En studie av ulike faktorer som påvirker en entreprenørs suksess – med og uten tilfeller av utviklingshemming blandt ecuadorianske husstander.

A study of the determinants for entrepreneurial success – in the presence and absence of a disability among Ecuadorian households.

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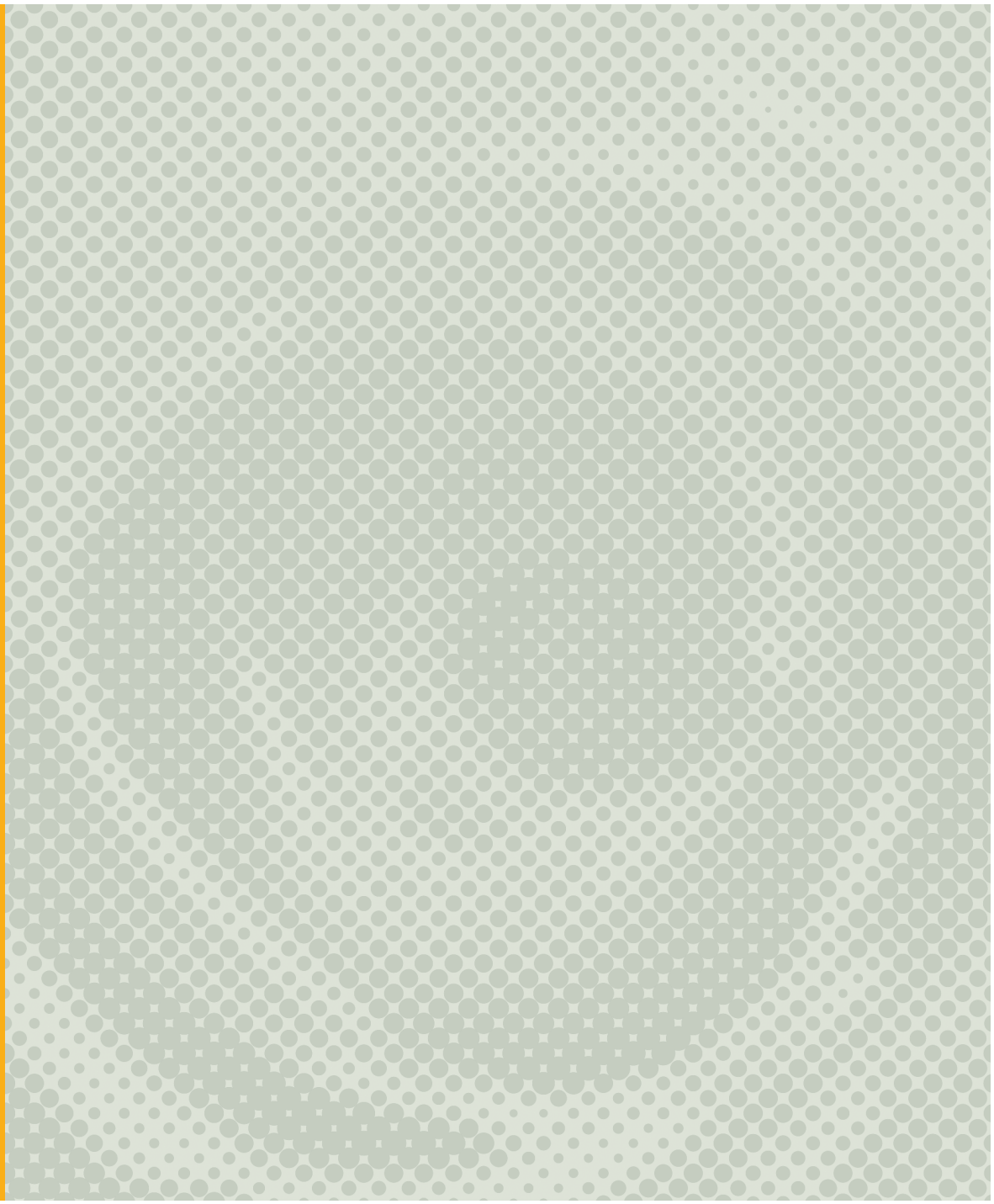

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Abstract

According to the United Nations, the right to work is a human right. Yet many marginalized people in developing countries have limited opportunities to get employed and earn an income, and among these persons are disabled people frequently represented. Entrepreneurship often becomes a tool to overcome unemployment, and in Ecuador about 25% of the urban population is self-employed. To achieve success adequate access to financial, human and social capital is acquired, all of which claimed to have a positive correlation with success. The trend indicates that marginalized people, and especially the disabled, often have limited access to such capital.

Quantitative methods have been used to analyse the relationship between various factors defining the different types of capital, and annual income of entrepreneurs. Entrepreneurs are divided into groups based on whether he / she or someone in his/her household is affected by a disability or not. The relationship between financial, human and social capital, and annual income, is analysed in order to investigate whether these relationships change because of a disability disabilities. A survey was conducted on entrepreneurs that are all clients of a microfinance institution, and is therefore secured access to financial capital, in the coastal region of Ecuador in the period January-February 2013.

The results of the analysis show that there is a significant relationship between financial capital and annual income. This strong correlation is applicable to all entrepreneurs, and is strongest in those cases where a disability is present. It also found an overall significant positive relationship between human capital and income. But when separating the entrepreneurs into groups, the relationship is no longer considered significant. Finally, we find an overall significant and positive relationship between social capital and annual income. After the division is made, this relationship remains positive and significant for those entrepreneurs who are affected by a disability, while the correlation between income and social capital for entrepreneurs who are not affected by a disability changes to become negative. Our results encourage donor organisations, institutions and the Ecuadorian government put more effort into improving the access to the various types of capital to meet demand, and increase the probability of success. This suggestion, and the findings of the study, is supported by previous research and theory.

Keywords: Entrepreneurship, disability, financial capital, human capital, social capital, annual income, Ecuador

Sammendrag

I følge FNs menneskerettigheter har alle rett på arbeid. Likevel er det mange marginaliserte mennesker i utviklingsland som står uten arbeid og inntekt, og blant disse er utviklingshemmede hyppig representert. For å få bukt med arbeidsledigheten blir entreprenørskap ofte en løsning, og i Ecuador er hele 25% av den urbane befolkningen selvstendig næringsdrivende. For å oppnå suksess kreves det tilstrekkelig tilgang på finansiell, menneskelig og sosial kapital, som alle hevdet å ha en positiv sammenheng med suksess. Tendensen viser derimot at marginaliserte mennesker, og spesielt utviklingshemmede, ofte har en begrenset tilgang på slik kapital.

Kvantitativ metode har blitt brukt for å analysere sammenhengen mellom forskjellige faktorer innenfor de ulike typene kapital, og årsinntekten til entreprenører. Entreprenører er inndelt i grupper basert på om han/hun eller noen i husstanden er rammet av en utviklingshemming, eller ei. Sammenhengen mellom finansiell, menneskelig og sosial kapital, og årsinntekt, blir videre analysert for å undersøke om disse endres i lys av en utviklingshemming. En spørreundersøkelse ble utført på entreprenører som alle er lånekunder hos en mikrofinansinstitusjon, og er derfor sikret tilgang på finansiell kapital, i kystregionen i Ecuador i perioden januar-februar 2013.

Resultatene fra analysen viser at det er en signifikant sammenheng mellom finansiell kapital og årsinntekt. Denne sterke sammenhengen er gjeldene for alle entreprenører, og er sterkest i de tilfellene hvor en utviklingshemming er tilstede. Det er også funnet en signifikant og positiv sammenheng mellom menneskelig kapital og årsinntekt når alle entreprenører er betraktet under ett. Når entreprenørene betraktes i lys av utviklingshemming kan derimot forholdet ikke lengre betraktes som signifikant. Til sist er det funnet en signifikant og positiv sammenheng mellom sosial kapital og årsinntekt for den samlede gruppen entreprenører. Etter inndelingen er gjort, forblir denne sammenhengen positiv og signifikant for entreprenører som gjennom seg selv eller sin familie er rammet av en utviklingshemming, mens sammenhengen for entreprenører som ikke er rammet av en utviklingshemming forandres til å bli negativ. Funnene fra undersøkelsen oppfordrer hjelpeorganisasjoner, institusjoner og den ecuadorianske regjeringen til å legge ned mer innsats for å øke tilgangen til de ulike typene kapital for å møte behov og øke sjansen for suksess. Oppfordringene og funnene fra undersøkelsen støttes av tidligere forskning og teori.

Nøkkelord: Entreprenørskap, utviklingshemming, Finansiell kapital, menneskelig kapital, sosial kapital, årsinntekt, Ecuador

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Chapter 1:

1.0 Introduction

The right to work is a fundamental right stated by the United Nations and allows people to live in dignity (United Nations Human Rights, 1948). However, in developing countries, employment tends to be scarcer among poor people. In such countries, entrepreneurship is regarded as a significant driver for employment creation since, and it is assumed that more than 50% of the work force in developing countries is self-employed. Entrepreneurship has therefore become a key driver of wealth creation and economic growth.

Ecuador is a upper middle-income country on the north-western coast of Ecuador. In 2004 almost one-third of urban households within low-to-middle income levels were reported to have at least one person being self-employed, and in 2011 about 25% of urban population in the country were self-employed. Among these entrepreneurs, the majority (86,9%) reported to have their enterprise as their full-time job, and 94,3% of the self-employed had their enterprise as their only source of income (Magill & Meyer 2005). These statistics are among the reasons for why entrepreneurship is a frequently studied topic that is highly relevant as a mean for poverty alleviation by giving marginalized people a possibility to create their own income generation activity.

1.1 Entrepreneurship and disability

Disabled people groups tend to be among the most marginalized and vulnerable people in the world, as poverty and disability are likely to be interlinked. In Ecuador there is no exception, and disabled persons disproportionately represent the most marginalized people in the country (The World Bank 20013). About 11-15% of the population worldwide have a physical or psychical disability, and as much as one quarter of the world´s households have a member suffering from a disability. About 80% of these persons live in developing countries. They tend to have less access to financial services, be less educated and are often more likely to be unemployed than the rest of the population. Between 80% and 90% of the disabled persons in the world do not have formal jobs, and thus most resort to self-employment (Handicap International 2006). They also have income levels likely to be lower than the rest of the population, and their income levels are often below the poverty line. These statistics make entrepreneurship highly relevant as a mean of poverty alleviation also among disabled persons, and entrepreneurs turn out to be one of the most researched groups of people in the world. However, the existence of a large number of

entrepreneurial projects does not guarantee economic growth and poverty alleviation. Once a new business is created, it has to survive and grow to become an entrepreneurial project able to generate new or increase already existing income to obtain entrepreneurial success.

1.2 Determinants for entrepreneurial success

With small businesses and entrepreneurs playing vital roles in the economy, it is essential to get a better understanding of which factors that increase the probability of success. Within the entrepreneurial literature and previous empirical research there is an ongoing debate on determinants for entrepreneurial success, where success is measured both objectively and subjectively. From an objective point of view, financial success is most commonly used and measured through return on assets, return on investment, assets owned, profit and income. Success measured subjectively is on the other hand based on the entrepreneur´s satisfaction and feelings (Fatimah-Salwa et al. 2013). Entrepreneurial success can either way not be explained easily, but is affected by different characteristics of the individual, the particular venture and aspects particular to the society. The majority of the problems faced by entrepreneurs working to achieve entrepreneurial success, originate from a lack of skills, insufficient access to banking services, and inadequate social network. These factors are among the variables used to define characteristics of the entrepreneur through ones financial, human and social capital.

Firstly, it has been argued that access to financial capital is crucial to run a business, as financial capital is necessary to buy resources and inputs used in the production of a good, to expand and to survive in the market. In developing countries credit markets tend to be imperfect, and marginalized people are often excluded and lack the access to financial services. In these countries micro credit plays a key role in providing important financial capital to poor people as an attempt to empower them by providing them with the access to money needed to start a business and obtain or increase an income. Micro credit therefore considered as an important factor in determining entrepreneurial success among poor people in developing countries, such as Ecuador. Micro credit will therefore get some focus in this study, and all entrepreneurs studied receive loans from the micro finance institution D-Miro in Ecuador.

Secondly, there is a general assumption that the human capital of the entrepreneur improves the chance of entrepreneurial success (Sriyani 2010). It is a resource that attributes variables such as age, years of education, years of work experience and industry specific experience. Access to education is often limited in developing countries, and in 2004 only 26% of the population in

Ecuador was completing high school. Access to education is often even more limited for persons with disabilities, and among the disabled part of the Ecuadorian population in 2004, only 10,5% finished high school and 40% did not receive education.

Finally, social capital is often found to positively relate to entrepreneurial success, and it has been argued that social capital also increases human and financial capital, and not only annual income. Some of the variables defining social capital are widespread, such as the presence of role models and learning from others. In a developing country, such as Ecuador, the share of the population being self-employed is large, and most people are assumed to know someone who is an entrepreneur to learn from. However, the culture is likely to put some obstacles in the way by limiting trust outside family relations among Ecuadorians. This might lead to a moderation in the affect of social capital on annual income.

1.3 Problem statement and objectives

Access to different sources of capital can more easily be affected through awareness of their importance and strategic planning by entrepreneurs and institutions providing them with the access to these specific types of capital. Based on this, the first objective of this study is to identify important variables determining entrepreneurial success. And even though entrepreneurs might turn out to be one of the most studied groups of people in the world, the results from previous research are inconclusive and there is a lack of literature on entrepreneurs coming from households where disability is present (Lee and Tsang 2001). For these groups of people; disabled entrepreneurs or entrepreneurs with a disabled child or partner, entrepreneurship often turns out to be their only option for income generation and poverty alleviation. This motivates an investigation of these entrepreneurs, and beside the intention to generally identify success factors, this study therefore also aim to reveal if there are any differences in the variables determining success in the absence and presence of a disability. By providing relevant information on this topic, assistance strategies can be improved with the purpose to better meet the needs of the clients and improve the success rate.

In this study success is measured as annual income, which is crucial for the ability to stay above the poverty line. Age, experience in the specific sector, and education, make up the human capital. The role of access to credit through participation in a micro-credit program (both loan amount and time of participation), as well as other type of credit, are the financial capital to be

considered, and the importance of marital status, role models and learning from entrepreneurial networks count as their social capital.

1.4 Research questions

Three research questions have been formulated for further investigation with the intention to determine which factors that determine entrepreneurial success:

Research question 1:

What is the affect of financial capital on the success of an entrepreneur in the costal region in Ecuador? How does the presence or absence of a disability influence the relationship between financial capital and entrepreneurial success?

Because of poverty among the entrepreneurs applying for micro credit, it is not given that access to financial capital increases income. High interest rates and lacking ability to repay loans can limit a possible growth in income. Investing in agricultural sector is associated with risk due to climate and weather changes, while the result from investing in non-farm activities might be threatened by competition from a homogenous supply of goods and services limiting the demand for goods and services and preventing positive changes in income, despite access to financial capital. To survive in the market after a start-up of a new enterprise, demand for ones goods or services, and financial capital, are not enough. There will also be a demand from the entrepreneur after knowledge of the market and skills in how to run a business to ensure survival. This means that an entrepreneur´s potential lack of human capital such as education and experience might become an obstacle for economic growth, even though if one is equipped with a lot of financial capital.

Research question 2:

What is the affect of human capital on the success of an entrepreneur in the costal region in Ecuador? How does the presence or absence of a disability influence the relationship between human capital and entrepreneurial success?

It is not straightforward that access to human capital leads to a positive change in annual income for an entrepreneur. An entrepreneur being equipped with years of education and experience has limited impact on annual income if the experience and education are not transformed into knowledge and skills that are relevant and used correctly in the specific business context. Experience might reduce the willingness to

meet a need for change, and in the context of small, lowtechnology and lowknowledge businesses the need for education will be limited, and an affect on income might be marginal (Lee and Tsang, 2001). Having human capital will also have limited impact on entrepreneurial success if the financial resources making it possible to invest and expand the business are missing.

Research question 3:

What is the affect of social capital on the success of an entrepreneur in the costal region in Ecuador? How does the presence or absence of a disability influence the relationship between social capital and entrepreneurial success?

The decision to start up a business tends to be influenced by others. After the start-up, the affect of social capital on annual income is not straightforward. The influence on annual income will depend on the information being shared in networks, to what extent an entrepreneur is able to identify himself with a role model and learn from him, and to what extent the entrepreneur receives support and advice that increase his social capital. Having large social capital, but lacking access to financial and human capital, leads to challenges for entrepreneurial expansion and success. However, it has been argued that entrepreneurs having large social capital often get easier access to financial capital through their networks.

Intended to answer the research questions, a survey was shaped and conducted on entrepreneurs being clients in the microfinance institution D-Miro in Ecuador. D-Miro is run by Mision Alianza de Noruega (Den norske Misjonsalliansen) and serves clients with access to financial services in the costal region of Ecuador; La Costa, with the majority of clients from the metropolis Guayaquil (D-Miro 2013). The intention behind this study is to give D-Miro important insight on their clients so that they can improve their products to better meet their clients needs and increase the chance of entrepreneurial success.

In the period January - February 2013, primary data were collected on two hundred and fifty entrepreneurs. One hundred and ten of the respondents have a disability or have a member of the household who suffer from a disability. The remaining one hundred and forty do not have a disability, nor have household members with disabilities. The groups are studied and compared with respect to variables defining human, social and financial capital as the independent variables, and annual income as the dependent variable.

1.5 Organization of the thesis

Chapter one provides an introduction to the topic of the study. It formulates the research questions and argues the relevance of the study. In chapter two the background information about Ecuador and disabled persons in Ecuador, about D-Miro, and the particular region studied is presented. Chapter three explains the theoretical framework and discusses the literature upon which this study is based and presents findings from previous studies. The data and methodology of the study are presented in chapter four, going more into the methods used for collecting and analysing the data. Chapter five continues with the specified models and the results of regression analysis, followed by a discussion of the results. Finally chapter six concludes the study, discuss important implications as well as the limitations, before it ends the chapter by giving a suggestion for further study.

Chapter 2:

2.0 Background

Ecuador is a small country along the northwestern coast of South America. It is a diverse country divided into four regions; La Costa, La Sierra, El Oriente and Galapagos. The urban population amounted to about two-thirds of the total in 2010. Even though Quito is the capital city, Guayaquil is recognized as the economic centre and is the largest city in Ecuador. In 2012 the country had an estimated population of 15.2million inhabitants (ICA, 2013). The population is concentrated in urban areas, and in the rural Andes Mountains in La Sierra region. In this study the coastal region bordering the Pacific Ocean in the west is studied. This is the region where nearly 50 % of Ecuador´s population live, with Guayaquil as an important part of the region, making urban population, poverty and entrepreneurship highly relevant.

The proportion of the population living below the poverty line or in extreme poverty has been reduced significantly from 2006 to 2012. After years with political instability Rafael Correa came to power in 2007, and a new Constitution was approved in September 2008. President Correa attempted to reduce inequality and poverty in Ecuador, and the 2009-2013 National Development Plan emphasizes poverty reduction and the promotion of social inclusion, equality and justice. The Ecuadorian government also increased public spending to reduce inequality and poverty. However, the World Bank still considers poverty and inequality to be Ecuador's main challenges (World Bank 2012). Table 2.1 presents the development in the proportion of the

population living in poverty and in extreme poverty from 2006 to 2012 at a national level, as well as in urban areas and in the metropolis Guayaquil.

