

**MAPPING HUMAN CAPITAL FOR SELF-EMPLOYMENT: EDUCATION FOR JOB
CREATION—AN ALTERNATIVE APPROACH TO YOUTH UNEMPLOYMENT**

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A widely-suggested educational policy solution for youth unemployment is to increase employability; however, this approach tends to neglect an alternative path—that of education for job creation and self-employment. This study emphasizes the importance of this alternative strategy and calls for greater attention to it for two reasons: 1) increasing employability is no longer sufficient in today's saturated labor market; and 2) the relationship between skills and successful entrepreneurship is still sketchy at best.

This study investigates how education can play a role in creating one's own job, and what the best way to foster self-employment competencies is. It is designed to help policy makers capture perspectives on education in relation to self-employment so that they can debate, design, and implement programs in the future. The study specifically focuses on how education, related to human and social capital, might play a role in the business creation process.

The study employs social cartography both to select data for analysis and also to present the final findings of the study. Meta-study procedures were applied for the data analysis. The study found three types of human capital (basic, specific, and entrepreneurial) and two types of social capital (cognitive and structural). The findings from the data-analysis were synthesized and mapped on a timeline of business creation and the management process. This map shows that basic human capital is constantly necessary throughout the process; however, the importance of specific and entrepreneurial human capital shifts along with the progress of business creation.

The most effective educational strategies also shift parallel with the type of human capital. The impact of social capital also shifts; cognitive social capital has more of an impact in earlier stages, while structural social capital affects the process more in later stages.

The recommendations for policy implications and further research possibility were made based on what the map shows, and does not show. This theoretical study is an effort to elucidate the underlying structures of human and social capital in the job creation process in an attempt to strengthen entrepreneurial education policy and programs in the future.

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PREFACE

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1.0 INTRODUCTION

In 2005, 1,168 million young people ranging in age from 15 to 24 comprised almost 18% of the world's population of 6,514 million, and they continue to grow in number (United Nations, 2006a, 2006b). Approximately 85% of those youth, more than 1 billion of them, live in developing countries, with 60% in Asia alone. The proportion living in developing countries will grow to 89% by 2020 (ILO, 2001). Over 80 million unemployed youth are seeking secure jobs (ILO, 2004b; Youth Employment Network, 2004). This tidal wave of young people cannot be fully absorbed within existing labor markets.

Youth unemployment has been growing despite national and international policy efforts. Youth unemployment is a critical social issue because it is related to a multitude of societal aspects, including 1) economic development, 2) social stability and welfare, and 3) building human capital and its delivery system. This third point is an education dilemma; and it is important for educators to proactively participate in policy interventions by suggesting what and how education can contribute to a solution.

To address the issue of youth unemployment, a majority of the studies in the education field look at how education can enhance the employability of the youth, such as in the area of school-to-work transition. This study takes further steps to examine an alternate employment option, that is, self-employment by creating new business enterprises. I look at entrepreneurship education (EE) as an educational tool to encourage creation of business, which ultimately leads

to creating jobs and reducing the amount of unemployed youth in the world. This theoretical study attempts to elucidate the underlying structure of human capital and social capital in the business creation process and to construct a basis for entrepreneurial education in the future in order to inform policy making decision relate to entrepreneurial education.

1.1 ORGANIZATION OF THE STUDY

This paper addresses how we can tackle the problem of rising youth unemployment in the world, especially where formal jobs are limited. It does this through examining current debates about how education contributes to the job creation process within the framework of self-employment.

Chapter One discusses the overall rationale and problem background of this study—the youth unemployment problem. As the introduction of this study, this chapter discusses why we should focus on youth unemployment, what the current situation is, and what the possible solutions are for this problem area. At the end of Chapter One, the problem statement is declared and the research questions are listed.

Chapter Two is devoted to exploring existing literature. In the first part of the chapter, I discuss education and employment theories. Two main employment theories, human capital theory and screening theory, are discussed in order to understand how education is debated to function in the labor market. In the second part of this chapter, I explore the literature of entrepreneurship in order to elucidate the mechanism of job creation as entrepreneurship is critical to becoming a successful self-employed individual. In this section, I discuss the definitions of entrepreneurship, the importance of entrepreneurship, and entrepreneurship's relation to education and its policies.

In Chapter Three, I discuss the research methodology used, social cartography, and the data analysis procedure used, meta-study. First, the nature of social cartography is analyzed, and then the reason why social cartography is appropriate to this study. After reviewing my research questions, I discuss meta-study for my data analysis method. Also it includes possible limitations of the study.

Chapter Four addresses my research questions. The first part of this chapter is dedicated to mapping employment literature which is related to human capital and social capital in order to locate the data studies for further analysis. The second part presents findings related to my research questions derived from a meta-study using the data-studies identified in the first part of the chapter. This sub-section addresses my supporting research questions related to human and social capital. Then, following sub-section presents the possible relationships between education and self-employment within the business creation and self-employment process in the form of a visual map. This later sub-section serves to address my primary research question.

Chapter Five concludes the study. It includes discussions of the findings and recommendations. In the discussion section, it describes interpretations of the map and also discusses what is *not* on the map. In the recommendation section, it suggests possible policy implications and future research directions based on the narrative emerged from the interpretations. Concluding remarks are included at the end of this chapter.

1.2 RATIONALE OF THE STUDY

This paper focuses on the relationship between education and entrepreneurship within the context of self-employment. This standpoint is based on the concern that discussion of education with a focus on self-employment has been neglected, in spite of its importance. As mentioned in the introduction, a common approach to youth unemployment through education is to increase employability of youth so that they will become more competitive in the labor market. While acknowledging that policies which focus on increasing employability of youth can benefit a large group of the population, this study chooses to examine an alternate employment option, that is, self-employment by creating new productive business. Increasing employability may provide youth with skills; however, skills alone do not ensure job opportunities. That is, in this era of job shortage, neither relying on existing jobs nor providing new ones is enough to maintain a sustainable labor market for youth or communities. Even though the chronic problem of job shortages are essential to tackling the youth problem, education for self-employment through business creation is an area which has been neglected by social scientists. This paper offers a speculative map to understand what we know about the mechanisms and dynamics of the relationships between education and job creation to strengthen debates about what we can do to address youth unemployment as educators. This map can help policy makers and program designers better understand the research and the debates that currently exist in this neglected but increasingly important corner of the educational policy and program world.

1.3 THE PROBLEM BACKGROUND—YOUTH UNEMPLOYMENT

1.3.1 Why We Should Study Youth Unemployment

Youth unemployment¹ has been growing despite national and international policy efforts. As mentioned in the introduction, in 2005, more than one billion young people ranging in age from 15 to 24 comprised almost 18% of the world's population of 6.5 billion, and this situation continues to worsen (United Nations, 2006a, 2006b). Moreover, most of unemployed youth, which count for more than 1 billion of them, live in developing countries, with 60% in Asia alone. The proportion living in developing countries will grow to 89% by 2020 (ILO, 2001). Currently over 81 million unemployed youth are seeking secure jobs (ILO, 2010a). This tidal wave of young people cannot be fully absorbed within existing labor markets.

Study of the youth unemployment problem is critical, not only because it is such a large problem, but also because it is related to a multitude of societal issues, including 1) economic development, 2) social stability and welfare, and 3) building human capital and its delivery system.

First, youth unemployment is often viewed as a significant economic loss in terms of wasting stocked human capital and consuming social welfare (ILO, 2006a). The 2004 ILO report claims “Tackling youth unemployment and the consequent vulnerabilities and feelings of exclusion would be a significant contribution to the global economy” (ILO, 2004b, third

¹ Definition of youth unemployment: The International Labour Office (ILO) defines unemployment as “all persons who during a specified reference period, such as one week, were i) without work, ii) currently available for work and iii) seeking work or jobless but available for paid employment within two weeks, and actively searching for a new job”(Brauns, Gangle, & Schere, 1999; ILO, 2009b). According to Key Indicators of the Labour Market 9 (KILM) from ILO (ILO, 2006b) the term “youth” covers persons aged 15 to 24, while “adults” are defined as persons aged 25 and over.

paragraph). The report estimates that at least US \$2.2 trillion, equal to about 4 % of the 2003 global GDP value, would be added to the global GDP by halving the youth unemployment rate (ILO, 2004b). Therefore, improving the youth employment situation is an important economic policy consideration, regardless of a country's level of economic development (ILO, 2003b).

Second, youth unemployment has been associated with social problems such as youth crime, drug use, violence in schools, youth suicide, illegal migration, and illegitimate births (Adepoju, 2002; ILO, 2010a; Singell & Lillydahl, 1989). In fact, a number of studies have found relationships between youth unemployment and social illness (Singell & Lillydahl, 1989). For example, unemployed persons experience more family conflicts, commit more crimes, and suffer diminished mental health and psychological well-being (Caspi, Entner Wright, Moffitt, & Silva, 1998). Reducing youth unemployment, then, is also a remedial strategy to counter crime and drug use (ILO, 2006a).

Third, youth unemployment is related to the function of human capital building and its delivery system. It can be seen, to some extent, as a result of the failure of a nation's strategies of education and training. Investment in education and training is a social cost; thus, unless educated youth are transformed to productive labor, i.e., they produce a nation's products, pay taxes and support public services (ILO, 2005; Youth Employment Network, 2004), the social investment does not pay off. Although, it seems that the failure of education may contribute to youth unemployment, better strategies in education could also improve the situation. Caspi (Caspi, et al., 1998), for example, claims that creating and providing jobs does not necessarily promise work stability; instead, programs which identify alternative skills, attitudes and habits should be provided in order to avert characteristics causing unemployment.

Then why should we focus on youth? This is critical for three reasons. First, the number of young people is growing in scale. More than 1 billion people today are between 15 and 25 years of age, with nearly 40% of the world's population below the age of 20. Eighty five per cent of these young people live in developing countries, where many are especially vulnerable to extreme poverty (Youth Employment Network, 2004). These 1 billion youth represent the largest group ever entering the transition to adulthood (World Bank, 2006), and this population, which has been rapidly increasing, will continue to grow.

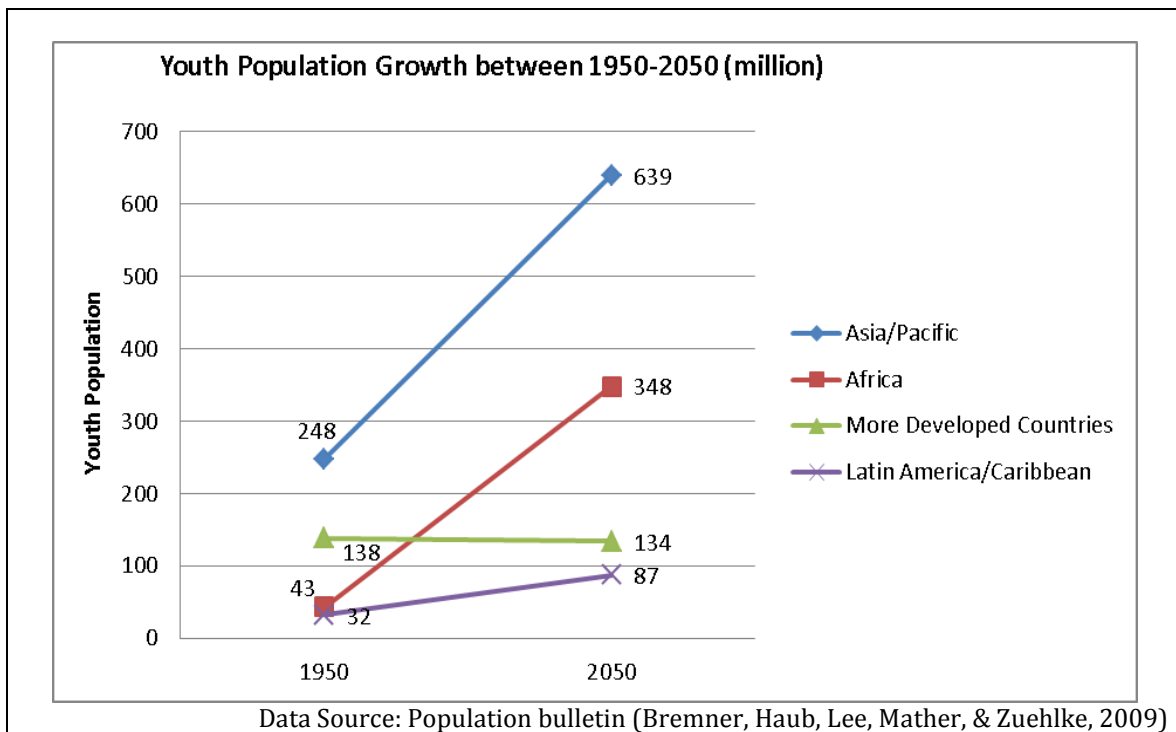


Figure 1: Estimation of Youth Population Growth between 1950-2050

As Figure 1 shows, by 2050, this population group will grow to more than double what it was in 1950. The growth in the Asia/Pacific area and Africa is particularly noteworthy. Whether this

increase will bring benefit or disaster in the future is largely relies on policy choices. With the right investment in education, health, and economic output, this large youth population could act as a catalyst to development and economic growth (Bremner, et al., 2009).

