment also offers PWDs with the opportunity to work at their own pace. Self-employment offers great amount of flexibility to the entrepreneur. Employees in formal employment have to always meet deadlines set by their supervisors and persons with disabilities may probably see this as being stressful regarding their disability. As a result, PWDs may opt for self-employment because it allows them to work at their own pace.

In sum, other researchers found motivations for business start-up among both disabled and non-disabled people. What remains unanswered is to compare motivations of people with disabilities with motivations of people without disabilities. This current study seeks to fill this important research gap. The purpose of this study is therefore to investigate whether there are any significant differences between motivations for business start-up of entrepreneurs with disabilities and motivations of entrepreneurs without disabilities.

The study seeks to answer the following research questions.

- a) What motivates people to start their own businesses?
- b) Are there any significant differences between motivations of entrepreneurs with and without disabilities?

The study applies data collected from customers of the micro bank D-Miro in Ecuador. The data consist of two independent samples of disabled and non-disabled people in the coastal region of Ecuador and they are both clients of D-Miro.

The findings indicate that, people are motivated to start an enterprise because of materialism, welfare considerations / "philanthropy", role models, escape and others. "Escape" in this study refers to avoiding bad or undesirable conditions regarding job. It is related to necessity-driven/push factors of entrepreneurship, meaning that, if all things in society remain normal, a person may not go into entrepreneurship but because of certain challenges in life especially concerning formal employment, some individuals are pushed into self-employment. When

comparing these motivations between persons with and without disabilities, few differences have been found. The differences lie in two motivations: “materialism” and “escape”. The results evident that persons without disabilities pursue material incentives more than their counterparts with disabilities. One possible explanation to this is opportunity-driven entrepreneurship where individuals look for opportunities in the market place to establish their business, for example, a part of the market may not be served by existing firms. Capitalising on such market opportunities so found, will result in more material benefits (money) accruing to the individual since unique goods/services are produced/rendered by the entrepreneur. This suggests that persons without disabilities are more likely to be opportunity-driven entrepreneurs than PWDs. Persons without disabilities are probably concerned with finding opportunities to enrich themselves materially. Non-disabled persons may not encounter as many challenges as PWDs regarding jobs.

The findings also provide evidence that PWDs go into business or become entrepreneurs because they want to ‘escape’ from job related challenges. Discrimination against disabled people in the labour market and job environment could be a possible explanation to this observed difference. Discrimination against PWDs may exist because employers probably misinterpret the ability of PWDs to mean ‘dis-ability’. Employers probably think that PWDs are not productive enough and this makes it difficult for PWDs to get employed. However, apart from mentally disabled persons, other PWDs possess a great deal of employable knowledge, talents and skills just as their non-disabled counterparts do have. For example, in this study, there are no differences in level of formal education (field and number of years of education) between PWDs and their non-disabled counterparts (not tabulated). PWDs are also a good source of problem solving and analytical skills for firms and organisations if they are employed. Another thing that PWDs probably want to avoid (escape from) could be the distance between home and the regular workplace. PWDs especially those with movement difficulty will prefer jobs close to home to those far from home. So if their job place is far from home and it is not cost effective to relocate to the workplace, such PWDs will opt for self-employment. As explained above, the architectural design of the building of the workplace could be another reason why PWDs score high on the “escape” variable. Escape could also be explained in the light of social discrimination in the workplace. If PWDs realise that other employees disassociate themselves from them at the workplace, they would be demoralised socially and may not want to continue to work in such a socially ‘exclusive’

work environment. In sum, distance to work, architectural design of work building, social stigma among other employees, discrimination in looking for job, among others, may be possible explanations for the observed difference in “escape” in the findings.

The conclusion drawn from the findings is that, PWDs are necessity entrepreneurs while non-PWDs are opportunity entrepreneurs. That is to say, PWDs are more likely to be necessity entrepreneurs than non-PWDs. On the other hand, non-PWDs are more likely to be opportunity entrepreneurs than the PWDs.

Based on the findings, the study contributes to entrepreneurship in two ways. In the first place, because this study tests motivations other researchers found and relates them to the classification of necessity and opportunity entrepreneurship. The findings specifically support GEM report (2004); Ecuador’s entrepreneurs are motivated by both opportunity and necessity entrepreneurship. Secondly, because the study shows empirically that motivations for business start-up of persons with and without disabilities differ significantly.

The rest of the study is organised as follows. Chapter two presents the research setting. Chapter three focuses on theory and existing studies. In chapter four, data and research design are presented, detailing how the whole process of the study is carried out. Chapter five presents the results of the data which are closely discussed in chapter six. Finally, chapter seven ends the study with summary of findings, recommendations, suggestions for further studies and some limitations of the study.

## **CHAPTER TWO: BACKGROUND OF THE STUDY**

### **2.0 Introduction**

The previous chapter introduced the topic under investigation. It revealed the purpose of the study and went ahead to outline the relevance of the study. This chapter presents information about the empirical setting. The chapter focuses on the country profile of Ecuador, with special attention on employment/unemployment, entrepreneurship, and disability in Ecuador. This chapter lays the foundation for the empirical results in chapter five.

### **2.1 Profile of Ecuador**

Ecuador is a Spanish speaking country, located in the Western South America, bordering the Pacific Ocean at the Equator, between Peru and Colombia (Ecuador.com, 2014). It is officially called the Republic of Ecuador and its capital city is Quito. The country has a land area of 283,561 sq. km and it is geographically divided into four regions: La Costa (the Coastline), La Sierra (Andes, the Highlands), El Oriente (the Amazon), and the Galapagos Islands (Ecuador.com, 2014).

The country has a total population of 15,439,429 (July 2013 estimates) with the largest age group being 25-54 years –38.7 percent (Central Intelligence Agency, 2014). Income distribution in the country is unequal; the United Nations Development Programme report on Human Development report 2011 shows that Ecuador's Gini coefficient (a measure of income disparity, 0 being complete equity and 100 being extreme inequality) on average was 47.3 in 2011 (MarketLine, 2013).

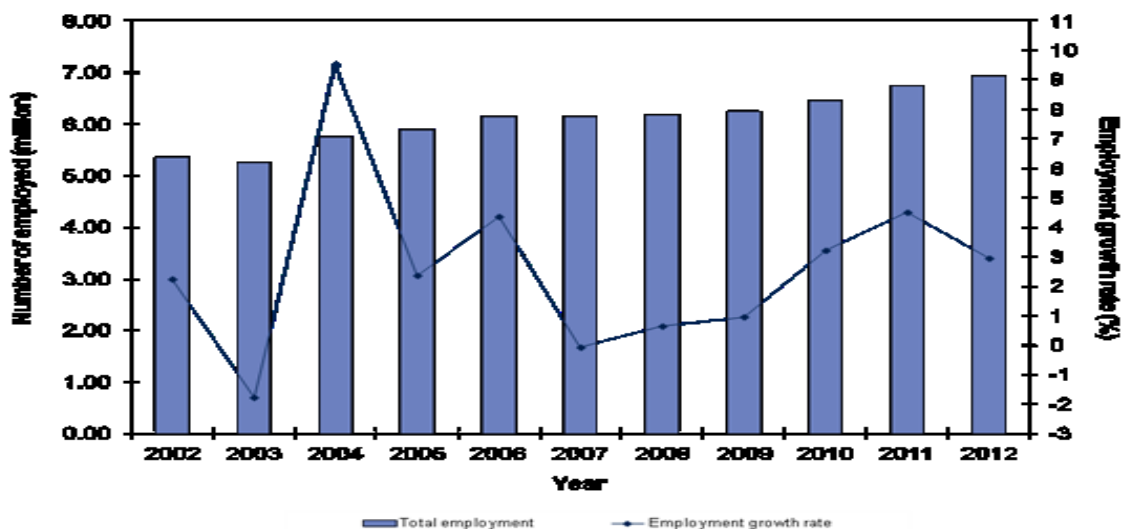
According to MarketLine (2013), the Ecuadorian economy experienced a depressing state in the 1990s. The condition became worst when the gross domestic products (GDP) contracted by 5.8 percent. As a result of the crisis, income disparities and poverty levels increased substantially. Poverty becomes endemic in the Quechua speaking areas where basic infrastructural facilities are lacking. Between 2001 and 2008, the economy recorded an average growth rate of 5.1 percent. Unfortunately, this growth declined substantially in 2009 due to falling oil prices as the global financial crisis reached its peak on the world economy. The economy however resumed its growth momentum by increasing in GDP by 3.6 percent in 2010 and a significant increment of 6.3 percent in 2011 (MarketLine, 2013).



## 2.2 Employment and Unemployment in Ecuador

Ecuador had a total number of labour force of 4.769 million in 2012 (estimates) and was ranked 81 worldwide (Central Intelligence Agency, 2014). According to MarketLine (2013), the country had an unemployment rate of 14 percent in 1999. The unemployment rate however in 2011 declined to 6 percent of the total labour force which stood at 7.35million. Out of this number, 430 thousand are unemployed. The number of unemployed people in the country includes people who are no more looking for job even though they are capable and able to work (MarketLine, 2013). According to MarketLine (2013), such people may not be blamed because of lack job opportunities in the country. The country experiences shortage of skilled labour force due to emigration of Ecuadoreans. The educational system of Ecuador which is regarded as weak has also contributed to the unemployment rate since graduates are not equipped with the needed skills sets to find promising employment opportunities. However, recent measures put up by the government in the educational sector coupled with development in the mining and construction segments, have created more and better employment opportunities for the labour force (MarketLine, 2013). The figure below shows employment trend in Ecuador from 2002 to 2012.

Figure 2.1: Employment in Ecuador, 2002–12

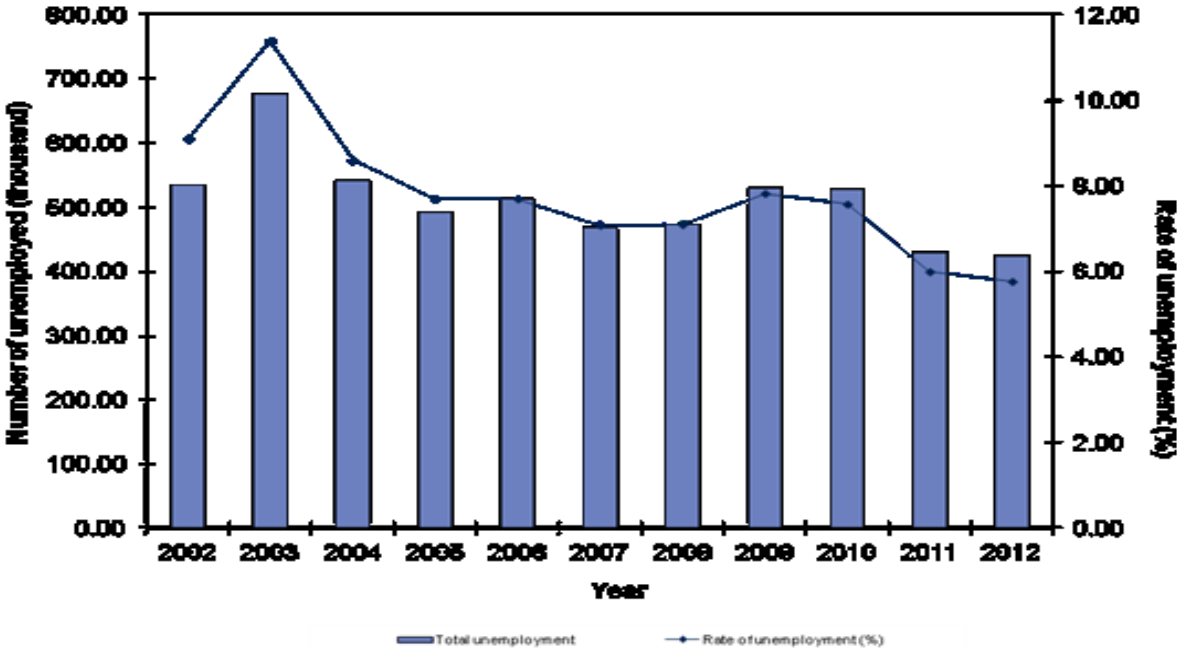


Source: MarketLine (2013)

Figure 2.1 displays the growth of employment in Ecuador from 2002 to 2012. The figure shows a steady growth in total number of people employed (left side of figure 2.1) and a fluctuating growth rate of employment over the period under review. A steady increase in

total number of people employed suggests that each year, just a small number of people are being absorbed into the workforce of the country. Probably, this is due to lack of job creation nationwide and this could be a reason why Ecuador tends to have high entrepreneurial activity indexes (see section 2.3). If few jobs are created yearly while the working population keeps on increasing, this will result in high unemployment in the country. Figure 2.2 presents a snapshot of unemployment trend in Ecuador for the same period (2002-2012) as for the employment trend.

Figure 2.2: Unemployment in Ecuador, 2002–12



Source: MarketLine (2013)

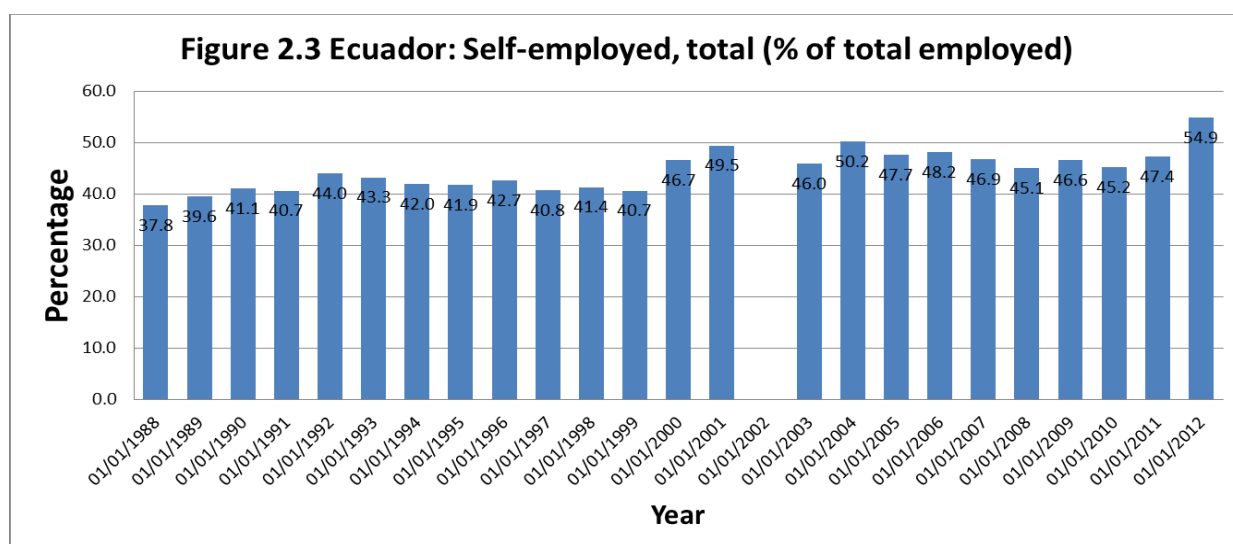
According to CIA (2014), unemployment rate in 2012 declined to 4.9 percent which indicates that the government is probably increasing public spending resulting job creation or the private sector absorbs the unemployed in the country. The decline in unemployment rate could be attributed to increase in self-employment as evident in the GEM report (2004) where Ecuador is among the top three countries that score high on total entrepreneurial activity (see next section). However, according to ILO (2014), unemployment rate in Ecuador increased consecutively from 2011 to 2013 and it is projected to further increase from 2014 to 2018 (see next table). Again, this may explain why Ecuador’s score on TEA index is so high. If unemployment is increasing instead of decreasing, the unemployed in the country may have to resort to self-employment.