Table 2.1: Poverty in Ecuador

Proportion of the population living below the poverty line		
	2006	**2012**
National level	*37,60 %*	*27,31 %*
Urban areas	*25,92 %*	*16,14 %*
Guayaquil	*24,16 %*	*7,21 %*
Proportion of the population living in extreme poverty		
National level	*16,89 %*	*11,18 %*
Urban areas	*8,79 %*	*4,96 %*
Guayaquil	*6,53 %*	*1,25 %*

Source: Central Intelligence Agency 2013 and The World Bank 2012

2.1 Poverty profile

In addition to the reduction in the proportion of the population living in poverty, the level of inequality among Ecuadorians has decreased during the last years. In 2008 the Gini index was reported by the World Bank to be 50,6 indicating a highly skewed distribution of wealth among Ecuador´s population. 1 In 2010 the Gini index was registered to be somewhat lower at 49,3. The Gini index of urban households in Ecuador was in 2011 found to be 47,3. This means that the distribution of income and consumption expenditures among urban households deviated from a perfectly equal distribution, and the poorest 10% of the Ecuadorian urban households received only 1,4% of total income, while the 10% richest urban households captured 38,3 %. Indigenous people, the Afro population, women and disabled people are disproportionately represented among the most marginalized people in Ecuador, and are receiving the smallest share of total income (CIA 2013, The World Bank 2013). In *this* survey the lowest annual income among entrepreneurs coming from households where disabilities are present, is 450 USD. The highest annual income for the same group of entrepreneurs is 8.000 USD. For entrepreneurs coming from households where disabilities are absent, the lowest annual income is 450 USD while the highest is 8.300USD. There is also statistics showing that in this study disabled entrepreneurs

1 Gini coefficient is a recognized tool in empirical work for measuring to what extent distribution of income and consumption among households deviates from perfect equality. A Gini coefficient of 1 (100) implies perfect inequality, while 0 means perfect equality (Ray 1998).

have the lowest average income, while entrepreneurs coming from households where disabilities are absent have the highest average income (see appendix). Further data distribution for this study on Ecuadorian entrepreneurs will be discussed in chapter 4.

Table 2.2 presents poverty and social indicators for Ecuador. Health outcomes can be used as measure for poverty as poor people usually have worse standards of living and are more vulnerable to malnutrition and diseases because of their limited access to clean water, food, medicines and vaccines.

Table 2.2: Socioeconomic indicators of Ecuador

	Ecuador
Population (July 2012 est.), million	15.2
Population growth (2012 est.),	1.4 %
Labour force (2012 est.), million	4.8
Population below poverty line (2012),	27,3 %
Birth rate (2012 est) (per 1,000 pop)	19.6
Death rate (2012 est) (per 1,000 pop)	5.00
Urban population (2010),	67,00%
Life expectancy at birth	75,9
Infant mortality (per 1,000 live birth)	19,1
Health expenditure (2009), % of GDP	5,00%
Unemployment (2012 est, urban areas)	5,90 %
Literacy (over 15 years old, can read and write)	93,20 %
Distribution of family income, Gini index	49.3
Household income or consumption by percentage share (2012)	
Lowest 20%	2,29%
Highest 20%	53,79%
Distribution of family income, Gini index, (June 2011, urban HH)	47,30%
Household income or consumption by percentage share (2010 est. urban households):	
Lowest 10%	1,40%
Highest 10%	38,30 %

Sources: Central Intelligence Agency 2013 and The World Bank 2012

2.2 Economic growth

Ecuador´s economic history is characterized by large fluctuations. In the late 1990´s the country faced serious economic problems associated with an acceleration of inflation, and a widespread freeze of bank deposits and closure of financial institutions. The simultaneous banking, currency and fiscal crisis evolved after a crash in oil prices, and in 1999 the economic downturn reached its steepest followed up by years with high inflation rate hitting new records at 60,7% (Jácome H. 2004). Negative numbers replaced the modest but positive economic growth, and poverty increased significantly. As an attempt to improve the situation, the Congress dollarized the currency in March 2000, making the US dollar the new national currency. After the dollarization, the oil prices increased, but growth in GDP continued to fluctuate from -8 % in 1999 before the dollarization, to 5,8% in 2004, to 0,4% in 2009 and 7,8% in 2011 before it fell to near 4% in 2012. To maintain economic growth, the current government's strategy is to increase public spending. The public spending increased from 24 % of GDP in 2005 to 57,6 % in 2011 (World Bank 2012). Table 2.3 presents key macroeconomic indicators and long-term trends for Ecuador. It shows an increasing trend in GDP per capita, and an economic growth that is fluctuating due to the historical events. Ecuador is still substantially dependent upon its rich petroleum resources that account for more than half of the export earnings and about 40% of public sector revenues (ICA, 2013).

Table 2.3. Macroeconomic indicators

	1988	**1990**	**1995**	**1999**	**2000**	**2009**	**2011**
Economic growth *(Change in real GDP, %)*	8,3	2,7	1,7	-6,3	2,8	0,3	7,7
GDP per capita ($)	5470,9	5413,9	5567,6	5319,2	5381,1	7051,0	7655,0
Inflation	58,2	48,5	22,9	52,2	96,0	5,1	4,4
Export *(% of GDP)*	27,0	32,9	25,7	31,5	37,0	29,5	32,9
Import *(% of GDP)*	32,2	32,0	28,2	24,9	31,0	31,9	38,6

Source: TheGlobalEconomy.com

It is often assumed that economic growth, poverty reduction and unemployment are interlinked. A discussion follows, indicating that economic growth and poverty reduction in a country can be achieved through a decrease in the unemployment ratio, as well as the opposite where an increase in the unemployment ratio reduce economic growth and increase poverty. Ecuador's recent history from 1990- 2001 demonstrates this assumption by showing how urbanization possessed challenges for urban job creation and thus increased unemployment in urban areas in the country. Because employment is the main source of income, and is often the only way to stay above the poverty line in the urban sector in Ecuador, this increase in unemployment from 1990-2001 caused the proportion of the population living below the poverty line in urban areas in two of the regions in Ecuador, namely La Costa and La Sierra, to increase by more than 80% (INEC 2012). In the same period one can see the economic growth hitting it´s lowest.

2.3 GDP structure

The sectors contributing to the GDP are divided into three categories: agriculture, industry and service. In Ecuador, the service sector accounted for approximately 57,5% of GDP in 2012 and contributed to the largest value added to the GDP. Agriculture accounted for the smallest share with only 6,4%. The developing trend has also been negative due to agriculture´s share of GDP. In this study, most of the entrepreneurs are engaged in non-farm activities, and the majority have started their business within the commerce and service sector. This makes the sample representative for the overall Ecuadorian population due to engagement in the different sectors. Table 2.4 presents the structure of the Ecuadorian economy by the value added to GDP by the three sectors discussed, and the developing trends from 2008 to 2012.

Table 2.4. Structure of GDP by sector

	2008	2009	2010	2011	2012
Annual growth GDP %	7,20	0,40	3,60	7,80	4,00
% value added to GDP agriculture	7,00	7,00	7,00	7,00	6,90
% value added to GDP industry	41,00	36,00	38,00	38,00	36,10
% value added to GDP service	52,00	57,00	55,00	55,00	57,50
Import % GDP	38,00	32,00	39,00	39,00	
Export % GDP	38,00	30,00	33,00	33,00	

Source: World Bank 2013 and Central Intelligence Agency 2013

2.4 Labour market

In 2012, the Ecuadorian labour force was estimated to be 4.769 million people. The unemployment ratio reached a record low of 4,6 % in September, a reduction of 0,9 % compared with in September 2011. The urban employment reached a 79,55% coverage of available urban work force in December 2012 (INEC 2012). With a partly developed market oriented economy, about 54% of the labour force are employed within service and commerce. Agriculture covers 27,6% of the employment and is the second largest employer of labour (INEC 2012). Informal sector has a strong position in the labour market in Ecuador, and is protected by the constitution as a mechanism for guaranteeing the right to work (Banco Central del Ecuador). In the coastal region about 39,5 % were in December 2012 working in formal sector, while 48,2 % worked in informal sector. In Guayaquil the informal sector was even larger, with about 51,6% compared with 39,6% in formal sector (INEC 2012). Entrepreneurs and their microenterprises are today highly represented in informal sector in Ecuador and are considered as important parts of the Ecuadorian labour market.

2.5 Entrepreneurship in Ecuador

Ecuador is one of two Latin-American countries with a strong growth in the proportion of inhabitants working in own enterprises compared to those who are not (OIT 2012; ILO 2013). Entrepreneurship is therefore considered as an important part of the labour market in Ecuador as around 25 % of the urban population in 2011 was self-employed. Ecuadorian microenterprises

usually tend to be a "one-man-show", and nearly 70% of the microenterprises do not employ workers or assistants, nor tend to grow or increase employment after establishment. Microenterprises and entrepreneurs in Ecuador are therefore considered to primarily be a way to get self-employed, and not to create employment for others. Still, in 2004 the sales from these businesses represented approximately 25,7% of Ecuador´s GDP and about 10% of net income earned in the country, - making entrepreneurship in Ecuador relevant (Arteaga et al. 2011; Magill and Meyer, 2005).

Throughout history, starting a business in Ecuador has been considered extremely difficult for the average Ecuadorian. In 2013 the World Bank ranked Ecuador as 169th out of 185 countries on their list of how easy it is to start up a business, and as 139 out of 185 on their list on "the ease of doing business." The listing is based on measures of regulations for starting a business and employing workers, getting credit, paying taxes, getting electricity, registering property etc. The government policies and political, institutional and social context have been considered as the main constraints that make starting up a business, a time consuming process, and therefore discourage entrepreneurship (World Bank 2013).

Recently Ecuador´s government has taken steps to support and encourage entrepreneurial activity, for example through making effort to promote networks, financial support to start new business, and training. The increased openness to self-employment and creation of own enterprises, have resulted in a growth in number of self-employed in Ecuador. Approximately 66,8 % of the total urban microenterprises is located in La Costa, and primarily in the Guayaquil area. In 2011 about 25,6% of the population were self-employed, while approximately 10,4 % was planning to start up a business. They usually operate in the informal sector, and are heavily concentrated in the service and commerce sector. In 2004 about 55,2 % of all microenterprises were in commerce (food, beverage and clothing sales), while 25,7% were in service (bars, restaurants, cafeterias, taxis, beauty parlors, barbershops etc.) and about 19,2 % where within the production sector (tailoring, furniture, wood products, metal products etc.) (Magill and Meyer, 2005). In *this* survey 61,30 % work in commerce, 24,80 % work within service sector, 2,00 % in production, 6,8 % within handicrafts and 5,60% in agriculture (and 3,20% in other type of firms). This makes the surveyed sample representative for the Ecuadorian economy due to the distribution of employment among the different sectors.

Profits, in absolute term, are in general relatively low for the self-employed in Ecuador (Magill and Meyer 2005). The average income of the entrepreneurs in this study is 1.609 USD for entrepreneurs coming from a household where a disability is present, while the average income for entrepreneurs coming from households where disabilities are absent is 1.969 USD. Disabled entrepreneurs have an average income of 1.587 USD, which is the lowest average annual income among the groups studied. This supports the assumption saying that disabled entrepreneurs are among the most marginalized people in a society.

2.6 Disabled people in Ecuador

Disabled people represented among the Ecuadorian population are a severely marginalized group with limited access to financial services, education and are less likely to be employed. An International Disability Rights Monitor from 2004 argued that in 2004 people with disabilities were likely to have even more difficulties to get employed compared with the rest of the population. Only 18,2% were registered as employed, and the rate of people with disabilities that were not gainfully employed was probably as high as 70,4%. About 29,1% of the people with a disability were assumed to be unable to work (Ideanet 2013). With about 13% of the total population in Ecuador being disabled in 2011, many of these persons therefore choose to turn to self-employment to cope with major challenges in finding decent employment in other sectors.

Even though there exist both regular and special schools, almost 40 % of people with disability in Ecuador did not receive education in 2004, and only 10,5% finished high school. The ratio for the overall population completing high school was 25,9%. As the ratio of people not getting education is high, this suggests that literacy is higher among disable people than the overall population (Ideanet 2013). In *this* study however, the average education among all entrepreneurs are 9 years, regardless of the presence or absence of a disability.

During recent years, the micro finance industry has expanded tremendously in Ecuador as an answer to demand for credit and the presence of imperfect credit markets. In spite of this expansion, disabled people still seem to be poorly represented among microcredit clients. On average disabled clients constitutes around 0,5% of the clients in a microfinance institution (D-Miro 2013). This indicates that these people still live with limited access to credit.

2.7 Microfinance and D-Miro

Micro finance is widespread and highly used in Latin America and the Caribbean. Ecuador is one of four countries that together counts for nearly 60% of the microfinance portfolio and serve almost 50% of the clients in the region. In 2011 the total loan portfolio of microfinance institutions was nearly 2,5 billion USD serving more than one million clients. The main intention behind microcredit institutions in Ecuador is to provide financial services to the poor to empower them. D-Miro is a microfinance bank in Ecuador owned by the Norwegian Mission Alliance (Den norske Misjonsallianse). This microfinance institution is located in the areas most excluded, and with the strongest demand for microfinance services At the end of 2010 the bank had a loan portfolio that equalled about 30 million US Dollars and served more than 37.000 active borrowers spread over 14 offices in nine cities and five provinces at the coast of Ecuador. (D-Miro 2013). The entrepreneurs investigated in *this* study are all active clients in D-Miro.

Chapter 3:

3.0 Theory and literature review

Entrepreneurship is increasingly recognized as a significant driver of economic growth, poverty alleviation and as a contributing factor for economic development in a country (Henry et al. 2003). It has been argued that entrepreneurs to a large extent are responsible for wealth creation in a country by contributing to job creation, being innovative and fostering increased productivity growth. Through an innovative behaviour, entrepreneurs challenge existing firms and increase competition in the market, leading to economic development (Carree & Thurik 2002). Based on the increasing focus on entrepreneurship, as a link between human and economic development, entrepreneurs have become an attractive and frequently studied theme. There are different attitudes to what entrepreneurship is, and there are various definitions of entrepreneurs that try to explain entrepreneurship. One formal definition of entrepreneurs is:

> *"... people who have the ability to see and evaluate business opportunities; to gather the necessary resources to take advantage of them, and to initiate appropriate action to ensure success"* (Henry et al. 2003, pp. 28).

An entrepreneur is that someone who is both able to identify opportunities and be innovative on the one hand, and on the other hand has the drive and competence to transform those ideas and

opportunities into a reality. It is someone who sets up and runs his/her own business and bears the risk of it. The main question and the challenge for an entrepreneur is to transform ideas into reality, and take advantage of the opportunities that arise. When encouraging entrepreneurship, the actual goal is to stimulate the persons who will be successful after starting their businesses, as these entrepreneurs are believed to play an important role in the economic progress in the society. Considering the great variety within the groups of potential and existing entrepreneurs, different approaches have been used to explain and give some insight in to the factors that determine the success of an entrepreneur. For *this* particular study, the focus has been narrowed down and concentrated around factors within financial, human and social capital. Within studies on business and entrepreneurship, financial performance is widely used as a measure of success that have been divided into five different measurements: income, growth in profit or income, return on investment, survival or the ability to pay requirements on time. For the purposes of *this* study, annual income will be the dependent variable measuring entrepreneurial success.

3.1 Financial capital

Access to financial capital is always one of the major setbacks for business entrepreneurship and it plays a significant role for venture performance. Credit and saving can be considered to serve the same purpose, but the time when an entrepreneur gets access to the money sets them apart. While savings take time to build up and use, a person with credit has access to the money immediately. With access to credit, the household has the possibility to expand the business and let expenditures exceed the sum of revenues and the accumulated savings that might have been built up over a period (Martinelli & Mersland 2010). A budget constraint would possibly have limited the optimal production and access to important inputs. Such limitations would have resulted in inefficiency, meaning that there would be possible with certain Pareto improvements (Ray 1998). With access to credit, the budget balance will no longer be a constraint, and the entrepreneur will have the possibility to expand his business, and rely on this safety net during bad periods in a firm´s business cycle.

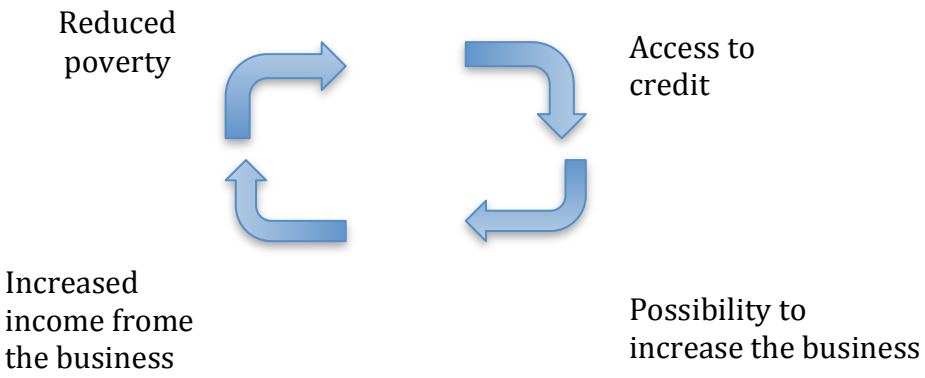
For marginalized people in developing countries, credit markets tend to be imperfect. With institutional credit agencies insisting on high collateral, poor people do often lack the access to credit (Ray 1998; Martinelli & Mersland 2010). Disabled people are disproportionately represented among high poverty groups, and because of discrimination and prejudices saying that disabled persons are unsuitable and more risky borrowers than abled clients, credit is even scarcer for people with disabilities (Elwan 1999). In addition disabled people are less likely to

have savings than the abled population, which increase their demand for credit. Since 2006 microcredit has gained much attention and become a well-known way to fight these trends, and a tool to give poor people access to financial capital (Martinelli & Mersland 2010).

3.1.1 Microcredit

Microfinance is known all over the world as an important tool to reduce poverty and to economically empower the poor and give them the opportunity to become self-employed. The giving of the Nobel peace price in 2006 to Muhammas Yunus for his effort to provide financial services to the poor has probably enhanced the focus on micro-finance as a way to serve the poor, and to increase their access to financial capital. Micro-credit is a way to build credit systems that serve the poor and takes their conditions into account and demand lower collateral. Micro-credit can thus solve the problem of credit constraint for poor people in developing countries as it serves marginalized households with access to capital when they demand more then what they can accumulate through employment and savings. By providing capital, micro-credit makes it more likely for poor households to become self-employed or to invest more money into their already existing enterprises. Microcredit serves to diversify the clients´ sources of income by allowing them to engage in other activities, adopt new technology, take advantage of business opportunities, and to cope with the good and bad times in a business cycle (Mersland & Martinelli 2010). Figure 3.1 illustrates how getting access to microcredit can increase the entrepreneur´s ability to increase his business, receive higher income and reduce poverty for his household. For people becoming less poor, the access to credit will be easier, and the virtuous circle of greater prosperity and financial security will evolve.

Figure 3.1: The virtuous circle of microcredit



Source: Martinelli and Mersland 2010, p. 230.

3.2 Human capital

Human capital is defined as *"the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well being"* (Sriyani 2010, p. 1). Theodore Schultz introduced the theory about human capital in 1960, with knowledge and skills as central elements. It was originally developed to estimate employees´ income distribution as a result of their investment in human capital (Frese & Rauch 2000; Bosma et al. 2000; Henry et al. 2003). Recently the theory on human capital has become frequently used in research on entrepreneurship and in prediction models of entrepreneurial success. It argues that an investment in education and working experience, sector experience and age will increase knowledge, skills, or health, and thereby raise money (Frese & Rauch 2000) It has for example been argued that an entrepreneur´s ability to adjust or reallocate resources to increase income in response to changing circumstances is considered as a form for human capital that can be increased through education and experience (Cook & Klein 2005). However, the knowledge gained from education and experiences, is a resource that is heterogeneously distributed across entrepreneurs. It is dependent on the transfer from education and experience to become a useful knowledge (Simpeh 2011; Frese et al. u.å). This means that it is not certain that all entrepreneurs will have the same dividend from education and experience, and thus increase income homogenously. Moreover, the size and the type of industry serve as moderation effects, and human capital may be especially important for entrepreneurial success in large, knowledgeintensive and hightechnology industries (Lee & Tsang, 2001).