Along with this increase in youth population, global youth unemployment increased from 74 to 85 million between 1995 and 2005, an increase of 14.8%, according to a ILO report (ILO, 2006b); this accounted for close to half of the total global unemployment of 186 million (ILO, 2004b). In addition, several studies have shown that the youth unemployment rate tends to be much higher than adults (Mehran, 1999; O'Higgins, 1997). Therefore, this large scale social problem should not be ignored.

Second, focusing on youth is important because having a fulfilled young adulthood can make a difference in a youth's future on both a social and personal level (World Bank, 2006). Since the current youth will soon become a core labor force, building human capital in this phase of human development is critical for a nation's growth and for poverty reduction (World Bank, 2006). In addition, creating a cadre of stable young workers results in creating young consumers, savers, and tax-payers, which creates attractive conditions for domestic and foreign investments (ILO & United Nations Global Compact, 2006). The impact of youth on building a stable society should not be underestimated; World Bank (2006) reports that countries with 40% or more young people aged 15-29 were twice as likely to break out in civil conflict during the 1990s. It would seem that whether a country heads towards prosperity or social instability depends in part on how its youth are situated in the social context.

At the personal level, entering the labor force makes a significant event for individual adolescents. It provides income, training opportunities for skill acquisition, vocational identity, and a sense of mastery and purpose (Australian Bureau of Statistics, 2001; Caspi, et al., 1998).

In addition, it encourages shared experiences with persons outside of one's family (Caspi, et al., 1998). As Bandura, Barbaranelli, Caprara, and Pastorelli (2001) claim, while a productive fulfilling work experience has a positive influence on the quality of life in a family, an adverse work experience has detrimental effects on family relations. In other words, while productive and decent work enables youth to realize aspirations, improve their living condition and actively participate in society (ILO & United Nations Global Compact, 2006), jobs which offer low wages, few benefits, and no security in an earner's early years may have some "scarring effect" on both earning and employment in adult life (Singell & Lillydahl, 1989; Youth Employment Network, 2004). Unemployment during one's young adulthood could have not only negative but also serious impact on altering values and attitudes, and this makes it difficult for youth in this situation to integrate themselves into both social and economic institutions. Therefore, policy makers and as well as those in the community should devote more attention to ensuring youth have a good first employment experience (Levin, 1983).

Third, focusing on youth is important because they are productive resources for the coming age. Due to changes in technology and globalization, workers in today's market need a different type of skills and attitudes (World Bank, 2006), i.e., they are required to acclimatize to the fast pace of change within the global economy (ILO, 2006c). The successful adaptation of workers to this new economic environment can help to determine a nation's economic development. Even though youth are currently suffering from a growing deficit of full and productive work, they are, in fact, the most educated generation ever (ILO, 2006a; World Bank, 2006). Today's youth is the group most equipped with the capacity to adapt to rapid changes; therefore, these educated youth hold the key to successful transition to new economic environments, making their participation in the workforce significant.

1.3.1.1 Characteristics of Youth Unemployment

In order to address the differences between youth unemployment and adult unemployment appropriately, we must first examine these differences. The main three are: 1) the unemployment rate of youth and adults, 2) discrimination in specific categories, and 3) the consequences of unemployment.

First, youth employment is almost always worse than that of adult unemployment. In general, the rate of unemployment is highest in the youngest age group (those under 25 years old), falls to a minimum between ages 25 and 50 and rises slowly thereafter (Magnussen, 1979). Several sources report that the youth unemployment rate is usually 3 to 3.5 times higher than the global adult unemployment rate (Bureau for Employers' Activities & Programme for Employers' Activities, 2011; Ha, McInerney, Tobin, & Torres, 2010; ILO, 2004b; ILO & United Nations Global Compact, 2006; Magnussen, 1979; Somavia, 2006; World Bank, 2006). In addition, during recessions, youth are the most likely to suffer from unemployment (ILO, 2004b).

Second, youth in the specific situation tend to face discrimination in the job market for a host of reasons; socio economic status of the family is one of the examples. Youth from lower income households are more likely to be unemployed (ILO, 2004b). Even when youth have jobs, the majority of them are low paying, unsecured jobs, with few benefits or prospects for advancement (ILO, 2005).

Third, youth unemployment has not only short-term but also long-term consequences. As mentioned, unstable job market experience early on can damage long-term career trajectories. It can negatively affect career mobility or cause development of an anti-work attitude (ILO, 2005; Levin, 1983). In addition, youth experience longer periods of unemployment in total as they more frequently experience unemployment in general (Magnussen, 1979).

Some other characteristics of youth unemployment are mentioned in the literature. For example, According to a study of Australia, it is more common for youth to have lost a job than to have left a job as a reason for being unemployed (Australian Bureau of Statistics, 2001).

The relationship between youth unemployment and formal economy is noteworthy. Although it is often claimed that youth unemployment can be associated with a weak formal economy, a weak formal economy is not necessarily associated with youth unemployment (ILO, 2003b). For instance, ILO study conducted in four countries in Latin America found that countries which experienced an increase in informal economies experienced a reduction in both the youth and adult employment rate due to the increase in overall unemployment (ILO, 2003b). As found in this example, a large youth unemployment rate may indicate a weak formal/strong informal economy; however, a strong informal economy cannot always predict a high youth unemployment rate relative to an adult one². Also another noteworthy characteristic of youth group in labor market is a size of people who are neither in education, employment nor training (NEET). This is the non-utilized labor potential of the population, and NEETs are likely to be found in youth³ (ILO, 2010a).

1.3.1.2 Causes of Youth Unemployment

The factors influencing youth unemployment are not simple (O'Higgins, 1997). These factors include both demand and supply sides of factors: the environment surrounding youth, a lack of job opportunities, the cost of hiring youth, and finally, education (Levin, 1983; O'Higgins, 1997).

² Some of informal jobs are non-wage jobs, so they are not counted as unemployed not employed.

³ A recent study on youth in Latin America reported an aggregate NEET rate in was 19.8% in 2008(ILO, 2010a) .

First, the environment surrounding youth has an impact on youth unemployment. This includes the socio economical, political, and cultural aspects of the environment. For example, an aggregate demand for employment is largely related to the youth employment situation and it is a socio economic aspect of the environment⁴. Since youth labor is a part of the total labor force, youth have a better chance to be employed when the aggregate demand for employment is larger and the economy is growing. Other research cautions, however, that youth unemployment is not always associated with adult employment or frequent job changing; for instance, youth tend to be concentrated in particular industries, such as low skilled manual labor industries. Therefore, an increase or decrease of employment in certain industrial sectors will affect the number of jobs available to adults and youths, and it may lead to a disproportional change in the unemployment rate. For example, Raffe (1984) claims that the recent increase of youth unemployment in Scotland is due to the recession and the government response to the youth employment policy⁵. This indicates that youth unemployment is not really a structural issue; rather it is more a result of political strategy.

As a cultural aspect of environment, personal and family characteristics also affect labor market outcomes of youth. They can affect not only the way and degree of accumulation of human capital such as education but also labor market behaviors (Caspi, et al., 1998). For example, Caspi et al. (1998) found that lack of attachment to school and growing up in a single parent family or family-conflict increase the risk of unemployment. Also some scholars point

⁴ Demand for employment is generally related to the overall state of development of the countries as well as investment/economics policies that encourage employing workers.

⁵ According to Raffe the government enacts certain strategies during the recession, such as cutting back training and suspending recruitment, which leads to increase youth unemployment. Conversely, when economy is in a good situation, youth benefit most from those programs; **therefore, changes in youth unemployment do not parallel changes in adult unemployment.** (Raffe, 1984),

out that youth's reluctant attitude toward the labor market⁶ causes their unemployment problem (ILO, 2004b). Another factor unique to the youth population, which also affects youth unemployment, is the fact that they experience a 'school-to-work' transition (ILO, 2011). For example, youth cannot find a job due to the skill mismatch between school and workplace, a lack of work experience due to the schoolwork, a lack of recruitment channels, a lack of job search skills, a lack of mobility or a lack of career information (ILO, 2011). Youth may be out of work because they are looking for their first job (ILO, 2006b). In fact, this unemployed population is not a small fraction⁷.

Second, one of the significant factors of youth unemployment is a lack of job opportunities. A part of the cause is the growth of the population, i.e., the size of labor force compare to available job positions. In many cases, especially in developing countries, a labor force grows faster than employment demand (Magnussen, 1979), and that makes the unemployment problem chronic. According to the ILO (ILO, 2004b), the global youth population grew 10.5 percent between 1993 and 2003, while youth employment grew only 0.2. It is important to note that these numbers include youth in both developing and developed regions. Considering the fact that actual youth unemployment in developed regions has been and is expected to continue decreasing due to declining youth populations, the gap between job and population growth in the developing regions is expected to become much worse than the above statistics might suggest (ILO, 2004a, 2004b). Another reason for a lack of job opportunities is that some regions have been experiencing decreases in job positions due to alternative supplies

⁶ There are a considerable number of youths who become so frustrated with the lack of employment opportunities; they simply withdraw from the labor force (ILO, 2004b).

⁷ For example, it accounts for 37% of youth ages 15-19 years old in Australia (Australian Bureau of Statistics, 2001). An extreme case is found in the urban area of Ethiopia. According to the 1994 Census, 83.6% of unemployed youth, which was 38.1% of the youth population, were first-time job seekers (Bizuneh, Adino, Gesano, Guarneri, & Heins, 2001).

of labor. That is, as a result of globalization and the technological revolution, outsourcing and streamlining operations have had a great impact on local employment capacities. This factor should not be ignored when strategizing a response for job shortage, especially in developed countries.

Third, some authors claim that one reason for youth unemployment is the cost of hiring youth. Since employers must bear the cost of training of new employees, hiring those with prior training and experience lowers hiring costs (Magnussen, 1979). For this reason, youth with no or little experience are vulnerable, especially in times of recession, when companies suspend recruitment, and/or cut back on training (Raffe, 1984).

And last, but not least, education is significantly related to youth unemployment in two ways. The first is due to the relationship between school participation and labor force participation. National and international efforts have raised the number of young people who enroll in school. In fact, the ILO & United Nation Global Compact (2006) claims that the main reason why we can observe an almost 5% decline in the labor force participation of youth in between 1994 and 2004 is because they are staying longer in educational institutions. This decline of labor force participation actually affects to youth unemployment rates. The youth unemployment rate tends to increase when labor participation decreases. This happens because of the way of calculating the unemployment rate⁸. Therefore, the increase of the unemployment

⁸ The unemployment rate is calculated as:

$$\text{Unemployment Rate} = \frac{\text{Number of unemployed individuals}}{\text{Number in the labor force}}$$

When a number in the labor force, i.e., the denominator (working and unemployed youth) becomes smaller by withdrawing from the labor force, the unemployment rate tends to be a bigger number, even if the number of actual unemployed stayed the same or we ignore the fact of a population increase. In that sense, even when the situation of unemployment seems to be worse with a higher unemployment number, the number could just be a result of shrinkage in the labor force.

rate as a measure does not directly indicate an increase in the number of unemployed youth or a worsening of the situation. For this reason, it is worthwhile to examine local contexts related to school enrollment.