**Table 2.1: Unemployment rate per country (%)**

Country	'05	'06	'07▼	'08	'09	'10	'11	'12	'13	'14P	'15P	'16P	'17P	'18P
Ecuador	6.6	6.3	5	6	6.5	5	4.2	4.1	4.5	4.9	5.1	5.3	5.5	5.6

Source: Extract from International Labour Organisation (2014b) dataset

Table 2.1 shows an increasing rate of unemployment from 4.2 percent in 2011 to 5.6 percent in 2018 (estimate). This increasing unemployment rate probably explains why more than one-half of the total employment in 2012 in Ecuador is contributed by self-employment (see Figure 2.3). Figure 2.3 shows that, in 2004, 50.2 percent of the total employment is self-employment. This high self-employment rate in 2004 is being reflected in GEM report (2004), where Ecuador had high TEA index.



Source: data from World Bank (2014)

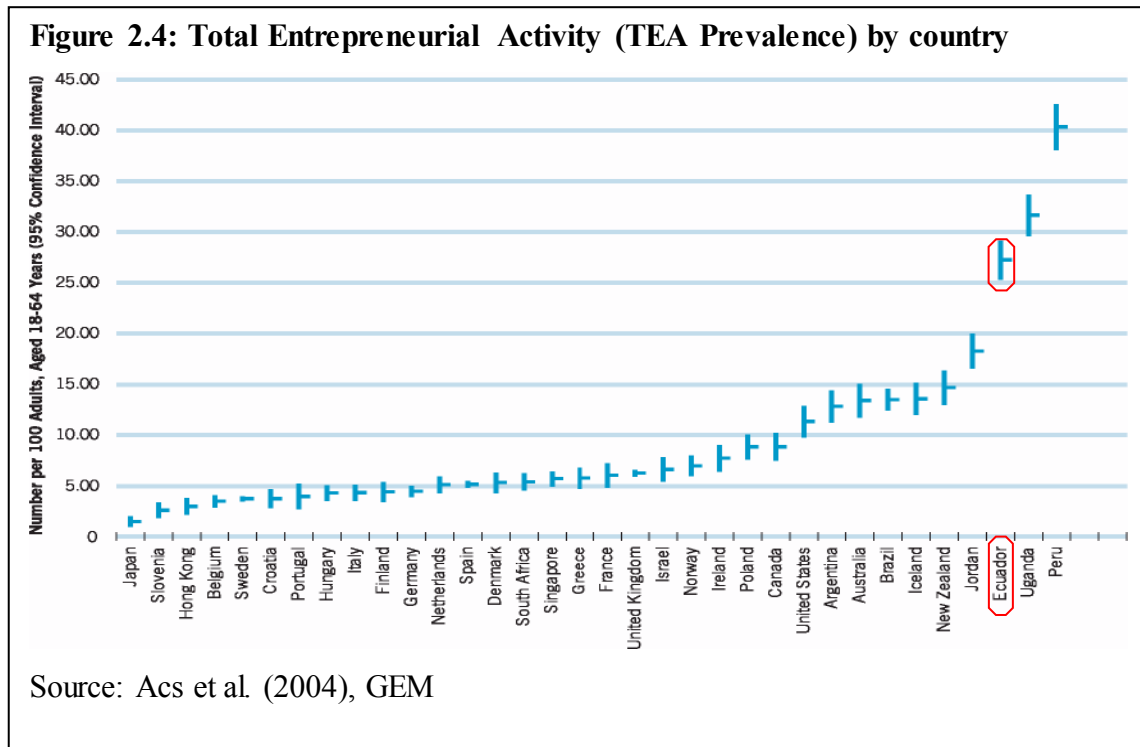
The self-employment rate of 54.9 percent in 2012 is typical of a developing economy like Ecuador. This suggests that employment opportunities in the formal sector are lacking and are much lower for PWDs than non-disabled persons since PWDs are normally discriminated against by the labour market. As a result of lack of employment opportunities, most PWDs will be motivated by necessity entrepreneurship. It can therefore be argued that, a country with high TEA (necessity) index, a larger proportion of this index will be contributed by PWDs. Hence, this can be the case for Ecuador, which has high TEA index in 2004 (see next section).

### **2.3 Entrepreneurship in Ecuador**

The level of entrepreneurial activity in a country to a larger extent could be influenced by the level of economic development. Developing nations lag behind in terms of economic development and they are recently referred to as emerging markets. They have the potential to grow but lack the needed capital in terms of financial, social and human capital as well as up-to-date technology and infrastructure. However, with the little amount of capital available, most of the people try to grow it by going into entrepreneurship. In this section, we will see that the level of entrepreneurial activity in developing countries is higher than that of developed countries.

In Ecuador, there has been significant improvement in the level of total entrepreneurial activity in recent years. In 2012, the Total Early Entrepreneurial Activity (TEA) Index for the country was 26.6 percent which is higher than the preceding years, for example, 21.3 percent in 2010 and 15.8 percent in 2009 (Lasio, Caicedo, & Ordeñana, 2012). TEA index is basically the sum of people taking actions to start a new business and new businesses established (Lasio et al., 2012). The authors also mention that during the year (2012), about 1 out of 4 adults had begun actions to start a new business venture or owned one which is less than 42 months old. The number of businesses started which are more than 42 months old, increased to 18.9 percent in 2012 and this rate is the highest in terms of businesses established since 2008 (Lasio et al., 2012).

Globally, Ecuador is one of the top countries regarding entrepreneurship growth. In 2004, the Global Entrepreneurship Monitor (GEM) report reveals that Ecuador is the third higher country in terms of Total Entrepreneurship Activity prevalence (see Figure 2.4).

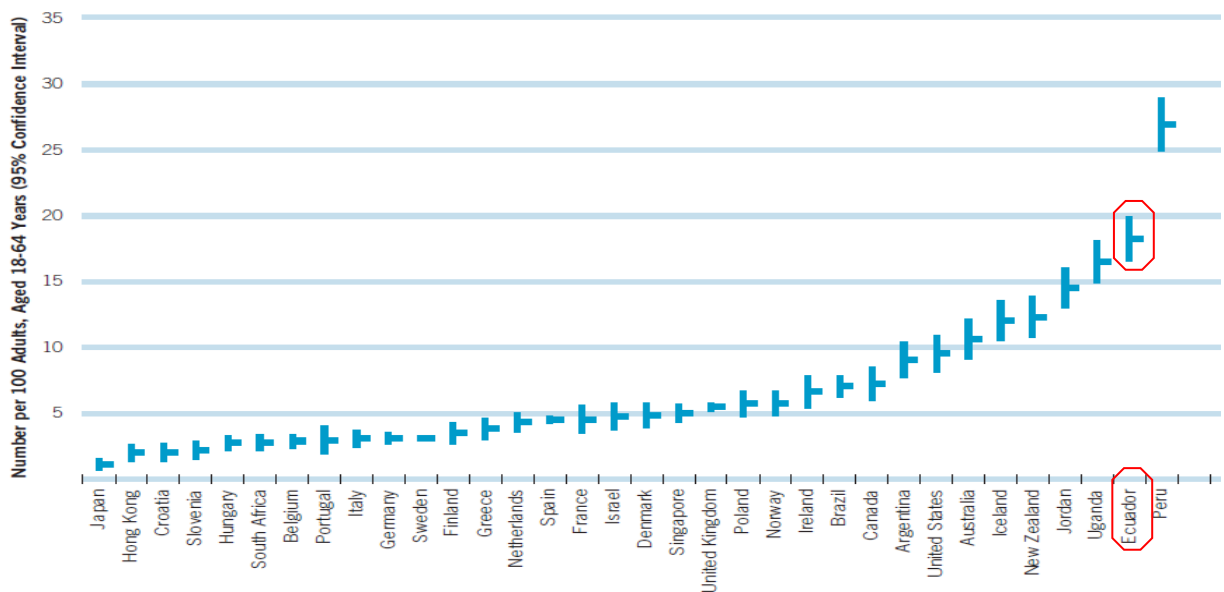


The countries that score high on TEA (in Figure 2.4) are typically developing countries and this suggests that less developed nations tend to have high TEA index more than developed nations. One explanation could be the extent to which the institutions are functioning (institutions here refer to rules, regulations, norms and values that govern human behaviour in a country (Falkenberg, 2007)) well. Countries with inadequate institutions (lacking and/or unenforced) lag behind in terms of socio-economic development. Unlike the developed countries, developing countries' institutions do not support fair distribution of national resources to the extent that some people live in extreme poverty while others are rich. Where institutions are weak, corruption tends to be high and the consequence is that only a small portion of the country's population enjoys the 'national cake' (national income) while the largest portion of the population lives in poverty. In other words, state funds are in the hands of few people. Political leaders focus on enriching themselves and their families instead of helping all people in the country, by designing policies that will lift everyone out of poverty. One of such policies could be job creation for all so that total unemployment rate and dependency ratio in the country could be reduced. Unfortunately, this seems not to be taking place as evident in global employment trends. According to International Labour Organisation (2014a), developing countries record the highest rates of unemployment in the world. With such high unemployment rates, the unemployed in developing countries resort to self-employment in order to earn a living by involving in business ventures ranging from trading

with a handful of items on a table to establishing small and medium-sized enterprises (SMEs). Again, this could explain why Ecuador records very high index on TEA because it is one of the less developed countries in the world.

Concerning motivation for business start-up, GEM report by Acs et al. (2004) shows that individuals undertake entrepreneurial activities for two main reasons: (1) opportunity-driven motivation (they start new business ventures to make good use of a perceived business opportunities available) and (2) necessity-driven motivation (individuals start new business because they are pushed to do so, since all other options for job are either absent or not satisfactory). Globally, according to Acs et al. (2004), more than 97 per cent of individuals who get involved in entrepreneurial activities are either “opportunity” or “necessity” entrepreneurs. In 2004, more than one-half of people who undertook entrepreneurial roles around the globe claim to be taking advantage of business opportunity (Acs et al., 2004). Among a sample of 34 countries, Ecuador ranks second after Peru, with a score of 18 per cent on Opportunity Entrepreneurial Activity (average score is 6.2 percent). On necessity entrepreneurial activity, Ecuador places third after Uganda and Peru. Figure 2.5 and Figure 2.6 present opportunity and necessity entrepreneurial activities respectively for each country in the sample for GEM report (2004).

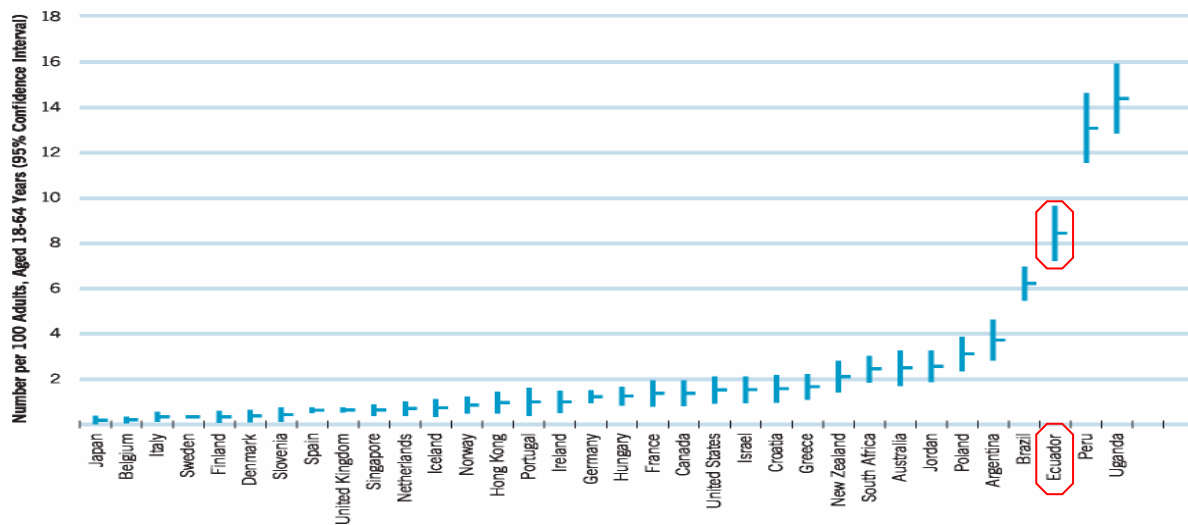
**Figure 2.5: Opportunity Entrepreneurial Activity 2004 by Country**



Source: Acs, Arenius, Hay, and Minniti (2004), GEM

Developing countries having high index on opportunity entrepreneurial activities could be attributed to availability of business opportunities. In developed economies, limited new business opportunities may exist due to their maturity status. Such economies are saturated with a lot of goods and services; hence, introducing/ establishing new business may not yield above average results, unless the new product has no substitute in the market. On the other hand, developing countries are regarded as emerging markets; hence, potential for growth exists. The markets are not saturated yet; creating new business ideas could yield good results. This may explain why developing countries have higher index on opportunity entrepreneurship than developed nations. The next Figure presents information on necessity driven motivation.

**Figure 2.6: Necessity Entrepreneurial Activity 2004 by country**



Source: Acs et al. (2004), GEM

In a country where unemployment rate is high, the unemployed are most likely to resort to self-employment. However, the extent to which the unemployed choose self-employment as a last resort is influenced by the level of economic development of the nation. That is to say, the unemployed in developing countries are likely to be more willing to go into self-employment than those in developed countries. In developed countries, the possibility of getting job is higher than in developing countries. The unemployed in developed states may not take long time to find job, hence, they will be less willing to resort to self-employment. In less

developed nations, this may not be the case. People who are unemployed may take longer time to find a job, because of limited jobs available. As a consequence, they may be more willing to resort to self-employment. This could explain why Ecuador as a developing country is found to have high index on necessity-driven entrepreneurship in Figure 2.6.

In 2012, 17 percent of the Ecuadorian adult population agreed that they began their businesses as a result of market opportunity while 9.5 percent did so due to necessity conditions (Lasio et al., 2012). On a more specific note, Lasio et al. (2012) find that, 25.3 percent of the opportunity-driven entrepreneurs were motivated to increase their income while 22 percent were seekers of independence as far as motivations for business start-up are concerned.

According to Lasio et al. (2012), entrepreneurial activities in Ecuador are facilitated by factors such as favourable cultural and economic environments. Favourable cultural environment has resulted in a large number (88.3 percent) of entrepreneurs and significant proportion of both opportunity entrepreneurs (87.7 percent) and necessity entrepreneurs (89.8 percent) support this (Lasio et al., 2012). This is partly attributed to the role of the media in highlighting entrepreneurial initiatives. Also, national experts of Ecuador say that the economic climate has the greatest impact in promoting local entrepreneurship. The country economic conditions favour entrepreneurship. However, lack of financial support is one of the constraints of entrepreneurship in Ecuador (Lasio et al., 2012). This leads us to Microfinance and poverty in the next section.