Human capital theory assumes that people try to maximize their economic benefits given their human capital, and attempt to receive a compensation for their investment in education or experience. It is therefore assumed that entrepreneurs with high human capital are likely to strive for high income and growth in their business compared to those who have invested less in human capital. The theory on entrepreneurship argues that individuals with high human capital will be better equipped to discover and exploit business opportunities, make beneficial strategies, acquire financial and physical capital and be more able to increase knowledge (Frese et al. u.å). Education also equips an individual with analytical and technical skills, which are essential to managing a business and achieve success (Lee & Tsang 2001).

To be able to create competitive advantages, an entrepreneur´s human capital has to be sufficiently different from competitors. Because human capital in developing countries is more heterogeneous and scarce, competitive advantages are more common in these countries than in

highly developed countries (Frese et al. u.å.). As Ecuador is considered to be a developing country, there is likely to exist a higher variance of people´s human capital in this country, compared with more developed countries. This leads to competitive advantages for entrepreneurs who have invested more in education and experience. However, the small firm size and low technology characteristics of the business can moderate this competitive advantage obtained from investment in human capital.

3.3 Social capital

Entrepreneurs require information, capital, skills and labour to start and succeed in a business activity. While they hold some of these resources themselves, they often complement their resources through the use of social networks (Greve & Salaff 2003). The social approach therefore focuses on social capital as a driver for success. It turns the attention to the relationships between entrepreneurs and others that might help entrepreneurs to detect new opportunities and provide them with resources necessary to succeed, and can be understood as the benefits and resources an entrepreneur gains from their strong or weak ties with others. Strong ties are here defined as relationships with family of close friends characterized by trust, and weak ties as relationships with peripheral friends and random entrepreneurs (Henry et al. 2003; Arribas & Vila 2012). Networks provide business owners with access to business opportunities, markets, information, ideas, advice and other resources, resulting in a frequently association of a positive relationship between network and business success (Abou-Moghli & Al Muala 2012). They are considered as valuable resources that maximize the value of human and financial capital, and are a forum for communication, sharing of knowledge and experiences to learn from each other, and as communities where entrepreneurs can get support and advice in how to run their business in the most beneficial way (Greve & Salaff 2003). Networks are also important as they may provide a unique source of information, financial funding and political support (Henry et al. 2003). To what extent entrepreneurs will benefit from the networks depends on the knowledge among the members of the groups, as well as the circulation of useful information between them (Lee & Tsang 2001; Cruickshank & Rollan 2006). In a network context trust becomes a key word, important for the willingness to share information and knowledge. In Ecuador trust is generally a lacking phenomena among people outside the household, which might result in the establishment of well functioning and rich-beneficial networks a challenging task to achieve.

People often use family and other strong ties for getting resources and support, and entrepreneurship is generally considered to "run in the family" (Greve & Salaff 2003). Entrepreneurial parents can offer unique information and knowledge to their children´s business and are therefore considered as valuable resources and important role models (Bosma et al. 2011; Greve & Salaff 2003). Role models are considered as an important part of social capital as they are objectives for learning about success and failure, and are likely to increase the entrepreneur´s probability for success. They can be both members of the household and other family members, friends, neighbours etc. Having role models to look up to and get advice from causes a development of certain skills that will help the entrepreneur in the business world (Henry et al. 2003). In Ecuador entrepreneurship is widespread, resulting in the access to possible role models being highly present. Role models tend to have some similarity with the entrepreneur, making it easier to compare and recognize themselves in their role models.

3.4 Disability

This study sets out to study entrepreneurs that have a disability or who comes from a family where a member of the household has a disability. The World Health Organization (WHO) uses the International Classification of Functioning definition:

> *"Disability is a generic term that includes impairments in the body functions and structures, activity limitation and participation restrictions. It indicates the negative aspects of the interaction between an individual (with a health condition) and his context (environmental and personal factors)"* (Barron & Ncube (2010), pp. 7).

The term impairment includes physical, sensory and mental problems, and also includes illness and lack of emotional wellbeing (Barron & Ncube 2010). Based on this definition, one can understand that a disability is complex, dynamic and multidimensional phenomena.

3.4.1 Entrepreneurship and disability

The right to work is a fundamental right stated by the United Nations and allows people to live in dignity (United Nations Human Rights 1948). As previously argued, persons with disabilities tend to have lower incomes than their counterparts without disabilities, they are often un- or underemployed, and consider self-employment as their way to earn an income (Elwan 1999). A lot of the research has been concentrated within the field of removing barriers to increase participation among disable persons in the labor market, and there exist limited research on

entrepreneurship among people with disabilities. (Elwan 1999). The literature on entrepreneurship that exist on disabled persons, are concentrated on the start-up process of a firm and the motivation behind it. Low education and failure to find jobs, and inability to secure and retain jobs are reasons that motivate persons with disabilities to become entrepreneurs (Boylan & Burchardt 2003). They encounter too many obstacles while searching for a traditional job, and entrepreneurship is therefore often considered to be more a necessity then a preferable choice because self-employment fulfills a basic need, which is to earn money (Holub 2001). People with disabilities are also considered to be "natural" entrepreneurs, as their disabilities stimulate them to become innovative and find effective ways of moving around, communicate and to overcome their problem. Evidence therefore shows that when disabled persons get access to equal opportunities as those not having a disability, they tend to experience success as self-employed to the same extent as abled persons. However, the main obstacle for persons with disabilities is access to financial capital as a result of imperfect credit markets, discrimination and lacking collateral. Many disabled persons do also experience to be excluded from microfinance services, preventing them from growing their businesses (Elwan, 1999; Mersland and Strøm 2005).

3.5 Literature review

This section provides a review on relevant studies analysing the relationship between entrepreneurial success and financial, human and social capital. Because of the limited studies done on entrepreneurs having a disability or coming from households where a member has a disability, this review will give a general presentation of some of the research done on the field of entrepreneurship. The main purpose in the studies has been to identify determinants for successful entrepreneurship.

A study by Bosma, Praag and Wit (2000) on Dutch entrepreneurs from 1994 -1997 investigates determinants for successful entrepreneurship in the Netherlands. Detailed information on 2.000 Dutch entrepreneurs, their environment and strategies were conducted by phone, first in their start-up period of their businesses in 1994, then followed up by annually reporting the achievement until 1997. The Netherlands is a well-developed country in Europe, while Ecuador is a developing country in South-America. This makes the entrepreneurial circumstances in Ecuador and the Netherlands different when it comes to access to resources and circumstances, as well as types of enterprises started. Dutch enterprises are likely to employ more people,

whereas in Ecuador they generally employ only the entrepreneur. However, the investigation of Dutch entrepreneurs has served as an inspiration for *this* study. Some of the variables are included, others have been changed or dropped, and new ones have been added to adapt to the entrepreneurial circumstances in Ecuador. In the study of Dutch entrepreneurs, 25 variables were selected and distributed between financial, human and social capital. Among factors measuring human capital, four variables were found to significantly affect profit. Experience within the same sector, education and experience within self-employment seems to increase profit, while age seems to have a negative impact on the dependent variable. These four variables have been included in the study of Ecuadorian entrepreneurs. The variables are expected to have the same direction of impact on income, but their significance might be discussable since these entrepreneurs mostly work in lowcompetence and lowtechnology firms, thus the advantages from human capital might be limited. Further comments on expectations for *this* study due to the variables and their impact on the dependent variable will be discussed in section 4.8. Within financial capital, only one variable is found to significantly affect profit in the study of Dutch entrepreneurs. The significant variable is the amount of other income received by the entrepreneur. This variable is negatively correlated with profit indicating that when the entrepreneurs receive more income elsewhere, the profit will decrease. In the study of Ecuadorian entrepreneurs, the variables defining financial capital are loan size and time of participation in a micro credit program and credit elsewhere. Other income received by the entrepreneur is dropped because it is assumed to be of limited relevance as Ecuadorian entrepreneurs tend to be engaged in own enterprise only. Because of the limited access to financial capital in Ecuador, I am expecting to find more variables to be statistically significant in the study of Ecuadorian entrepreneurs than what they found in the study of Dutch entrepreneurs, illustrating the unequal distribution and the need for such capital. Within social capital, only two variables were found to significantly relate to entrepreneurial success in the case of Dutch firm founders. These variables are support from spouse and help from others outside the family. Support from spouse positively affects profit, while help and advice from others is highly negative correlated with profit. For *this* study, the attention has been on learning from others from networks, role models and marital status as measurements for social capital, and it is expected to find the same results for marital status in the study of Ecuadorian entrepreneurs as for support from spouse in the case of Dutch entrepreneurs. Finally, none of the control variables included in the equation such as sector dummy, gender and full self-employment are significantly related to profit in the study done by Bosma, Praag and Wit

(2000). In *this* study gender is expected to have a significant effect on entrepreneurial success, as it has frequently been argued that women earn less than men.

Fatimah-Salwa, Mohamad-Azahari and Joni-Tamkin (2013) reported on success factors in entrepreneurship. They investigated 250 entrepreneurs from Malaysia and used total assets owned as their measurement for success. About 44,8 % of the entrepreneurs were working within production, 39,2 % within sales and 16 % in service. In *this* study on Ecuadorian entrepreneurs, the majority belongs to sales and service sectors, while only small share are producers. However, both countries are classified as developing countries and have imperfect credit markets, especially for poor people. Microcredit serves therefore as a tool to provide marginalized people with access to credit, and the entrepreneurs in both studies are recipients of microcredit. Fathimah-Salwa, Mohamad-Azahari and Joni-Tamkin focus on microcredit, government support, education and experience as important factors explaining entrepreneurial success. The researchers found the model to explain 97,5 % of the variance in entrepreneurial success. Microcredit represents the financial capital, and this type of capital´s contribution to business success. The study of Malaysian entrepreneurs revealed that microcredit has a significant and positive impact on entrepreneurial success. It is expected to find a positive and significant relationship between microcredit and success for Ecuadorian entrepreneurs as well. The study done by Fathima-Salwa et al. has also identified a positive and significant relationship between government support, education, and success. This means that training programs provided by the government, as well as education contribute to success by introducing and investing in new knowledge. These training programs can be courses in management, accounting, finance or marketing. Such training programs might have many similarities to networks as they are organized to share knowledge and skills, and to learn from other people´s experiences. The relationship between experience and success is on the other hand found to be significantly negative, saying that less experienced entrepreneurs tend to possess more valuable assets.

Frese, Rauch, Rosenbusch and Unger (u.å) developed a model that meta-analytically integrates results from three decades of human capital research in entrepreneurship to investigate human capital´s impact on success. The analysis involved 70 independent samples consisting of 24.733 entrepreneurs suitable for investigation. The dependent variable success, was measured through three types of variables; size, growth and profit. Human capital was measured through variables such as education and experience, as well as knowledge, competencies and skills. From their

research, they found a small but significant and positive overall relationship between human capital and success. The relationship was found to be stronger between success and knowledge and skills, than between education, experience, and success. For *this* study age is used as a measurement of knowledge of the world and experience, as older entrepreneurs tend to have more life experience and knowledge than younger people.

A study done by G.T.Wasantha Sriyani (2010) on 100 small-scale enterprises located in the Southern Province of Sri Lanka, investigated the relationship between human capital factors and entrepreneurial success, and found an overall significant relationship between human capital and business success. However, in the study of entrepreneurs from Sri Lanka, neither experience within industry specific, work nor managerial experiences have been found to significantly be related to business success. On the other hand, the study identifies a positive and significant relationship between training and education, and success, thus indicating that the greater the training and education of the entrepreneur causes to increase success. The conclusion drawn from this research is that investment in education and training will positively affect success.

Lee and Tsang (2001) conducted a study on 168 entrepreneurs in small and medium sized businesses in Singapore. They have investigated the effect of entrepreneurial personality traits, background and networking activities on venture growth. As the focus in *this* study is on human, social and financial capital, personality traits are here eliminated from the discussion. Lee and Tsang measured success through growth in sales and profit. They found that the effect of education on success was moderated by firm size, and had a positive effect for larger firms, while the effect was negative for smaller firms. Experience was also found to be significantly and positively related to success. For *this* study, the average firm size tends to be small, which again might limit the effect of education. In addition to these measures of human capital, Lee and Tsang have investigated some measures for social capital. They found networking activities and number of partners to be significantly and positively related to success, indicating the importance of social capital.

Abou-Moghli and Al Muala (2012) reported on entrepreneurs in Jordan. They investigated whether or not entrepreneurial networks can impact the success of businesses at an on-going stage. One hundred and five male entrepreneurs working in manufacturing sector in Jordan were investigated due to social, business and inter-organizational networks, and their business success. Abou-Moghli and Al Muala found that all three types of networks significantly affect success,

and that they together explained about 81,6% of the variance in business success. Social networks with friends and family were found to be the type of network with strongest impact on success, followed by business networks. These findings are in line with the theory available on strong and weak ties. Abou-Moghli and Al Muala concluded that a mixture of social, business and inter-organizational networks is probably best to achieve success, and secondly, entrepreneurial network relationships are important for business success by providing better access to outside resources, and reduce the problem of lack access to capital, market opportunities and inadequate information etc.

Despite the results from previous works that have already been discussed, the relationship between financial, human and social capital, and income, is not guaranteed and straightforward. Rooks, Szirmai and Sserwanga (2009) intended to identify the effects of human and social capital on success among entrepreneurs in Uganda, but found a limited number of variables to be statistically significant in explaining entrepreneurial success. A sample of the population aged 16-64 was studied comprising 750 entrepreneurs and 250 non-entrepreneurs. A questionnaire was developed and data was collected during May 2008. The enterprises studied were predominantly very small and did not create employment beyond the entrepreneur himself. There are several similarities between the study of entrepreneurs in Uganda and *this* study on entrepreneurs in Ecuador in terms of the variables and the methodology used. The dependent variables in the study from Uganda are business success (percentage change compared to last year in sales, number of customers and profit), innovativeness and gestational activities. From the investigation of these relationships, they found many of the variables to be non-significant in explaining variation in success. The variables found to have a positive impact on percentage change in profit, sales and number of customers, are years of education, firm size and agricultural sector. Being married is, on the other hand, found to negatively affect success. They also found the squared variables of years of education, network size and network resources to be significant in explaining success. This report illustrates how the relationship between human and social capital, and income is not given, even though the theory gives the expectations of such a conclusion.

In the next chapter, a model is developed that takes into account some of the variables used in previous work. The model is developed to answer the research questions in *this* study about determinants within financial, human and social capital for entrepreneurial success in Ecuador.

Chapter 4

4.0 Data and methodology

This chapter presents the process of investigating the relationship between human, social and financial capital and the success of an entrepreneur. The dependent variable, success, is for the purpose of this study considered through an economic dimension. As discussed in chapter 3, the chosen variable to measure success is annual income received by the entrepreneur from his own venture. This variable provides a measure of economic performance. Special effort has been put into identifying similarities and differences in the determinants for success depending on the presence or absence of a disability.

4.1 The survey

To assess the impact of human, social and financial capital on entrepreneurial success in the coastal region in Ecuador, entrepreneurs living in this specific region have been surveyed. Because of imperfect credit market and limited access to financial capital for poor people, micro-credit, as discussed in previous chapters, plays a crucial role in empowering people in developing countries, and does often play a significant role for income generation in poor areas. Based on these circumstances, micro credit serves as an important variable defining financial capital in developing countries. To be able to capture the affect of micro-credit on success, the entrepreneurs that have been surveyed are actively participating in micro-credit programs offered by D-Miro.

To be able to identify differences and similarities among determinants of entrepreneurial success corresponding to the absence or presence of a disability in the household, 110 entrepreneurs coming from households where disabilities are present, and 140 entrepreneurs coming from households where neither the entrepreneur nor members of the household have a disability, have been surveyed. A questionnaire was developed to collect information about individual and firm characteristics, while information about credit, income and clients´ financial histories in D-Miro was collected directly from D-Miro's database (see appendix for questionnaire used). In total 250 clients were interviewed by phone during January and February 2013.

4.2 Methodology

In this study a comparison analysis between different groups of entrepreneurs is conducted. The comparison is intended to identify determinants affecting annual income as well as differences due to variables affecting entrepreneurial success regarding the presence or absent of a disability.

4.3 Questionnaire, sampling and pre-testing

To answer the research questions formulated for *this* study, a questionnaire was formed to provide information about the entrepreneur´s social network and role models, his/her education and experience, the business venture, and his/her disability or the disability of a household member. Other surveys with comparable research questions were examined to take advantage of well-formulated questions.

To get well-formulated questions adapted to the local environment and the Spanish language, consultation were held with the D-Miro staff. When the questionnaire was translated into Spanish and the questions were adapted to the local environment, a pre-test of the questionnaire was conducted with the intention to reveal leading questions and to reveal whether questions were understood or whether they needed to be changed, added or eliminated. After pre-testing the questionnaire on 20 clients in D-Miro, some questions were found unnecessary and were deleted, while other questions were revealed to be difficult to answer. For instance, a question asking to divide start-up capital among different sources of capital into percentage shares was changed because the respondents found it too demanding to answer. In the new question the demand for a percentage division was dropped, and the new formulation asked the respondent to identify the three main sources of capital when starting up his/her venture. The order of the rating points in some of the Likert scales was also changed to make it more logical to understand. Pretesting the questionnaire indicated that a low response rate could be expected because of to turned off telephones and entrepreneurs being in a short of time. This experience further affected the sampling selection by taking into account a relatively low response rate, and therefore choosing a large sample to ensure the number of respondents to be sufficiently high due to the purpose of the study, despite of low a response rate.

To get the true picture of the relationship between financial, human and social capital, and success among entrepreneurs in the coastal region in Ecuador, it was important that the entrepreneurs in the survey represented the diversity in the population as a whole. At the same time the survey needed to put some selection criteria on the sampling to allow the comparison

between the groups of entrepreneurs coming from a household where a member has a disability, where all members are abled, and finally; where the entrepreneur himself is the disabled person. The entrepreneurs with disabilities or coming from households where a member has a disability have in general participated in a microcredit program in D-Miro for a shorter time than their counterparts without disabilities, and their loans tend to be smaller in value. To make the groups of entrepreneurs suited for a comparison, all entrepreneurs in D-Miro with a disability or coming from a household where a member has a disability were chosen (400), and entrepreneurs coming from abled households were thereafter selected to reflect these 400 based on to two selection criteria: size of loan amount, and time as a client in D-Miro. After this purposive sampling technique was conducted among abled customers, about 15.000 entrepreneurs were identified matching these restrictions. A random sample was conducted with the intention to select 400 customers for further investigation to avoid biased sample in any of the variables. A team consisting of five persons got presented the questionnaire, were trained to conduct the surveys and supervised during the period when the interviews were performed. The response rate was approximately 30% and the surveyed entrepreneurs counted in total 250 persons, 110 of which were entrepreneurs coming from households where disability is present, and 140 entrepreneurs coming from households where disability is absent.

It is difficult and demanding for an entrepreneur to give accurate information about their financial situation without giving them the time to prepare. Even when given time to prepare such information, it would be difficult for the respondents to estimate correctly. They might also be unwilling to give the correct information about their income and assets. To secure validity of the information about income, credit amount and time in the program for each respondent, this information was collected directly from D-Miro´s database and added to the dataset prepared for *this* study. D-Miro has substantial ways to evaluate and measure the economic situation of their customers, and by using their database the information is more reliable and accurate. Neither information about social nor human capital was recorded in the official records, and were based on the answers given by the respondents.