The second relevance of education to youth unemployment is its role as a provider of skills and credentials, i.e., youth with no or little general or vocation education are especially vulnerable in the labor market (Ha, et al., 2010). There are a number of theoretical and empirical studies which examine the relationship between education and employability. Youth unemployment is also discussed from this perspective as well. Caspi, et.al. (1998) found that a lack of high school credentials, poor reading skills, and a low IQ score significantly increased the risk of unemployment. Palley (1967) also claimed that one of the factors which worsens the situation of youth dropping out of the labor market is lack of formal education.

As summarizing these factors, ILO offers concise explanations why the youth unemployment rate is usually 3 to 3.5 times, can be up to 6 times higher than adult unemployment rate: 1) the last-in, first-out explanation, 2) the lack of job search expertise explanation, 3) the shopping around explanation, 4) the lack of mobility explanation, and 5) the measurement explanation (ILO, 2006b). The last-in, first-out explanation claims youth enter last and exit first from the labor market due to their lack of work experience. Second, the lack of job search expertise explanation states that youth tend not to find a job due to their immaturity in terms of job searching and access to information. The shopping around explanation claims that, unlike adults, youth might wait longer to find work that suits their requirements and the fourth, the lack of mobility explanation, argues that youths often don't relocate to a place where a job is available due to a lack of financial resources. Finally, the measurement explanation points out that while the adult labor force is stable, i.e., there is a relatively equal number of people entering

and leaving the work force, the youth labor force experiences decreases when more youth attend school. As demonstrated above, this can cause a deceptively high number for the youth unemployment rate, even though the actual unemployment has not changed much.

1.3.2 Current Situation of Youth Unemployment

Young workers are more likely to be working long hours, on short-term and/or informal contracts with low pay, little or no social protection and no voice at work. In all, about one third of the 1.1 billion youth in the world suffer from a deficit of decent work opportunities (ILO, 2006a).

This is the situation of youth employment. The problem is exacerbated for females, especially in the area of jobs which are intensive and require few skills (Magnussen, 1979). In this section, first, I explore the current situation of youth unemployment in the global context, and then I discuss developed and developing regions separately.

While youth represent only 25 percent of the working age population, they make up 47 percent of the unemployed population (ILO, 2004b; Youth Employment Network, 2004). The unemployment rate for young people is more than three times higher than the adult rate (Australian Bureau of Statistics, 2001; ILO, 2005). In addition, as many as 500 million young people are expected to enter the world's workforce over the next decade (ILO, 2005; ILO & United Nations Global Compact, 2006).

Worldwide, youth unemployment has increased dramatically recent years (ILO, 2004b). Although the number varies depending on the source, all claim around 81-88 million youth aged 15 to 24 are currently unemployed in the world (ILO, 2004b, 2006a, 2010a; ILO & United Nations Global Compact, 2006; United Nations, 2010; Youth Employment Network, 2004).

According to the report from United Nations (2010) and ILO (2010a), the number of world unemployed youth in 2009 counted, 81 million. It rose 7.8 million from 2007. The youth unemployment rate in the world accounted for 13% in 2009. This is more than 1 point increase from 2007 (11.9%) and it forecast to continue to increase to coming year (ILO, 2010a; United Nations, 2010) (ILO, 2004a).

According to the Global Employment Trend for youth 2006 (ILO, 2006b), youth unemployment in 2005 was concentrated mostly in Sub-Saharan Africa (17.414M), followed by South Asia (13.662M) and East Asia (12.076M). However, the number of unemployed youth represents only one aspect of the problem and could lead one to overlook the seriousness of other issues. For example, while South East Asia and the Pacific rank only fourth in total number of unemployed youth (9.727M), this is an 85% increase in their number since 1995. This is an extremely high growth rate as compared to the second highest growth rate, which is 34%, in Sub-Saharan Africa (ILO, 2004b). As can be seen in Table 1, global youth unemployment has increased by 14.8% over the past decade. Considering the fact that Developed Economies and the European Union experienced decrease (-17.5%), the problem is concentrated in developing regions and that they are in a much more severe situation that 14.8%.

Table 1: Transition of Total Youth Unemployment (1995-2005)

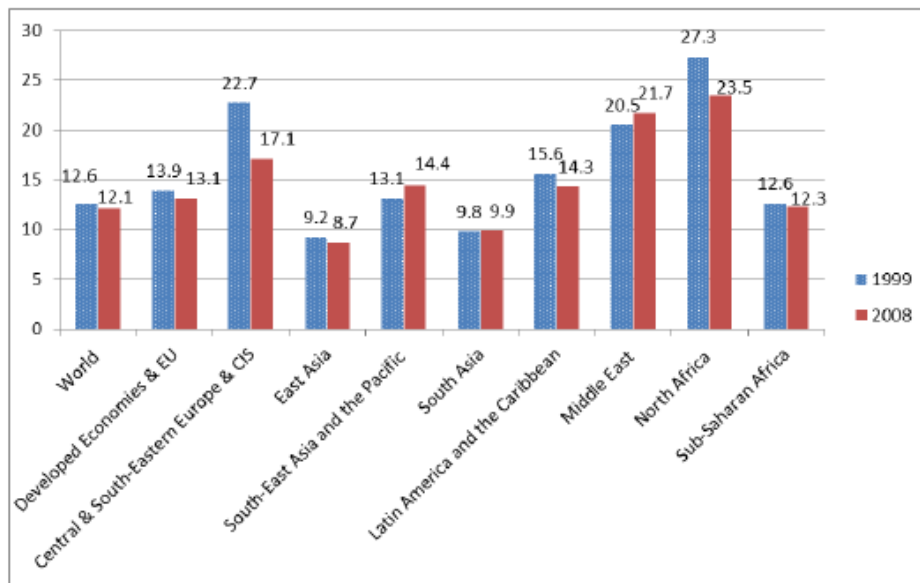
	Youth Unemployment ('000s)		
	1995	2005	% change 1995-2005
World	74,302	85,278	14.8
Developed Economies and European Union	10,281	8,481	-17.5
Central and Eastern Europe (non-EU) and CIS	5,962	5,900	-1.0
East Asia	13,149	12,076	-8.2
South East Asia and the Pacific	5,242	9,727	85.5
South Asia	11,765	13,662	16.1
Latin America and the Caribbean	7,722	9,495	23.0
Middle East and North Africa	7,209	8,525	18.2
Sub-Saharan Africa	12,972	17,414	34.2

Source: (ILO, 2006b, p. 16, Table 2.5.)

On the other hand, the current youth unemployment rate in the world is estimated 12-13% in the world (ILO, 2010a). In 2008 (See Figure 2), the areas with highest rates were the Middle East (21.7%) and North Africa (23.5%), followed by Central and Eastern Europe (non-EU) and the Commonwealth of Independent States (CIS) (17.1 %), South-East Asia and the Pacific (14.4%), Latin America and the Caribbean (14.3%), sub-Saharan Africa (12.3 %), the Developed Economies and European Union (13.1%), South Asia (9.9%) and East Asia (8.7 per cent) (ILO, 2006b). It is noteworthy to mention that the transition in a decade may indicate totally different unemployment facts, depending on where the data is cut off. For example, considerable changes cannot be identified in both South East Asia and Pacific and Latin America and the Caribbean in the period of 1998-2008 (Figure 2). Both region, however, actually had experienced significant increase in youth unemployment rates between 1995-2005 (ILO, 2006b); youth unemployment were once worsened from 9.2% to 15.8% in South East Asia and Pacific and from 14.4 % to

16.6% in Latin America and the Caribbean. The deteriorating situation in South East Asia and the Pacific is serious—the ratio of youth to adult unemployment increased from 1:4.9 to 1:5.6 from 1995 to 2005 (Somavia, 2006). This situation is explained as an effect of regional economic crises in the late 1990’s (ILO, 2006b). The drop in youth unemployment growth rates in the Middle East and North Africa regions in 1995-2005 (28.5% to 25.7%) is explained by the phenomenon of youth staying in school longer⁹ (El-Hamidi & Wahba, 2005). Overall, the transition of youth unemployment rate between 1995-2005 indicates much worse increase comparing to the one in 1998-2008. This may suggest that analyzing what had happened between 2005-2008 may provide some critical knowledge about decreasing the youth unemployment rate.

Youth unemployment rate, by region, 1999 and 2008



Data Source:(ILO, 2010b, p. 46)

Figure 2: Transition of Youth Unemployment Rate

⁹ El-Hamidi and Wahba found that youth unemployment is concentrating among educated youth in Egypt and they are mostly voluntarily unemployed in order to be employed in the next available public sector job.

Educated youths without jobs are particularly numerous in this area. For example, the proportion of unemployed youth with more than 13 years of education increased from 7.1 % in 1990 to 29% in 2003 in Sri Lanka (Somavia, 2006). The economic loss as a result of their youth unemployment is tremendous; ILO estimates a 1.4% increase in GDP if youth unemployment could be halved in West Asia (Somavia, 2006).

In addition to youth unemployment rates, it is also important to note the underemployment¹⁰ situations of youth. That is, though youth may have jobs, in fact, approximately 106 million working youth lived in households earning less than US\$ 1 per day in 2004 (ILO & United Nations Global Compact, 2006), 152 million working youth were living in below US \$1.25 in 2008 (ILO, 2010a). According to the ILO, youth account for about 24% of the world's working poor (ILO, 2010a). Part of the reason for this is that a majority of the jobs available for youth are situated within the informal economy¹¹. For example, approximately two-thirds of new jobs created in Latin America and South-East Asia during the period 1990-2002 were in the informal economy (ILO & United Nations Global Compact, 2006), which often

¹⁰ Underemployment refers to underutilization of the productive capacity of the employed individual; it includes the situations resulting from a deficient national or local economic system (ILO, 1998b). Youth are underemployed when the following conditions are not fulfilled: "(i) [a] work is as productive as possible; and (ii) they have the freedom to choose the employment and that each worker has all the possibilities to acquire the necessary skills to get the employment that most suits them and to use in this employment such skills and other qualifications that they possess" (ILO).