## **2.4 Microfinance and poverty**

Microfinance is the “provision of a broad range of financial services to low-income micro enterprises and households” (Bakhtiari, 2006, p. 65) who lack access to the traditional banking and other financial institutions services. Services offered include loans, savings, insurance, leasing and remittances (Bakhtiari, 2006; Mixmarket, 2010). Microloans are often given for the purpose of microenterprise development (Mixmarket, 2010). According to Mixmarket (2010), it is expected that services offered will change the financial needs of individuals, households and enterprise over time, particularly for those who live in poverty. Ecuador is one of the countries that experience poverty in the world and according to Central Intelligence Agency (2014), 27.3 percent (December 2012 estimate) of the population is



below poverty line (i.e., less than \$1 a day per head (Ahmed, Hill, Smith, Wiesmann, & Frankenberger, 2007)). People who live below the poverty line are considered to be living in extreme poverty (Ahmed et al., 2007). The main objective of microfinance is poverty reduction.

## **2.5 Disability in Ecuador**

According to Caselli (2013), about 300 thousand people (over 2 percent of the total population of Ecuador) have disabilities. This 2 percent may not be the true representation of the number of disabled people in Ecuador because of the existence of many definitions of disability. For example, Beisland and Mersland (2012b) realise that, three (3) different disability rates (3.5, 7.1 and 20 percent) for the Ugandan population have been reported arising from different definitions of disability by the authors of the three surveys. To narrow the gap in different rates of disability proportion resulting from different definitions of disability, researchers note that the percentage of disabled people in a population may be about 3 to 20 percent (Beisland & Mersland, 2012b). Beisland and Mersland (2012b) argue that, irrespective of the different definitions of disability and methods used in obtaining percentages, the disability group is large enough to attract the attention of policy makers.

When it comes to employment, PWDs do not have equal opportunities as their counterparts without disabilities. PWDs usually have lower rates of employment compared with those without disabilities (WHO & World Bank, 2011). Caselli (2013) notes that the Ecuadorian disabled people were neglected and considered not employable; they had to always stay at homes. In response to this, the government introduced a law in 2010. It became compulsory for firms with more than 25 employees to employ disabled people, at least, 4 percent of staff positions (Caselli, 2013). As a result of the introduction of the law, between 2006 and 2012, about 10 thousand disabled Ecuadorians have been helped to find job (World Bank, 2013). This suggests that without the law, companies would not have employed disabled people up to 10 thousand and even with the law, there seems to be inconsistency in its application. Out of 300 thousand disabled people, only 10 thousand have been employed suggesting that the law does not have much impact on disabled people and most of them continue to resort to self-employment either voluntarily or involuntarily. It is voluntary because of the benefits associated with self-employment (discussed in chapter one) compared to regular work. It can also be involuntary due to necessity driven factors, thus, they are forced into self-employment

because of unfavourable situations in which they find themselves. Hence, they choose self-employment as a last resort.

## **2.6 Chapter Summary**

Ecuador is a country in South America with a population of over 15 million (July 2013 estimates). As typical of developing countries, employment opportunities seem to be lacking in the country and this is evident in its rising unemployment rate. As a result, most of the unemployed resort to self-employment raising the level of total entrepreneurial activity for Ecuador. When compared with other countries around the globe, Ecuador is found among the top countries with high TEA indexes and these countries are underdeveloped. It can be concluded that, poor countries have high TEA indexes because they are not developed enough to provide jobs for their labour force. Regarding motivations for business start-up, the Ecuadorian entrepreneurs appear to be motivated by two main factors, namely: opportunity-driven and necessity-driven factors and these entrepreneurs include both PWDs and non-PWDs. Detailed information is provided on entrepreneurship and disability in the next chapter.

## CHAPTER THREE: THEORY

### 3.0 Introduction

The previous chapter presented detailed information on the empirical setting - the background of the study. The focus of chapter three is to present existing literature relevant to the study which leads to formulation of the research hypotheses.

### 3.1 Definitions of key terms and concepts

To ensure better understanding of this study to the reader, explanations of key terms and concepts have been provided.

**Necessity-driven motivations** – According to Snyder (2004) in Williams, Round, and Rodgers (2009), necessity motivations are external factors (including discrimination, unemployment, economic restructuring) that push people to engage in entrepreneurial activities by starting a business. Other words used to refer to necessity-driven motivations in this study include: necessity-driven entrepreneurship, necessity driven factors, push factors, necessity entrepreneurship, and necessity. Necessity entrepreneurs are persons who are motivated by these factors; hence, ‘necessity entrepreneurs’ still refers to necessity-driven motivations in this study.

**Opportunity-driven motivations** – These refer to market opportunities which attract individuals to start a business. Opportunity entrepreneurs are those who start a business in order to take advantage of available market opportunity (Liñón, Fernández-Serrano, & Romero, 2013). An existing market niche is an example of market opportunity. A person who leaves his job voluntarily in order to establish a business is classified as an opportunity entrepreneur (Block & Wagner, 2010). The following terms and concepts also mean or refer to opportunity-driven motivations in this study: opportunity entrepreneurship, opportunity driven entrepreneurship, and opportunity entrepreneurial activity, opportunity, and opportunity entrepreneurs.

**Entrepreneurship and entrepreneur** – see next section

**Disability** – see section 3.4

**Persons with disabilities (PWDs)** – In this study, PWDs, people with disabilities and disabled persons are used interchangeably. PWDs who engage in entrepreneurial activities are referred to in this study as disabled entrepreneurs.

**Persons without disabilities** – Same as non-PWDs, people without disabilities and non-disabled persons. ‘Non-disabled entrepreneurs’ is used to refer to entrepreneurs in this group

**Motivations** – also refer to reasons, factors, and driving force for starting a business.

**Escape** – ‘escape’ here goes beyond its verb form. It is used here to refer to push factors; external factors that push people to run to self-employment. It is the same as necessity entrepreneurship.

**Materialism** – Materialism relates to money or material incentives (Dubini, 1988). It concerns physical matters. An example is focusing on money. Materialism is classified as opportunity entrepreneurship to mean entrepreneurs who are material conscious rather than those who just want to meet basic needs (necessity entrepreneurship).

### **Discrimination**

Discrimination refers to unfair treatment to people because of certain prejudice based on their actual or perceived membership in a group or category (Wood, Braeken, & Niven, 2013). The basis of discrimination is not on what the person does but on who the person is. People are discriminated based on factors that they cannot do anything about. For instance, no one change his/her age or skin colour. Types of discrimination in society may include: disability, ethnic, gender, age, marital status, and religious discrimination (Wood et al., 2013). For the purpose of this study, I will explain only disability discrimination. Disability discrimination occurs when physically challenged people are unfairly treated. This means, comparatively, people who are physically fit are given fair treatment when it comes to distributions of resources or services, or selection for jobs. For example, Lewis (2004) notes that disabled women have difficulties in accessing microfinance services.

**Self-employment** – In self-employment, the owner of the business is the boss and earns income from the business operations. Self-employment falls under informal sector of an economy.

**Formal employment** – is the opposite of self-employment. A person gets income for being an employee of a business or a person. Formal employment, regular work, job, traditional job, salaried job, are used interchangeably in this study.

## **3.2 Entrepreneurship and Entrepreneur**

### **3.2.1 Entrepreneurship**

Entrepreneurship concerns the ability of a person to identify market opportunities, create new goods and services that meet societal needs. It also includes modifying existing products to meet current needs of customers. Entrepreneurship is about creating a new business venture with resources at individual's disposal and successful entrepreneurs do create wealth in societies "through their imagination, energy, talent, knowledge, contacts and activities" (Eades, Laseter, & Skurnik, 2010, p. 243). Shane and Venkataraman (2000, p. 218) define entrepreneurship as the process by which "opportunities to create future goods and services are discovered, evaluated and exploited". The definition shows that entrepreneurship is a creative process whereby existing resources are rearranged in a new and attractive way. Entrepreneurs normally investigate gaps in the market (for example, unserved market segment) and take steps to fill them after evaluating the profitability of those gaps (Shane & Venkataraman, 2000). Eades et al. (2010) refer to these gaps as inefficiencies. They note two sources of inefficiencies, (1) when resources are 'sticky' making it difficult to transfer from current use and reapply them in new useful ways, and (2) when people could differently perceive the future prospects of resources and customer demands due to information they have. According to Eades et al. (2010), these efficiencies give entrepreneurs a great pool of opportunities for the creation of successful new enterprises and in practice, every industry has such inefficiencies. In addition, opportunities to create new goods and services arise due to limited knowledge to great possibilities and also because humans are very creative and do view the world in new ways (Eades et al., 2010).

Entrepreneurship plays a large role in the development of economies. It is regarded as an engine of economic growth because it introduces new technologies (Schumpeter 1942 in Garud, Hardy, and Maguire (2007)) in the production of new goods and services. Entrepreneurship does not only inject fresh dynamism into an economy but it also adds to the economic success and future economic development of a nation (Constant, Shachmurove, & Zimmermann, 2003). Entrepreneurship plays a larger role in the reduction of unemployment and welfare drain by creating jobs (Constant et al., 2003) especially in developing countries

where unemployment rate is undoubtedly high. These authors argue that, even though some businesses are not large enough to absorb the unemployed, at least, entrepreneurship creates jobs for the entrepreneurs themselves (that is, self-employment). The entrepreneurial process is of great importance because of the following reasons outlined in Shane et al. (2003). In the first place, entrepreneurship propels innovation and technical change and this leads to economic growth (Schumpeter, 1934 in Shane et al, 2003). Secondly, Austrian economists demonstrate that entrepreneurship is the process by which demand and supply are in equilibrium (Kirzner, 1997 in Shane et al, 2003). Thirdly, entrepreneurship is also important because its process allows new knowledge to be transformed into goods and services (Shane & Venkataraman, 2000 in Shane et al, 2003). Fourthly, entrepreneurship has become a very vital vocation and there is the need to understand its role in the development of human and intellectual capital (Zahra & Dess, 2001 in Shane et al. (2003)).

### **3.2.2 Entrepreneur**

The word “Entrepreneur” originated from the writings of Cantillon (1680-1734) when he recognises three groups of economic agents: landowners, entrepreneurs and employees (Wennekers & Thurik, 1999). An entrepreneur is “an individual who organizes, operates, and assumes the risks of a business venture” (Constant et al, 2003, p. 2). Entrepreneurs are people who take calculated risks in meeting their dream of becoming self-employed. As hard working people, entrepreneurs do not only become self-employed but they also create new jobs and opportunities for others.

*“Entrepreneurs are persons who initiate, organise, manage and control the affairs of a business unit what combine the factors of production to supply goods and services, whether the business pertains to agriculture, industry, trade or profession”* (Pande, 2009, p. 10).

The role of an entrepreneur has been viewed from different angles. Three main intellectual traditions about the role of an entrepreneur exist and each school of thought has its origin linked to Cantillon (Hebert and Link, 1989 in Wennekers and Thurik (1999)). The first is the German (Schumpeterian) tradition which views an entrepreneur as a creator of instability and creative destruction. This tradition concerns the creative potential of entrepreneurs. The second is the Austrian tradition of Menger, von Mises, and Kirzner. The Austrians focus on the capabilities of the entrepreneurs to discover profit avenues. The third group of tradition is the (neo-)classical tradition of Marshall, Knight and Schultz who concentrate on the function

of the entrepreneur as someone who leads markets to equilibrium through his entrepreneurial activities (Wennekers & Thurik, 1999).

### **3.3 Motivations for business start up**

Motivation here refers to the reason for doing something. Hence, motivations for business start-up refer to reasons for establishing an enterprise. The Global Entrepreneurship Monitor has classified motivations for business start-up into two, necessity and opportunity entrepreneurship (Reynolds et al, (2002); Sternberg et al. (2006) in Block and Wagner (2010) and Liñón et al. (2013)). Opportunity entrepreneurs are those who start a business in order to take advantage of available market opportunity while necessity entrepreneurs are those entrepreneurs who are pushed by external factors including unemployment conditions or dissatisfaction with their previous regular work (Liñón et al., 2013). Necessity entrepreneurship is regarded more as need-based (Block & Wagner, 2010) because, the individual needs to do it in order to meet basic needs of life. To a larger extent, the degree to which individuals become opportunity/necessity entrepreneurs depends on the economic conditions. According to Deli (2011), opportunity entrepreneurs are more likely to start a business when the economic conditions are favourable. On the other hand, necessity entrepreneurs are normally pushed into self-employment after involuntary unemployment and they are mostly common during rising unemployment rate. High unemployment rates motivate self-employment especially among persons with low ability (that is, low income persons) (Deli, 2011) including PWDs.

The level of economic development of a country to some extent determines necessity versus opportunity entrepreneurs (GEM 2005 in Anca, Cornescu, and Elena (2009)). Necessity entrepreneurship is common in developing countries and correlates negatively with the level of economic development; it decreases with economic growth (Wennekers et al, 2005 in Anca et al. (2009)). Anca et al. (2009) argue that, the number of business start-ups will decrease as the number of people who find permanent jobs increases. Necessity entrepreneurs are the majority of entrepreneurs in developing countries and are relatively less common in developed nations (Anca et al., 2009). Adom and Williams (2012) find that, 65 percent of the entrepreneurs in their sample from Ghana (a developing country) are necessity entrepreneurs while the remaining 35 percent are opportunity entrepreneurs. In developed countries, necessity entrepreneurship is less common and gradually falls off while opportunity

entrepreneurship increases (Wennekers et al, 2005 in Liñón et al. (2013)). In addition, Job search theory states that the longer a person is unemployed, the more his/her reservation wage (defined as the minimum wage a person is willing to accept for a job) declines (Devine and Keifer, 1993 in Block and Wagner (2010)). Therefore, necessity entrepreneurs will be more willing to start a business than opportunity entrepreneurs in low income sectors (Block & Wagner, 2010). A country with high necessity entrepreneurial activities implies that few employment opportunities will exist for PWDs and as a consequence, PWDs are more likely to be motivated by necessity entrepreneurship.

Other researchers identify some other motivations for business start-up but they can be classified into the two main classifications: necessity-driven and opportunity driven motivations.

### **3.3.1 Achievement**

Establishing a new venture allows individuals to accomplish their dreams (self-actualisation). Business start-up is as an aspect of personal development and also an opportunity for people to develop their own ideas (Dubini, 1988). It is found that entrepreneurs start business to be able: to contribute directly to the firm's success, to keep learning, to be challenged, to be innovative, for personal accomplishment and to develop an idea (Dubini, 1988). Achievement fits well into need for achievement as characteristic for entrepreneurs as discussed above, Maslow's self-actualisation need (1954) and individualistic behaviour - Hofstede's (1980) cultural dimension, both cited in Dubini (1988). Achievement also relates to entrepreneurial behaviour expressed by Peterson and Stevenson (1987) and Stevenson and Sahlman (1986) in Dubini (1988), regarding the essential features of model work. Furthermore, achievement correlates with Friberg's (1975, 1976 in Dubini, 1988) "inherent incentive" – where individuals choose to work because performance in itself is rewarding to them. Performance lessens tension within the individuals. Achievement is an opportunity driven motivation since the individual wants to pursue an idea which can yield good results. It is a pull factor and not a push because the individual chooses self-employment out of his/her free will.