4.4 Data description

Different variables are constructed to measure financial, human and social capital that are important for an entrepreneurs' success. The dependent variable is a continuous variable measured as annual income Y_x of the entrepreneur. The following tables 4.1, 4.2, 4.3 and 4.4 give an overview of the variables, their type and definitions.

4.4.1 Control variables

Control variables contain information about the enterprise and the household. *Gender* is a dummy variable defining if the entrepreneur is female (1) or male (0). *Depratio* is a continuous variable measuring the dependency ratio in the household as the ratio between the total number of persons living in the household divided on the number of working persons in the household. *DisabHouse* is the dummy variable that with a value of one indicates that there are members of the household that do have a disability. The disable person in the household can be the entrepreneur himself, his/her partner or child. Which person in the household who is the disabled one is identified through the dummy variables *PartnerDis*, *ChildrDis* and *EntrepDisability*. To identify what type of business the entrepreneur is engaged in, five dummy variables are established. The different types of sectors are handicrafts, manufacturing, sales and services, agriculture, and "others".

Table 4.1: Control variables

Control variables		
Gender	Dummy	1= Female, 0= male
depratio	Continuous	Dependency ratio, number of people living in the household divided by number of people in the household working
DisabHouse	Dummy	1= household has disability, 0= if not
ChildrDis	Dummy	1= Child has disability, 0= if not
PartnerDis	Dummy	1= Partner has disability, 0= if not
EntrepDisability	Dummy	1= Entrepreneurs has disability, 0= if not
EnterpManuf	Dummy	1=The enterprise is within manufacturing, 0= if not
EnterpHandicraft	Dummy	1= The enterprise is within handicrafts, 0= if not
EnterpSalesService	Dummy	1= The enterprise is within services, 0= if not
EnterpAgric	Dummy	1= The enterprise is within agriculture, 0= if not
EnterpOther	Dummy	1= The enterprise is within other area, 0= if not

4.4.2 Financial capital

Financial capital of entrepreneurs is in *this* study defined by three indicators. Microcredit is an essential source for financial capital in developing countries, and the variable *Time* represents the number of loans the entrepreneur has taken during his time as a client in D-Miro, which is

normally one loan per year. *Loan* represents the entrepreneur´s annual amount borrowed from D-Miro, and is a continuous variable. *CreditOther* is a dummy variable and indicates whether the entrepreneur has a loan elsewhere or not.

Table 4.2: Financial capital

Financial capital		
Time	Continuous	The number of loans the client has taken
Loan	Continuous	Amount of credit
CreditOther	Dummy	1= entrepreneur has credit in other places than D-MIRO, 0= if not

4.4.3 Human capital

Human capital includes individual-specific factors. In *this* study, human capital is determined according to three indicators. *Age* and *Edu* are two continuous variables measuring the age of the entrepreneur and number of years of education the entrepreneur holds. These variables will reflect their competences and knowledge of the world. In addition *ExpArea* is a dummy variable taking the value 1 if the entrepreneur has previous experience within the same sector as he or she today is self-employed.

Table 4.3: Human capital

Human capital		
Age	Continuous	The age of the entrepreneur
Edu	Continuous	The number of years of education
ExpArea	Dummy	1= the client has experience within the same area as he is working now (in his own enterprise), 0= if not

4.4.4 Social capital

Social capital of entrepreneurs is in *this* study defined by three dummy variables. *RoleModel* indicates that the entrepreneur knows others who also are entrepreneurs. These role models can be friends, parents, siblings, or other entrepreneurs being disabled. If the respondent has entrepreneurial role models, the value of the dummy variable is one, and zero if not. *NetworkLearning* determines whether the entrepreneur is part of a network where he learns from

others in how to run his business. The variable takes a value of one if the answer is yes, and zero if not. The last variable within social capital is *Status*, which identifies the marital status of the entrepreneur: one if married, zero if single.

Table 4.4: Social capital

Social capital		
Rolemodels	Dummy	1= knows someone who is an entrepreneur, 0= if not
NetworkLearning	Dummy	1= part of a network and learn from others, 0= never learns from others
Status	Dummy	1= married/united, 0= if not

4.5 Measuring success using OLS

Previous research tends to suggest that entrepreneurship should be modelled multi-dimensionally and include elements representing the individual and firm characteristics, and environmental influence. In this study multiple regression equations have been estimated to identify the relations between the variables. The ordinary least squares-method (OLS) of regression analysis has been used to estimate the models, and to obtain best linear, unbiased estimators (BLUE), OLS is based on assumptions from the classical normal linear regression models (Guayarati & Porter 2009).

The model used to identify the relationship between income and financial, human and social capital is specified as:

$$Y_i = \beta_0 + \Sigma \beta_i X_i + u_i \qquad (4.1)$$

where Y_i represents income and is the dependent variables measuring entrepreneurial success. The vector X_i represents all explanatory variables that are expected to have an effect on income, while u_i is the stochastic disturbance term, - the error term. The coefficients β_0 and β_i are regression coefficients and measure the "net" effect of a unit change in a specific variable on the mean value of Y_i, holding other variables constant (Gujarati & Porter 2009). To identify the variation in the influence of explanatory variables on annual income corresponding to the presence or absence of a disability in households, the equation has been run for both disabled and abled households, as well as for the total sample and disabled entrepreneurs.

4.6 Goodness of fit and F-Test

The F statistic determines the overall significance of the regression. It tests the hypothesis of $H_0 = \beta_1 = \beta_2 = \ldots\ldots = \beta_k = 0$, saying that all coefficients in the model are zero. If the F statistic fails to reject the hypothesis saying that the independent variables do not help in explain variation in the dependent variable, this is an indication showing that the regression model is insignificant. With an insignificant regression model one must look for new variables to explain variation in the dependent variable. If the p-value of the F statistic does not exceeds the critical level of significance, α=0,05, the data provide evidence indicating that at least one of the coefficients obtained in the model is different from zero and does have an impact on the dependent variable. The F-test will be used in this study to test for an overall significance of the model, and the results from these tests are presented in chapter 5. Still, it is not sufficient to use the F statistic only to determine the significance of the model. That is why the R^2 value also has been included in the study to interpret how much of the variation in entrepreneurial success that is explained through financial, human and social capital. The R^2 value indicates how well the model fits to the data set and explains how much of the total variation in the dependent variable that is explained through the regression model (Wooldridge 2009). R^2 is always between 0 and 1, and a value close to 0 indicates that very little of the variation in the dependent variable is captured by the variation in the explanatory variables. The R^2 values for this study are presented in chapter 5.

4.7 Regression Diagnostics

Regression diagnostics have served as important tools to control and check for potential problems and evaluating the plausibility of violation of key assumptions of OLS. Tests have been conducted to reveal whether there is any reason to distrust the regression results or if there exists more beneficial ways to specify the models to obtain BLUE estimates for the chosen variables. In this survey there were tested for functional form, multicollinearity and heteroskedasticity.

4.7.1 Functional form

The choice of functional form is guided by the underlying theory. Previous similar empirical studies might also give some relevant indications. To formally test the model for functional form and specification errors the *ladder* and the *gladder* commands in STATA and Ramsey´s regression specific error test (RESET) are used. The *ladder* and *gladder* commands in STATA

identify the best transformation of variables in order to reduce skewness and kurtosis and obtain normalized variables. The *ladder* command gives numerical statistics, where the intention is to choose the transformation with the smallest chi-square. The *gladder* command illustrates the same results graphically. The RESET-test is a general test for functional form in a multiple regression model. The null hypothesis indicates that the model is correctly specified, and an insignificant F statistic leads to a rejection of the null hypothesis, indicating functional form misspecification (Cameron & Trivedi 2010; Wooldrige 2009). All results from the testing for functional form in this study are presented in chapter 5.

4.7.2 Heteroskedastisity

Homoskedasticity is one important assumption in the classical linear regression model. It argues that the variance of each disturbance term u_i that appear in the regression should be a constant number equal to σ^2. In contrast, heteroskedastisity appears when the variance of u_i varies. Heteroskedasticity does not cause bias or inconsistency in the OLS estimators of the parameters, but the presence of heteroskedasticity violates the assumptions. This means that defaulted OLS standard errors are incorrect and OLS is no longer BLUE. In addition to these consequences, the t- and F-tests will no longer be valid in the presence of heteroskedasticity (Wooldrige 2009). Because of its consequences for further analysis and results, it is of interest to formally test whether heteroskedasticity is present or not in this study of Ecuadorian entrepreneurs. The Breusch-Pagan Larange multiplier test has been run through the command *estat hettest* in STATA (Cameron & Trivedi 2010). If the Breusch-Pagan gives a p-value of 0,05 or smaller, the hypothesis of homoscedasticity should be rejected and some corrective measure should be taken. The results from the testing are presented and discussed in chapter 5.

4.7.3 Multicollinearity

Originally multicollinearity was used to describe the existence of a perfect or exact, linear relationship among some or all independent variables in a regression model. In the case of perfect multicollinearity it would have been impossible to estimate the separate influence of different independent variables because the variables would have been indistinguishable. Even though OLS estimators retain the property of BLUE despite the presence of multicollinearity, one of the assumptions of the OLS is that there should be no perfect multicollinearity among the independent variables in the model, and there are some practical consequences of high multicollinearity making it relevant to test for it among the variables in a model. When multicollinearity is present, OLS estimators are likely to have large variance and covariance. Large variances and covariance make precise estimation difficult. Confidence intervals will also

tend to be much wider, and wide confidence intervals increase the probability of accepting a false hypothesis. In addition, OLS estimates and their standard errors become very sensitive to small changes in data when multicollinearity is present (Gurajati & Porter 2009). Few statistically significant t ratios and a high R^2 value measuring goodness of fit are often considered as the classical symptom of multicollinearity. As multicollinearity is a question of degree, the variance inflation factor (VIF) and pair-wise correlation are used to indicate multicollinearity among the variables in this study (Gurajati and Porter 2009). If these tests indicate multicollinearity some corrective measures should be done, such as dropping some variables. The results from the testing of multicollinearity are presented in chapter 5.

4.8 Expected signs of the variables

Based on previews research and theory discussed in chapter 3, there are some expectations on how explanatory variable will affect the dependent variable. These expectations are presented in this section.

i) Annual income

The entrepreneur´s annual income Y_x is chosen as the dependent variable for this study. Annual income has through theory been used as a measure of entrepreneurial success. It is supposed to be explained by access to capital, entrepreneurial skills as well as firm specific characteristics. The average income of disabled entrepreneurs is expected to be lower than for abled entrepreneurs as a result of their disability and limited access to capital. Also an entrepreneur coming from households where a member has a disability is expected to have lower income than entrepreneurs coming from households where disabilities are absent. The reason for why disabled entrepreneurs and entrepreneurs having a household member with a disability are expected to have lower income than the average population has been argued in previous sections. It can be a result of the use of money on medicine expenditures instead of business expansion, time consumption, physical obstacles etc.

ii) Amount of loan

Access to credit is significant for entrepreneurs running a business. It is therefore expected that income will increase when the loan amount increases. This positive relationship between the size of loan amount and income is expected to be significant for all entrepreneurs investigated in this study, regardless of the absence or presence of a disability. However, the affect on income is expected to be highest for entrepreneurs having a disability as a result of limited access to credit

elsewhere. On the other hand, abled entrepreneurs are expected to be better at utilizing the loan for practical reasons and to take advantages of business opportunities that appear.

iii) Number of loans taken

It is expected that the increasing number of loans taken, as a measure of the years of participation in a MFI, have a positive impact on annual income. This expectation is consistent with the theory, as it has been argued that the first loans taken and years of participation in a micro-credit program, have limited benefits. For all regressions done in this study regardless of disability, this is the expected outcome for the estimates.

iv) Credit elsewhere

As financial capital is found to be crucial for entrepreneurial success, a positive relationship between having credit elsewhere and annual income is expected. As discussed in chapter 3 credit has the same role as savings, and for poor people with marginal saving resources, credit becomes a substitute to missing savings. Having credit elsewhere is therefor expected to have a positive impact on income for all households, regardless of the presence or absence of a disability. However, the benefit from having credit elsewhere might be limited depending on where this credit is taken. The fact that there exist loan sharks in Ecuador and many poor people turn to them for credit, increase the risk for a loss of values due to their high interest rates. However, in *this* study only six entrepreneurs out of 250 admitted to have received loan from loan sharks, - four of these represented entrepreneurs from households where disability is present.

v) Years of education

Based on theory and literature discussed in chapter 3, years of education are expected to positively affect income. Education equips a person with knowledge that can be applied into the business situation making comparative advantages. However, since the majority of the firms investigated are small lowtechnology firms and the average years of education are about nine years for the total sample, the impact of education on annual income might be moderated and marginal. This expectation is applicable for all types of households investigated in this study. More important might be sector specific experience.

vi) Experience within the same sector

Experience within the same sector has been argued to have a positive affect on income because the entrepreneur can apply the experience to learn how to run his own business. As education

might be lacking, especially for entrepreneurs coming from marginalized and disabled households, experience has the ability to serve as a substitute for education. Experience should be transformed in a beneficial way to become knowledge and skills that significantly can affect annual income. Having sector specific experience is expected to have a positive impact on annual income, regardless of disability.

vii) Age

Results from previous studies on how the age of an entrepreneur affects annual income are inconclusive, making it challenging to give some expectations for this study. It has been found to positively affect business success as older entrepreneurs are assumed to hold more experience, training and knowledge, but at the same time it has been argued that increasing age reduce willingness to take risks. Despite these inconclusive results, it is in this study expected to find a positive relationship between age and annual income. However, the positive impact on income is expected to be decreasing and may even be negative as the entrepreneur gets older, especially for entrepreneurs who become disabled later in life.

viii) Role model

To have role models is expected to affect annual income positively. Empirical research argues that having parents being entrepreneurs is positively related to the possibility of entrepreneurial success. Entrepreneurial parents can give advice to their children in how to run a business, and by doing so, reduce the money and time spent on disadvantageous management and business to increase income. It has also been found that entrepreneurs tend to benefit more from role models having some similarities with themselves. Such similarities could be age, gender, type of business or disability, etc. To have a role model is expected to have a positive affect on annual income for all entrepreneurs included in the survey, regardless of the presence or absence of a disability. However, role models are expected to be especially important for disabled entrepreneurs if their role models are disabled as well. If the entrepreneurs then are able to adopt the successful processes practised by their role models, it can serve as a tool to cope with challenges due to their disability and thus increase annual income.

ix) Learning from others

The relationship between annual income and the advantage obtained by learning from others depend on the entrepreneur´s ability to transform what he learns into knowledge that is useful for his own business. It also depends on the information shared within the network. There has been

separated between strong and weak ties when discussing networks. Weak ties are defined as entrepreneurs´ relationships with hardly known persons, while strong ties are relationships with family members and friends. Because trust is limited in the Ecuadorian culture, the Ecuadorian culture challenges the possible benefits one could obtain by learning from others. The benefits and impact on annual income from weak ties where trust tends to be scarce are therefore expected to be limited or even negative. The impact on annual income from learning from others in strong tie relationships is, on the other hand, expected to be more likely to increase income. Generally one can say that the impact on annual income from learning from other is expected to vary for all entrepreneurs and is dependent on the characteristics of the network, the sharing of relevant information and a successful transformation into beneficial knowledge, - and not the presence or absence of a disability in the household.

x) Marital status

Having a spouse has been found to have a positive affect on an entrepreneur´s income. The reason for this is the support, motivation and advice an entrepreneur can receive from his or her partner in how to run the business. In addition a partner can help out in the firm with labour power. Being married is expected to have a positive affect on annual income for all entrepreneurs, and especially for the disabled ones.

xi) Gender

Gender is a control variable included in the model and is often considered to have an impact on annual income and entrepreneurial success. Female entrepreneurs tend to have a lower income than men, and this expectation holds also in the case of Ecuadorian entrepreneurs (Magill & Meyer 2005). There is, in other words, expected to be a negative relationship between income and gender, regardless of the entrepreneur´s characteristics concerning the absence or presence of a disability.

xii) Dependency ratio

The dependency ratio is the total household members divided by the working members in the household. Based on results from previous empirical research, the dependency ratio is expected to have a negative impact on annual income. When the dependency ratio increases, the household income is reduced. With less money available, it becomes more difficult to take advantage of business opportunities, and expand the business. As entrepreneurs coming from households where disabilities are present, the money available tends to be even scarcer because

of medicine expenditures. This means that an increasing dependency ratio is expected to reduce annual income.

xiii) Type of enterprise

The relationship between type of enterprise and annual income depends on supply and demand for a good or service. It has been argued that being engaged in non-agricultural sectors will positively affect annual income. In Ecuador the majority of people work within commerce and services, and being engaged in commerce has been reported to generate the highest income (Magill & Meyer 2005). However, the major challenge in these sectors is the competitive market with limited growth potential. With several actors supplying homogenous goods and services, the positive impact from investing in non-agricultural products is expected to be moderate. Only a small proportion of the population who live in the costal region in Ecuador, work within agriculture. This leads to fewer suppliers of agricultural goods in the market, giving them some market power. The climate also favours agricultural production in the coastal region in Ecuador. Based on this, it is expected to find a positive relationship also between engagement in agricultural sector and annual income.

xiv) Disability

Disability is expected to have a negative impact on annual income and previous research supports this assumption. Being blind, deaf, having movability or psychical problems are all considered as problems making it harder to take full advantage of business opportunities. When the entrepreneur himself is the disabled person in the household, the negative impact on annual income is expected to be strongest. Having a disabled child or partner is also expected to negatively affect income because both children and elderly persons being disabled demand care and money for medicines. Care taking is time consuming, and money for medicines reduce money available for use in own enterprise. Disability also affects the ability to help out in the enterprise, reducing the available labour power.

4.9 Data distribution

Table 4.5 provides the descriptive statistics for the total sample of the variables included in the model. From table 4.5 data on mean, standard deviation, and minimum and maximum values are listed. It has been separated between 4 groups of entrepreneurs: the total sample of entrepreneurs, entrepreneurs coming from households where disabilities are present, entrepreneurs coming from households where disabilities are absent, and finally for disabled

entrepreneurs. The tables providing descriptive statistics on the different types of households except for the total sample are included in the appendix. The number of respondents counts 250 in the total sample. For entrepreneurs coming from households where disability is present, there are 110 clients compared with 140 entrepreneurs coming from households where disability is absent. Among the 250 respondents, there are 57 disabled entrepreneurs.

The descriptive data shows that entrepreneurs coming from household where disability is absent, have an average annual income of 1.969,37 USD, - which is the highest average annual income among the groups of entrepreneurs investigated in this study. The highest annual income counting 8.3000 USD is also found among these entrepreneurs. The lowest average income is, on the other hand, found among disabled entrepreneur, and equals 1.587,10 USD. The lowest minimum annual income is 8.000 USD, and is found among both disabled households and disabled entrepreneurs. As discussed on chapter 3, disabled people are often found to have lower incomes than the rest of the population. From the descriptive statistics, the sample used in *this* study on Ecuadorian entrepreneurs, supports this result. For the total sample, the mean of annual income is 1.810,85 USD, the minimum annual income is 450 USD and the maximum annual income is 8.3000 USD. The mean size of the amount of loan taken is 1.533 USD for the total sample. Disabled entrepreneurs are the group of entrepreneurs with the highest mean value of loan. Their mean value of loan amount is 1.672, which is slightly higher than for the total sample. On average, the entrepreneurs have participated in D-Miro for around three years. The entrepreneurs that have received most loans from D-Miro have received loans in fifteen years. Only one third of the entrepreneurs have credit elsewhere (a mean value of around 0,3). On average the entrepreneurs have approximately nine years of education. The most educated entrepreneurs have 18 years studying, while those who are less educated have not studied at all. Disabled entrepreneurs seem to have the highest level of education. This is the opposite from what was expected due to theory where it has been argued that disability often works as an obstacle and limit the access to educational opportunities. The mean value of age is from 41,27 years old for households coming from households where disability is absent, to 45,40 years old for disabled entrepreneurs. The oldest entrepreneur is 70 years old and comes from a household where no member has a disability. The youngest entrepreneur is 19 years old and does also come from a household without disability. Descriptive data also indicate that most entrepreneurs work within sales and service sector, followed by handicrafts. Manufacture is the sector with the smallest engagement among the entrepreneurs. Disabled entrepreneurs account for the biggest part of persons being disabled in a household, followed by disabled children.