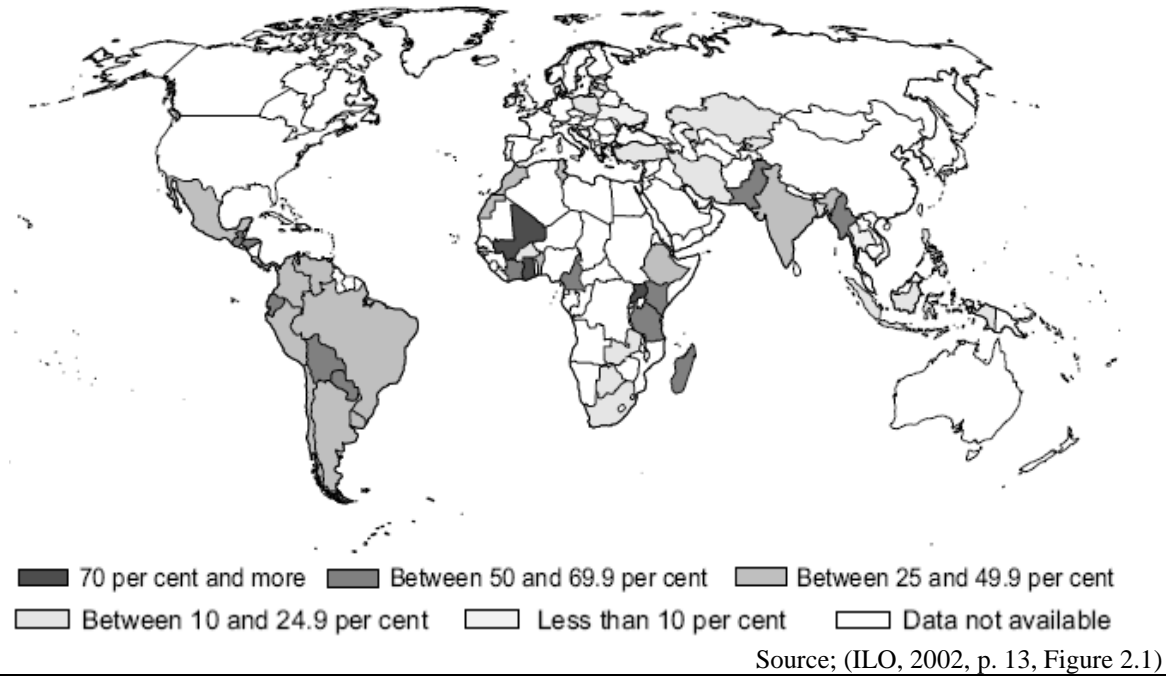
¹¹ According to the International Conference of Labour Statisticians (ICLS), the definitions of informal sector are:

- 1) a group of production units which...form part of house hold sector as house hold enterprises or equivalently, unincorporated enterprises owned by households,
- 2) Within the household sector, the informal sector comprises (i) 'informal own-account enterprises'...and (ii) the additional component consisting of 'enterprises of informal employers'....
- 3) The informal sector is defined irrespective of the kind of workplace where the productive activities are carried out, the extent of fixed capital assets used, the duration of the operation of the enterprise (perennial, seasonal or casual), and its operation as a main or secondary activity of the owner" (ILO, 2007b, p. 5).

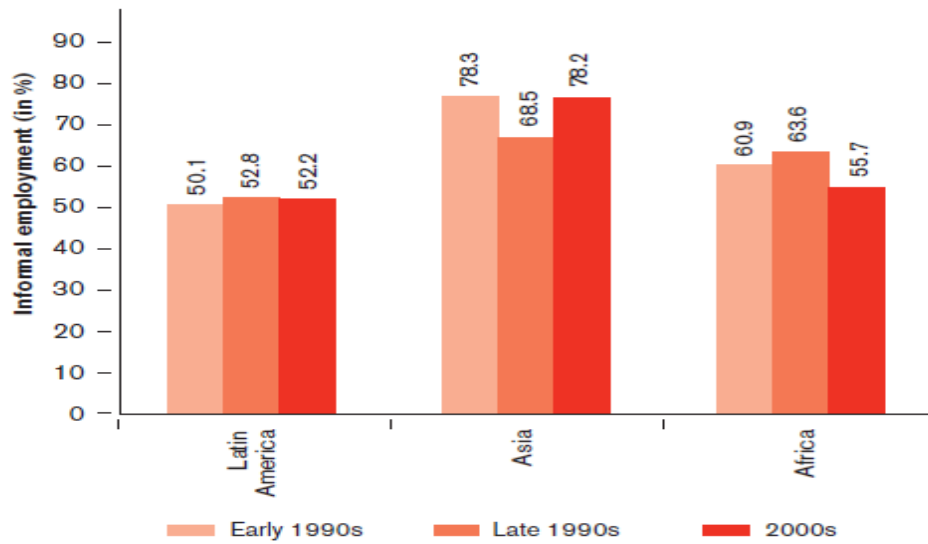
offers unsatisfactory working conditions(ILO & United Nations Global Compact, 2006). In the informal economy, most jobs are low paid, temporary, insecure, involuntary part-time or casual work which offer few benefits or prospects for advancement (ILO & United Nations Global Compact, 2006; Youth Employment Network, 2004). The ILO supports these claims, saying, “the informal sector accounts for up to 93% of all jobs available to young people, and the wages in the informal sector are 44% lower than the formal economy, and benefits are nonexistent” (ILO, 2005, p. 1). In addition, social protections are not adequate for youth; according to ILO’s 2006 Global Compact Policy Dialogue, almost 52 million young people ages 15-17 engaged in hazardous work in 2004 (ILO & United Nations Global Compact, 2006). Another example of a lack of social protection is provided by an example in Latin America, where the social security coverage¹² for youth dropped from 44% in 1990 to 38% by the end of the decade (ILO, 2005). The world map on the top in Figure 3 shows geographic areas and their percentage of labor in the informal economy. Clearly, the informal economy plays an important role of nation’s economic activities in Latin America, Sub-Saharan Africa, South Asia, as well as South East Asia. The bottom figure shows that more recent statistics about these three major regions.

¹² Many countries have been adopting policies and initiatives to extend social security coverage to those who are not covered by existing schemes, in particular to workers in the informal economy. This includes extension of social insurance, cash transfer and social pension in order to grant access to basic health care, permission to attend school for their children, and basic universal pension for old age (ILO, 2007a).

Informal Sector Employment as a Percentage of Total Employment for Countries Where Data are Available



Informality around the world



Note: Country groupings: (i) Latin America: Argentina, Chile, Colombia, Costa Rica, Ecuador, Mexico, Panama, Uruguay, Venezuela, (ii) Asia: China, India, Indonesia, Pakistan, Sri Lanka, Thailand, (iii) Africa: Botswana, Cameroon, Egypt, Ethiopia, Ghana, Kenya, Malawi, South Africa, Tanzania, Zambia, Zimbabwe.

Source (Bacchetta, Ernst, & Bustamante, 2009, p. 29 Figure 1.2)

Figure 3: Informal Sector Around the World (Relative total employment)

The informal economy indeed provides a large number of ‘employment opportunities’ in these developing areas because employment takes the form of not only waged work but also self-employment activities such as farming and small shop-keeping; therefore, it is clearly important to resolve how to increase the quality of jobs in this area.

Difference between developed and developing regions

Both developed and developing countries are failing to increase employment opportunities for young people (ILO & United Nations Global Compact, 2006). However, youth in the developing regions are clearly more disadvantaged than youth in developed regions. For example, the youth in industrialized countries are 2.3 times more likely to be unemployed when compared with older workers, while youth in the developing countries are 3.8 times more likely (ILO, 2004a, 2004b). The reason for this difference in numbers lies in the differing nature of the problem in developed and developing regions. In developed regions, the main problem is related to a mal-distribution of jobs, i.e., equity issues such as the gap between men and women. (ILO, 2005). Meanwhile, the most critical issue of youth unemployment in the developing regions is the large number of youths relative to adults. Moreover, youth in developing regions make up the fastest growing segment of the world population¹³ (World Bank, 2006). For this reason, the ILO report predicts that the largest challenges related to unemployment will fall on developing regions in the years to come (ILO, 2004a).

¹³ Sixty percent of youth who will enter the labor force for the first time this century live in Asia (Somavia, 2006).

1.3.3 Possible Policy Solutions

1.3.3.1 How to Approach Youth Employment Problem

Since most of the youth population is concentrated in developing regions, the experience and impact of youth unemployment in developed and developing regions are indeed different. In general, the goal of human resource development policies in industrialized nations is to facilitate creation of globally competitive, knowledge based industries by focusing on enhancing work force skills (Krahn, Lowe, & Lehmann, 2002). However, youth unemployment issues are more serious and complex in developing regions. For example, estimation of a severity of youth unemployment problem can be drawn differently depending what one is looking at. One study (Mehran, 1999) estimated that about half of the total world unemployment is occurring in Africa, Asia/Pacific and the Middle East because of the large labor force in these regions; however, countries with transition economies, such as the Russian Federation, Ukraine, and Lithuania are actually experiencing higher unemployment rates compared to those in the previous regions.

Policy choice varies depending on the local context, making it difficult to create a strategy that is ‘one size fits all’. In general, curative interventions, rather than preventative interventions, are suggested and utilized in the developing regions to alleviate the situations of the poorest of the poor (Godfrey, 2003); however, the bulk of unemployed youth in some developed and transitional regions has more than the minimum level of education—they are not necessarily poor. In these cases, then, a curative strategy is likely to be ineffective at reducing the rate or number of unemployed youth (Godfrey, 2003). If reducing the number of these educated youth is the goal of the intervention, then preventative intervention through education might be more appropriate.

Having mentioned these differences, youth unemployment is still an important policy issue, regardless of a country's stage of development (ILO, 2006b). Policy intervention for youth unemployment can be categorized into two types: those influencing the demand side of the labor force and those influencing the supply side¹⁴.

As mentioned above, increasing the aggregated demand for a labor force is an important factor in decreasing youth unemployment. To this end, a general economic development policy is often created as it can lead to an increase in employment opportunities; however, a job creation stimulus policy can also be an effective way to enhance demand because, quite simply, it provides more positions to fill (Magnussen, 1979). Easing entry restrictions to a market, reducing corruption and restructuring markets are all effective job creation strategies (Klein & Hadjimichael, 2003). In addition, supporting the informal economy, e.g., improving infrastructure and/or providing microcredit, can lead to an increase in economic activity. If the labor force demand does not increase faster than the growth in the labor force, youth tend to be pushed out of the market and unemployment will be concentrated among the least skilled youth (Magnussen, 1979). Therefore, any increase in job positions, even those not meant to be filled by youth, can also enhance demand in the labor force, which can lead to youth being employed (ILO, 2011).

In contrast to the policy response through the demand side of labor market, youth unemployment can be tackled from the supply-side through education. In fact, Godfrey (Godfrey, 2003) claims that increases in the demand for labor depend on the average quality of

¹⁴ ILO suggests 13 policy approaches to intervene youth unemployment problem: 1) Political, economic and institutional stability, 2) good governance, 3) Social dialogue, 4) investment in infrastructure, 5) Investment in health care, 6) Investment in education and skills development, 7) Promotion of export growth strategies, 8) Access to financial services, 9) Information and communication technology, 10) Support for small and medium Enterprise (SME) development, 11) Policies promoting productivity and competitiveness, 12) Flexible labour market policies and the absence of red tape, 13) Safety net for failed start-ups. (ILO, 2011)

the labor rather than the quantity available. Education can enhance the productivity, i.e., the quality, of the youth labor force and it certainly contributes to reducing the problem of youth being pushed out of the market as it provides youth with a competitive advantage relative to adults (Levin, 1983). Therefore, enhancement of general education is critical. Audretsch and Thurik (2000) claim further that employment policies should focus more on input such as research and investment in advanced technical specialties and training as they lead to an upgrade in the skill level of workers. They point out this is imperative in times of uncertainty and especially important in developing countries; even though developing countries have an abundant source of labor, there is a shortage of skilled labor, a large number of immature industries, monopolistic practices, weak capital markets, inadequate infrastructures, and the low levels of education in management (Kiggundu, Jorgenson, & Hafsi, 1983), resulting in an ineffective mobilization of local resources (Kiggundu, et al., 1983).

Some scholars claim that the youth unemployment problem is unlikely to be solved using an educational solution because it is not primarily an educational dilemma—that might be one of the reasons why this area of study has been almost totally neglected. However, sustainable labor market and economic development cannot be achieved without supply side intervention to provide a balance. Employment issues deal with people; thus, focusing solely the external environment is not only an insufficient but also an ineffective strategy, since it can neglect make use of underutilizing human power. I believe empowering the internal force can lead to more effective results. Therefore, to bring about a better understanding of this issue, this study focuses on the supply side of policy discussions. The shaded area in Figure 4 indicates the topics which this paper focuses on within youth employment policy.