### **3.3.2 Welfare considerations / “Philanthropy”**

Starting a business allows an individual to contribute to the welfare of the family, community or the group to which the entrepreneur belongs to (Dubini, 1988). This motivation correlates with Hofstede’s cultural dimension – collectivism and Friberg’s internalised incentives (Dubini, 1988). Welfare consideration is also strongly related to Lodge’s (1976) communitarianism (Birley & Westhead, 1994). Welfare consideration is a voluntary motivation, hence opportunity entrepreneurship.

### **3.3.3 Status**

Status refers to the relative position of somebody in a society or group. People start a business in order to increase their status and personal prestige in their society. Dubini (1988) finds that entrepreneurs start businesses in order to be respected by friends, influence the community and gain higher positions in society. Status is related to high need for power (McClelland’s Need for Power, Hofstede’s Power Distance Index) and Friberg’s social incentives in connection with group effects (Dubini, 1988). Status is opportunity motivation because it is out of the individual’s choice but not a force to gain status.

### **3.3.4 Materialism**

Materialism relates to money or material incentives (Dubini, 1988). Individuals start business in order to earn more money, have fun and security. Starting a business may be risky, but if it becomes successful, the entrepreneur earns enough money within a short period of time than income earned from employment elsewhere (Dubini, 1988). Money allows for independence and freedom of the entrepreneur. Materialism is related to the characteristics of ideal compensation method noted by Peterson and Stevenson (Dubini, 1988). Materialism is an opportunity driven motivation since the individual’s motive is to acquire more material wealth. However, it can also be classified under necessity entrepreneurship if the individual sees self-employment as the only option to meet basic needs (like food, shelter, health, and so on). But materialism is more opportunity driven than necessity driven entrepreneurship.

### **3.3.5 Escape**

To escape is to avoid bad situations or get free from captivity. This motivation falls under the necessity-driven entrepreneurship where individuals are pushed into self-employment. Unemployment and discrimination in the labour market may compel people to start-up self-employment venture (Constant et al, 2003). According to Friberg (Dubini, 1988), entrepreneurship is a means of avoiding bad situation and this confirms other authors' view of seeing entrepreneurial activity as a "last choice career path". Individuals who are primarily motivated by *escape* factors are called *socially discriminated entrepreneurs* (Mishra, 2005). Mishra finds that people start business because they face discrimination in looking for job and because they want to increase their social status. And we can find PWDs in this group since they are the most affected in this regard.

### **3.3.6 Freedom/Independence**

People who want to be independent are more likely to start their own business than people who do not want independence. Independence allows entrepreneurs to structure their work how they want, control their own time and select collaborators including location of work (Dubini, 1988). Freedom relates to Hofstede's cultural dimension "Individualism" where individual control and freedom of choice are essential to the entrepreneur (Birley & Westhead, 1994). Independence also relates to "control of nonfinancial resources" expressed by Peterson and Stevenson (Dubini, 1988). The choice to be independent is opportunity entrepreneurship than necessity entrepreneurship (need-based). But for PWDs, freedom/independence can be a necessity factor, considering their disabilities. As outlined in chapter one and subsection 3.5 of this chapter, self-employment offers PWDs with a greater amount of flexibility.

### **3.3.7 Role Models**

People start business because they want to keep family tradition. Mishra (2005) finds that people are in business because it is a family tradition; they inherited it and because other family members were already in business. According to Friberg (Dubini, 1988), willingness to continue family tradition is a social incentive and is more related to a group than personal creativity. Role model is an opportunity driven motivation since the individual keeps family tradition out of choice but not a force. Also, the experience gained from previous family business can be used to take advantage of a promising opportunity in the market.

### **3.3.8 Ease of entry and management**

Mishra (2005) finds that individuals start business because it is easy to enter and run. This is possible during economic recession where individuals' jobs add low value and are not lasting and may even vanish with advancement in agricultural conditions (Liedholm and Mead, 1999 in Mishra, 2005). Ease of entry and management can be classified as an opportunity-driven motivation.

In sum, motivations for business start-up are opportunity-driven and necessity-driven motivations. What this study seeks to contribute to the entrepreneurship literature is to investigate whether disabled entrepreneurs' motivations differ from non-disabled entrepreneurs' motivations or not. In other words, whether one group is opportunity entrepreneurship and other is necessity entrepreneurship or they are the same. The next sections present information on disability.

### **3.4 Disability**

According to the World Health Organisation (WHO, 2014), disability is a broad concept which covers impairments, activity limitations and participation restrictions. Impairment is a health problem associated with body function or structure. Activity limitations concern the troubles that people go through in trying to perform a task or action. Participation restriction is a social problem that people encounter when involving themselves in life situations. Disability is a complex issue apart from being a health problem. It reflects the relationship between a person's body characteristics and the characteristics of the society to which he/she belongs to or lives in. Removing both environmental and social barriers will solve the problems disabled people encounter (WHO, 2014).

In general, people with disabilities are unintendedly excluded from public services. Public systems indirectly discriminate against people with disabilities by not including their needs (WHO & World Bank, 2011). Attitudes of people can also affect the lives of people with disabilities. The WHO and the World Bank (2011) report notes that negative attitudes towards disability can lead to negative treatment of disabled persons such as (1) school children intimidating their colleagues with disabilities, (2) bus driver not supporting access needs of disabled passengers, (3) employers discriminate against persons with disabilities, and (4) when strangers mock at disabled people.

According to Sen (2009) in WHO and World Bank (2011), disability is a development issue and it has bidirectional link to poverty. Disability and poverty are positively related; increase in disability may lead to increase in the risk of poverty and vice versa (WHO & World Bank, 2011). This suggests that the rate of increase in risk of disability is higher in developing countries than developed countries. Reducing poverty indirectly means reducing the risk of disability.

Quantitatively, about 15 percent (approximately over 1 billion) of the world's population live with some type of disabilities (WHO & World Bank, 2011) and a large number of these disabled persons live in developing countries (Beisland & Mersland, 2012a). Mersland (2005) notes that over 80 percent of disabled people live in developing countries. In addition, one out of six people in some developing countries are considered disabled (Elwan, 1999 in Mersland, 2005). In the previous chapter, it is outlined that, approximately 2 percent of the Ecuadorian population represents PWDs.

Disability is not a homogenous group. Disabled persons are diverse and heterogeneous but people generally view them as wheelchair users, blind and deaf people (Park et al., 2007 in WHO & World Bank, 2011). Disability includes child born with congenital condition, loss of leg by a young soldier, severe arthritis faced by middle-aged woman or older people with dementia, and so on (WHO & World Bank, 2011). It is therefore misleading to generalise people with disabilities.

### **3.5 Entrepreneurship and disability**

Most people with disabilities are economically active and can do most of the activities that people without disabilities do. It is only a small proportion of the disabled population that cannot work. However, even though disabled persons have the working capabilities, about 80 to 90 percent of them do not have formal job and as a result resort to self-employment (UN, 2008 in Labie, Méon, Mersland, and Szafarz (2011)). Studies conducted in both developed and developing countries reveal that employment rates for disabled people of working age are much lower than that of people without disabilities (OECD, 2010, Houtenville et al, 2009, Mitra et al., (forthcoming), Contreras et al., 2006, Mete, 2008, Mitra, 2008, Mitra & Sambamoorthi, 2006, World Bank, 2009) in WHO and World Bank (2011)). But the United Nations Convention on the Rights of Persons with Disabilities (CRPD) notes the rights of

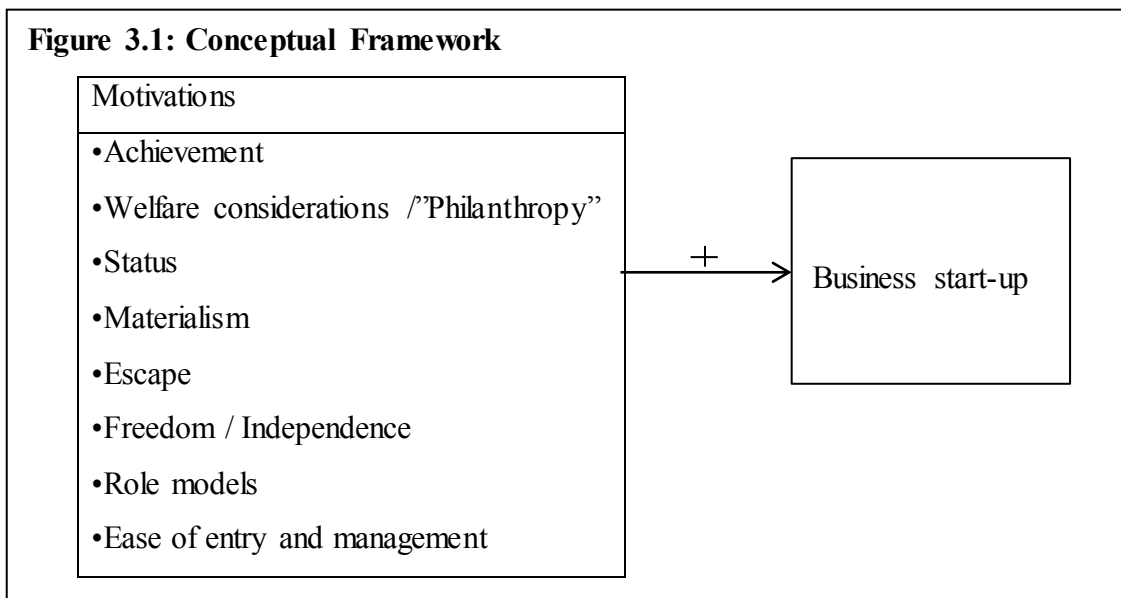
people with disability to work; putting disabled persons on equal basis with others without disabilities (UN, 2006 in WHO & World Bank, 2011). If CRPD prohibits all forms of employment discrimination, what accounts for the disparity in employment rates between disabled persons and non-disabled person? Various factors influence the labour market's decision relating to disabled people. The labour market is impacted by productivity differentials, labour market imperfections regarding discrimination and prejudice, and disincentives resulting from disability benefit systems (OECD, 2010, World Bank & Oxford University, 1994, Kinsella & Velkoff, 2001, Kidd et al, 2000 in WHO and World Bank (2011)).

Globally, PWDs also become entrepreneurs and self-employed workers (Domza, Houtenville & Sharma, 2008 in WHO and World Bank (2011)). Most people with disabilities start their own businesses as a result of obstacles they face in looking for formal job. The obstacles may be lack of physical accommodations or inflexible work schedule. Disabled entrepreneurs operate their businesses from homes, which enables them to control their environment and have flexible work schedule (Fysh, 2000 in Holub (2001)). Entrepreneurship offers both benefits and disadvantages to disabled entrepreneurs. According to the U.S. Department of Labour (Holub, 2001), benefits that disabled entrepreneurs may enjoy include: flexibility, freedom, independence associated with self-employment, and freedom from access related problems (i.e., transportation, fatigue, inaccessible work environment and the need for personal help). The disadvantages may include forgone cash from Social security or supplementary disability programs, forgone health care benefits related to cash programs, forgone housing benefits and other subsidies, lack of access to venture capital due to poor credit rating, and lack of collateral security for borrowings (Office of Disability Employment Policy, 2001 in Holub, 2001). Despite the disadvantages associated with entrepreneurship, it is still argued that self-employment is the "true" option for people with disabilities (Doyle, 2002 in Pagan, 2009). Self-employment and entrepreneurship help people with disabilities move from unemployment, underemployment and entitlements based programs to profitable employment and self-sufficiency (Blanck, Sandler, Schmeling, & Schartz, 2000). Studies reveal that workers with disabilities are about twice likely to be self-employed as workers without disabilities (Nelton, 1998 in Blanck et al. (2000)). In addition, Pagán (2009) finds that people with disabilities are more likely to be self-employed than people without disabilities; disabled persons use self-employment as an opportunity to take care of their impairment with working life.

Considering that disabled persons have lower employment rates than their non-disabled counterparts, face more challenges with regular job and that disability is positively related to poverty, then it can be argued that PWDs are necessity entrepreneurs. And this forms the basis for the hypotheses of this study.

### 3.6 Conceptual framework

Regarding the discussions on motivations for business start-up, a conceptual model can be drawn. Motivations (as listed in the figure below) are the independent variables and business start-up is the dependent variable.



Source: Author's own constructs

As summarised in Figure 3.1, the desire for personal development (achievement) will motivate an individual to start a business. Also, people who want to contribute to the need of others including members of family, community or group will want to create their own business to be able to do so. Status seeking individuals are more likely than others to enter into self-employment especially in countries with high power distance. In addition, the desire to earn more money in order to achieve certain things in life will make people start their own business. Furthermore, people who face difficulties either in looking for job or in other unfavourable situations are more likely to start a business than people who are formally employed and have everything easy for them. Persons with disabilities for example may be

forced to begin their own enterprise if they face difficulties in the work environment including unfavourable structures of the building and social stigmatisation by fellow workers. To add, individuals who want to be independent in order to control what they do, will be more motivated to start a business. The desire to be independent is more common in individualistic countries such as USA. Some people also start their own business in order to continue a family tradition. If previous generations in the family were entrepreneurs, the possibility of current generations in the same family becoming entrepreneurs is very high. Finally, individuals are more likely to establish a business if it is easy to enter and run. These motivations will be tested in this study by applying Factor analysis. With Factor analysis, the test variables can be grouped into factors and these factors will be named according to the motivations presented in the theoretical framework.

The control variables in this study include: age, gender, marital status, number of children and level of education. Age is a driving factor for business start-up because age is associated with experience (Pedersen, 2013). The more old a person is, the more experienced he/she will be, all things being equal. Therefore, older people will be more willing than younger people to take up entrepreneurial activities. Studies show that people with disabilities are older than those without disabilities (Mizunoya and Mitra, 2013) in Beisland and Mersland (forthcoming). Gender could also influence motivations for business start-up. Men in general are more aggressive than women; as a result, men will be willing to take risk associated with an entrepreneurial activity. Also, a married person will be more willing to start a business than a single person. This is because the spouse will be a source of support, encouragement, advice (Pedersen, 2013), and so on, for the entrepreneur. The children can also serve as a source of labour for the entrepreneurial work. The number of children a person has is related to dependency ratio. If the number of children is large, the responsibilities of the entrepreneur will be greater; hence he will not be able to save more in order to go take up entrepreneurial activity. Thus, the more the number of children a person has, the lesser his willingness to embark on entrepreneurial work. Finally, level of education is associated with knowledge and skills acquired. The higher a person is educated, the more knowledge and skills are acquired, hence, the better the person is equipped in handling business operations.