Table 4.5: Descriptive data: Total sample

Variable	Obs	Mean	Std. Dev.	Min	Max
Yx	250	1810,85	1099,597	450	8300
Loan	250	1533,66	666,744	301,19	4558,08
Time	250	3,23	2,446	1	15
CreditOther	250	0,32	0,468	0	1
Edu	250	9,46	3,855	0	18
Age	250	42,75	11,222	19	70
ExpArea	250	0,74	0,439	0	1
Rolemodel	250	0,80	0,397	0	1
NetworkLearning	250	0,77	0,420	0	1
Status	250	0,61	0,488	0	1
Gender	250	0,58	0,493	0	1
depratio	250	2,41	1,160	1	7
EnterpAgric	250	0,04	0,196	0	1
EnterpManuf	250	0,02	0,140	0	1
EnterpHandic	250	0,06	0,252	0	1
EnterpSaleService	250	0,85	0,355	0	1
EnterpOther	250	0,03	0,176	0	1
DisabHouse	250	0,44	0,497	0	1
PartnerDis	250	0,08	0,283	0	1
ChildrDis	250	0,15	0,363	0	1
EntrepDisability	250	0,22	0,420	0	1

Source: Field study 2013

i) Annual income

The distribution of annual income is shown in table 4.6. The distribution of the entrepreneurs´ income is presented for the whole sample and for the disabled households, abled households and disabled entrepreneurs separately. From the table one can see that the majority of entrepreneurs have an annual income between 450 USD and 2.450 USD. Disabled entrepreneurs and entrepreneurs coming from households where a member has a disability, are the two groups of entrepreneurs with the largest share of income within the lowest income levels.

Table 4.6 Distribution of annual income

Annual income	Total sample		Disab. HH.		Abled. HH		Disab. entrep.	
	Freq	%	Freq.	%	Freq.	%	Freq.	%
450-950	36	14%	23	21%	13	9%	15	26%
951- 1450	65	26%	34	31%	31	22%	18	32%
1451-1950	71	28%	28	25%	43	31%	12	21%
1951-2450	39	16%	11	10%	28	20%	4	7%
2451-2950	16	6%	8	7%	8	6%	5	9%
2951-3450	8	3%	1	1%	7	5%	0	0%
3451-3950	4	2%	1	1%	3	2%	0	0%
3951-4450	5	2%	3	3%	2	1%	2	4%
4451-4950	1	0,2%	0	0%	1	1%	0	0%
4951-5450	0	0%	0	0%	0	0%	0	0%
5451-5950	0	0%	0	0%	0	0%	0	0%
5951-6450	2	0,8%	0	0%	2	1%	0	0%
6451-6950	0	0%	0	0%	0	0%	0	0%
6951-7451	0	0%	0	0%	0	0%	0	0%
7451-7950	3	1%	0	0%	2	1%	0	0%
7951-8451	3	1%	1	1%	2	1%	1	2%
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field survey 2013

ii) Size of loan amount

In table 4.7 the distribution of loan size is illustrated for the different groups of entrepreneurs. As one can see, the majority of the entrepreneurs have loan amount that equal somewhere between 300USD and 2.700USD. The sizes of the loan amounts are more or less equally distributed among the entrepreneurs, regardless of the presence or absence of a disability, and disabled entrepreneurs are the entrepreneurs with the highest average loan amount due to descriptive data illustrated in section 4.7.

Table 4.7 Distribution of loan size

Loan size	Total sample		Disab. HH		Abled. HH.		Disab. entrep.	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
301-1500	122	48,5%	55	50%	67	48%	28	50%
1501-2700	124	50%	51	46%	73	52%	25	43%
2701-3900	1	0,5%	1	1%	0	0%	1	2%
3901-4600	3	1%	3	3%	0	0%	3	5%
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field survey 2013

iii) Number of loans received in D-Miro

The majority of the studied entrepreneurs have received between one and five loans in D-Miro. However, there are also entrepreneurs that have participated in microcredit programs for a much longer lime, and received from 11 to 15 loans.

Table 4.8 Number of loans in D-Miro

Loans in D-Miro	Total sample		Disab. HH.		Abled. HH		Disab. entrep.	
	Freq.	%.	Freq.	%	Freq.	%	Freq.	%
1-5	214	85,60%	96	87,27%	118	84,28%	53	92,98%
6-10	30	12,00%	10	9,09%	20	14,28%	3	5,26%
11-15	6	2,40%	4	3,63%	2	1,42%	1	1,75%
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field Survey 2013

iv) To have credit elsewhere

Table 4.9 illustrates the distribution of the entrepreneurs that have credit in other places in addition to D-Miro. Regardless of disability, the majority of the entrepreneurs do not have credit elsewhere, and in the total sample of entrepreneurs, only 32 % of the participants have credit elsewhere. For disable entrepreneurs this percentage is only 26%. However, it is important to take into account that not all entrepreneurs might have answered the question truthfully. There is a risk due to a lacking willingness to admit having loans elsewhere, making the ratios not entirely realistic.

Table 4.9: Having credit elsewhere

Credit elsewhere	Total sample		Disab. HH.		Abled HH.		Disab. entrep.	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Not credit elsewhere	169	68 %	74	67 %	95	68 %	42	74 %
Has credit elsewhere	81	32 %	36	33 %	45	32 %	15	26 %
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field survey 2013

v) Age

Table 4.10 shows the distribution of age among the entrepreneurs. The age varies from 19 to 70 years old. The majority are between 33 and 53 years old in all groups, and with 21% of the entrepreneurs in the total sample being between 47 and 53 years old. For disabled households, about 26% of the entrepreneurs are between 47 and 53 years old, making up the largest share of total number of these entrepreneurs. Also among disabled entrepreneurs, the most common age is between 47-53 years. For abled households, the largest share of entrepreneurs is between 33 and 39 years old.

Table 4.10: Distribution on age of entrepreneurs

Age	Total sample		Disab. HH .		Abled HH		Disab. entrep.	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
19-25	14	6 %	5	5 %	9	6 %	2	3 %
26-32	32	13 %	12	11 %	20	15 %	6	10 %
33-39	59	24 %	18	16 %	41	29 %	10	18 %
40-46	51	20 %	24	22 %	27	19 %	9	16 %
47-53	52	21 %	29	26 %	23	17 %	17	30 %
54-60	23	9 %	10	9 %	13	9 %	7	12 %
61-70	19	7 %	12	11 %	7	5 %	6	11 %
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field Survey 2013

vi) Years of study

Years of education vary among the entrepreneurs surveyed. The distribution of education is shown in table 4.11. The majority in all four cases has studied 6 years or 12 years. This indicates that the majority lack education on a higher level. The highest number of years studied is 18 years, but only a small percentage of the clients surveyed have reached this educational level.

Table 4.11: Distribution of education

Education	Total sample		Disab. HH.		Abled HH.		Disab. entrep.	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
0	1	0,40%	0	0,00%	1	0,71%	0	0,00%
1	0	0,00%	0	0,00%	0	0,00%	0	0,00%
2	7	2,80%	4	3,64%	3	2,14%	1	1,75%
3	5	2,00%	4	3,64%	1	0,71%	3	5,26%
4	6	2,40%	5	4,55%	1	0,71%	3	5,26%
5	0	0,00%	0	0,00%	0	0,00%	0	0,00%
6	80	32,00%	32	29,05%	48	34,29%	18	31,58%
7	3	1,20%	0	0,00%	3	2,14%	0	0,00%
8	7	2,80%	2	1,82%	5	3,57%	2	3,51%
9	11	4,40%	3	3,64%	8	5,71%	1	1,75%
10	8	3,20%	2	1,82%	6	4,29%	1	1,75%
11	3	1,20%	0	0,00%	3	2,14%	0	0,00%
12	86	34,40%	42	38,18%	44	31,43%	20	35,09%
13	3	1,20%	0	0,00%	3	2,14%	0	0,00%
14	7	2,80%	2	1,82%	5	3,57%	2	3,51%
15	8	3,20	4	3,64%	4	2,86%	2	3,51%
16	7	2,80%	3	2,73%	4	2,86%	1	1,75%
17	2	0,80%	1	0,90%	1	0,71%	0	0,00%
18	6	2,40%	6	5,45%	0	0,00%	3	5,26%
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field survey 2013

vii) Experience within the same sector

Table 4.12 gives an overview of the distribution of the variable indicating if the entrepreneurs have experience within the same sectors as he or she is engaged in through own enterprise. The majority of the entrepreneurs surveyed have responded that they do have experience within the same sector as they are working now from previews job experiences. Especially entrepreneurs and entrepreneurs coming from households that have a disability have experience from the same sector. This is illustrated in table 4.12.

Table 4.12 Distribution of experience within the same sector

Sector experience	Total sample		Disab. HH		Abled HH		Disab. entrep.	
	Freq	%	Freq	%	Freq	%	Freq	%
Experience	185	74%	86	78 %	99	71 %	48	84 %
No exp.	65	26%	24	22 %	41	29 %	9	16 %
Total	250	100%	110	100%	140	100%	57	100%

Source: Field Survey 2013

viii) Learning from others

The majority of the entrepreneurs respond that they do learn important thing in how to run their business from others. Especially disable entrepreneurs and entrepreneurs that come from household where a member is disabled seems to learn from other. The distribution is shown in table 4.13.

Table 4.13 Distribution of learning from others

Learning from others	Total sample		Disabl. HH		Abled HH.		Disab. entrep.	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Learning	193	77 %	93	85 %	100	71 %	50	88 %
Not learn.	57	23 %	17	15 %	40	29 %	7	12 %%
Total	250	100%	110	100%	140	100%	57	100%

Source: Field survey 2013

ix) Role models

About 80 % of the entrepreneurs in the total sample says that they do have entrepreneurial role models. These role models are parents, siblings and friends. Since many poor people turn to self-

employment to get an income, this is as expected. The share of total number of entrepreneurs coming from abled households that do have entrepreneurial role models are even larger, at a 83% level. The distribution of the presence of role models depending on the different types of households is listed in table 4.14.

Table 4.14: Distribution of role models

Role model	Total sample		Disab. HH		Abled HH		Disab. entrep.	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Rolemodel	201	80 %	84	76 %	117	84 %	46	81 %
No rolemodel	49	20 %	26	24 %	23	16 %	11	19 %
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field survey 2013

x) Marital status

In table 4.15 the distribution of marital status is presented. In the total sample of entrepreneurs studied, 61 % is married, while only 37 % of disabled entrepreneurs are married. Entrepreneurs coming from a household where a member has a disability, 55 % are married. About 66 % of the entrepreneurs coming from abled households are married. This distribution indicates that disabled entrepreneurs are the only category of the groups studied where the majority are single.

Table 4.15: Distribution of marital status

Marital status	Total sample		Disab. HH		Abled HH.		Disab. entrep.	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Single	97	39 %	49	45 %	48	34 %	36	63 %
Married	153	61 %	61	55 %	99	66%	21	37 %
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field survey 2013

xi) Engagement in different types of business sectors

Among the surveyed entrepreneurs the majority are engaged within the sector of sales and services. Among entrepreneurs coming from households where no member has a disability, as much as 90% are working in this sector. As this survey is done on entrepreneurs living in the

costal region of Ecuador, it is as expected that agriculture activities are relatively limited since the majority live in urban areas. The total distribution can be studied in table 4.16.

Table 4.16: Type of business venture

Type of business	Total sample		Disab. HH		Abled HH		Disab. entrep.	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Agriculture	14	6 %	11	10 %	3	2 %	6	11 %
Handicrafts	17	7 %	9	8 %	8	6 %	6	11 %
Manufacture	5	2 %	4	4 %	1	1 %	4	7 %
SalesService	208	83 %	81	74 %	127	90 %	38	66 %
Other	6	2 %	5	4 %	1	1 %	3	5 %
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field survey 2013

xii) Dependency ratio

Dependency ratio measures the total number of people living in the household divided by the number of people in the household working. Table 4.17 shows the distribution of dependency ratio in the different types of households. As the table shows, the majority of the households have a dependency ratio between 2 and 3,99. This means that in the majority of households, there are between two and four persons that are dependent upon the income generated by the entrepreneur.

Table 4.17: Distribution of dependency ratio

Dependency ratio	Total sample		Disab. HH		Abled HH		Disab. entrep.	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
0-1,99	75	30 %	35	32 %	40	29 %	24	42 %
2-3,99	142	57 %	56	51 %	86	61 %	23	40 %
4-5,99	27	11 %	16	14 %	11	8 %	8	14 %
6-7	6	2 %	3	3 %	3	2 %	2	4 %
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field survey 2013

xiii) Gender

Female entrepreneurs represent 58 % of the total sample. For both entrepreneurs coming from households where a member has a disability, and for those coming from households where no member has a disability, female entrepreneurs represent the majority. Only among disabled entrepreneurs are men representing the highest proportion, with 58% of the total sample of disabled entrepreneurs, against 42% disabled women. The distribution of gender is listed in table 4.18.

Table 4.18: Distribution of gender

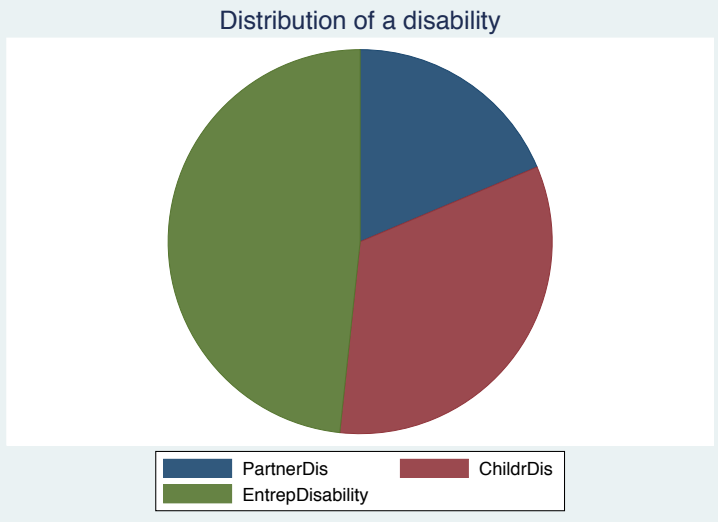
Gender	Total sample		Disab. HH		Abled HH.		Disab. entrep.	
	Freq	%	Freq	%	Freq	%	Freq	%
Female	146	58 %	60	55 %	86	61 %	24	42 %
Male	104	42 %	50	45 %	54	39 %	33	58 %
Sum	250	100%	110	100%	140	100%	57	100%

Source: Field survey 2013

xiv) Disability

In figure 4.1 the distribution of disability between the entrepreneur himself, his partner and his child is illustrated. Entrepreneurs represent the majority of disabled persons, followed by disabled children.

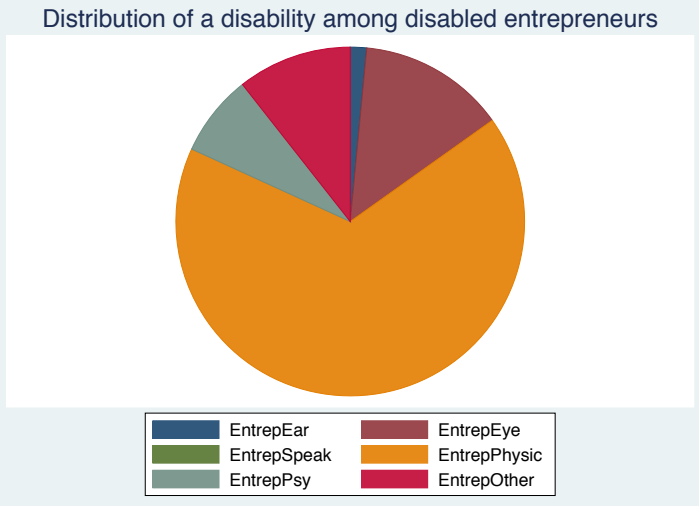
Figure 4.1: Distribution of disability among entrepreneur, child and partner



Source: Field survey 2013

Figure 4.2 illustrates how different types of disabilities are separated and distributed between visual, hearing, speaking, physical and psychical problems respectively among disabled entrepreneurs. From the figure one can easily see that physical impairment is the most common form for disability among disabled entrepreneurs.

Figure 4.2: Distribution of different types of disability among entrepreneurs



Source: Field survey 2013

Chapter 5

5.0 Models, results and discussion

One economic model is specified to analyse the relationship between financial, human and social capital, and entrepreneurial success. Special effort has been put into investigating the differences in factors that determine success, depending on the presence or absence of a disability in the household where the entrepreneurs live. The left-hand-side variable in the model, Y_x, is defined as annual income received by the entrepreneur from his own business. This variable has been transformed into natural log, and takes the form lnY_x. Data from the survey has been analysed through multiple regression models by using OLS. This chapter starts by presenting the regression models and the result from the belonging regression diagnostics. After this presentation follows a discussion of the regression results. STATA version 12 was used as econometric software for all data entry, descriptive statistics, regression diagnostics and econometric estimation.

5.1 Goodness of fit (R^2-values) and F-test

As indicated in chapter 4.6, the F static and its belonging p-value are important indicators revealing if the regression model and the regressed explanatory variables are significant in explaining variation in the dependent variable. For this study, the F values are 5,78 for the regression model including the total sample of entrepreneurs, it is 1,79 for the regression model for disabled households, 4,59 for abled households and 2,89 for the model including disabled entrepreneurs only. The corresponding p-values are 0,0001 for the total sample, 0,0487 for disable households, 0,000 for not disable households and 0,0031 for the sample of disable entrepreneurs. All these F- and p-values indicate that the models are statistically significant in explaining variation in entrepreneurial success. This conclusion provides strong evidences that at least one of the model coefficients is nonzero. The R^2 statistics for the models are the second way of evaluating the goodness of fit. This statistic for the total sample is 0,2463, meaning that about 25% of the variation in annual income is explained by the variables included in the model. The R^2 for disabled households indicates that about 21% of the variation is explained through the variables included, while for entrepreneurs coming from abled households, the variation explained by the included variables in the regression model is slightly higher and settled at 27%. For disabled entrepreneurs R^2 is even higher, capturing as much as 47 % of the variation in annual income.

5.2 Regression diagnostics

In this section the different results from regression diagnostics and testing the models are presented. It has been tested for functional form and normality, heteroskedasticity and multicollinerity.