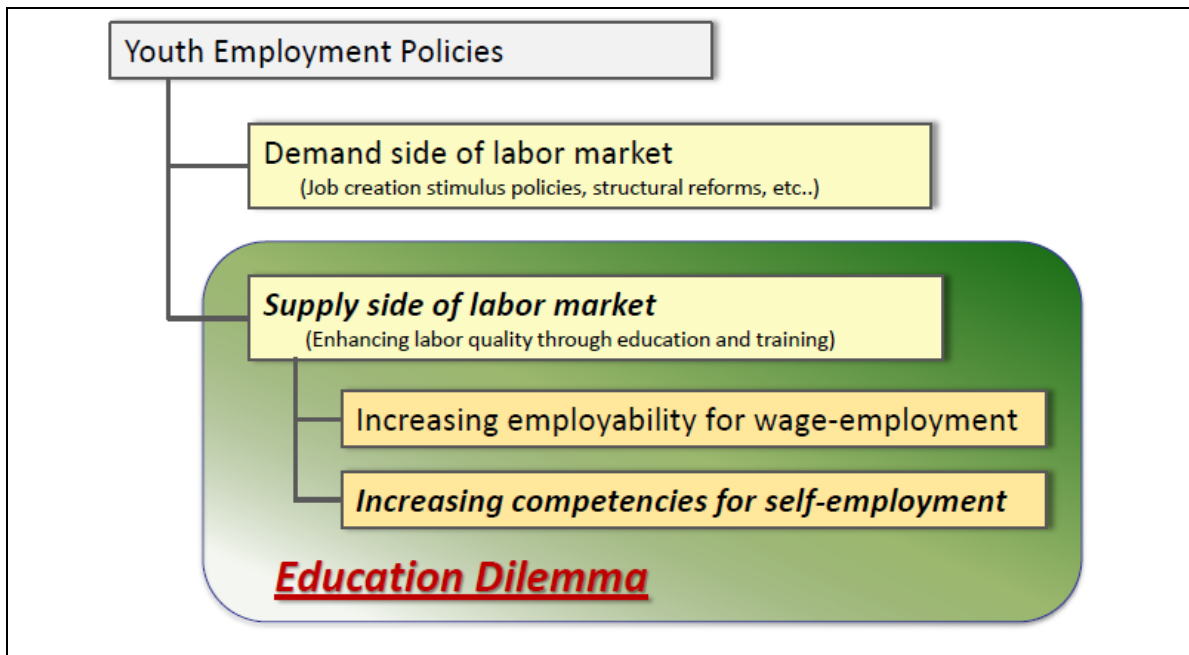


Figure 4: Youth Unemployment Policy Intervention

As indicated in this figure, the supply side of labor market policy can be considered an education dilemma. I identify two types of policy approaches which aim at enhancing the quality of labor through education; increasing employability for wage-employment and increasing competencies for self-employment, i.e., job creation. Since increasing the number of people who are wage employed is the basis of dynamism in the labor market as a whole, most policy discussions focus on how to increase one's employability, (Godfrey, 2003). This approach is appropriate for making youth more competent compared to experienced adult labor. In order to increase employability, this type of policy suggests early and sustainable intervention of basic literacy and numeracy skills in developing regions, while focusing on reducing drop-outs in transition regions. (Godfrey, 2003). However, while acknowledging this widely administrated strategy, I would like to highlight an alternative approach—increasing competencies for self-employment;

i.e., job creations. This approach emphasizes enhancing a student's capacity to be a job creator, i.e., entrepreneur. I believe this alternative approach will become more and more critical to adopt in places where not many jobs are available and also in places where job streaming and outsourcing are becoming common practice. This approach, targeting job creations, is imperative both in developing and developed regions in order to respond to labor market demand and as well as the structural changes.

1.3.3.2 Why Should We Focus on Self-employment Option?

Regardless of the fact that self-employment is a viable alternative to wage-employment (ILO, 2011), policy interventions in this area has been neglected especially in education field. The issue of improving the unemployment situation involves not only securing employment for a number of people, but also increasing the number of productive job positions which will allow living standards to rise; however, large, especially state-owned, businesses generally fail to deliver sustainable productivity growth (Klein & Hadjimichael, 2003). If unemployed individuals know how to create such jobs for themselves, i.e., have the competency to become sustainable self-employed labor, the number of unemployed individuals can decrease and the local labor market can improve. Creating jobs is especially important in areas where the number of formal jobs are limited, and also where job streamlining is accelerating. Clarifying the dynamics of human capital building, especially how to build entrepreneurial skills, which are believed to be an engine of business creation, has become an area of interest for research and practice. This trend became more obvious beginning in the 1980s, when the stagflation¹⁵ and

¹⁵ Stagflation is a state of economic crisis in which inflation accompanied by economic stagnation (ILO, 1989).

high unemployment resulted in increasing interest in supply side economics and its underlying factors (Wennekers & Thurik, 1999)

The direct effect of the magnitude of entrepreneurs on economic growth has not been proven; however, what is already known is that entrepreneurship has an impact on the competitiveness of the national economy because a shortage of business owners diminishes competition and, therefore, efficiency (Carree & Thurik, 2003). The efforts to find a positive relationship between entrepreneurship and decreasing unemployment, in fact, exist although it is very small. For example, there are some theoretical frameworks which suggest this relationship, such as “refugee effect” or “Schumpeter effect,”¹⁶ (Carland, et al., 1984; Carree & Thurik, 2003). Audretsch and Thurink (2000) attempt to examine this relationship; they looked at 23 OECD countries between 1974 and 1994 and found that growth in the number of entrepreneurs led to a reduction in underemployment rate. Regardless of these studies, this research area is clearly underdeveloped. Part of the reason of this is that it is difficult to measure the power of the individual entrepreneur with respect to aggregated economic outcomes (Wennekers & Thurik, 1999). Having noted about this neglected research area, encouraging entrepreneurship is still considered as one way to tackle the youth unemployment problem. For example, the “*national reviews and action plan*” which was prepared by the High-Level Panel of the Secretary-General's Youth Employment Network (YEN) in 2001, identifies entrepreneurship as one of four priorities¹⁷ in all countries’ action plans for youth employment (ILO, 2003a).

¹⁶ The ‘refugee effect’ argues that unemployment stimulates entrepreneurial activities (Carree & Thurik, 2003). The ‘Schumpeter effect’ argues that a higher level of entrepreneurship reduces unemployment (Carland, Hoy, Boulton, & Carland, 1984; Carree & Thurik, 2003).

¹⁷ YEN’s four employment strategies are: Employability, Equal Opportunity, Entrepreneurship, Employment creation.

Starting up a number of firms does not directly contribute to bringing down the unemployment rate; however, firms which survive can and will generate employment in a later phase (Audretsch & Thurik, 2000). Furthermore, in the case of rural area, being entrepreneur may not necessary mean that he or she establishes a ‘firm’ as a legalized form; Nonetheless, if one could be more productive through the entrepreneurship and that leads to engaging in economic activity, it would certainly be a source of employment. Schumpeter (1934) defines entrepreneurs as individuals who carry out new combinations of productive means; i.e., they can generate unknown potential to create a future prosperity by utilizing existing supplies of productive means in the economic system.

Job creation and self-employment

The importance of self-employment and creation of small businesses appears often in economic development policy papers. Carree and Thurik (2003) stress that creation of small businesses is a route of innovation, an industry dynamic, and a force in job generation; thus, the economic power of small businesses should not be ignored. Although some scholars debate the effectiveness of small firm creation in reducing the unemployment problem (Acs, Arenius, Hay, & Minniti, 2005), Carree and Thurik (2003) claim that the function of job creation is one of the reasons why self-employment and small businesses are crucial. In fact, countries with large unemployment are eager to create jobs with Schumpeter-type of entrepreneurs¹⁸ (Leo Paul, 1992). Most firms, even multi-national corporations which employ millions of workers, probably started from self-employment or on a small scale; this fact highlights that self-

¹⁸ Schumpeter, who is the most known scholar within the study of entrepreneurship, claims that entrepreneurs are individuals who carry out new combinations of production means. He defines five categories of entrepreneurial behavior: 1) introduction of new goods, 2) introduction of new methods of production, 3) opening of new markets, 4) opening of new sources of supply, and 5) industrial reorganization (Schumpeter, 1934). The details of entrepreneurship will be discussed in Chapter 2.2.

employment and small businesses have at least the potential to be job generators. Indeed, many business owners never intended for their businesses to grow beyond what they considered to be controllable in the beginning (Carland, et al., 1984). The stagnation of job creation in the formal sector has intensified the unemployment problem of youth (ILO, 2003b); therefore, the function of job creation should be a great interest for employment policy makers.

Self-employment creates job directly, and it can create jobs for others too (Bureau for Employers' Activities & Programme for Employers' Activities, 2011). Job creation is directly related to increases in the size of the labor force and so affects youth employment as well. As mentioned previously, when the demand for a labor force does not increase more than the growth of the potential labor population, youth tend to be pushed out of or are not allowed to enter the labor market. Then, theoretically, any job creation will enhance demand for a labor force and create job positions for youth to be employed; and entrepreneurship is an important engine for business creation, job creation, and legitimate wealth creation (Acs & Virgill, 2010).

Reducing the number of unemployed individuals through enhancing the self-employed workforce could still be seen as insignificant; however, more attention has been paid recently by policy and political decision makers to the potential role of entrepreneurs as a possible solution to rising unemployment rate (Garavan & O'Connell, 1994), and this potential should not be ignored. Table 2 shows the empirical findings presented in GEM report. It shows the expected job creation by baby businesses (less than 42 month old) to create jobs in five years.

Table 2: Job Creation Aspiration of Baby Business by Size Category

	N	Total Jobs	N (%)	Jobs (%)
0 to 1 employees	16,485	149,406	100.0%	100.0%
2 or more employees	9,566	147,278	58.0%	98.5%
5 or more employees	4,529	133,564	27.5%	89.4%
10 or more employees	2,888	124,108	17.5%	83.1%
20 or more employees	1,663	110,002	10.1%	73.6%
50 or more employees	742	86,320	4.5%	57.8%

Data Source; (Autio, 2005, 23)

In this study, Autio (2005) used 16,485 baby businesses as his data¹⁹. Autio found that about 10% of all baby businesses expect to create 20 or more jobs in 5 years, which is nearly 75% of all new jobs. As seen in his findings, a job creation policy through new businesses can be one of the critical elements for employment policy.

In fact, the number of self-employed persons has been rapidly increasing in the world, especially since the mid 1970s in most modern economies (Carree & Thurik, 2003). For example, the small business administration in the United States reports that the number of people self-employed increased by 8.2%, or more than 1 million people, from 1995 to 2003, (Sullivan, McGibbon, & Moutray, 2005); one study claims that one quarter of young U.S. workers pursue self-employment (Carree & Thurik, 2003). One of the reasons why self-employment attracts people in the modern economy is that it has an innovative advantage over larger counterparts in industries where high innovation is necessary (Carree & Thurik, 2003). Then a systematic training strategy to produce competent self-employed individuals is desirable in those regions. In addition, I argue that this type of strategy is even more needed in pre-mature economies,

¹⁹ The data has been weighted according to UN estimate for adult-age population in June 2005 for the 44 countries that participated in GEM from 2000 to 2004 (Autio, 2005).

where large companies have no positions open to accommodate the large number of job candidates available. As mentioned, some developing and transitional countries have an excess number of educated youth who do not wish to settle in farming or low paying jobs²⁰. Then what can we suggest to deal with those youth, who already possess more than basic literacy and numeracy skills?

Caspi and his colleagues (1998) cite Hill's argument that unless programs which identify and alter skills, attitudes, and habits, are provided, work stability won't be achieved. Assessment and designing those preprograms is certainly a role of education and training. Nelson (1977) also urges those in the education field to take responsibility:

Entrepreneurship can be the means to stimulate the creativity and innovation necessary to create a better community, nation...to achieve this goal, government policies should focus on the education the aspect of the vast human potential for entrepreneurship which exists in every society.
(p, 885)

This under developed policy area will become increasingly critical, especially the areas where existing jobs are not sufficient, or the time when economic policies are simply won't bring about growth in an area. Given that traditional methods of education do not seem to be benefitting youth in finding a job, it is a time to recognize the limitation of increasing employability to reduce youth unemployment problem, and face the challenge to figure out what education can do to create new jobs.