### **3.7 Research hypotheses**

Motivations for business start-up for persons with disabilities will differ from those without disabilities. This is because employment rates for disabled people of working age are much lower than non-disabled persons (OECD, 2010, Houtenville et al, 2009, Mitra et al., forthcoming, Contreras et al., 2006, Mete, 2008, Mitra, 2008, Mitra & Sambamoorthi, 2006, World Bank, 2009 in WHO and World Bank (2011)), in other words, about 80 to 90 percent of PWDs of working age do not have formal job and as a result resort to self-employment (UN, 2008 in Labie et al. (2011)). Also, PWDs face more difficulties (such as discrimination) in searching for traditional jobs (Holub, 2001) and are the poorest of the poor (low income people); majority of PWDs (over 80 percent) live in developing countries Mersland (2005). Disability and poverty are positively related (Sen, 2009 in WHO and World Bank (2011)). Putting all these challenges together, it can be argued that disabled entrepreneurs are more motivated by necessity than opportunity; hence, the following general research hypotheses (H) can be formulated for testing.

*H<sub>1</sub>: PWDs are more likely to be necessity entrepreneurs than those without disabilities.*

*H<sub>2</sub>: PWDs are less likely to be opportunity entrepreneurs than those without disabilities*

### **3.8 Chapter Summary**

The chapter discussed what entrepreneurship and outlined motivations for business start-up. All motivations for start-up can be grouped into necessity and opportunity driven factors. Since this study includes people with disability, disability theory has also been explored. The chapter ended with the research hypotheses which will be tested in chapter five. But before testing the hypotheses, there is a need to outline the tools necessary for data collection and analysis and that is the focus of the next chapter.



## **CHAPTER FOUR: DATA AND RESEARCH METHODOLOGY**

### **4.0 Introduction**

This chapter focuses on data, the methods and procedures of a research design. A research design, according to Zikmund, Babin, and Griffin (2013, p. 64) is “a master plan that specifies the methods and procedures for collecting and analyzing the needed information”. It shows the plan of action of the researcher. As there is no any single best research design (Zikmund et al., 2013), the methods and procedures used in this paper are absolutely not the only best ones, they could be alternatives.

### **4.1 Sources of data**

Zikmund et al. (2013) outline two main sources of data: secondary sources and primary sources. Secondary data are those that have been gathered previously for some other purposes than the current purpose. Primary data are data collected and organised specifically for the study at hand (Zikmund et al., 2013). Since secondary data do not usually meet the specific need of the current study, primary data are used in this study.

This study uses a dataset collected from the Coastal region of Ecuador. The respondents are entrepreneurs and they are participants of microcredit programs offered by D-Miro, one of the Microfinance Institutions in Ecuador. The data were collected from a total of 354 respondents during the period of January – February, 2013. One-half of the entrepreneurs come from households where disabilities were present and the other one-half of entrepreneurs come from households without disabilities.

### **4.2 Sample design**

According to Zikmund et al. (2013), a sample is a subset of a larger population (a complete group of people, sales territories, stores, college students, and so on). A list of elements from which the sample is selected is known as the sampling frame. The purpose of sampling is to estimate an unknown feature of a given population. A sample is used to draw conclusions about the whole population (Zikmund et al., 2013). The authors note that, sampling is important because of budget and time constraints; it will be costly and time consuming for a researcher to contact every member of the population. Sampling is also important because most properly selected samples provide accurate and reliable results. This is particularly

possible if the elements of the population are similar. Furthermore, most research projects especially researches in quality-control testing, demand that test units are destroyed. Therefore sampling prevents the destruction of many test items (Zikmund et al., 2013).

Zikmund et al. (2013) note that all sampling techniques can be grouped into two: probability and non-probability techniques.

*Probability sampling* refers to sampling techniques where every element of the population has the chance of being selected that is, having known nonzero probability of selection (Zikmund et al., 2013). Probability sample is also characterised by true randomness in the selection process. Types of probability sampling techniques include: simple random sampling, systematic sampling, stratified sampling, cluster sampling, and multistage area sampling (Zikmund et al., 2013). According to these authors, simple sampling is a sampling technique where each of the elements in the population stands equal chance of being selected. An example is picking names from a hat. Systematic sampling is a procedure of selecting a sample in which a beginning number is selected randomly and afterwards every  $n$ th number is selected on the sampling frame. For example, if a researcher wants a sample of 100 from a list of 20,000 names, then every 20<sup>th</sup> name on the list will be selected. In stratified sampling, a subsample is selected by way of simple random sampling within each of the strata of the population. Cluster sampling is a technique in which the primary sampling units are not the single elements in the population but a big group of elements. The clusters are normally selected randomly. Finally, multistage area sampling concerns a combination of two or more probability sampling methods (Zikmund et al., 2013).

*Non-probability sampling* refers to sampling techniques in which there is no known probability of selecting a member of the population. The sampling units are therefore selected arbitrary because the researcher relies on his personal judgement. Four types of non-probability sampling have been noted in Zikmund et al. (2013). They include: convenience sampling, judgment (purposive) sampling, quota sampling and snowball sampling. Convenience sampling involves selecting sample units that are most conveniently available. Judgment sampling is where an experienced researcher chooses the sample based on his judgment about the appropriateness of the sampling element. The researcher selects the sample that meets the specific purpose of the study. In quota sampling, various clusters of the population are represented on some important features according to the way the researcher desires. For example, if a researcher wants to select a sample of 20 from undergraduate

student body of which 95 percent are full-time students, he may choose 15 full-time and 5 part-time students. Lastly, snowball sampling is about doing initial selection of the respondents and then getting additional respondents through the help of the first respondents. The initial respondents provide information that helps the researcher to get the additional respondents (Zikmund et al., 2013).

The population for this current study is all entrepreneurs who are clients of D-Miro in the Coastal region of Ecuador. It is divided into two subgroups of unequal size. The first subgroup is entrepreneurs with disabilities or members of their families have some form of disabilities. The second subgroup is entrepreneurs without disabilities and none of their family members is disabled. The disabled group did not participate in the microcredit program for a long time and this result in their small number (400) as compared to the number of non-disabled people. All of the 400 disabled entrepreneurs were selected as a sample. Since the study seeks to make a comparison between the two groups, the same sample size of 400 was selected from the non-disabled group which has a larger number of members. Purposive sampling was applied based on two criteria (loan size and time as a client of D-Miro) to get the sampling frame of 15,000 non-disabled clients from which a sample of 400 was drawn by using simple random sampling technique.

### **4.3 Method of data collection**

Method of data collection concerns the way the data were collected. There are several methods of collecting primary data. For this study, interviewer-administered questionnaire was used. Questionnaire is a set of questions used to gather information in a survey and they are normally standardised and the questions are quite structured (Zikmund et al., 2013). With the interviewer-administered questionnaires, the interviewer asks the respondent the questions and he/she selects the appropriate option. This is normally done either in personal interview or telephone interview (Zikmund et al., 2013). In this study, the respondents were interviewed on phone. Telephone interview is important because of the speed of data collection. While personal interviews can take several weeks to be completed, hundreds of telephone interviews can be conducted within a day (Zikmund et al., 2013). Also, these authors argue that, compared to personal interviews, telephone interviews are cheaper. Costs of telephone interviews are estimated to be 25 percent of door-to-door personal interviews. The absence of face-to-face contact in telephone interview allows the respondent to answer sensitive

questions more readily as compared to personal interview. However, mail and internet surveys are better than telephone interview in collecting confidential information due to the fact that they are more anonymous (Zikmund et al., 2013).

The questionnaire was translated from English into the local language of Ecuador (i.e. Spanish) in order to ensure better understanding of the questions. The questionnaires were pre-tested by using 20 clients in D-Miro. This was done purposely to iron out fundamental problems in the instructions or questionnaire design. Pretesting helps determine whether the questionnaire needs to be refined (Zikmund et al., 2013). After conducting the pretesting, some questions were not relevant and they were eliminated accordingly. The respondents (20) found it difficult answering some questions. For instance, a question required respondents to split their start-up capital among various sources of capital into percentage proportions. This was difficult to answer, and it was changed by dropping the percentage division to asking the respondent to indicate three main sources of their start-up capital. Rating order on Likert scale was also changed to ensure reasonable understanding. The pretesting indicated low response rate due telephone turn-off. To accommodate this low response rate in the actual questionnaires administration, the initial sample sizes were increased (see Pedersen (2013)).

The questionnaires were administered by a team of 5 people who were properly trained for the data collection. Though they got training, they were not without supervision during the survey. The response rate (the proportion of questionnaires duly returned or completed) was about 45 percent accounted for by a total of 354 respondents comprising 177 entrepreneurs who are either disabled or come from families where disability is present and 177 entrepreneurs who are neither disabled nor come from families where disability is present. For this study in particular, the data were further screened to get only respondents with disabilities for the disability group. Hence, observations provided by respondents who do not have any form of disability but come from a family where a member has a disability were deleted. After the screening, the total number of observations for the disabled group came down to 96. The total number of observations in the non-disabled people group remains the same (at 177).

#### 4.4 Operationalisation and measurement of concepts

According to Zikmund et al. (2013), operationalization refers to the process of identifying scales that relate to variance in a concept that is included in a research process. A concept, according to these authors, is a generalised idea which represents something that has meaning. Some concepts' properties can be measured through observation. Those non-observable operational concepts can also be measured by inferring to the behaviour that can be observed (Zikmund et al., 2013). The following table lists both the test variables and the control variables with their explanations and expected influence.

**Table 4.1: Explanations of independent and control variables**

<b>Independent variables</b>	<b>Explanation (measurement)</b>	<b>Influence expected</b>
Lack of opportunities elsewhere	A dummy with 1 if entrepreneurs start business because of lack of opportunities elsewhere	+
To be entrepreneur/self-employed	A dummy variable like first one	+
To earn more money	A dummy variable like previous one	+
To supplement family income	A dummy variable like previous one	+
To quit other job	A dummy variable like previous one	+
Experience from previous family business	A dummy variable like previous one	+
To overcome the difficulties and limitations which I had in my last job (disability, the situation of my family etc.)	A dummy variable like previous one	+
To have the opportunity to stay close to my family	A dummy variable like previous one	+
Other reasons for starting the business	A dummy variable like previous one	+
<b>Control variables</b>		
Gender	Dummy, 1= Female, 0= male	+/-
Age	The age of the entrepreneur	+/-
Married/united	Dummy, 1=married/united 0 =single, divorced, widow(er)	+

Children	Number of children of entrepreneur	+/-
Education	The number of years of education	+

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‘Disability status’ is a dummy variable and equals to 1 if the entrepreneur has disability, 0 otherwise. This variable is used as the dependent variable to test whether there are any differences between motivations of entrepreneurs with disabilities and those without. The two sub-samples are very unique in that they were selected based on common characteristics regarding credit program offered by D-Miro. Also, it is assumed that all entrepreneurs will have similar motivations to start a new business; therefore, any differences observed in this study will be attributed to the disability itself.

#### **4.5 Data analysis techniques**

The data analysis begins with t-test (univariate technique) to investigate if there are significant differences in the means of the test variables between entrepreneurs with and without disabilities. t-test is a test to determine the statistical significance of the difference between two sample means for a single dependent variable and it is a special case of ANOVA for two groups (Hair, Black, Babin, & Anderson, 2010). To make a strong conclusion regarding the research hypotheses, the study applied a multivariate analysis, particularly logistic regression analysis. Logistic regression (also known as logit analysis) is normally applied when the dependent variable is nominal (categorical, binary, nonmetric) and the independent variables are either nonmetric or metric or both (Hair et al., 2010). It is equivalent to two-group discriminant analysis. Logistic regression is mostly preferred for this type of research due to two reasons (Hair et al., 2010; Sekaran & Bougie, 2010). First, discriminant analysis is concerned with meeting the assumptions of multivariate normality and equal variance –covariance matrices across groups, though these assumptions are not normally met in most cases. Logistic regression does not face such strict assumptions and it is much more robust in this regards. This makes logistic regression application suitable in many situations. The second reason is that, according to Hair et al. (2010), many researchers prefer logistic regression to discriminant analysis because it is very much similar to multiple regression analysis. It has straightforward tests, the same methods of incorporating metric and nonmetric variables and nonlinear effects, and a great amount of diagnostics.

The general form of logistic regression model is given as:

$$Y_1 = X_1 + X_2 + X_3 + \dots + X_n$$

(binary nonmetric) (nonmetric and metric) (Hair et al., 2010, p. 318)

For this study, I adopt Beisland and Mersland (forthcoming) model to test the hypotheses.

$$\text{DisabilityStatus} = \alpha + \beta * \text{TestVariable} + \gamma * \text{Controls} + \varepsilon$$

Where;

Disability status = 1 if the entrepreneur has disability and 0 if he/she has no disability.

Approximately 35 percent of the entrepreneurs in this study have disabilities (see table 5.2).

Test variables = independent variables presented in table 4.1

Controls = control variables in table 4.1

$\alpha$  is a constant and it becomes the value of the dependent variable if all the test variables and control variables are zeros.

$\beta$  and  $\gamma$  are regression coefficients and  $\varepsilon$  is the error term.

The significance level of  $\beta$  denotes the degree to which the test variable is different for the PWD and the non-disabled entrepreneurs. The significance level of the gammas ( $\gamma$ 's) denotes the degree to which the control variables differ between the two sub-samples.

The pseudo  $R^2$  is an overall measure of the extent to which the two sub-samples differ, it is similar to  $R^2$  in multiple regression analysis (Hair et al., 2010).

The next multivariate technique to be applied is factor analysis. It is used in this study in order to relate the test variables to theory by grouping them. This helps to test the motivations for business start-up presented in chapter three. Factor analysis is a statistical tool for identifying the structure of the interrelationships or correlations among a huge number of variables (for example, questionnaire responses) by grouping variables that are much related known as factors (Hair et al., 2010; Zikmund et al., 2013). The number of factors is determined by applying a common rule of thumb of accepting factors with eigenvalues more than 1.0 (Hair et al., 2010; Zikmund et al., 2013). Eigenvalue (latent root) is the sum of squared factor loadings in a column. To know which factor a variable belongs to, a rule of thumb is also applied. Variables with factor loading more than 0.50 are included in a factor (Andersen, 2013). Factor loadings show how strongly a variable is corrected with a factor (Zikmund et al., 2013) and they are crucial in understanding the nature of the factor (Hair et al., 2010).

Factor analysis has been applied by other researcher to investigate motivations for business start-up (for example, Dubini (1988), and Birley and Westhead (1994)).

This study uses SPSS and STATA to analyze the data depending on their suitability regarding the statistical technique at hand. Both SPSS and STATA are computer software programmes, normally used for data analysis.

#### 4.6 Econometric analysis

Correlation analysis has been applied to determine whether the variables relate to each other or not. The correlation analysis helps in determining the extent of multicollinearity. The results of the correlation analysis indicate that the variables correlate to each other (Table 5.1). Multicollinearity refers to the extent to which independent variables in a multiple regression analysis correlate with each other and high multicollinearity makes it difficult to interpret parameter estimates (Zikmund et al., 2013).

To test for heteroscedasticity in this study, the Breusch-Pagan test was performed by using the command 'hettest' in STATA. The results show a p-value of 0.3171 which indicates the absence of heteroscedasticity; the null hypothesis (Ho) is not rejected.