5.2.1 Functional form

In this study a mixed functional form was selected to identify the relationship between financial, human and social capital, and income. By running the *ladder* command in STATA the best transformation for the variables due to normality will be revealed. Annual income was suggested transformed into natural log, since log- transformation represented the lowest chi^2 -value (11,46) and the highest p-value (0,003). This means that log would be the best normalizing transformation for annual income. In addition, the *gladder* command was run to graphically illustrate the differences between the transformations. Also the results from *gladder* confirmed that annual income should be transformed into natural log. The advantage of transforming into natural logs is the easy way to give an interpretation of the meaning of the coefficients. Logarithmic transformation is therefore frequently used. With both independent and dependent variables measured as logarithms, the slope coefficient β measures the elasticity of Y with respect to X, that is the percentage change in Y given a small percentage change in X. By running the *ladder* and *gladder* commands for the independent variables as well, it was suggested that some variables should be transformed into squared roots, while others into natural logs. Both logarithms and square roots are often used with the intention to change the variables´ distributions´ shape, reduce skewedness and increase symmetric and normal distribution. The variables measuring age, education, and number of loans receives from D-Miro, were transformed into square root variables, while dependency ratio and loan size were transformed into natural logs. The choices of transformations are based on the p-values and chi^2- values given by *ladder* command in STATA, and supported by the graphs given through the *gladder* command. None of the dummy variables are transformed, as an assumption of normality would be unreasonable. Together these transformations make up a mixed model for the relationship between financial, human, and social capital, and annual income by the entrepreneur. The p-values obtained from Ramsey RESET test to reveal specification errors are all rejecting the hypothesis saying that the models suffer from misspecification errors and/or omitted variables. For the total sample $F(3, 229) = 0,34$ and $Prob > F = 0,7940$. For the model estimated for entrepreneurs coming from households where a member has a disability, the results after Ramsey´s RESET test were $F (3, 92) = 0,54$ with a probability of $Prob > F = 0,6574$. For

entrepreneurs coming from household where disability is absent, F (3,122)=0,87 and Prob > F= 0,4569. And finally the model estimated for disabled entrepreneurs have F (3, 37) = 0,40 and Prob > F = 0,7565.

5.2.2 Heteroskedasticity

To secure BLUE estimates and valid t and F-tests, it is important to test for and, if necessary, correct for heteroskedasticity in the regression models. Heteroskedasticity has bee defined in section 4.7.2 as a situation where the variance in the disturbance term is not constant but vary. To test for heteroskedasticity in this study, the Breusch-Pagan test is performed using the command *hettest* in STATA. For the total sample of entrepreneurs, the p-value obtained from Breusch-Pagan was 0,0498. Since 0,0498 is under the critical value of 0,05, this p-value indicates that heteroskedasticity might be a problem that should be corrected for. With a p-value of 0,0158 obtained from *hettest* in STATA for entrepreneurs coming from abled households, the hypothesis of homoscedasticity again is rejected. From the Breusch-Pagan test for entrepreneurs coming from households where a member does have a disability, the p-value is 0,9317, indicating homoscedasticity and no need for any correction. Finally, for the regression done on disable entrepreneurs, the p-value from Breusch-Pagan is 0,0027, which indicates heteroskedasticity. To correct for heteroskedasticity in three of the models where heteroskedasticity was revealed as a problem, these specific regression models are run with robust standard deviations.

5.2.3 Multicollinearity

As discussed in 4.7.3 the regression models have been tested for multicollinearity to avoid any nearly perfect linear relationship among the variables. In this study there are included variables within financial, human and social capital with the intention to explain entrepreneurs´ income. It is likely to believe that some of the variables will be related to each other, e.g. loan size is a function of income, and not the other way around. In this study, two different methods have been adopted to check for multicollinearity. Firstly a pair-wised correlation matrix was run to identify correlation between the variables. From using this method no serious correlation between the variables was detected. Secondly the variance inflator factor (VIF)-test was run to check for multicollinearity. This test indicated high VIF-values for sector dummy variables. The high VIF-values therefore revealed the presence of multicollinearity, which resulted in removal of some variables to secure BLUE estimated. Examples of variables that were removed are *EnterpOther* and *EnterpManu*. After correcting for multicollinearity by dropping these variables, the mean VIF-values where 1,44, 1,41, 2,08 and 1,59 for the whole sample, entrepreneurs coming from

disabled household, entrepreneurs coming from abled household, and disabled entrepreneurs respectively. It is therefor possible to continue with the assumption of BLUE estimates.

5.3 Econometric models

One econometric model is specified to analyse the relationship between financial, human and social capital, and entrepreneurial success measured as annual income. The variables included in the model are chosen based on previous theory and literature reviewed in chapter 3. The left hand-side variable Y_x is defined as annual income and is transformed into a natural log variable. As discussed in section 5.2.1, some of the explanatory variables are transformed into natural logs, and others into squared roots. Dummy variables are not transformed.

$$\begin{aligned} lnY_x = {} & \beta_0 + \beta_1 lnLoan + \beta_2 sqrtTime + \beta_3 CreditOther + \beta_4 sqrtAge \\ & + \beta_5 sqrtEdu + \beta_6 ExpArea + \beta_7 Rolemodel + \beta_8 NetwoekLearning \\ & + \beta_9 Status + \beta_{10} Gender + \beta_{11} EnterpHandic + \beta_{12} EnterpSalesService \\ & + \beta_{13} EnterpAgric + \beta_{14} lndepratio + \beta_{15} ChildrDis + \beta_{16} PartnerDis \\ & + \beta_{16} EntrepDisability + u_i \end{aligned} \qquad (5.1)$$

The different β_i are the parameter estimates, u_i is an error term, while *ln* denotes the natural log and *sqrt* the square root. All variables are defined in section 4.4. To identify the relationship between the different explanatory variables and annual income when the entrepreneur is the disable person, *EntrepDisability* takes the value of 1.

As this study aim to identify if there are any differences in variables determining annual income depending on the presence or absence of a disability also in the household where the entrepreneur lives, a dummy variable are introduced to the econometric model (5.2). This variable; *DisabHouse*, takes the value of 1 if the entrepreneur comes from a household where a member has a disability, and 0 if not. The disabled person in the household could be a child, partner or the entrepreneur himself.

$$\begin{aligned} lnY_x = {} & \beta_0 + \beta_1 lnLoan + \beta_2 sqrtTime + \beta_3 CreditOther + \beta_4 sqrtAge \\ & + \beta_5 sqrtEdu + \beta_6 ExpArea + \beta_7 Rolemodel + \beta_8 NetwoekLearning \\ & + \beta_9 Status + \beta_{10} Gender + \beta_{11} EnterpHandic + \beta_{12} EnterpSalesService \\ & + \beta_{13} EnterpAgric + \beta_{14} lndepratio + u_i \quad if\ DisabHouse == value\ 1\ or\ 0 \end{aligned} \qquad (5.2)$$

Table 5.1 presents the results of the estimation for the total sample. The results from the regression models for entrepreneurs coming from disable households are presented in table 5.2, while results for entrepreneurs coming from abled households can be found in table 5.3. The estimates from the regression done on disabled entrepreneurs are introduced in table 5.4.

5.4 Results

This section presents the results of the estimation of the regression models (5.1) and (5.2) for the different entrepreneurs due to the presence or absence of a disability. The coefficient values, their signs and significance, as well as the interpretation of the elasticity are discussed in the following sections.

5.4.1 Total sample: determinants of entrepreneurial success

As discussed in section 5.1 the model is found to be statistically significant and does succeed in explaining some of the variation in the dependent variable. After correcting for heteroskedasticity and multicollinearity detected through diagnostic tests, the estimates are BLUE. The t-statistics, p- values and coefficients of the explanatory variables are presented in table 5.1. All variables have the expected signs, except from *Rolemodel* and *NetworkLearning*.

The first implication that one get from the regression results for the total sample is that disability is statistically significant in explaining variation in annual income. All three variables that measure disability in a household are found to negatively affect entrepreneurial success. This finding is illustrates the importance of putting more effort into the study of the relationship between disability and annual income, and the result is supported by theory discussed in chapter 2 and 3. Having a disabled child (*ChildrDis)* or partner (*PartnerDis*) is statistically significant at a 5% level and reduces annual income by 20%. Also the entrepreneur being the disabled one, reduces annual income by 20% with a statistically significance of 1%. Several circumstances can be discussed as explanations for the negative relationship between disability and annual income. Being disabled or having a family member who is disabled requires medicines that result in expenditures that abled families avoid. Being forced to spend money on health care and medicines reduces the money available to invest and expand own enterprise. Another reason worthwhile to consider is the time spent on taking care of a disabled child or partner that makes the time available to run the business short. Geographical limitations can also serve as an explanation for the negative relationship between annual income and disability because the presence of a disability might force the entrepreneur to establish his business close to home and

not where the demand is strongest. With a strong supply of homogenous goods and services, such geographical limitation can increase market competition, reduce the sale and thereby reduce annual income. Finally, the disability it self is an explanation for the negative relationship between income and disability. The presence of a disability is assumed to limit business opportunities because disabilities often affect both social and human capital, as well as the ability to take advantage of business opportunities as a consequence of physical or psychical obstacles.

Two out of three variables defining financial capital are statistically significant in explaining variation in income in the total sample of the studied entrepreneurs. The amount of credit taken in D-Miro is found to be statistically significant at a 1% level with a coefficient of *lnLoan* of 0,294 stating that by increasing the size of the loan taken in D-Miro by 1%, the annual income will increase by 0,294%. The second significant variable is *CreditOther*. This variable is statistically significant at a 1% level with a corresponding coefficient of 0,220. This means that having credit elsewhere will increase annual income by 24% after the calculation $e^{0,220} = 1,24\%$. These results are supported by previous research revealing that access to financial capital is crucial to run a business and take advantages of business opportunities, expand and increase productivity.

Two of three variables defining human capital are statistically significant in explaining variation in annual income. Having sector specific experience (*ExpArea*) and the number of years of education (*sqrtEdu*) are positively related to entrepreneurial success. Both education and experience in the sector equip entrepreneurs with knowledge and skills in how to run a business, and can reduce time consumption and expenditures from trying and failing. The variables *sqrtEdu* and *ExpArea* are both statistically significant at a 10% level and their coefficients are 0,059 and 0,123 respectively. Increasing the squared root number of years studying will increase annual income by 5%, while having experience within the same area increase income by 13%. The positive relationship between human capital and annual income is supported by the theory and literature available.

From the regression results for the total sample of entrepreneurs studied, only one variable representing social capital is statistically significant in determining entrepreneurial income. Marital status has been found to be statistically significant at a 5% level, and has a coefficient of 0,134. This means that being married positively affects and increase income by $e^{0,134} = 1,14 =$

14%. Being married can be considered as a network of strong ties where trust is present, a relationship from where the entrepreneur can get support and advice in how to run a business, and where the information being shared is likely to be beneficial for the firm.

Among the control variables included in the model, one sector variable is statistically significant in explaining variation in annual income for the total sample of entrepreneurs. Being engaged in agriculture is found to increase annual income by 37% at a significant level of 5%. The climate in the costal region of Ecuador is favouring agricultural production, and the share of entrepreneurs being engaged in this specific sector is limited. This might result in higher demand compared to low supply of agricultural goods, giving entrepreneurs who are investing in this sector some financial benefits.

Table 5.1: Regression results of total sample

Linear regression		Number of obs = 249 F(17, 232) = 5.78 Prob > F = 0.0001 R-squared = 0.2463 Root MSE = .43705	
	Coef.	t	P>t
lnLoan	.294	4.25***	0.000
sqrtTime	.064	1.24	0.217
CreditOther	.220	3.32***	0.001
sqrtAge	.028	0.89	0.375
sqrtEdu	.059	1.69*	0.092
ExpArea	.123	1.64*	0.103
Rolemodel	-.078	-0.91	0.365
NetworkLearning	-.103	-1.42	0.158
Status	.134	1.91**	0.058
Gender	-.022	-0.38	0.707
EnterpHandic	.025	0.17	0.862
EnterpSalesService	.138	1.29	0.199
EnterpAgric	.319	2.20**	0.029
lndepratio	-.056	-0.96	0.339
EntrepDisability	-.186	-2.42***	0.016
ChildrDis	-.185	-2.34**	0.020
PartnerDis	-.186	-1.99**	0.048
Constant	4.678	8.94***	0.000

Note: ***, ** and * mean statistically significant at the 1%, 5% and 10% levels respectively (STATA output).

5.4.2 Disabled households: determinants of entrepreneurial success

Table 5.2 presents the relationships between the different types of capital and an entrepreneur´s annual income for entrepreneurs coming from households where a disability is present (5.2). As discussed in section 5.2.1, the model is statistically significant in explaining variation in annual income, and the explanatory variables explain 21 % of this variation. In table 5.2 the p-values and t-statistics for each variable in the model are presented to indicate the level of statistical significance. The coefficients presented in the table, indicate how the explanatory variables will affect entrepreneurial success. Except for *Rolemodel,* all other variables have the expected signs. However, among the regression results in table 5.2 only three out of fourteen variables have a significant impact on annual income on a significance level of 1%, 5% or 10%.

First, one variable defining financial capital is found to statistically determine entrepreneurial success. This variable is the amount of loan taken in D-Miro (*lnLoan*), and it has a positive impact on annual income lnY_x. A 1% increase in loan size, leads to a 0,19% increase in annual income. This observation is supported by several empirical studies on the relationship between micro credit and income that have identified and argued the importance of micro credit for income generation. Secondly, social capital is again found to have a positive impact on annual income through marital status. The positive coefficient on *Status* is significant at the 1% level, indicating that being married will lead to a 38 % increase in annual income lnY_x. A 38% increase in income for entrepreneurs coming from household where disability is present, is slightly higher than the 18% increase that was identified for the total sample of entrepreneurs. This indicates that being married has a stronger affect on income among entrepreneurs coming from a household where a member has a disability. The relationship and arguments behind this finding will be more deeply discussed later on. Finally the control variable *lndepratio* is the last variable that is statistically significant among the regression results for entrepreneurs coming from households where disability is present. The *lndepratio* has as expected a negative impact on annual income, and from the regression results it is stated that a 1% increase in dependency ratio reduces annual income by 0,21%. The rest of the variables are not statistically significant in explaining variation in annual income.

Table 5.2: Regression results of disabled households

		Number of obs = 109 F(14, 95) = 1.79 Prob > F = 0.0487 R-squared = 0.2100 Adj R-squared = 0.0936 Root MSE = .4534	
	Coef.	t	P>t
lnLoan	.239	2.37***	0.020
sqrtTime	.028	0.37	0.715
CreditOther	.152	1.56	0.123
sqrtAge	.014	0.26	0.796
sqrtEdu	.080	1.21	0.229
ExpArea	.090	0.75	0.456
Rolemodel	-.134	-1.22	0.227
NetworkLearning	.083	0.63	0.527
Status	.269	2.91***	0.004
Gender	-.027	-0.30	0.767
EnterpHandic	.004	0.02	0.984
EnterpSalesService	.077	0.45	0.650
EnterpAgric	.343	1.49	0.138
lndepratio	-.226	-2.21**	0.030
Constant	5.013	5.92***	0.000

Note: ***, ** and * mean statistically significant at the 1%, 5% and 10% levels respectively (STATA output).

5.4.3 Abled households: determinants of entrepreneurial success

Table 5.3 presents the relationship between variables within the different types of capital, and annual income for entrepreneurs coming from households where disability is absent. The model diagnostics indicated that the model should be corrected for heteroskedasticity and multicollinearity. This correction has been done through robust standard errors and elimination of correlated variables, thus the estimates are BLUE. About 27% of the variation in annual income is in this case explained though the variables included in the model. This is slightly higher compared with the R^2 values from the previous two models. All variables have the expected impact on annual income, except for *Rolemodel*, *NetworkLearning* and *lndepratio*. Among these three variables, only *lndepratio* is statistically significant in explaining variation in annual income.

Loan amount (*lnLoan*) is again statistically significant at a 1 % level in explaining variation in annual income lnY_x. With a coefficient of 0,341, a 1% increase the amount of loan taken in D-Miro is assumed to increase annual income with 0,341%. This is a stronger increase than what was found among the two previous regression results for the total sample of entrepreneurs, and those coming from disabled households. This might indicate that entrepreneurs coming from abled households have a stronger demand for credit, and therefore benefit more from an increase in loan amount, or that these entrepreneurs use their credit in a more efficient way compared to the total sample and the entrepreneurs coming from disabled households. Having credit elsewhere (*CreditOther*) is also highly significant at a 1% level in explaining entrepreneurial success. The positive sign of the coefficient shows that having credit elsewhere will increase income by 30% after the calculation $e^{0,269}$ = 1,30%. The regression results for loan amount and distribution of credit indicate that financial capital, also in the case of entrepreneurs coming from households where disability is absent, plays a virtual role in determining annual income. The regression results continuously identify that learning from others in networks (*NetworkLearning)* is statistically significant in explaining annual income. This variable, representing social capital, is negatively related to annual income with a coefficient value of -0,158, and learning from others therefore reduces annual income with 17%. The negative affect of learning from others on annual income can be a result of the presence of weak ties within the network, resulting in a lack of trust and willingness to share valuable information that provide comparative advantages, limited information flow and unsuccessful transformation of information into knowledge. Among the control variables included in the model, the regression results for EntrepSalesService is statistically significant at a 5% level. Being engaged in the sector of sales and service increases annual income by 26%. Investment in non-agricultural sector is in general considered to positively affect income, and the regression result is supported by this assumption. The other variables included in the model are insignificant in explaining entrepreneurial success.

Table 5.3: Regression results of abled households

Linear regression		Number of obs = 140 F(14, 125) = 4.59 Prob > F = 0.0000 R-squared = 0.2718 Root MSE = .42886	
	Coef.	t	P>t
lnLoan	.341	3.86***	0.000
sqrtTime	.087	1.37	0.174
CreditOther	.269	2.85***	0.005
sqrtAge	.020	0.41	0.681
sqrtEdu	.040	0.72	0.473
ExpArea	.144	1.51	0.133
Rolemodel	-.046	-0.36	0.717
NetworkLearning	-.158	-1.68*	0.095
Status	.020	0.25	0.803
Gender	-.075	-0.85	0.396
EnterpHandic	.028	0.14	0.892
EnterpSalesService	.233	1.86**	0.066
EnterpAgric	.349	1.27	0.207
lndepratio	.020	0.27	0.787
Constant	4.348	6.09***	0.000

Note: ***, ** and * mean statistically significant at the 1%, 5% and 10% levels respectively (STATA output).

5.4.4 Disabled entrepreneurs: determinants of entrepreneurial success

To investigate the relationship between financial, human and social capital and annual income for disabled entrepreneurs, the model was run on a sample of disable entrepreneurs only (57 observations). All variables have the expected direction of impact on annual income, except for *Rolemodel*, *ExpArea* and *PartnerDis*. About 47% of the variation in annual income is explained by the variables included in the model. This is the highest degree of explanation compared with the previous models in *this* study.

The loan amount taken in D-Miro (*lnLoan)* is again found to be statistically significant in affecting annual income. It is significant at the 1 % level, and has a coefficient of 0,370 which suggests that a 1% increase in loan size will increase annual income by 0,37%. Disabled entrepreneurs are the group of entrepreneurs found to have the strongest increase in income due to a 1% increase in loan amount, followed by entrepreneurs coming from households where a disability is absent. These results might be explained by the high need for credit among disabled

entrepreneurs as they often tend to lack the possibility to save money. Secondly, this finding might indicate that entrepreneurs who have a partner or a child with a disability are prevented from using credit in the most efficient way to exploit all opportunities. The regression results show that *CreditOther* is also found to be statistically significant at a 1% level and that is positively related to entrepreneurial success. Having credit elsewhere will increase annual income by 62%. Disabled entrepreneurs are the group of entrepreneurs that increase their annual income the most when having credit elsewhere, revealing a high demand for credit. These results indicate that financial capital again plays a crucial role for entrepreneurial success. Among the variables defining social capital, *Status* is statistically significant at the 5% level in explaining the variation in annual income. The positive coefficient of 0,442 shows that being married increases annual income by as much as 55%. This means that for both disabled entrepreneurs and entrepreneurs coming from households where disability is present, marital status has been found to have a positive and statistically significant impact on annual income. This can be an indication showing that for entrepreneurs having a disability, support and help from spouse is crucial to be able to run their business successfully, and the presence of a disability in a household seems to increase the necessity for a spouse to success as an entrepreneur. Among the control variables included in the model, two variables have a statistically significant impact on income. These are *ChildrDis* and *EnterpAgri*. Having a child with a disability reduces annual income with 60% while being engaged in agricultural sector increases annual income by 71%. One possible explanation for the positive relationship between engagement in agricultural sector and annual income could be the lower competition in the market within agricultural sector. Other variables included in the model are not statistically significant in explaining variation in annual income.