²⁰ In Sri Lanka, for example, the probability of being out of a job is highest among youth with 10 and 12 years of education. For instance, there are a thousand of unfilled vacancies in agricultural sectors in Sri Lanka, 10,000 candidates applied for 300 positions in government work (Godfrey, 2003).

1.4 STATEMENT OF THE PROBLEM

1.4.1 Problem

Having recognized the importance of education for self-employment, the relationship between education and entrepreneurship is unclear; therefore, it is uncertain whether current entrepreneurial education is effectively designed based on certain rationales. This paper investigates how education plays a role in creating jobs, and what the best way to foster self-employment competencies is in order to address current unemployment problem. This study explores research literature to understand how education theories and practices can be used to achieve better employment outcomes. To this end, it attempts to make sense of the mechanisms of entrepreneurship and education which lead to producing sustainable self-employed individual labor. It is designed to help policy makers capture educational perspectives so that they can debate, design, and implement programs in order to create productive and sustainable self-employed labor in the future.

1.4.2 Research Questions

This is a theoretical debate paper; therefore, this paper does not focus on a specific region or curriculum. Instead, I examine how education might play a role in the business creation process for self-employment. The following research questions are asked in order to discover some of the currently uncharted relationships in this area.

Primary Research Question:

What are the current debates related to the roles of education in the development of entrepreneurship skills that lead to both self-employment and business creation?

Supporting Research Questions:

- i) What types of human capital²¹ are currently thought to be needed for self-employment and business creation?
- ii) To what extent is social capital²² thought to enhance business creation for self-employment²³?

To analyze this problem, I explored existing literature for the purpose of employing a meta-study of the available literature. I use the mapping technique to illustrate my findings. Mapping, sometimes called social cartography, is a relatively recently-developed methodology based on the need to manage a lack of scholarly consensus and a need to understand multiple valid perspectives. Rolland G. Paulston (1993) explains that:

[Map] reinscribe[s] and structure[s] ways of seeing social and education phenomena embedded in the semiotic space of literary text and the intertextual space of educational practice (p. 18).

In other words, this methodology allows researchers to aggregate fragmented scholarship into meaningful comparative and international perspectives.

The result of this methodology is a visual presentation. It portrays the mapper's perception of the current state of the field. The purpose of a map is to place fragmented

²¹ In this context, human capital refers to personal resources such as skills and knowledge. It maximizes one's productive ability in the labor market (Caspi, et al., 1998). The details of human capital are discussed in Chapter 2.1.

²² In this context, social capital is used to mean social resources which are relevant to economic activities. Examples are social networks or environments where one can learn values (Caspi, et al., 1998; Durning, 1990; Putnam, 2000). The details of social capital are discussed in Chapter 2.1.

²³ Self-employment takes into account not only the urban, modern sector, but also the rural, traditional sector. However, this paper focuses more on the creation of a legalized form within a social structure.

contemporary thinking by scholars and others into a new space that encourages discussion across different communities; obviously, then, mapping is a great help to those working in interdisciplinary areas. The map is relatively simple and straightforward and can help policy makers and program designers better understand the research and the debates that exist in this neglected but increasingly important corner of the educational policy and program world. The details of this methodology are discussed in Chapter Three of this paper.

2.0 LITERATURE REVIEW

2.1 THEORETICAL FRAMEWORK—EDUCATION AND EMPLOYMENT

This section explores the theoretical arguments and research evidence which connect education and employment in general (excluding self-employment, which is discussed in Chapter 4.0). The main purpose of this section is to capture the dynamics of hiring practices through analysis of these theories and arguments in order to understand the difference and similarity between increasing one's employability and self-employment. First, it discusses general theoretical arguments with respect to education and employment, and then it moves on to discuss two main streams of theoretical framework—human capital theory and screening theory. Finally, the section discusses how these theories explain the job distribution and employability mechanism.

2.1.1 The Relationship between Education and Employment

The causes and cure for the youth unemployment problem do not solely rest with educators; however, there certainly is a sphere where education can and should contribute. Then, what should be the responsibilities of the education field? The relationship between education and employment outcomes has been studied and theorized in many ways. In this section, I explore the literature to find out what theories are currently available and how these theories explain the

mechanism of education and employment in order to make a meaningful contribution to employment strategies.

Youth unemployment does not randomly fall onto youth, but it falls onto a targeted group of youth (Levin, 1983); These groups are sometimes characterized by sex, socio economic status, or race, but most often by educational situation. For example, several researchers claim that a youth without basic skills tends to be unemployed or underemployed and remains in the poverty cycle without fulfilling his/her potential to contribute to society and the economy (Singh, 2000; Somavia, 2006). Because education is related to one's skills, sometimes it can be blamed for youth unemployment (Levin, 1983). Somavia (2006) supports this idea, claiming "Education is the first step towards decent work and productive and responsible lives for young people" (p. 2). The main two factors claimed regarding how education relates to unemployment issues are schooling and attainment.

First, there is a schooling effect on the youth unemployment outcomes. Decreuse and Granier (2002) claim that there is a structural relationship between aggregated schooling and the unemployment rate. That is, less educated youth are more likely to be unemployed (Levin, 1983), and this tendency is regardless of age and sex (Magnussen, 1979). Since the difference in the rate of unemployment among youths who have and have not completed primary school is significant, Magnussen (1979) stresses the importance of completion of primary school. At the adolescence level, Palley (1967) found that high school dropouts are an unstable labor force.

Few studies suggest that schooling does not guarantee better employment. Even though today's youth are the most educated generation in the history (Somavia, 2006), they are facing a growing deficit of full and productive work. This occurs in part because schooling cultivates an attitude toward certain jobs; youth possessing a higher formal education diploma tend not to

accept manual jobs and remain unemployed, especially in developing countries (Gedeon & Psacharopoulos, 1982).

A number of scholars claim that schooling also has an impact on the labor market and business outcomes. For instance, Sluis, Praag and Vijveberg (2005) state that schooling has a productive effect on the quality and quantity of labor supplies that leads to a higher productive ability of the labor market. Decreuse and Granier (2002) argue that disseminating education raises labor demand and wage dispersion, since firms are willing to post higher wages for their educated workers. Sluis et.al. (2005) claim that a marginal year for schooling raises business income by an average of 5.5 percent, regardless of the level of a country's economic development. Moreover, the higher the level of schooling, the more On the Job Training (OJT) will be provided in general; thus, formal education and OJT are complementary factors (Magnussen, 1979).

Second, educational attainment also has a relationship to youth unemployment issues; one study found that unemployment rates decrease as education attainment increases in OECD countries (Decreuse & Granier, 2002). As Gedeon and Psacharopoulos (1982) suggested, this is a consequence of the fact that students with higher certificates and grades are more successful at getting jobs.

Meanwhile, youth unemployment also has an effect on schooling outcomes for several reasons. A high rate of youth unemployment leads to a reduction in student's motivation to complete an educational program, since schooling seems to be unnecessary to reach reasonable employment prospects (Levin, 1983).

There are some theoretical frameworks we can refer to in order to understand how job opportunities are distributed in labor markets. Two of the main theories related to education and

employment are Becker and Schultz's "Human Capital Theory" (Becker, 1993) and Thurow's "Screening Theory" (Thurow, 1975). These two perspectives see the mechanism of education in the labor market quite differently. It is important to historically contextualize these theoretical arguments: thus, in the next section, I first briefly describe how these theoretical perspectives emerged within the field of employment and education and then discuss the main ideas of each perspective.

2.1.2 Human Capital and Screening Theories—Historical Perspectives

Becker and Schultz first introduced human capital theory in the early 1970s. They introduced how the classic economic idea, that of returns in investment, can be applied to labor market practice. They argued that education is a means of investing in one's human capital. In other words, human capital theory claims that more education brings more earning or better employment to individuals.

In the mid 1970s, the screening theorists, such as Thurow, Arrow and Riley first challenged this argument. They did not completely reject the basic argument of human capital theory; however, they expressed skepticism over the direct relationship between education and employability. Screening theory argues that education does not necessarily enhance one's competency, but merely sort people according to generic competence. This theory reflects the more complex reality of hiring practices, i.e., more education does not always promise better employment outcomes.

Empirical and conceptual research on the relationship between education and employment flourished from the late 1970s to the early 1980s, much of it claiming that less education tends to create more unemployment; since this is consistent with both human capital

and screening theories, it is not difficult to deduce that this research is built on these two classic theories. At this phase, researchers believed that primary education would bring the highest return to individuals.

The theoretical debates on this issue slowed during the neoclassic era, which I define as the period between the late 1980s and the early 1990s. Human capital theory and screening theory still held dominance; however, in the beginning of the 1990s, a new way of approaching employment issues began to germinate in the field. For example, instead of using a broad definition for “education”, the newer studies identified employability and productivity skills as a focus of education (Brock, 1991; During, 1990). In addition, during this time the term “social capital” began to appear in academic literature.

From the late 1990s, new waves of theoretical approaches emerged in the employment and education field. Scholars more actively pursued discussions of social capital in employment strategies, especially after 2000. This scholarship emphasizes political and cultural influences on employment outcomes and advocates psychological approaches to enhance competencies in the labor market (Davidsson & Honig, 2003; Krueger, 2003). In addition, entrepreneurship education scholarship claimed a place of responsibility and contribution to the field.

In light of this more recent research, human capital theory has developed in several areas. First, although the basic argument that more education brings more economic returns is still prevalent, more current theorists claim that investment in education does not promise economic prosperity, but that the relationship between education and prosperity is thought to be more conditional and dependent on factors in specific situations (Brown, 2001). Second, while scholarship in the 1970s promoted the idea that primary education offered the most returns on investment, the scholarship of this era highlights the importance of higher education, because

higher education imparts skills which absorb technology (Barro, 2001). Third, recent human capital theory scholarship points to quality and type of education as relevant to the building of competent human capital. Current theory also considers pliability within an unknown environment and adaptability to technology to be important.

In response to this shift in focus, empirical and conceptual research has also developed a new attitude within the field of education and employment. Although the main idea has not changed radically, new discussions arose in the late 1990s to 2000s. For example, in the classic theory, education indicated either years of schooling or levels of education; however, in recent years, “quality” of education has been added as a dimension, i.e., how a specific type of education or attainment of individuals relates to employment outcomes. Likewise, the quality of employment has emerged as a concern recently. That is, researchers support the idea that not any job can help to solve the youth employment problem anymore; rather, a decent job is needed to solve the problem, and education must be the first step toward decent employment (Somavia, 2006). Moreover, while in the 1970s studies measured the effect of schooling by returns of earnings of individuals, some new studies have been looking at the effect of schooling within the profit of businesses. In other words, the interests of recent researchers have shifted from individual outcomes to aggregated outcomes, such as those of organizations or communities. This phenomenon parallels the appearance of discussions of social capital, which also addresses the aggregated power of individuals.

As described in this section, the theoretical arguments and research tendencies within debates related to education and employment have grown to incorporate more complex and specific factors, while also changing to focus on aggregated outcomes. In light of this historical

change, we can now consider new educational strategies within the ongoing debates on the relationship of education and employment.

2.1.2.1 Human Capital Theory

“Human capital is the resources qualifications, skills, and knowledge that are available to and acquired by individuals to maximize their own employability” (Caspi, et al., 1998, p. 427). Human capital theory argues that investment in human capital has positive effects on the earning and employment of individuals, and education and training is the way to invest in human capital (Becker, 1993). Investing in human capital, i.e., increasing the capabilities of people, is an activity which leads to future earning; therefore, more educated and skilled persons almost always earn more than less educated and less skilled ones (Becker, 1970).