#### **Table 4.2 Breusch-Pagan tests for heteroscedasticity**

Hottest:

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: NeedOpport NeedEntrep NeedMoney NeedFamily NeedQuit NeedExper  
NeedChall NeedHome NeedOther Gender Age Child Edu Married

chi2(14) = 15.94

Prob > chi2 = 0.3171



## **4.7 Chapter summary**

The chapter presented detailed information on how the data on the unique sample for the study was collected. Statistical tools needed to analyse the collected data have also been outlined and include one univariate technique (t-test) and two multivariate techniques (Factor Analysis and Logistic Regression) and the reasons for their applications have been presented in this chapter. The next chapter presents the results of these statistical techniques produced by SPSS and STATA.

## CHAPTER FIVE: RESULTS

### 5.0 Introduction

This chapter presents the results of the statistical techniques that have been applied to analyse the data. In addressing the first research question, factor analysis is applied and the results are presented in table 5.3. To answer the second question, which is the main focus of this study, both univariate and multivariate analyses are used. In particular, t-tests and logistic regression analyses are run and the results are presented in table 5.4 and table 5.5 respectively.

### 5.1 Results

The first results are correlation matrix results meant to test for multicollinearity among the variables. The results are presented in table 5.1. The meanings of the variables of the correlation matrix are as follows.

Disability-s = Disability status

Needopport =Lack of opportunities elsewhere

Needentrep =To be entrepreneur/self-employed

Needmoney =To earn more money

Needfamily =To supplement family income

NeedQuit = To quit other job

Needexper = Experience from previous family business

NeedChall = To overcome the difficulties and limitations which I had in my last job

NeedHome = To have the opportunity to stay close to my family

NeedOther = Other reasons for starting the business

**Table 5.1 Correlation matrix**

	Disability	NeedOpport	NeedEntrep	NeedMoney	NeedFamily	NeedQuit	NeedExper	NeedChall	NeedHome	NeedOther	Gender	Age	Child	Edu
Disability	1.0000													
NeedOpport	0.0824	1.0000												
NeedEntrep	-0.0895	-0.0626	1.0000											
NeedMoney	-0.0990	-0.2042	-0.2856	1.0000										
NeedFamily	0.0442	-0.1457	-0.1268	-0.0124	1.0000									
NeedQuit	-0.0786	-0.0825	-0.0155	-0.0079	-0.0039	1.0000								
NeedExper	0.0085	0.0011	-0.0772	0.0015	0.0452	-0.0234	1.0000							
NeedChall	0.1475	-0.0763	-0.0437	-0.0819	0.0703	-0.0257	-0.0216	1.0000						
NeedHome	0.0971	-0.1091	0.1214	-0.1921	0.0636	-0.0367	-0.0309	-0.0339	1.0000					
NeedOther	0.0294	-0.0276	-0.0303	-0.1899	0.0190	-0.0469	-0.0395	-0.0433	-0.0620	1.0000				
Gender	-0.2567	-0.0308	0.0447	0.0587	-0.0377	-0.0309	0.0783	-0.0065	-0.0461	-0.0861	1.0000			
Age	0.2411	0.0315	0.0638	-0.1093	-0.0149	-0.1338	-0.0194	0.0495	0.1476	0.1421	-0.1359	1.0000		
Child	-0.1935	0.1166	-0.0122	0.0473	0.0288	-0.0013	-0.0926	-0.0849	0.0103	-0.0408	0.0879	0.0244	1.0000	
Edu	-0.0275	-0.1763	-0.0363	0.0059	0.0633	0.0764	0.0249	-0.0337	-0.0103	0.0277	0.0553	-0.1327	-0.2101	1.0000
Married	-0.1186	-0.0632	-0.0435	0.0542	0.0732	-0.0242	0.0718	0.0466	0.0667	-0.0541	-0.0962	0.0759	0.1891	-0.0089
		Married												
Married		1.0000												

A correlation exceeding 0.9 indicates the presence of multicollinearity (Hair et al., 2010). The correlation results in the table above show that there is no multicollinearity effect among the variables since no correlation exceeds 0.9. Another way to check for multicollinearity is by calculating the variance inflation factor (VIF) and comparing it with the rule of thumb, 5.0 (Zikmund et al., 2013). Again, the results for VIF (not tabulated) also show that there is no evidence of multicollinearity among the variables.

The next table presents descriptive statistics of the dependent, test and control variables.

**Table 5.2: Descriptive statistics for the key variables of the empirical analyses**

	Mean	Std Dev.	n
Disability status	0.35	.478	273
Lack of opportunities elsewhere	0.19	.393	269
To be entrepreneur/self-employed	0.48	.500	271
To earn more money	0.60	.491	271
To supplement family income	0.44	.497	271
To quit other job	0.03	.170	271
Experience from previous family business	0.02	.135	271
To overcome the difficulties and limitations which I had in my last job (disability, the situation of my family etc.)	0.02	.147	271
To have the opportunity to stay close to my family	0.04	.206	271
Other reasons for starting the business	0.07	.256	271
Gender	0.52	.501	272
Age	43.41	11.098	273
Married/united	2.46	1.162	272
Children	2.00	1.524	264
Education	9.44	3.884	273

Notes: The table lists the results of descriptive statistics of the study variables  
Std Dev. stands for standard deviation

To test motivations for business start-up which are summarized in the theoretical framework (see Figure 3.1), Factor analysis has been applied to group the test variables into factors. By testing these motivations for business start-up, the first research question (What motivates people to start their own businesses?) will be answered though this is not the main focus of this study.

**Table 5.3: Motivations for business start-up: Varimax Rotated Component Matrix**

	Component				
	1	2	3	4	5
Lack of opportunities elsewhere	-.028	<b>-.733</b>	.121	.383	.040
To be entrepreneur/self-employed	<b>.727</b>	-.155	-.055	-.199	-.034
To earn more money	<b>-.632</b>	.181	-.453	-.197	-.210
To supplement family income	-.092	<b>.677</b>	.187	.282	.175
To quit other job	-.074	.099	-.045	<b>-.546</b>	-.149
Experience from previous family business	-.117	.128	-.133	<b>.673</b>	-.235
To overcome the difficulties and limitations which I had in my last job (disability, the situation of my family etc.)	-.033	.091	-.071	-.006	<b>.933</b>
To have the opportunity to stay close to my family	<b>.654</b>	.374	-.135	.139	-.112
Other reasons for starting the business	-.056	.064	<b>.914</b>	-.076	-.094
Eigenvalues	1.453	1.233	1.139	1.044	1.014
Percent of variance explained	16.147	13.705	12.658	11.599	11.266
Cumulative percent of variance explained	16.147	29.851	42.510	54.109	65.375

Notes: The table lists the results of factor analysis  
Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

Table 5.3 presents the results of the factor analysis. The components (factors) 1 to 5 are named with respect to the motivations presented in the theory chapter (see a summary in Figure 3.1). Factor 1 (*Materialism*) corresponds to factor 4 in Dubini (1988) and component 5 in Birley and Westhead (1994), which concerns money or material incentives in the expression of Friberg. The entrepreneurs in this study want to be self-employed so that they can be able to earn more money. Successful business can be more rewarding than salary paid by an employer. Factor 2 (*Welfare considerations*) also relates to Dubini (1988) factor 2 and Birley and Westhead (1994) component 4. Individuals are motivated to establish their own businesses because they want to contribute to the welfare of the family. Lack of opportunities elsewhere and desire to contribute to the welfare of the family or the community will motivate an individual to start a new business. Factor 3 relates to other reasons that may lead to business start. Other motivations not covered by the other four factors in the table above may fall under factor 3, and these other reasons may relate to Achievement, Status, Freedom / Independence or Ease of entry and management as presented in the theoretical framework.

Factor 4 (*Role models*) corresponds to factor 7 in Dubini (1988) and Birley and Westhead (1994), items in this factor relate to individuals willingness to continue family tradition in entrepreneurship. Experience from previous family business motivates individuals to start new business. Such individuals will even quit other jobs to be able to work full-time on their business. Factor 5 (*Escape*) also relates to factor 5 in Dubini (1988), and it involves unfavourable situations which push people into entrepreneurship. People start their business due to motivations determined by “coercive forces” including difficulties encountered in job places due to issues such as disability discrimination, unsatisfactory job conditions, and so on.

### Hypotheses testing (H<sub>1</sub> and H<sub>2</sub>)

To test the hypotheses (answering the second research question), I start by applying t-test to identify significant differences in means between the two samples of PWDs and non-disabled persons. The results are presented in table 5.4.

**Table 5.4: t-tests for differences between PWDs and non-disabled persons**

	Disabled	Nondisabled	Diff.	t-value
Lack of opportunities elsewhere	.24	.16	.078	1.559
To be entrepreneur/self-employed	.42	.51	-.092	-1.449
To earn more money	.53	.64	-.109	-1.752*
To supplement family income	.47	.42	.052	.818
To quit other job	.01	.04	-.030	-1.376
Experience from previous family business	.02	.02	.004	.215
To overcome the difficulties and limitations which I had in my last job (disability, the situation of my family etc.)	.05	.01	.046	2.501**
To have the opportunity to stay close to my family	.07	.03	.044	1.700*
Other reasons for starting the business	.08	.06	.020	.630
Gender	.35	.61	-.254	-4.111***
Age	46.58	41.68	4.900	3.557***
Married/united	2.06	2.68	-.615	-4.293***
Children	1.62	2.22	-.595	-3.102***
Education	9.38	9.47	-.094	-.190

Notes: The table lists the results of t-test applied to study if there are differences in a number of personal characteristics between entrepreneurs with and without disabilities. One (\*), two (\*\*), and three (\*\*\*) asterisks denote the conventional 10%, 5% and 1% significance levels, respectively.

The results in table 5.4 show that what motivates PWDs to start their own business does not differ so much from their counterparts without disabilities. The result indicates that less PWDs than those without disabilities will start business because they want to earn more money. This variable is included in the factor “materialism” in the factor analysis. This supports hypothesis two ( $H_2$ ) that non-disabled persons are more likely to be opportunity entrepreneurs than PWDs (Note: materialism is classified as an opportunity motivation). The results also provide evidence that PWDs face more difficulties (4 times that of persons without disabilities) as far as formal employment is concerned. The results further evident that PWDs are more likely than non-PWDs to start a business because they want to stay closer to home. One explanation could be that, operating business from home will solve mobility problem, particularly for disabled entrepreneurs who have impairments associated with movement. The evidence provided by two variables also supports the first hypothesis ( $H_1$ ). PWDs are more likely to be necessity entrepreneurs than non-PWDs. For the rest of the test variables, there are no significant differences between the two sub-samples.

Regarding the control variables, it is observed that there is no significant difference in number of years of education between PWDs and those without disabilities. However, there are significant differences in the rest of the control variables. The results show that PWDs appear to be older, more often male, less often married/united and have fewer children than their non-disabled colleagues.

In sum, the result show that there are no so much differences between motivations of PWDs and motivations of persons without disabilities. Out of nine test variables, only three appear to indicate a significant difference between the two groups. Though there is evidence supporting the research hypotheses, it would be premature to draw conclusion based on the univariate analysis. It is possible that person-specific characteristics could influence these findings and this will be controlled for in the multivariate analysis. Therefore, to be able to draw a strong conclusion regarding the research hypothesis, I applied a multivariate logistic regression analysis. The results are presented in table 5.5 as follows.

**Table 5.5 Motivations for business start-up for entrepreneurs with and without disabilities**

Logistic Regression (with control variables)		Number of obs =	259
		LR chi2(14) =	58.22
		Prob > chi2 =	0.0000
		Pseudo R <sup>2</sup> =	0.1705
Disability Status	coefficient	Z	P > z
Because of lack of opportunities elsewhere	.456624	1.18	0.245
To be entrepreneur/self-employed	-.6020528	-1.88*	0.059
To earn more money	-.2068088	-0.60	0.547
To supplement family income	.1933904	0.64	0.519
To quit other job	-1.154485	-0.96	0.339
Experience from previous family business	.3172596	0.30	0.765
To overcome the difficulties and limitations which I had in my last job (disability, the situation of my family etc.)	2.451542	2.85***	0.004
To have the opportunity to stay close to my family	.8935869	1.25	0.210
Other reasons for starting the business	-.3368666	-0.60	0.547
Gender	-1.09142	-3.64***	0.000
Age	.0481047	3.07***	0.002
Children	-.2468819	-2.39**	0.042
Education	-.0042359	-0.11	0.912
Married/united	-.7746022	-2.29**	0.022
_cons	-1.158962	-1.27	0.203

*Notes:* Table 5.5 lists the results of a multivariate logistic regression in which the binary variable ‘Disability Status’ is regressed on the test variables and control variables for gender, education, age, marital status and number of children. One (\*), two (\*\*) and three (\*\*\*) asterisks denote the conventional 10%, 5% and 1% significance levels, respectively.

After running the multivariate logistic regression, two of the variables that appeared significant in the univariate analysis are no longer statistically significant. The variables “*To earn more money*” and “*To have the opportunity to stay close to my family*” lost their significance in the multivariate analysis. Only one variable still maintains its significance and that is “*To overcome the difficulties and limitations which I had in my last job*”. A positive coefficient means that an increase in the independent variable is associated with an increase in the predicted probability, hence increasing the likelihood that an entrepreneur is a PWD and vice versa for a negative relationship. Thus, the variable “*To overcome the difficulties and*



*limitations which I had in my last job*” has a positive coefficient (2.451) indicating that one unit increase in this variable will increase the likelihood of an entrepreneur being a PWD by 2.451. PWDs are more likely than persons without disabilities to be motivated by challenges associated with previous regular work. This variable seems to be the most important motivation for business start-up for PWDs and this is an *escape* motivation, generally classified as necessity entrepreneurship. This result supports the first hypothesis (H<sub>1</sub>). PWDs are more likely to be necessity entrepreneurs than persons without disabilities. This finding corresponds to the t-test results where the variable is also significant. The result turns to support the findings of Mishra (2005) that disabled people start their own business because of discrimination in the formal job environment (discrimination is considered as part of the difficulties and limitations faced by PWDs).

The results in table 5.5 also show another variable of importance which was less significant in the t-test results and that is *“To be entrepreneur/self-employed”*. This variable also has a negative coefficient (-.6020), meaning that one unit increase in this variable will decrease the predicted probability, thus, the likelihood that an entrepreneur will be classified as PWD is decreased by .6020. This means that persons without disabilities are more likely to start a business just because they want be entrepreneurs or self-employed. This finding departs from expectations. Studies show that employment rates for PWDs are lower compared to those without disabilities; as a result, PWDs should want to be entrepreneur/self-employed. But this is not what I observe. However, the possible explanation for this finding is in the light of opportunity entrepreneurship. To take an advantage of market opportunity may be the motivation for persons without disabilities to become entrepreneurs. This variable is included in factor one (materialism) in Table 5.3; hence, it can be classified as an opportunity-driven motivation, thereby, supporting the second research hypothesis (H<sub>2</sub>). Persons without disabilities are more likely to be opportunity entrepreneurs than PWDs.