Table 5.4: Regression results of disabled entrepreneurs

Linear regression		Number of obs = 57 F(16, 40) = 2.90 Prob > F = 0.0032 R-squared = 0.4677 Root MSE = .44539	
lnYx	Coef.	t	P>t
lnLoan	.370	2.95***	0.005
sqrtTime	.065	0.40	0.689
CreditOther	.482	3.03***	0.004
sqrtAge	-.080	-0.94	0.354
sqrtEdu	.004	0.04	0.966
ExpArea	-.055	-0.33	0.742
Rolemodel	-.241	-1.41	0.166
NetworkLearning	.129	0.80	0.427
Status	.442	2.38**	0.022
Gender	.045	0.32	0.754
EnterpHandic	.229	0.91	0.366
EnterpSalesService	.052	0.25	0.808
EnterpAgric	.537	1.79*	0.080
lndepratio	-.196	-1.30	0.202
ChildrDis	-.474	-2.17**	0.036
PartnerDis	.018	0.11	0.916
Constant	4.837	4.47***	0.000

Note: ***, ** and * mean statistically significant at the 1%, 5% and 10% levels respectively (STATA output).

Chapter 6

6.0 Conclusion

The objectives of this study have been to determine important factors within financial, human and social capital for entrepreneurial success, and investigate if there are differences in the determination of annual income depending on the presence or absence of a disability in a household. The results from the regression models were presented and discussed in chapter 5. In section 6.1 the main findings of the study will form the conclusions to each research question highlighted in this study. Each conclusion will be followed up by a discussion on how this specific finding could affect policies in D-Miro and in Ecuador. After this discussion, section 6.2 explains the limitations of the study before section 6.3 ends the study by giving suggestions for future research.

6.1 Main findings

6.1.1 Implications of financial capital

The first conclusion drawn from this study on Ecuadorian entrepreneurs is that there is a positive relationship between financial capital and entrepreneurial success showing that access to credit increases annual income. The size of the loan taken in D-Miro is revealed as an important variable in determining success for all types of entrepreneurs, regardless of the presence or absence of a disability. For all entrepreneurs income increases when the amount of credit taken in D-Miro increases. Hence, this suggests that, the higher amount of credit D-Miro provides an entrepreneur, the higher is the possibility for the entrepreneur to succeed. The purpose of micro credit is to empower poor people by giving them access to small amounts of credit. However, the result on the relationship between an increase in annual income corresponding to an increase in the amount of loan illustrates the benefits from increasing the size of the loans given to entrepreneurs to increase their income. The more capital an entrepreneur has, the more success could be achieved. This finding gives important implications for governmental policies as well as for policies in D-Miro, and suggests them to increase the amount of loan given to entrepreneurs to stimulate success. The amount of loan tends to be especially important in determining annual income for disabled entrepreneurs. As disabled persons are revealed as the group of entrepreneurs with the strongest benefits from credit, D-Miro should put a special effort into developing products meeting their demand for financial capital. By doing so, disabled entrepreneurs will increase their income and their chance to succeed. From the descriptive data presented in chapter 4, one can see that disabled entrepreneurs are the ones with the highest

average loan amount. This can be an indication telling that D-Miro already are aware of the demand for credit, especially among disabled entrepreneurs, and thereby tries to meet their needs by providing them with high amounts of credit. An alternative strategy is to develop saving programs that help and encourage disabled entrepreneurs to save money. As savings and credit serve the same purpose, having access to savings can replace the demand for credit. However, such a program will take time to build up and will demand incentives that motivate poor people to save their money. It will also take time for a poor person to get a savings account filled with money. This study has also revealed that disabled entrepreneurs and entrepreneurs coming from households where disabilities are absent increase their annual income by distributing their sources of credit for example by having credit elsewhere as well. This finding tells the government in Ecuador that there is a need for more credit to increase entrepreneurs´ possibility to succeed in the business market. From this study, a conclusion is made saying that financial capital plays a virtual role for annual income, and a policy that improves access to financial capital will most likely increase the annual income of entrepreneurs living in the costal region in Ecuador, and thereby serve as a mean for poverty alleviation.

6.1.2 Implication of human capital

There has been revealed a generally positive relationship between human capital and annual income through the study of Ecuadorian entrepreneurs. Education is the first variable found to positively relate to income. This means that by spending more years on studies, annual income tends to increase. This finding has a central implication indicating the importance of investment in education to secure entrepreneurial success, for the entrepreneur, D-Miro and the Ecuadorian government. Entrepreneurs should based on this finding be motivated to invest time and money in education. Since D-Miro is a microfinance bank, and not an educational system, the positive relationship between education and annual income should encourage them to develop and provide their clients with more and improved courses as an attempt to increase their probability for success. D-Miro could also try mandatory courses for their clients with the intention to increase their knowledge. By doing so, the returns and benefits from the loans might increase, because annual income increases. The implication towards the Ecuadorian government is to again reaffirm the importance of education. The positive relationship between education and annual income should encourage them to invest more in education, and improve the access to education also in less developed areas in Ecuador as an attempt to increase entrepreneurial income, fight poverty and stimulate to more entrepreneurial activities. Another alternative suggestion towards D-Miro and the Ecuadorian government is to encourage them to make

campaigns towards households communicating the importance of education for children. By doing so, the campaign might help to prevent school dropouts who are tempted or forced to work in their parents´ businesses. By preventing school dropouts, D-Miro and the Ecuadorian government invest in future entrepreneurship. The second variable with a positive impact that increases annual income is to have previous experience within the same sector as one is engaged in now through own enterprise. The implication of this finding towards D-Miro is a suggestion to develop training programs within different sectors. Developing such training programs can work as an alternative source for D-Miro to provide their clients with useful experiences, and for entrepreneurs to get some experience within a sector without trying and failing. An alternative is to develop mentoring programs and networks where experiences can be shared. This will be discussed in section 6.1.3.

When separating between entrepreneurs depending on the presence or absence of a disability, human capital loose it´s significant impact on annual income. However, when separating between entrepreneurs, engagement in different kind of sectors becomes relevant. Disabled entrepreneurs seem to increase their income when being engaged in agricultural sector, while entrepreneurs coming from abled household seem to significantly benefit from investment in the sector of sales and services. A suggestion to D-Miro would be to provide disabled entrepreneurs with training and courses within agricultural sector to increase their knowledge and skills, and help them to get an even higher income. For entrepreneurs coming from households where disability is absent, courses and training within service and sales sector can be beneficial and help them to increase their annual income. By specifying the training programs and courses it is possible to implement a test to see if the benefits from such programs can increase the possibility of entrepreneurial success, and if there can be created a positive relationship between human capital and annual income. From the discussion on human capital and annual income, both D-Miro and the Ecuadorian government should be encouraged to invest in education and training to ensure the competitiveness and survival of small firms, and increase annual income for the entrepreneur to stay above the poverty line.

6.1.3 Implications of social capital

The results on the relationship between social capital and annual income vary depending on the absence or presence of a disability. There has been revealed a positive relationship between marital status and annual income among the total group of entrepreneurs. When separating between entrepreneurs depending on the presence or

absence of a disability, the conclusion is somewhat different. The positive effect of marital status on annual income also applies for disabled entrepreneurs and entrepreneurs having a partner or a child with a disability. However, for entrepreneurs coming from households where disabilities are absent, the impact of social capital on annual income is on the other hand negative, and represented by a negative effect of learning from others in networks on annual income. To transform these findings into useful implications for strategy development, it is beneficial to use the theory on strong and weak ties. The positive effect of marital status can give an indication of the importance of strong ties to increase income, and especially disabled entrepreneurs and entrepreneurs coming from households where a member has a disability seem to increase their income through such relations. The negative relationship between learning from others in networks, and annual income, for abled entrepreneurs illustrates how weak tie networks among entrepreneurs in D-Miro and the costal region in Ecuador not work beneficially, and put the question of networks characteristics on the agenda. The results give important hints to D-Miro revealing a need for an improvement in mentoring programs that could better benefit entrepreneurs and increase the probability for success. Improved mentoring programs should be built upon the same characteristics that one can observe within strong ties, where trust and frequent communication are key words. By running a pre-test on such mentoring programs it is possible for D-Miro to determine whether networks of learning can be developed and improved in a way to better benefit entrepreneurs. The results from the pre-tests of mentoring programs will reveal if investment in social capital by increasing the provision of mentoring programs and networks organized by D-Miro, is investment that should be included in D-Miro´s strategic planning as an attempt to increase the entrepreneurs' probability for success, and to stay above the poverty line.

6.2 Limitations

In this study the relationships between financial, human, and social capital, and annual income have been investigated with the intention to reveal which variables that are important in determining entrepreneurial success. It has been separated between households where disability is present and household where disability is absent as an attempt to identify differences depending on the absent or present of a disability, both in the household and for the entrepreneur himself.

Because of time and budget constraints, the respondents were limited to concern clients in D-Miro that live in the costal region in Ecuador only. A wider scope would have been preferable to ensure greater generalizability of the results found in the study. As all entrepreneurs live in the costal region, certain businesses may not be represented appropriately in the sample. I also acknowledge the failure to obtain a large enough sample of disabled entrepreneurs. The small sample of disabled entrepreneurs makes generalization difficult, as well as the results might be questionable. In the case of entrepreneurs coming from households where a member has a disability, the high p-value of 0,04 and the small number of statistically significant variables make it relevant to be critical to the finding in this model.

Another limitation with the study is the lacking separation between different types of disabilities. All disabilities, both among disabled entrepreneurs and in households, have been treated as homogenous disabilities. This makes the conclusions on the relationship between the different categories of capital and annual income for entrepreneurs visual problems, equal to the conclusion for an entrepreneur having problems with walking, - even though having problems with walking and having eye problems are very different from one another and affect the way of living differently. Another limitation is due to the measurement of disability. There has not been included variables that measure how serious the entrepreneur, partner or child is affected by his or her disability. This means that an entrepreneur having a child who is deaf is included in the same group as entrepreneurs having a spouse who has some hearing problems.

6.3 Suggestion for further study

Entrepreneurial success is a complex measurement that could be defined through different types of variables. For further study entrepreneurial success could be expanded to study both financial and non-financial success. For instance, employment generation would be of interest as a tool for poverty alleviation. Identifying which variables that correlate with entrepreneurial employment generation is important to provide suggestion for new strategies and policies toward a development of financial and nonfinancial services for microenterprises so that entrepreneurs can expand their contribution to employment generation. By expanding their contribution to employment generation, more people are likely to get a job, get an income and to keep themselves above the poverty line.

For further studies it could also be beneficial to separate between different types of disabilities. As assessed above, there are different categories of disabled persons, and their potential benefits

from financial, human and social capital for income generation might vary according to their situation. It would also be interesting to go more into depth in studying the challenges disabled entrepreneurs face when being self-employed. By doing qualitative analyses to identify these challenges, more information could be provided with the intention to develop good strategies to remove obstacles and increase probability of success.

For further study it would be interesting to use a cross-sectional method to obtain information on how income and explanatory variables have changed over time. By doing so, a more sustainable conclusion on the relationship between financial, human and social capital, and annual income could be developed.

References

Abou-Moghli, A. & Al Muala, A. (2012). Impact of entrepreneurial networks on the success of business on-going stage in Jordan in a manufacturing companies. *American Academic & Scholarly Research Journal*, 4 (2): pp. 1-9.

Arribas, I., Fornoni, M. & Vila, J.E. (2012), An entrepreneur´s social capital and performance: The role of access to information in the Argentinean case, *Discussion paper in Economic Behaviour*, Universitat de Valencia 7(12): pp.15.

Arteaga, M.E., Caicedo, G. & Lasio G. (2011). *Global Entrepreneurship Monitor Ecuador 2010*, Universidad de Ecuador, pp. 82.

Banco Central del Ecuador. (2013).
http://www.bce.fin.ec/. (Accessed 14.12.2013).

Barron, T. & Ncube, J.M. (2010), *Poverty and Disability*, London: Leonardo Cheshire Disability, pp. 426

Bosma, N., van Praag, M. & de Wit, G., (2000), Determinants of successful entrepreneurship, *Research Report by Scientific AnaLysis of Entrepreneurship and SMEs*, 0002/E. pp. 41

Bosma, N., Hessels, J., Schutjens, V. van Praag, M. & Verheul I. (2011), *Entrepreneurship and Role Models*, The Netherlands: Tinbergen Institute Discussion Paper

Boylan, A. & Burchardt, T. (2003). *Barriers to Self-Employment for Disabled People*, London: Small Business Service, pp.100.

Cameron, A. C. & Trivedi, P.K. (2010). *Microeconometrics Using Stata*. Texas: Stata Press, College Station. pp. 706

Carree, M.A. & Thurvik A.R, (2002). The impact of entrepreneurship on economic growth. I: Acs, Z. & Audretsch, D. (eds); *International Handbook of Entrepreneurship Research,* pp. 1-28.

Central Intelligence Agency. (2013). World Wide Web: https://www.cia.gov/library/publications/the-world-factbook/geos/ec.html (Accessed 10.01.2013).

Cook, M.L. & Klein, P.G. (2005). *T.W. Schultz and the Human-Capital Approach to Entrepreneurship.* Columbia: University of Missouri, Division of Applied Social Sciences, pp. 9.

Cruickshank, P. & Rollan, D. (2006). Entrepreneurial success through networks and social capital: explanatory consideration from GEM research in New Zealand, *Journal of Small Business and Entrepreneurship*, Canadian Counsil for Small Business and Entrepreneurship 1 (1).

D-Miro (2013). World Wide Web: http://www.d-miro.com/portal/ .(Accessed 10.11.2012).

Elwan, A. (1999). Poverty and Disability: A survey of the literature. *Social Protection Discussion Paper Series*, The World Bank, 9932, pp. 56.

Fatimah-Salwa, A.H., Joni-Tamkin,B. & Mohamad-Azahari,A., (2013). Success Factors of Successful Microcredit Entrepreneurs: Empirical evidence from Malaysia, *International Journal of Business and Social Science*, 4 (5): pp. 153-159

Frese, M. & Rauch, A. (2000). Psychological approaches to entrepreneurial success: A general model and an overview of findings, *International Review of Industrial and Organizational Psychology,* pp. 101-142

Frese, M., Rach, A., Rosenbusch, N. & Unger, J.M. (u.å). Human Capital and Entrepreneurial Success: A Met-Analytical Review, *Journal of Business Venturing*, pp: 48.

Greve, A. & Salaff, J.W. (2003). Social Networks and Entrepreneurship, *Entrepreneurship Theory and Practice*, Baylor University, pp.23.

Gujarati, D.N., & Porter, D.C. (2009). *Basic Econometrics*, 5th edition. New York: McGraw-Hill Companies, pp. 922

Handicap International, (2006). *Good Practices for the Economic Inclusion of People with Disabilities in Developing Countries: Funding Mechanisms for Self-Employment*, Handicap International, pp. 112.

Henry, C., Hill, F. & Leitch, C. (2003). *Entrepreneurship Education and Training*. Hants: Ashgate Publishing Limited, pp. 231

Holub, T. (2001), *Entrepreneurship among People with Disabilities*, Los Angeles: ERIC Publications

IDEAnet 2013, World Wide Web: http://www.ideanet.org/content.cfm?id=5355&searchIT=1 (Accessed 26.04.2013).

Instituto Nacional de estadísticas y censos 2012, World Wide Web: http://www.inec.gob.ec/home/ (Accessed 14.03.2013).

Instituto Nacional de estadísticas y censos (2012). World Wide Web: http://www.inec.gob.ec/home/ (Accessed 16.05.2013).

Instituto Nacional de estadísticas y censos (2012). World Wide Web: http://www.inec.gob.ec/inec/index.php?option=com_content&view=article&id=542%3Ael-desempleo-en-ecuador-bajo-a-46-en-septiembre-de-2012&catid=68%3Aboletines&Itemid=51&lang=es (Accessed 16.03.2013).

International Labour Organization, (2013). *Global Employment trends 2013: Recovering from a second jobs dip*, International Labour Office, pp. 172.

Jácome, H.L.I, (2004). The Late 1990s Financial crisis in Ecuador: Institutional Weakness, Fiscal Rigidities, and Financial Dollarization at Work, *Working Paper International Monetary Fund.* 4 (12): pp. 1-47.

Lee, D.Y. and Tsang, E.W.K., (2001). The effects of entrepreneurial personality, background and network activities on venture growth, *Journal of Management studies*, 38 (4): pp. 583-602.

Magill J. H. and Meyer, R. L.,(2005). *Microenterprises and microfinance in Ecuador*, United States Agency for International Development, pp. 164.

Martinelli, E. & Mersland, R. (2010). Microfinance for people with disabilities, I:Barron, T. & Ncube, J.M (Eds.), *Poverty and Disability*, London: Leonard Chesire Disability, pp.214-259

Mersland, R. & Strøm, R.Ø. (2005), Mikrofinans, fra helt til kjeltring?, *Magma 0511*, pp. 63-73

Organización Internacional del Trabajo, (2012). *Panorama Laboral 2012: América Latina y el Caribe*, Oficina Regional para América Latina y el Caribe, pp. 114.

Prihatin, Dwi Riyanti, B. (2004). Factors influencing the success of small-scale entrepreneurs in Indonesia. I: Setiadi, B.N., Supraktiknya, A., Lonner, W.J., Poortinga, Y.H. (Eds.) *Ongoing themes in psychology and culture,* Melbourne, FL:International Association for Cross-Cultural Psychology.

Ray, D.,(1998). *Development Economics*, New Jersey: Princeton University Press, pp. 848.

Rooks, G., Szirmai, A & Sserwanga, A. (2009). *The Interplay of Human and Social Capital in Entrepreneurship in Developing Countries: The case of Uganda,* Research paper, UNU-WIDER, 2009(09): pp. 35

Simpeh, K.N. (2011), Entrepreneurship theories and Empirical research: A Summary Review of the Literature, *European Journal of Business and Management*, 3(6): pp. 1-8.

Sriyani, G.T.W. (2010). *Human Capital and its Impact on Small Firm Success*. Sri Lanka: University of Ruhuna, Departmet of Management & Entrepreneurship, Facult of Managemente and Finance, pp. 18

TheGlobalEconomy (2013), World Wide Web: http://www.theglobaleconomy.com/Ecuador/ (Accessed 14.03.2013).

The World Bank, (2013). *Doing Business 2013, Smarter regulations for small and medium-sized enterprises: Comparing business regulations for domestic firms in 185 economies*, 10th edition, Washington DC: The World Bank, pp. 282.

The World Bank. (2013). World Wide Web: **http://www.worldbank.org/en/country/ecuador** (Accessed 07.01.2013).

The World Bank. (2013). World Wide Web: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALPROTECTION/EXTDISABILITY/0,,contentMDK:21151218~menuPK:282706~pagePK:210058~piPK:210062~theSitePK:282699,00.html (Accessed 07.01.2013).