Becker (1970) claims that the cause of the earning gap among workers is due to the differences in the investment in themselves. Individuals pay the cost of being employed, i.e., the salary is the balance of their total earnings and their training costs. Young people’s training costs are higher than older employees’. That is why younger people tend to earn less, even if they have the same educational background as older people (Becker, 1970; T. W. Schultz, 1970b). Becker also points out that sometimes the returns on their investment are not collected by the individuals themselves, but by the employers (Becker, 1970); thus, in cases of exploitation, workers do not earn what is appropriate.

It should be noted that education, as a mean of investing human capital, does not imply only formal education, but also include non-formal or informal setting, such as on-the-job training and previous experience (Caspi, et al., 1998; Davidsson & Honig, 2003). Schultz’s human capital theory assumes education, in this broad sense, can develop both generic and

specific competences, and that these are directly relevant for productivity in the labor market (Becker, 1993; Semeijn, 2003).

Education is beneficial for economic growth because it provides productive skills and the ability to modify a routine in response to changing opportunities in a dynamic environment (P. Schultz, T., 1994). That is how individuals increase productivity as labor and that is why they invest in education within human capital theory (Sluis, et al., 2005). More human capital tends to bring about more economic growth through mainly two channels: first, more human capital, especially that obtained at the secondary and higher levels of formal education, facilitates the absorption of superior technologies, and second, more human capital accelerates economic growth when the physical capital is increasing in the limited infrastructural areas (Barro, 2001; Brown, 2001).

2.1.2.2 Screening Theory

In the 1970s, economists revised human capital theory and created “screening theory” because there was a certain level of skepticism about the direct relationship between education and employability and also about employer’s rationales for candidate selection (Brown, 2001). This revision claims that education does not necessarily produce competences, but merely sorts people according to generic competences and desired capacities (Thurow, 1975). Schooling and a diploma are acknowledged as one of the signs which indicate productive ability of individuals in the labor market (Sluis, et al., 2005); however, Brown (2001) explains that “Here, educational signals (grades, degrees, school prestige, and so forth) and other markers of competence served to enhance probabilistic employers computations of the future technical performance of candidates” (p. 22). Education is used as means to distinguish which individuals have differing talents (Riley, 1979). In other words, an educational label indicates one’s fixed capital assets,

i.e., one's skills and motivation (Caspi, et al., 1998), and it helps employers to choose their employees without a full set of background information (Sluis, et al., 2005). Brown (2001) interprets Weber's view of educational credentials as "essentially cultural-political constructions of competence and organizational loyalty that [bear] little relationship to the technical demands of modern work (p. 21)". This claim points out even more strongly the irrelevance between education and technical competency in the workplace, while highlighting the significance of finding candidates who would fit to the organization.

Thurow (1975) and Riley (1979) claim that because most practical job skills are acquired in on-the-job training (OJT), employers use formal education merely as a sorting device to find candidates with the lowest training cost. A similar view is presented by Arrow; he argues that education, especially higher education, serves as a screening device which sorts out individuals of differing ability and conveys this information to the purchasers of labor (Arrow, 1973).

From this perspective, pursuing a higher level of education is seen as a process of self-selection since individuals can prevent themselves from being eliminated from job candidacy by signaling their productivities with educational qualifications (Riley, 1979).

2.1.3 Understanding Job Distribution and Employability Mechanism

2.1.3.1 Human Capital Theory vs. Screening Theory

Human capital theory and screening theory are the two main theories available for analyzing the relationship between education and employment in labor markets. These two perspectives see the mechanism of job distribution quite differently. The human capital theory assumes that employers hire educated people because they will be more productive than less educated people. From this perspective, formal education is defined as an institution specializing in the production

of training to gain productivity. The screening theory does not deny the function of schooling as skill provider; however it stresses more its function as information provider to employers of the candidates (Riley, 1979).

In the human capital theory, repeated years of schooling do not have a negative effect on one's wages; however, they do have a negative effect in the screening theory, since the fact of repeating a year indicates ineffective learning capacity (Groot & Oosterbeek, 1994). In other words, years of schooling without a certificate would have a positive wage effect according to human capital theory, while screening theory predicts that schooling without certification would have no effect or even a negative effect on wages. This is called the sheepskin effect²⁴ (Groot & Oosterbeek, 1994).

How the theories see the distribution of training cost during on-the-job-training is also different. Becker's human capital theory argues the cost of training is borne by the employee; thus the earnings of a beginner are small due to the deduction of the training cost from what he should earn. (Becker, 1970, 1993). Conversely, Thurow's screening theory states that minimizing the training cost is the main interest of the employer at the hiring process, since it is a cost which the employers would ultimately bear (Thurow, 1975). The following table directly compares the two perspectives (see Table 3).

²⁴ The sheepskin effect claims that "wages will rise faster with extra years of education when the extra year also conveys a certificate" (Hungerford & Solon, 1987, p. 175).

Table 3: Comparison of Theoretical Perceptions of Education in Labor Market

	Concepts	Human Capital Theory (Becker, Schultz)	Screening Theory (Thurow, Arrow)
1	Productivities at work place	Education adds to productivity, thus it increases the market value of individuals.	Education does not indicate one's productivity, but it is one type of information to relate one's market value ; thus an employer cannot differentiate the productivity of individuals who have the same information
2	Schools	Schools specialize in the production of training to enhance productivity	Schools are sorting institutions for finding trainable resources
3	Repeated years of schooling	No effect on wages.	Negative effect, since it indicates ineffective learning capacity
4	Increasing years of schooling without certification	Positive effect on wages	No effect or negative effect on wages.
5	Training cost in the workplace	Trainee pays the cost for skill acquisition	Employer pays the cost as an investment to produce future trainers for On the Job Training (OJT).
6	Reason for wage increase	Training costs are deducted from earnings at the beginning; thus, wages will increase after the training	To maintain effective OJT, wages need to be secured at a certain level, according to seniority.
7	Reason for mass unemployment of youth	Low skills	Weakness of background characteristics (education, innate abilities, test score etc...)
8	Difference in wages between individuals	Well-educated and skilled persons almost always earn more than others; they invest more in themselves.	Since the wages among older workers who completed training have more variance than that of workers as a whole, differences cannot be explained by human skills.
9	Skilled candidates are welcome because...	They have higher productivities; thus employer offers higher wages during training term	They have low training costs. The employer does not have to train them much, but no relationship to their wages
10	Reason for intensive training of youth	Youths have longer use than older people	Youths needs to learn many skills using OJT.

(Becker, 1993; Thurow, 1975)

Empirical studies support both the human capital theory and the screening theory. Since interpretations of screening theory do not completely reject the main idea of human capital

theory, education as a provider of skills and productivities, screening theory may offer a “more complete explanation of observed behavior than the traditional human capital models” (p. 250), as Riley (Riley, 1979) stated in his work. This would seem to be supported by the fact that many dropout-youth cannot find employment in a credential oriented society (Palley, 1967). In addition, there are several phenomena which the human capital theory does not explain well.

For example, there are cases where uneducated people can execute a job better or be as productive as educated people. While this is hard to explain with human capital theory, it can be deduced using the screening perspective; the information which the human capital theory claims comes with a certification is not necessarily correct; that is, if some criteria which relates to a productive nature are not included in the sorting process in the school system, one can get a certificate without having that productive quality. Conversely, ones who have this quality may not be recognized within the school system.

Another situation which reveals the limitations of the human capital theory is the case where not all well-educated people possess the level of job or earnings which they deserve. According to Becker’s argument, educated people should be more productive and should be able to earn more, i.e., should receive returns on investment as a result of their education. However, this also is not always true. The explanation of this phenomenon by human capital theory would probably be that because those who receive education focus on the nature of education as pure consumption (Becker, 1993; T. W. Schultz, 1970b). Those individuals are not interested in finding a job appropriate to their level of education—education is not seen as an investment (a way to increase earning power), but as an end in itself (an opportunity to satisfy personal interests). However, this cannot explain why well-educated people who are interested in finding an appropriate job fail to get one. Screening theory can better account for this situation in that it

supports the idea that marginal productivity resides in the job, not in the man, i.e., an individual's earnings depends on the job he or she acquires, not directly on his or her own personal characteristics (Thurow, 1975). Thurow states that since most skills are acquired through OJT, skills are only acquired and accumulated when a job opening exists. In other words, merely investing in human capital does not guarantee successful employment, but it can provide an advantage only if job opportunities are available.

2.1.3.2 Job Competitive Model

Riley claims that among these arguments, the screening theory offers a more complete explanation of observed behavior. I also believe that the screening theory does offer a more comprehensive explanation of the labor market phenomenon. For this reason, I would like to refer to Thurow's job competitive model in order to better explain the mechanisms of hiring practice and to capture backwards from an employer's perspective. His job-competitive model argues that individuals compete against one another for job opportunities based on their relative costs of being trained to fill whatever job is being considered (Thurow, 1975). The model observes that most practical job skills are not acquired before a worker enters the labor market, but only after one has found employment and gone through an on-the-job-training. He claims that only actual production generates the degree of realism necessary to polish production skills (Thurow, 1975). This model assumes employers have to train employees to make them productive; thus they are interested in finding the lowest training cost possible.

From this perspective, the labor market does not buy and sell existing skills, but serves instead as a place where supplies of trainable labor are matched with training opportunities (Thurow, 1975). In order to find better candidates for a position, employers attempt to rank and hire their potential labor force from those with the lowest training cost to highest training cost

(Thurow, 1975). Background characteristics such as education, innate abilities, age, sex, personal habit, psychological test score, etc. are used as indirect measures, due to the lack of direct information on training costs. These background characteristics are considered to affect training costs (Thurow, 1975). In other words, if certain qualities that make people productive workers are not reflected in their background characteristics, these people are unlikely to be picked from the labor queue.

Then, what is a good predictor of potential training costs? Thurow states that education attainment and performance are critical background characteristics because education is one type of training; thus, it indicates the ability to absorb training at workplace (Thurow, 1975). Education then becomes an important indirect measure of an individual's absorptive capacity and is relevant to the employer, even when no practical job skills are learned at school (Thurow, 1975). That is how job candidates are chosen by employers, i.e., the jobs are distributed to a particular group in the labor market.

2.1.3.3 Social Capital Effect on Job Distribution

Human capital theory, including its screening effect, is quite strong – it explains well the relationship between education and labor productivity. However, it is still not a perfect theory; rather, we sometimes find discrepancies between what theory suggests and empirical evidence has shown (Schuller & Bamford, 2000). The social capital theory might be able to explain this discrepancy. Unlike human capital, high social capital itself does not promise productive economic outcomes (McClenaghan, 2000); however, from the perspective of economic development, social capital becomes a critical factor because the socio-cultural environment influences people's economic motivation and behaviors (Rodríguez & Santos, 2009).

Social capital, sometimes called social exchange or social networks, is social relationships which provide access and control over various types of resources, and it can be measured by concrete resources, such as provision of loans or information about potential business (Caspi, et al., 1998; Durning, 1990). Social capital develops from the reciprocity and trust which is in the community (Schuller & Bamford, 2000), and it is distributed through a network, such as group gathering or social and family relationships (Davidsson & Honig, 2003). In other words, resources are accessible by being a member of these networks (McClenaghan, 2000), and each individual is believed to be capable of contributing something valuable to other members (Schuller & Bamford, 2000). Although there are three schools of social capital definitions²⁵, and all include the key words “social resources” and “reciprocity”, Putman’s definition extends to include its relevance to economic productivity (McClenaghan, 2000). Therefore, for Putman, social capital is a predictor of economic development and effectiveness of the governance of a community (McClenaghan, 2000)”.