Concerning the control variables, the multivariate results in table 5.5 are also similar to the univariate results in table 5.4. The control variables evident that PWDs sample differs significantly from their colleagues without disabilities. First it appears that the proportion of female entrepreneurs without disabilities is more than their counterparts with disabilities. The finding does not correspond to expectations. The academic literature on microfinance and micro-enterprise seem to suggest that women dominate men in establishing micro-enterprises and because women with disabilities are poorer than their counterparts without disabilities,

more disabled females will undertake entrepreneurial activities than non-disabled females. The results also indicate that entrepreneurs with disabilities are older than their colleagues without disabilities. Experience is an important factor in entrepreneurial success. No doubt, an experienced person is more likely to succeed in business than someone who has no experience. Age is normally used to measure experience. The results suggest that PWDs need more experience than other people before they can start their own business. The results in table 5.4 reveal a significant difference between PWDs and their counterparts without disability in the light of marital status. Non-disabled entrepreneurs are more likely to be married/united than PWDs. Accordingly, this has reflected in a significant difference in the number of children they have. The non-disabled entrepreneurs have more children than PWDs. Finally, the findings show that level of education between the two groups is not different. Both groups have the same number of years of education (approximately 9 years).

Table 5.6 presents the logistic regression results without the control variables. This is done to see the behaviour of the pseudo  $R^2$  and how many variables will turn significant without the control variables. The results show two variables being significant: *“To overcome the difficulties and limitations which I had in my last job”* and *“To have the opportunity to stay close to my family”*. Both variables increase the predicted probability that an entrepreneur is classified as PWD. The result on the variable *“To have the opportunity to stay close to my family”* corresponds with intuition. PWDs prefer to work from home than to travel to a distant regular job and this is largely due to their disability. For example, PWD using a wheelchair will like to stay at home and work in order to avoid the challenges associated with moving from home to regular workplace. Therefore, this variable can be classified as a necessity driven motivation, hence, supporting the first hypothesis ( $H_1$ ). The variable *“To overcome the difficulties and limitations which I had in my last job”* has already been explained previously. In fact, this is the only variable that appears statistically significant in both the t-test and the logistic regressions (with and without control variable). This shows that it is the most significant variable among all the test variables. The pseudo  $R^2$  has reduced indicating that is appropriate to include the control variables in the logistic regression model.

**Table 5.6 Motivations for business start-up for entrepreneurs with and without disabilities**

Logistic Regression (without control variables)		Number of obs =	269
		LR chi2(14) =	18.44
		Prob > chi2 =	0.0509
		Pseudo R <sup>2</sup> =	0.0526

Disability Status	coefficient	Z	P > z
Because of lack of opportunities elsewhere	.4898787	1.40	0.160
To be entrepreneur/self-employed	-.466373	-1.60	0.109
To earn more money	-.3475422	-1.12	0.261
To supplement family income	.1052448	0.38	0.707
To quit other job	-1.201329	-1.11	0.268
Experience from previous family business	.1265342	0.14	0.887
To overcome the difficulties and limitations which I had in my last job (disability, the situation of my family etc.)	2.233656	1.97**	0.048
To have the opportunity to stay close to my family	1.095383	1.78*	0.074
Other reasons for starting the business	.244038	0.47	0.638
_cons	-.4101959	-1.04	0.299

*Notes:* Table 5.6 lists the results of a multivariate logistic regression in which the binary variable ‘Disability Status’ is regressed on the test variables only without control variables. One (\*) and two (\*\*) asterisks denote the conventional 10% and 5% significance levels, respectively.

Finally, some robustness check has been performed. As mentioned in the data and methodology chapter (chapter 4), the methods applied in this study are absolutely not the only best ones. Apart from logistic regression analysis, other statistical techniques could be used to test the research hypotheses. In view of this, standard Ordinary Least Squares (OLS) has been run as an alternative to logistic regression. With the OLS, each of the test variables is regressed on ‘Disability Status’ and the control variables. This is done purposely to find out whether ‘Disability Status’ is statistically significant for any of the test variables. The significance level of ‘Disability Status’ would indicate that the presence of disability is associated with the test variable.

After applying OLS, ‘Disability Status’ is significant for two test variables. They are: “*To overcome the difficulties and limitations which I had in my last job*” and “*To be entrepreneur/self-employed*”. These same variables were those significant with the logistic regression model. ‘Disability Status’ is insignificant for the rest of the test variables (see

Appendix). Thus, the alternative regression model (OLS) results are similar to that of the logistic regression; hence, the original conclusion is maintained. PWDs are necessity entrepreneurs while non-PWDs are opportunity entrepreneurs.

## **5.2 Chapter Summary**

The results produced by the factor analysis provide some support for motivations for business start-up discussed in the theory chapter. The findings support materialism (opportunity), welfare considerations (opportunity), role models (opportunity) and escape (necessity). In testing the hypothesis, the t-test and logistic regressions produced both similar and dissimilar results. Regardless of whatever test has been applied, difficulties individuals face regarding previous job remains highly significant throughout all tests. The conclusion is that PWDs are motivated by necessity factors and this supports the first hypothesis. PWDs are more likely to be necessity entrepreneurs than those without disabilities. The second variable that also appears significant in the regression analysis (with control variables) relates to materialism which is arguably classified as an opportunity motivation for business start-up. This provides some evidence to support the second hypothesis. PWDs are less likely to be opportunity entrepreneurs than those without disabilities.

## CHAPTER SIX: DISCUSSION OF EMPIRICAL RESULTS

### 6.0 Introduction

This chapter focuses on discussion of the empirical results presented in the previous chapter. The chapter presents detailed explanations of the findings and the lessons that can be drawn from them.

### 6.1 Discussion

The decision to start a business is driven by a number of motivations. Existing literature reveals that motivations for business start-up include factors such as achievement, welfare considerations, status seeking, materialism (money), escape, freedom, role models, and ease of entry and management. These motivations are being classified into two main categorisations, namely, opportunity (pull) and necessity (push) factors. To test these motivations in this study, factor analysis has been employed. The results support the findings of other researchers (Birley & Westhead, 1994; Dubini, 1988). In particular, the results provide support for materialism, welfare considerations, escape and role models. The rest of the motivations in existing studies may be supported by ‘other reasons for starting a business’ in this study. These motivations are being discussed as follows.

The first motivation that is supported in this study is materialism. It is observed that entrepreneurs in the study sample seek to earn more money and they choose to achieve this by starting their own businesses. They want to amass more wealth so that they can be secured and have fun. As Dubini (1988) argues, a successful business is more rewarding than remuneration from an employer. One main disadvantage is the risk associated with starting a business. However, entrepreneurs take calculated risks; hence, there is room for success. The *materialism* factor explained 16.15 percent of the total variance and the variables in this factor have significant factor loadings which are above the cut-off point of 0.5. One explanation for *materialism* as a motivating factor for business start-up is that, in countries where there is income disparity, the low income group may turn to entrepreneurship which offers them not only self-employment but also a source of substantial income. This suggests that entrepreneurship could be a way of reducing income disparity and poverty in a country, especially in a developing country like Ecuador. Another possible explanation for materialism is probably due to the existence of available market opportunities in the country. In emerging

markets, market opportunities exist and individual may choose self-employment in order to take advantage of them. Entrepreneurs who follow this course of action are called opportunity entrepreneurs; hence, materialism is an opportunity-driven motivation. The lesson here is that, economic growth could be achieved through entrepreneurship, provided market opportunities for business start-up exist.

The second motivating factor is *welfare considerations*. People who are concerned about the needs of others and do not currently have the means of helping them are likely to start a business. Such people want to contribute to the welfare of their families, communities or groups to which they belong to. Starting an enterprise can offer a great deal of benefits to other people. Notable among them are job creation and charity. As an enterprise succeeds and expands, the owner will not be able to execute all the business tasks only; more hands will be needed. This is good news to the unemployed people in society. Secondly, the ability do philanthropic activities will be enhanced by a successful business. Individual personal income may be inadequate as far as the pursuit of *welfare considerations* is concerned. Dubini (1988) argues that *welfare considerations* are pursued by collective countries, where people do things in groups or see themselves as part of a group. One lesson could be drawn here; entrepreneurship development may be enhanced by collective countries which are underdeveloped. The quest for philanthropic activities may increase TEA in a country and growth in TEA means growth in GDP, since entrepreneurship is considered as an engine of economic growth Schumpeter (1942) quoted in Garud et al. (2007).

It was also observed that, entrepreneurs in this study want to keep their family tradition (i.e., they want to be role models). This suggests that, people who have experiences from previous business are more likely to establish a business than others who have no such experiences.

Furthermore, individual's decision to start a business may be driven by factors beyond his/her control. Academic literature refers to such factors as *escape* motivations (unsatisfactory conditions). In this study, it is found that the Ecuadorian entrepreneurs start their businesses because of challenges associated with formal employment. This supports the findings of Constant et al. (2003), that individuals are pushed to into self-employment venture because of lack of job opportunities and discriminations in the labour market. In particular, for disabled entrepreneurs, Mishra (2005) finds that discrimination in the labour market is what chiefly drives them into entrepreneurship. One may want to conclude that in a country where it is

difficult to get job because of limited number of jobs and discrimination in the job environment, entrepreneurial activities may be on the increase. But one should not also forget that it is not everyone who has the capital (financial, human and social capital) to start a business. Thanks to MFIs especially D-Miro, which provide microcredit and other microfinance services to the low income group to carry out their entrepreneurial activities. Though push factors are good in the context of entrepreneurship development, they also ring a bell, drawing the attention of the government to ensure that the needs of the citizens are met. If some people move into business because they are pushed, how about those who cannot 'move' when they are pushed? It is not everyone who has requisite capital (financial, human and social) for self-employment. Governments need to intervene by creating more jobs and capital for microenterprises for people who face challenges in looking for jobs and cannot start any business due to lack of capital.

The above motivations were compared between two sub-samples of entrepreneurs in this study: disabled entrepreneurs and non-disabled entrepreneurs. As presented in chapter five, most of these motivations do not provide evidence of significant differences between the two groups. The results of the multivariate analysis provide significant difference only in two motivations (1) materialism (measured by the variable "*To be entrepreneur/self-employed*") and (2) escape (measured by the variable "*To overcome the difficulties and limitations which I had in my last job*"). Persons without disabilities are found to be motivated by money or material incentives than PWDs. Non-disabled people want to be entrepreneurs so that they can earn more money. This suggests that, PWDs may establish a business not because they want to be entrepreneurs in order to earn more money but because they are pushed to do so. That is why it has been concluded that self-employment is the 'true' option for PWDs (Doyle, 2002) as quoted in Pagán (2009). The second evidence says it all. *Escape* is the only motivation which provides strong evidence of difference between PWDs and their counterparts (non-disabled entrepreneurs) no matter the statistical technique used in the analysis. PWDs encounter many difficulties than nondisabled persons when it comes to salaried jobs. The difficulties PWDs face regarding salaried jobs can be attributed to disability discrimination. Disabled people are discriminated against by the labour market because of productivity differential, the labour market imperfections regarding discrimination and prejudice, and disincentives resulting from disability benefit systems (OECD, 2010, World Bank & Oxford University, 1994, Kinsella & Velkoff, 2001, Kidd et al, 2000) quoted in WHO and World Bank (2011). Employers see PWDs to be less productive compared to non-

disabled entrepreneurs; as a result, employers will choose to recruit non-disabled persons. However, generally, most disabled people can equally perform the tasks persons without disabilities do. It is against this background that the Ecuadorian government enacted a law, making it compulsory for firms with more than 25 employees to include PWDs, at least, 4 percent of staff positions (Caselli, 2013). As a result of this law, approximately 10 thousand disabled persons have been helped into formal job (World Bank, 2013).

In this study, *materialism* and *escape* are regarded as opportunity and necessity driven motivations respectively. These motivations provide some evidence to support the research hypotheses though not many variables indicate significant differences between the two groups.

A country with high TEA index may be influenced by factors such as favourable economic conditions and high unemployment rates. Favourable economic conditions create more entrepreneurial opportunities than sluggish economy. One example of favourable economic conditions is low inflation which results in increased demand for goods and services since purchasing power is high. As such conditions exist, individuals are more likely to start a business in order to take advantage of business opportunities available (Deli, 2011) and these are the opportunity entrepreneurs. This suggests that opportunity entrepreneurs would never have gone into self-employment if no business opportunity existed and such opportunities are mostly available in a buoyant economy. The findings of this study imply that, opportunity entrepreneurs are more likely to be persons without disabilities. Ecuador is an emerging economy; hence, there are opportunities for business ideas.

Unemployment also influences the level of TEA index of a country. Countries with high unemployment rates will tend to have high necessity entrepreneurial activity index, thereby increasing the TEA index as a whole. High unemployment will motivate persons into self-employment especially among individuals with low ability (Deli, 2011) and this is what I observed in this study. Ecuador has increasing unemployment rates leading to high self-employment rates (for example 54.9 percent in 2012, see chapter 2). PWDs are the most affected people when a country experiences high unemployment rates. This is evident in the introduction of a law by the Ecuadorian government to ensure that at least, 4 percent of staff positions are filled with PWDs, for companies with over 25 employees (Caselli, 2013). But even with that, PWDs still resort to self-employment since there is no consistency in the



application of the law as only 10 thousand PWDs got employment out of 300 thousand (i.e. 3.33 percent, instead of 4 percent). Also, the labour market discriminates against PWDs owing to reasons such as productivity differentials (OECD, 2010, World Bank & Oxford University, 1994, Kinsella & Velkoff, 2001, Kidd et al, 2000 in WHO and World Bank (2011)). Thus, in a country with limited employment opportunities, the labour market would choose to employ persons without disabilities since they are considered more productive. As employment opportunities are limited for PWDs, coupled with some other challenges, PWDs will be forced to resort to self-employment. It is in the light of this that Doyle, (2002) in Pagán (2009) sees self-employment as the 'true' option for PWDs. This may be one reason why the variable supporting the first hypothesis appeared to be significant in both the univariate and multivariate (with and without control variables) analyses. Thus, PWDs are more likely to be necessity entrepreneurs than persons without disabilities.

Another thing worth discussing is that, necessity versus opportunity entrepreneurship is influenced by the level of economic development of a country. Necessity entrepreneurship is common in developing countries and decreases with economic growth (Wennekers et al, 2005 in Anca et al. (2009)). That means that, as the economy grows, necessity entrepreneurship gradually falls off while opportunity entrepreneurship increases (Wennekers et al, 2005 in Liñón et al. (2013)). This suggests a transition from necessity entrepreneurship to opportunity entrepreneurship over time. Entrepreneurs, who started their businesses due to necessity, will begin looking for market opportunities as the economy flourishes. Williams et al. (2009) find this move in Ukraine, where entrepreneurs' motives changed from push-oriented to more pull-oriented factors as their businesses become established. This implies that in Ecuador, there will be times where necessity entrepreneurs change their motivation to opportunity-driven and this happens when the economy grows substantially over time. When the economy keeps on growing, the country will eventually become a developed state, where PWDs will no longer be necessity entrepreneurs or few of them will be necessity entrepreneurs. Once PWDs become opportunity entrepreneurs, the research hypotheses of this study will be irrelevant, but at present, Ecuador is still a developing economy and this makes the hypotheses relevant and they have been supported by the findings.