The World Bank & World Health Organization, (2011). *World Report on Disability*, Geneva: World Health Organization, pp. 24.

United Nations, (1948) *Universal Declaration of Human Rights*, World Wide Web: http://www.un.org/en/events/humanrightsday/udhr60/hrphotos/declaration%20_eng.pdf (Accessed 13.02.2013).

Wooldridge, J.M., (2009). *Introductory Econometrics*, 4th edition, Canada: Michigan State University, pp. 865.

APPENDIX 1

Questionnaire

Date: _____
Place: _____
Name of interviewer: _____
_____

1. General information:

Name of client: _____
Identification number: _____
Area: _____
Direction: _____

2. Personal characteristics:

2.1 Gender
Male ( ) Female( )

2.2 Age
Specify number of years.....

2.3 Civil status
Single ( )
Married ( )
United ( )
Separated ( )
Widow/er ( )

b) Do you have a husband/wife suffering from a disability?
Yes ( ) No ( )

If YES:
What kind of disability does he/she has? ……..
At what age did he/she get his/her disability? …….
For how long will his/her disability last?
Permanent ( ) Temporary ( )

To what extent does the disability affect his/her personal life?
(1= very little, 5 = very much)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

To what extent does the disability affect the economic situation of the family?
(1= very little, 5 = very much)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

2.4 Number of children

a) How many children are you a caretaker for today?…….

b) Do you have a child/children suffering from a disability?
Yes ( ) No ( )
If YES:
What kind of disability does he/she has?……
At what age did he/she get his/her disability?...……
For how long will his/her disability last?
Permanent ( ) Temporary ( )

To what extent does the disability affect his/her personal life?
(1= very little, 5 = very much)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

To what extent does the disability affect the economic situation of the family?
(1= very little, 5 = very much)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

2.5 Education

a) How many years of school have you completed?
Specify number of years……..

b) Indication of field of formal education specialization:
Business administration ( )
Entrepreneurship ( )
Agriculture ( )
Social science ( )
Technology ( )
Humanities ( )
Mechanics ( )
Art ( )
Cooking ( )
Economics ( )
Accounting ( )
Tourism ( )
Other ( ) …….
I do not have a specialization ( )

c) Have you taken a course in entrepreneurship during your formal studies?
Yes ( ) No ( )

d) Have you attended entrepreneurship training courses or seminars (beside your formal studies)?
Yes ( ) No ( )

e) Have you attended course(-s) in management and accounting ?
Yes ( ) No ( )

f) Is your education relevant in the business you are working in today?
Yes( ) No ( ) No education, but working ( )
Not working, but have education ( )

3. Experience and employment

a) For how many years have you been working in total?
Specify number of years: …….

b) For how many years have you been running your own enterprise?
Specify number of years: ……..

c) How many employers have you had before?
Specify number of employers: ……..……...

d) Where were you last employed?
In a salaried job with affiliation in IESS ( )
In a salaried job but without affiliation in IESS ( )
Through self-employment ( )
I was not working ( )

e) For how many years were you hired in your last job?
Specify number of years: ……..

f) What type of business were you working in in your last job?
Manufacturing ( )
Handicraft (textile production, crafts, leather work etc) ( )
Services (restaurant, hairdressing, cleaning service, food stalls) ( )
Agriculture (food or other crop production) ( )
Livestock production (animal raising) ( )
Commerce/ trade ( )
I was not working ( )

g) Are you *currently* working in a salaried job?
Yes ( ) No ( )
If YES: How many salaried jobs are you currently working in? ( )

h) Have you started an enterprise after getting a loan?
Yes ( ) No ( )

i) Have you started the business that you are currently running?
Yes ( ) No ( )
If YES: Is this the first business you have started?
Yes ( ) No ( )

j) Do you have relevant experience within the same area as you are working now?
In my salaried job: Yes ( ) No ( )
Not having a salaried job ( )

In my own enterprise: Yes ( ) No ( )
Not running an own enterprise ( )

k) How many enterprises have you started in total?
Specify number of enterprises: ……..……..

l) Specify number of business activities that you are *currently* running…….

If you are <u>currently</u> running an enterprise:

m) What kind of business are you engaged in?
Manufacturing ( )
Handicraft (textile production, crafts, leather work etc) ( )
Services (restaurant, hairdressing, cleaning service, food stalls) ( )
Agriculture or livestock production ( )
Commerce/ trade ( )
Other ( )

n) How has the annual profit changed the last year?
Decreased by ……. %
Increased by ……. %
I do not know ( )

ñ) How has the sales changed the last year?
Decreased by …… %
Increased by ……. %
I do not know ( )

o) Which of your enterprises generates the highest income?
Specify type of enterprise:…… ……..

p) How much would you expect your enterprise(s) / assets in enterprise(s) to be valued today?

0 USD – 1999 USD	( )
2.000 USD – 4.999 USD	( )
5.000 USD – 9.999 USD	( )
> 10.000 USD	( )

q) Have you expanded your enterprise during the last year?

Yes ( ) No ( )

r) How many hours do you on average work *each day*?

(both salaried job and own enterprise included) ……

s) Divide the time you spend on working during *one week*

(divide 100% hours worked in percentage):

Salaried job	( )
Own enterprise:	( )

t) When you first started your own business, from where did you get the money to start it?

From savings	( )
From money lenders or chulqueros	( )
From microcredit institutions or a bank	( )
From friends	( )
From family	( )
From others	( )

u) Why did you start your own business? (tick maximum 3 alternatives)

Lack of opportunities elsewhere	( )
Wanted to be self-employed	( )
Wanted to earn more money	( )
Supplement to family income	( )
Quit job in business	( )
Experience from previous family business	( )
To have the opportunity to stay close to my family	( )
To overcome the difficulties and limitations which I had in my last job (disability, the situation of my family etc.)	( )
Other	( )

v) Do you have other people working in your enterprise for a salary?

Yes ( ) No ( )

Specify number…….

How much do you on average pay each of them for one month?.....

How many hours do each of them normally work each week?.....

w) Do you have other people (family members etc.) working for you without salary payment?
Specify number……..…
How many hours do they normally work each week?.....

x) The last loan you took from D-MIRO; did you invest some of it in:

Housing and house improvements	( )
Business	( )
Health	( )
Education	( )
Consumer goods (TV, refrigerator, mobile phone, pleasure etc.)	( )
Other	( )

Please indicate: _____

y) If you invested in income-generating activity, what type of activity was it?

Manufacturing	( )
Handicraft (textile production, crafts, leather work etc)	( )
Services (restaurant, hairdressing, cleaning service, food stalls)	( )
Agriculture and livestock production	( )
Commerce/ trade	( )
Did not invest the loan in an income-generating enterprise	( )

z) Are you considering yourself as a successful entrepreneur?
(1= very unsuccessful, 5= very successful)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

4. Role models

a) Do you have close friends that run their own business?
Yes ( ) No ( )

If yes:

b) To what extent do you consider them as successful entrepreneurs?
(1= very unsuccessful, 5= very successful)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

c) To what extent is you business similar to their business?
(1= not similar at all, 5= very similar)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

d) Do you have parents that run their own business?
Yes ( ) No ( )

If YES:

e) To what extent do you consider them as successful entrepreneurs?
(1= very unsuccessful, 5 very successful)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

f) To what extent is you business similar to their business?
(1= not similar at all, 5= very similar)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

g) Do you have brothers or sisters that run their own business?
Yes ( ) No ( )

If YES:

h) To what extent do you consider them as successful entrepreneur?
(1= very unsuccessful, 5 very successful)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

i) To what extent is you business similar to their business?
(1= not similar at all, 5= very similar)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

j) Do you know of people with disabilities that run run their own business?
Yes ( ) No ( )

If YES:

k) To what extent do you consider them as successful entrepreneur?
(1= very unsuccessful, 5 very successful)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

l) To what extent is you business similar to their business?
(1= not similar at all, 5= very similar)
1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

5.Social Network

a) Are you a part of a network with other entrepreneurs where you can learn from each other and share experiences?
Yes ( ) No ( )

b) Do you learn from others and get advices in how to run your business?
Yes, all the time ( ) Yes, sometimes ( )
No, never ( )

c) Did you get advices or help from anyone when starting your business?
Yes ( ) No( ) I haven´t started an enterprise ( )
IF YES, from who?:_____

d) Would your family approve it if your decided to start your own business / when you started your own business?
Yes ( ) No ( ) I do not know ( )

e) Would your closest friends approve it if your decided to start your own business / when you started your own business?
Yes ( ) No ( ) I do not know ( )

6. Household

a) Who is the head of the household?

Myself	( )	Spouse/partner	( )
My mother	( )	My father	( )
Male relative	( )	Female relative	( )
Child	( )	Other	( )

b) How many people are living in your house?
Specify number of people: ……..

c) How many people in your house are working for a salary/in an own enterprise?
Specify number of people: ……..

7. Financial situation

7.1 Savings

a) Do you save regularly?
Yes ( ) No ( )

If YES:

b) Where do you save?
In D-Miro ( )
In another bank ( )
Home ( )
Other ( ), specify: …….

c) What is the main reason for you to save?

To invest in my existing business
To start up a new business ( )
Education for me or my kids or other ( )
Lend out money to others ( )
Invest in house/assets ( )
Daily consumption (food etc) ( )
Wedding/funeral etc ( )
In case of emergencies ( )
For my old age
Medicines ( )
Other ( )

d) Do you consider saving in D-Miro as your best option or do you consider saving in another bank as a better option than D-Miro?

I consider saving in D-Miro as my best option ( )
I consider saving in another bank as my best option ( )

7.2. Credit

a) Do you have loans elsewhere?

Yes ( ) No ( )

If YES: Where do you have other loans?

I have loans in other banks ( )
I have borrowed money from moneylenders/chulqueros ( )
I have borrowed money from family ( )
I have borrowed money from friends ( )
I have not borrowed money from others ( )

b) If you have borrowed elsewhere is the loan you have in D-MIRO higher or lower than what you totally have borrowed elsewhere?

Higher ( ) Lower ( ) I do not have loan elsewhere ( )

7.3 Income

a) How much was your monthly income before joining D-Miro (all income, business, remittances etc)?

Specify amount of monthly income: ……..……

8. Self-esteem

SA= *strongly agree, A= agree, D= disagree, SA= strongly disagree*

a) On the whole, I am satisfied with myself	SA	A	D	SD
b) At times, I think I am no good at all	SA	A	D	SD
c) I feel that I have a number of good qualities	SA	A	D	SD
d) I am able to do things as well as most other people	SA	A	D	SD
e) I feel I do not have much to be proud of	SA	A	D	SD
f) I certainly feel useless at times	SA	A	D	SD
g) I feel that I'm a person of worth, at least on an equal plane with others	SA	A	D	SD
h) I wish I could have more respect for myself	SA	A	D	SD
i) All in all, I am inclined to feel that I am a failure	SA	A	D	SD
j) I take a positive attitude toward myself	SA	A	D	SD

9. Entrepreneurial characteristics

1. I would not mind routine unchallenging work if the pay is good	YES ( )	NO ( )
2. When I have to set my own target for anything I set difficult ones	YES ( )	NO ( )
3. I do not like to do things that are unconventional or novel	YES ( )	NO ( )
4. Capable people who fail to become successful have not taken chances when they have occurred	YES ( )	NO ( )
5. I rarely day dream	YES ( )	NO ( )
6. I usually defend my point of view if someone disagrees with me	YES ( )	NO ( )
7. One is either naturally good at something or not, effort makes no difference	YES ( )	NO ( )
8. Sometimes people find my ideas unusual	YES ( )	NO ( )
9. If I had to gamble 1000 shillings I would rather buy a lottery ticket than play cards	YES ( )	NO ( )
10. I like challenges that really stretch my abilities rather than things I can do easily	YES ( )	NO ( )
11. I would prefer to have a reasonable income in a job I was sure of keeping rather than in a job that I might lose if I did not perform well	YES ( )	NO ( )
12. I like to do things in my own way without worrying about what other people think	YES ( )	NO ( )
13. Many of the bad times that people experience are due to bad luck	YES ( )	NO ( )
14. I like to find out about things even if it means handling some problems whilst doing so	YES ( )	NO ( )
15. If I am having problems with a task I leave it and move on to something else	YES ( )	NO ( )
16. When I make plans to do something I nearly always do what I plan	YES ( )	NO ( )
17. I do not like sudden changes in my life	YES ( )	NO ( )
18. I will take risks if the chances of success are 50/50	YES ( )	NO ( )
19. I think more of the present and the past than of the future	YES ( )	NO ( )
20. If I had a good idea for making some money I would be willing to borrow some money to enable me to do it	YES ( )	NO ( )
21. When I am in a group I am happy to let someone else take the lead	YES ( )	NO ( )

22. People generally get what they deserve	YES ( )	NO ( )
23. I do not like guessing	YES ( )	NO ( )
24. It is more important to do a job well than to try to please people	YES ( )	NO ( )
25. I will get what I want if I please the people who have control over me	YES ( )	NO ( )
26. Other people think that I ask a lot of questions	YES ( )	NO ( )
27. If there were a chance of failure then I would rather not do it	YES ( )	NO ( )

Categories:
Need for achievement: spm. 1, 10, 15, 16, 19, 24,
Creative tendency: 5, 8, 14, 17, 23, 26,
Drive and determination: 4, 7, 13, 16, 22, 25
Autonomy: 3, 12, 21
Risk: 2, 9, 11, 18, 20, 27

10. Disability

a) Do you have a disability?
Yes ( ) No ( )

If YES:

b) What type of disability do you have?

Visually impaired

I can see perfectly without corrective lenses or glasses	( )
I have visual problems but see enough to do daily activities with or without corrective lenses or glasses (read a newspaper, do handicrafts, make food)	( )
I can only see outlines of objects and needs guidance	( )
I am blind	( )

Hearing impaired

I hear perfectly without hearing aid	( )
I can hear adequately to function well in the daily life with or without hearing aid	( )
I hear if spoken to in a loud voice OR if we are only 2 people communicating	( )
I only hear shouting and certain words, or I read lips or understand gestures	( )
I am deaf and unable to understand what people say	( )

Problems with speaking

I can speak normal	( )
I have a speech/language problem but able to express myself	( )
I have a major speech/language problem but I am able to express basic needs and answer simple questions (yes, no)	( )
I express myself through sign language	( )
I am not able to communicate and need technical aid such as computer communication board	( )

Physically impaired

Are you able to use public transportation?
- No, because of my disability ( )
- Yes, I am able to use public transportation ( )

Are you able to walk independently
(with or without cane, prosthesis, orthosis or walker) ?
*Distance of at least 10 meters
- I walk independently without problems ( )
- Walks independently but needs guidance or other kind of help in certain circumstances ( )
- I need help of another person to walk ( )
- I cannot walk and use a wheelchair ( )
- I cannot move around at all ( )

Are you able to walk in stairs independently?
- Yes, I can climb up and down stairs independently ( )
- I need guidance to go up and down stairs ( )
- I need help to go up and down stairs ( )
- I cannot go up and down stairs ( )

Have you lost a part of your body?
- Yes, arm(s) ( )
- Yes, leg(s) ( )
- Yes, arms and legs ( )
- No ( )
- Yes, other: ……

Memory
- I have a normal memory ( )
- I have a minor recent memory deficit (names, appointments, etc.) but remember important facts ( )
- I have serious memory lapses ( )

Learning

How difficult is it for you to learn new thing?
(such as new tasks at work etc)
- I learn new things without difficulty ( )
- I learn new things with some difficulty ( )
- I can learn new thing, but with difficulty ( )
- I can learn new thing, but with extreme difficulty ( )

Other
- I have other disability than those mentioned above ( )

c) When did you get your disability?

I have had it since I was born	( )
I got it when I was younger than 5 years old	( )
I got it when I was between 6 and 15 years old	( )
I got it when I was between 16 and 25 years old	( )
I got it when I was older than 26 years old	( )

d) For how long will your disability last?

Permanent (the rest of my life)	( )
Temporary	( )
I do not know	( )

e) To what extent does the disability affect your personal life?

(1= very little, 5 = very much)

1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

f) To what extent does the disability affect the economic situation of the family?

(1= very little, 5 = very much)

1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( )

APPENDIX 2

Table 1.: Descriptive data: Disable household

Variable	Obs	Mean	Std. Dev.	Min	Max
Yx	110	1609,10	963,291	450	8000
Loan	110	1555,05	758,155	401,58	4558,08
Time	110	3,14	2,580	1	14
CreditOther	110	0,32	0,471	0	1
Edu	110	9,63	4,263	2	18
Age	110	44,64	11,177	19	67
ExpArea	110	0,78	0,414	0	1
Rolemodel	110	0,76	0,426	0	1
NetworkLearningg	110	0,84	0,363	0	1
Status	110	0,55	0,499	0	1
Gender	110	0,54	0,500	0	1
depratio	110	2,41	1,204	1	7
EnterpAgric	110	0,06	0,245	0	1
EnterpManuf	110	0,03	0,188	0	1
EnterpHandic	110	0,08	0,275	0	1
EnterpSalesService	110	0,78	0,414	0	1
EnterpOther	110	0,06	0,245	0	1
EnterpAsset	110	1,73	0,945	1	4
DisabHouse	110	1	0	1	1
PartnerDis	110	0,2	0,401	0	1
ChildrDis	110	0,35	0,480	0	1
EntrepDisability	110	0,51	0,501	0	1

Source: Field survey 2013

Table 2: Descriptive data: Not disable households

Variable	Obs	Mean	Std.Dev.	Min	Max
Yx	140	1969,37	1175,069	450	8300
Loan	140	1516,85	587,332	301,19	2654,31
Time	140	3,30	2,343	1	15
CreditOther	140	0,32	0,468	0	1
Edu	140	9,32	3,512	0	17
Age	140	41,27	11,071	19	70
ExpArea	140	0,70	0,456	0	1
Rolemodel	140	0,83	0,371	0	1
NetworkLearning	140	0,71	0,453	0	1
Status	140	0,65	0,476	0	1
Gender	140	0,61	0,488	0	1
depratio	140	2,41	1,129	1	7
EnterpAgric	140	0,02	0,145	0	1
EnterpManuf	140	0,007	0,084	0	1
EnterpHandic	140	0,05	0,232	0	1
EnterpSalesService	140	0,90	0,291	0	1
EnterpOther	140	0,007	0,084	0	1
EnterpAsset	140	1,87	0,958	1	4

Source: Field survey 2013

Table 3: Descriptive data: Disabled entrepreneurs

Variable	Obs	Mean	Std. Dev.	Min	Max
Yx	57	1587,10	1150,476	560	8000
Loan	57	1672,21	864,443	640,14	4558,08
Time	57	2,75	1,939	1	11
CreditOther	57	0,26	0,444	0	1
Edu	57	9,36	4,190	2	18
Age	57	45,40	11,064	21	67
ExpArea	57	0,84	0,367	0	1
Rolemodel	57	0,80	0,398	0	1
NetworkLearning	57	0,87	0,331	0	1
Status	57	0,36	0,486	0	1
Gender	57	0,42	0,498	0	1
depratio	57	2,32	1,244	1	6
EnterpAgric	57	0,03	0,185	0	1
EnterpManuf	57	0,07	0,257	0	1
EnterpHandic	57	0,10	0,309	0	1
EnterpSalesService	57	0,73	0,444	0	1
EnterpOther	57	0,07	0,257	0	1
EnterpAsset	57	1,85	1,025	1	4
DisabHouse	57	1	0	1	1
PartnerDis	57	0,07	0,257	0	1
ChildrDis	57	0,05	0,225	0	1
EntrepDisability	57	1	0	1	1

Source: Field survey 2013