## **6.2 Chapter Summary**

The level of TEA index is to a larger extent is determined by the level of economic development of a country. As seen in chapter 2, poor countries have high TEA. In such poor countries, necessity entrepreneurship is common and among necessity entrepreneurs, PWDs are the majority due to challenges including limited employment opportunities available to them. But as the country develops, there can be a shift in the motives of entrepreneurs from necessity-driven to opportunity-driven.

## **CHAPTER SEVEN: CONCLUSION, IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH**

### **7.0 Introduction**

The driving force for business start-up has been classified in the entrepreneurship literature as either opportunity or necessity motivation. The literature reveals that, among other things, the decision to begin a business may be influenced by achievement, materialism (money), independence, escape, role models, welfare considerations, status and, ease of entry & management. These motivations can be grouped into the two broad classifications outlined above. This study aims to fill a relevant gap in the entrepreneurship literature by comparing these motivations between persons with and without disabilities. The study uses data from Ecuador and the findings are summarised in the next section.

### **7.1 Summary of findings**

The findings support the literature in the light of motivations for business start-up. The Ecuadorian entrepreneurs are also motivated by both opportunity and necessity factors. This study classifies materialism, welfare considerations, and role models as opportunity motivations and escape as necessity motivation.

When comparing the above motivations between persons with and without disabilities, the findings reveal that disabled entrepreneurs are motivated by necessity factors while opportunity-driven factors motivate nondisabled entrepreneurs. It was found that challenges associated with regular jobs are the main factors that push persons with disabilities into self-employment and this was statistically significant regardless of the technique used in the analyses. It was also found that, individuals without disabilities are motivated by materialism or material incentives, hence, their desire to be self-employed. These provide some support for the research hypotheses that, persons with and without disabilities are more likely to be necessity and opportunity entrepreneurs respectively.

## 7.2 Implications and recommendations

Indirectly, disability (which is a barrier to formal employment) is a contribution factor to self-employment based on necessity entrepreneurship. Disabled entrepreneurs probably would not have gone into entrepreneurship if they had no disability, because they choose self-employment in order to accommodate their impairments (Pagán, 2009) and to escape disability discrimination associated with formal jobs. It is hereby recommended that labour laws and regulations concerning persons with disabilities should be re-enforced to make sure that organisations, institutions and companies nationwide do not discriminate against persons with disabilities when selecting potential candidates for available job positions. Countries without labour laws protecting persons with disabilities should enact some. Being disabled is not a choice and disabled persons should not be 'punished' for their disability. Literature on employment rates between persons with and without reveals that disabled persons have much lower employment rates than their counterparts without disabilities (OECD, 2010, Houtenville et al, 2009, Mitra et al., (forthcoming), Contreras et al., 2006, Mete, 2008, Mitra, 2008, Mitra & Sambamoorthi, 2006, World Bank, 2009) in WHO and World Bank (2011)). As a consequence, majority of necessity entrepreneurs are persons with disabilities (as the findings of this current study show). However, studies show that opportunity entrepreneurs are more successful than necessity entrepreneurs (Block & Wagner, 2010), meaning that, if more of the entrepreneurs in a country are necessity entrepreneurs, there will be little contribution to GDP as compared to opportunity entrepreneurship. It stands to reason that, necessity entrepreneurs are probably not skilful enough or not adequately prepared to take up entrepreneurial activity. They are pushed into it by external forces such unemployment, discrimination, company close down or restructuring (Snyder (2004) in Williams et al. (2009)). Governments can also encourage employers to include persons with disabilities in their staff by giving incentives to organisations, institutions and companies which employ persons with disabilities. The incentives could be in the form of reduction in corporate tax. Once persons with disabilities get formal employment, their motivation to establish a business will not more be based on necessity but opportunity and as more of the entrepreneurs in a country are opportunity entrepreneurs, there can be substantial contribution to GDP, leading to economic growth.

A country with high Total Entrepreneurial Activity index is an indicator of high unemployment rates and high necessity entrepreneurial activity also indicates the level of the country's economic development. Thus, TEA can be a policy making indicator. Non-

governmental organisations (NGOs) can use TEA in their decision making as to which country to support. As literature reveals, necessity entrepreneurship is common in developing countries while opportunity entrepreneurship is dominant in developed nations.

### **7.3 Limitations**

One limitation of this study is the small number of persons with disabilities in the sample as compared to persons without disabilities. Probably, the results would have been different if equal sample size for each group has been used. In addition, the data were collected from only the coastal region of Ecuador. The total sample used in this study may not be a good representation of entrepreneurs in Ecuador, and this may impair generalisation of the findings.

### **7.4 Suggestions for further studies**

A similar study could be conducted with data from different country or countries in order to test the reliability and validity of the findings of this study.

A study on actual challenges disabled persons face regarding formal employment. A qualitative study could explore most problems persons with disabilities encounter when they attempt searching for regular job or when they are employed. Once the problems are identified, it will enable policy makers to come out with decisions in favour of persons with disabilities.

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## APPENDIX

### Alternative regression model (OLS) results (where 'Disability Status' is significant)

```
. regress NeedChall Disabilitystatus Gender Age Child Edu Married
```

Source	SS	df	MS	Number of obs = 261		
Model	.205824007	6	.034304001	F( 6, 254) =	1.54	
Residual	5.65624496	254	.022268681	Prob > F =	0.1653	
				R-squared =	0.0351	
				Adj R-squared =	0.0123	
Total	5.86206897	260	.022546419	Root MSE =	.14923	

NeedChall	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Disabilitystatus	.0473254	.0208257	2.27	0.024	.0063124	.0883384
Gender	.0154535	.0194193	0.80	0.427	-.0227899	.0536969
Age	.0001085	.0008761	0.12	0.902	-.0016169	.0018339
Child	-.008362	.0064166	-1.30	0.194	-.0209986	.0042746
Edu	-.0018718	.0024797	-0.75	0.451	-.0067552	.0030117
Married	.0259458	.0199758	1.30	0.195	-.0133935	.0652851
_cons	.0180681	.0515477	0.35	0.726	-.0834472	.1195834

Note: NeedChall = To overcome the difficulties and limitations which I had in my last job  
'Disability Status' is significant at 5 percent level of significance

```
. regress NeedEntrep Disabilitystatus Gender Age Child Edu Married
```

Source	SS	df	MS	Number of obs = 261		
Model	1.60073695	6	.266789492	F( 6, 254) =	1.07	
Residual	63.5333627	254	.250131349	Prob > F =	0.3831	
				R-squared =	0.0246	
				Adj R-squared =	0.0015	
Total	65.1340996	260	.250515768	Root MSE =	.50013	

NeedEntrep	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Disabilitystatus	-.1321744	.0697968	-1.89	0.059	-.2696286	.0052798
Gender	.0278192	.0650835	0.43	0.669	-.1003528	.1559912
Age	.0047418	.0029363	1.61	0.108	-.0010409	.0105245
Child	-.0142554	.0215053	-0.66	0.508	-.0566067	.028096
Edu	-.0051002	.0083108	-0.61	0.540	-.0214671	.0112667
Married	-.0489816	.0669485	-0.73	0.465	-.1808265	.0828633
_cons	.4028543	.1727611	2.33	0.020	.0626277	.7430808

Note: NeedEntrep = To be entrepreneur/self-employed  
'Disability Status' is significant at 10 percent level of significance

**Alternative regression model (OLS) results (contd) – ‘Disability Status’ is not significant**

. regress NeedOpport Disabilitystatus Gender Age Child Edu Married

Source	SS	df	MS			
Model	2.16307716	6	.36051286	Number of obs =	259	
Residual	38.7944518	252	.153946237	F( 6, 252) =	2.34	
Total	40.957529	258	.158750112	Prob > F =	0.0322	
				R-squared =	0.0528	
				Adj R-squared =	0.0303	
				Root MSE =	.39236	

NeedOpport	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Disabilitystatus	.0737442	.0549874	1.34	0.181	-.0345492	.1820375
Gender	-.014884	.0512534	-0.29	0.772	-.1158236	.0860556
Age	-.000345	.0023196	-0.15	0.882	-.0049133	.0042233
Child	.0308514	.0169233	1.82	0.069	-.0024778	.0641806
Edu	-.0154039	.0065267	-2.36	0.019	-.0282576	-.0025502
Married	-.0643803	.0528473	-1.22	0.224	-.1684589	.0396984
_cons	.2995672	.1355935	2.21	0.028	.0325265	.566608

Note: Needopport = Because of lack of opportunities elsewhere  
'Disability Status' is insignificant

. regress NeedMoney Disabilitystatus Gender Age Child Edu Married

Source	SS	df	MS			
Model	1.28313964	6	.213856607	Number of obs =	261	
Residual	61.6670519	254	.242783669	F( 6, 254) =	0.88	
Total	62.9501916	260	.242116121	Prob > F =	0.5094	
				R-squared =	0.0204	
				Adj R-squared =	-0.0028	
				Root MSE =	.49273	

NeedMoney	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Disabilitystatus	-.0589612	.068764	-0.86	0.392	-.1943815	.0764591
Gender	.0250111	.0641205	0.39	0.697	-.1012644	.1512865
Age	-.004092	.0028929	-1.41	0.158	-.0097892	.0016051
Child	.0091689	.0211871	0.43	0.666	-.0325558	.0508936
Edu	-.0008414	.0081879	-0.10	0.918	-.0169661	.0152834
Married	.0504909	.0659579	0.77	0.445	-.079403	.1803848
_cons	.7507619	.1702047	4.41	0.000	.4155697	1.085954

Note: NeedMoney = To earn more money  
'Disability Status' is insignificant

**Alternative regression model (OLS) results (contd) – ‘Disability Status’ is not significant**

. regress NeedFamily Disabilitystatus Gender Age Child Edu Married

Source	SS	df	MS	Number of obs =	261
Model	1.02721536	6	.17120256	F( 6, 254) =	0.69
Residual	63.1796812	254	.248738902	Prob > F =	0.6593
				R-squared =	0.0160
				Adj R-squared =	-0.0072
Total	64.2068966	260	.246949602	Root MSE =	.49874

NeedFamily	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Disabilitystatus	.0731237	.0696023	1.05	0.294	-.0639474 .2101948
Gender	-.0269855	.0649021	-0.42	0.678	-.1548003 .1008293
Age	-.0017383	.0029282	-0.59	0.553	-.0075049 .0040282
Child	.0167687	.0214453	0.78	0.435	-.0254646 .0590021
Edu	.0096916	.0082877	1.17	0.243	-.0066297 .0260129
Married	.0666697	.0667619	1.00	0.319	-.0648077 .1981471
_cons	.3493017	.1722795	2.03	0.044	.0100235 .68858

Note: NeedFamily = To supplement family income  
 `Disability Status' is insignificant

. regress NeedQuit Disabilitystatus Gender Age Child Edu Married

Source	SS	df	MS	Number of obs =	261
Model	.1985524	6	.033092067	F( 6, 254) =	1.27
Residual	6.61370814	254	.026038221	Prob > F =	0.2712
				R-squared =	0.0291
				Adj R-squared =	0.0062
Total	6.81226054	260	.026201002	Root MSE =	.16136

NeedQuit	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Disabilitystatus	-.02295	.0225194	-1.02	0.309	-.0672986 .0213986
Gender	-.0236215	.0209987	-1.12	0.262	-.0649752 .0177323
Age	-.0017102	.0009474	-1.81	0.072	-.0035759 .0001556
Child	.0015859	.0069385	0.23	0.819	-.0120785 .0152502
Edu	.0027625	.0026814	1.03	0.304	-.0025182 .0080431
Married	-.0111703	.0216004	-0.52	0.606	-.0537091 .0313685
_cons	.096064	.0557401	1.72	0.086	-.0137076 .2058355

Note: NeedQuit = To quit other job  
 `Disability Status' is insignificant

**Alternative regression model (OLS) results (contd) – ‘Disability Status’ is not significant**

. regress NeedExper Disabilitystatus Gender Age Child Edu Married

Source	SS	df	MS			
Model	.130974638	6	.021829106	Number of obs =	261	
Residual	4.77323992	254	.018792283	F( 6, 254) =	1.16	
Total	4.90421456	260	.018862364	Prob > F =	0.3274	
				R-squared =	0.0267	
				Adj R-squared =	0.0037	
				Root MSE =	.13708	

NeedExper	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Disabilitystatus	.0090083	.0191312	0.47	0.638	-.0286677	.0466842
Gender	.0284144	.0178393	1.59	0.112	-.0067173	.0635461
Age	-.0002533	.0008048	-0.31	0.753	-.0018383	.0013317
Child	-.0103314	.0058946	-1.75	0.081	-.0219398	.0012771
Edu	-.0002016	.002278	-0.09	0.930	-.0046877	.0042846
Married	.0304387	.0183504	1.66	0.098	-.0056997	.0665771
_cons	.0236794	.0473534	0.50	0.617	-.069576	.1169347

Note: NeedExper = Experience from previous family business  
 'Disability Status' is insignificant

. regress NeedHome Disabilitystatus Gender Age Child Edu Married

Source	SS	df	MS			
Model	.338373731	6	.056395622	Number of obs =	261	
Residual	11.1099021	254	.043739772	F( 6, 254) =	1.29	
Total	11.4482759	260	.04403183	Prob > F =	0.2625	
				R-squared =	0.0296	
				Adj R-squared =	0.0066	
				Root MSE =	.20914	

NeedHome	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Disabilitystatus	.0344615	.029187	1.18	0.239	-.0230179	.0919409
Gender	-.0020075	.0272161	-0.07	0.941	-.0556054	.0515904
Age	.0023122	.0012279	1.88	0.061	-.000106	.0047303
Child	.0020928	.0089929	0.23	0.816	-.0156173	.0198029
Edu	.0007326	.0034753	0.21	0.833	-.0061116	.0075767
Married	.0263215	.0279959	0.94	0.348	-.0288122	.0814553
_cons	-.0862148	.0722437	-1.19	0.234	-.2284878	.0560582

Note: NeedHome = To have the opportunity to stay close to my family  
 'Disability Status' is insignificant

**Alternative regression model (OLS) results (contd) – ‘Disability Status’ is not significant**

. regress NeedOther Disabilitystatus Gender Age Child Edu Married

Source	SS	df	MS	Number of obs =	261
Model	.585078809	6	.097513135	F( 6, 254) =	1.45
Residual	17.0317794	254	.06705425	Prob > F =	0.1945
Total	17.6168582	260	.067757147	R-squared =	0.0332
				Adj R-squared =	0.0104
				Root MSE =	.25895

NeedOther	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Disabilitystatus	-.0199889	.0361381	-0.55	0.581	-.0911573 .0511796
Gender	-.0429846	.0336977	-1.28	0.203	-.1093471 .0233778
Age	.0035152	.0015203	2.31	0.022	.0005212 .0065092
Child	-.0032486	.0111346	-0.29	0.771	-.0251765 .0186793
Edu	.0032408	.004303	0.75	0.452	-.0052333 .011715
Married	-.0421392	.0346633	-1.22	0.225	-.1104032 .0261249
_cons	-.0584558	.0894489	-0.65	0.514	-.2346117 .1177002

Note: NeedOther = Other reasons for starting the business

'Disability Status' is insignificant