Greater social capital enhances a community’s ability to manage economic and human capital (Schuller & Bamford, 2000), and it leads to economic prosperity (McClenaghan, 2000). That is, social capital reduces transaction costs and it makes it easier to access information, to coordinate activities and to make decisions (Rodríguez & Santos, 2009)²⁶. In regards to employability, social capital mitigates the negative effect of socioeconomic disadvantage

²⁵ The three schools of definitions are represented by 1) Bourdieu, 2) Coleman, and 3) Putnum. Bourdieu claims that “totality of actual and potential resources in individuals can mobilize through membership in organizations and social networks” (McClenaghan, 2000, p. 568). Coleman argues that this social resource has two elements in common: a) it consists of some aspect of social structure, b) it facilitates certain actions of actors within that structure; it exists between individuals and entities with reciprocity (McClenaghan, 2000). Putman’s definition incorporates the notion of community productivities, i.e., it is associated with norms which affect political and economic development (McClenaghan, 2000).

²⁶ McClenaghan (McClenaghan, 2000) found an extreme case of decreasing transactional cost in Northern Ireland. People in Northern Ireland have lost the motivation to acquire educational credentials since the formal certification does not contribute to finding a job due to their high social capital situation.

(Putnam, 2000). More specifically, social networks can provide job seekers with advice, job leads, strategic information, and/or letters or words of recommendation (Putnam, 2000). For this reason, when unemployed, individuals attempt to utilize their social network if there is any (Putnam, 2000). Putnam (Putnam, 2000) points out that many studies show social capital is a powerful resource for achieving occupational advancement, mobilizing higher social status and obtaining economic rewards. And he claims further “[social capital is] perhaps even more important than human capital” (p. 321).

2.2 ENTREPRENEURSHIP

This second part of literature review discusses entrepreneurship, because it is believed to be one of the key factors for successful self-employment. In this section, I explore the literature of entrepreneurship from an education perspective in order to examine possibilities for reducing the youth unemployment problem. I first, attempt to define what the ‘entrepreneurship’ is, then discuss the importance of entrepreneurship and its relationship to education. Finally, I explore the literature of entrepreneurial policies.

2.2.1 An Attempt to Define the Characteristics of Entrepreneurship

Many authors seem to have difficulty defining entrepreneurship, and they admit differences in or the absence of a clear definition in the discourse (Audretsch & Thurik, 2000; Carland, et al., 1984; Carree & Thurik, 2003; During, 1990; Tucker, 1988; Wennekers & Thurik, 1999).

Moreover, different countries use different definitions when they collect data (Audretsch & Thurik, 2000). This ambiguity in the definition and the frustration with the situation is expressed in a report of the OECD Entrepreneurship Indicator Projects:

[W]hile there is considerable interest in entrepreneurship, the OECD has not yet been able to develop either an overall entrepreneurship statistic framework, including concepts and definitions, or an agreed-to list of the key indicators that are required to understand entrepreneurship and its impacts (OECD, 2005, Second Paragraph).

Carree and Thurik (2003) explain that entrepreneurship is a multidimensional concept which can only be measured by intermediate variables, such as innovation, variety of supply, entry and exit of firms, and specific actions of entrepreneurs, which is one reason for the ambiguity. Also, the characteristics of an entrepreneur can be not only different but even conflicting depending on the time being looked at, the industry, and the culture (Gartner, 1985; Thomas & Mueller, 2000; Wennekers & Thurik, 1999).

Defining entrepreneurship might be difficult because it is not a specific individual or occupation, but it is an activity or function (Gartner, 1985). For this reason, many authors utilize the term “an entrepreneur” in explaining entrepreneurship, since “an entrepreneur” is a person who pursues entrepreneurship. “Entrepreneur” can be defined in several ways because it implies a configuration of psychological traits, attributes, behaviors, and values of an individual motivated to initiate a business venture or increasing productivity (Thomas & Mueller, 2000).

Kent (1989), who analyzed how economic textbooks treat entrepreneurship, found that there are two ways of capturing the concept of entrepreneurship; one is to attempt to capture entrepreneurship from 1) entrepreneurs traits, i.e., who they are and, 2) entrepreneurs’ behavior, i.e. what they do. Even though Kruger (2003) explicitly states that there is no ‘entrepreneurial

personality’, she also recognizes trait-like personal beliefs and attitudes do appear to offer additional insight to the theory and predictive power of the research. As Wenneker and Thurik (1999) claim, entrepreneurs have to be defined both their traits and actions. Therefore, I attempt to capture the concept of entrepreneur and entrepreneurship based on these two categories²⁷ from the literature.

2.2.1.1 Personality-like Traits

Sometimes, entrepreneurs are explained and measured according to their personal traits. In addition to a direct literature review, I also use Carland’s (1984) historical analysis of entrepreneurial characteristics within the entrepreneurial research. His findings are attached as Appendix A. Table 4 summarizes selected personal traits which are commonly used in the literature to define entrepreneurs.

²⁷ Following categorized traits and actions are not exclusive which define entrepreneurs in the literature. Most authors use a combination of a few other traits or actions to define an entrepreneur.

Table 4: Personality-like Traits of Entrepreneurs

<p>1. Action oriented (Promptness and Pro-activeness); Entrepreneurs are action oriented by being “prompt”. A success depends on intuition, which is the capacity to see things in a way that afterwards proves to be true; it is an ability to grasp the essential and discard unessential facts (Schumpeter, 1934). A proactive trait is also a prerequisite for entrepreneurs (During, 1990).</p>
<p>2. Innovative, Creative traits; “one behaves as an entrepreneur only when carrying out innovation” (Schumpeter, 1934). Innovativeness is required regardless of culture to create and run a new firm (Thomas & Mueller, 2000). This does not have to be an individual’s trait, but could be a trait of a collective group.</p>
<p>3. Risk taking; Entrepreneurs are able to perceive risk, but they still act on it. Creating a value assumption of risk is a common thread linking entrepreneurs (Shaver, 2003). This trait could be seen as an ‘opportunity seeking’ (Bifulco, 1997; Carree & Thurik, 2003; During, 1990; Krueger, 2003).</p>
<p>4. Internal locus of control, Independent; Internal locus of control allows the individual to make decisions without consulting others—i.e., making own decisions, employing own actions on own responsibilities.</p>
<p>5. Opportunity directed, Ability to perceive opportunity; Entrepreneurial activities are a result of perceiving opportunity, and it is the “heart” of entrepreneurship (Krueger, 2003).</p>
<p>6. Optimism; Entrepreneurs perceive the institutional environment, such as businesses climate, more favorably than non-entrepreneurs.</p>
<p>7. High self-efficacy, Competence; A study shows entrepreneurs perceive themselves as highly competent and they scored higher on a measure of general self-efficacy. Self-efficacy influenced perceptions of opportunity and threat. (Krueger, 2003)</p>
<p>8. Energy; Entrepreneurs have a force called ‘energy’ to start a project rather than day-dreaming (Schumpeter, 1934). It also implies physical strength—they tend to work long hours to establish and run a new business. (Thomas & Mueller, 2000)</p>
<p>9. Physical and Mental Freedom, Creativity; Mental freedom allows entrepreneurs to have the force to seek opportunities, overcome challenges and create new traditions (Schumpeter, 1934). Entrepreneurs more likely to choose ‘creativity’ as the most important career determination (Carland, et al., 1984).</p>
<p>10. Motivation to Achieve; Achievement motivation is greater in entrepreneurs compared to public sector employees (Tucker, 1988). Entrepreneurs have more motivation, especially to earn money (Djankov, Qian, Roland, & Zhuravskaya, 2006).</p>

2.2.1.2 The Actions Entrepreneurs Take

While there is a group of scholars who utilize trait to define entrepreneurship, others claim that it is a behavioral characteristic of a person (Carree & Thurik, 2003; Wennekers & Thurik, 1999).

Table 5 summarizes what actions are utilized in order to define entrepreneurs in the literature.

Table 5: The Actions Entrepreneurs Take: What do they do?

1. Pursue innovative behavior:

Establishing a new path is one part of the behaviors of entrepreneurs (Schumpeter, 1934); a new path—a creation of a combination that did not previously exist (Carland, et al., 1984), creates new economic opportunities (Carree & Thurik, 2003; During, 1990; Wennekers & Thurik, 1999). This also is called an innovation. Entrepreneurs translate their personal innovation into economically viable entities (Tucker, 1988; Wennekers & Thurik, 1999).

2. Perceive and pursue opportunities:

Entrepreneurs proactively see, seize or perceive economic opportunities (Carree & Thurik, 2003; During, 1990; Krueger, 2003). Entrepreneurs pursue more opportunities (quantity) or better opportunities (quality), because a credible opportunity is required for intentional business pursuits (Krueger, 2003)

3. Build and run own organization:

Creating a new organization is a function of entrepreneurship (Begley & Tan, 2001). Entrepreneurs organize, manage, and run the firms for profit and growth by strategic management practices (Carland, et al., 1984) (Tucker, 1988). .

4. Produce and promote idea/products and open the market:

Entrepreneurs create products (Gartner, 1985), because their activities are associated with business. However, they are not only producers, but also marketers of their product (Carree & Thurik, 2003; Wennekers & Thurik, 1999) to introduce their ideas into the market.

5. Utilize resources and social network:

Entrepreneurs brings a nation's resources (land labor and capital) and product means, together to launch their innovation to the market (Carland, et al., 1984; Federal Reserve Bank of Dallas; Schumpeter, 1934). In addition, they utilize personal resources—social networks. They tend to pursue their business through their personal network (Davidsson & Honig, 2003).

6. Act with intention, initiate, and implement:

Entrepreneurs possess intention so that they initiate their intentions and implement them into economic practice (Krueger, 2003; Tucker, 1988). Entrepreneurial thinking is an intentional pursuit of opportunities (During, 1990; Krueger, 2003)

7. React to the environment, follow the rules of society:

Entrepreneurs interact with the external environment; because they communicate with the environment such as a market, a government and a social norm, their idea could turn into a legitimate business (During, 1990) (Gartner, 1985).

8. Face challenges and social resistance:

Entrepreneurs do something new regardless of having uncertainty and facing unknown difficulties (Carree & Thurik, 2003; Schumpeter, 1934; Wennekers & Thurik, 1999). These challenges include legal or political impediments.

9. Take risks:

Entrepreneurs are individuals who willingly take the risks that are necessary to start a successful business (Tucker, 1988), and they accept this risk and also possible failure (Thomas & Mueller, 2000).

2.2.1.3 Controversy Over the Definition of Entrepreneur

Although the previous two sections summarize the definitive explanations of entrepreneurship, capturing the definition of entrepreneurship has become one of the most difficult and confusing tasks for this chapter, because there are cases where a definitive explanation in one study is rejected in another. Therefore, in this section, I discuss some arguments found in the literature to illustrate how the definition itself could be conditional.

Intuition vs. Rationale

As mentioned previously, acting on intuition is one of the unique traits of entrepreneurs; Schumpeter (1934) points out that actions based on logical thinking and preparation, such as a preparatory work, a special knowledge, a breadth of intellectual understanding, and a talent for logical analysis could be sources of failure. Krueger (Krueger, 2003) also claims that entrepreneurial behavior relies on one's unique perception, i.e., intuition. On the other hand, some scholars claim that entrepreneurs act based on rationales or reasoning rather than intuition. Schumpeter himself also states that entrepreneurs acts based on rationales which aim to satisfy the demand of markets. In general, the way most people's decisions are made tends to reflect a more constructive pattern of thinking (Krueger, 2003); entrepreneurs are no exception to this. However, the literature suggests that those rationales entrepreneurs find a basis in could be totally self-absorbed rationales, called 'magical thinking'²⁸ or 'categorical (black and white) thinking'²⁹, which may be interpreted as 'intuition'. Therefore, 'rationale behavior' might have a wider meaning.

²⁸ "Magical thinking is an expression of the cognitive-processing limitations of the human mind. It is that form of noncorrelational reasoning utilized when objects and events conceptually (or semantically) affiliate or exclude one another in one's mind"(Shweder et al., 1977, p. 637).

Inventor vs. Innovator

A large group of authors have identified that invention and/or creativity are crucial characteristics of entrepreneurs and entrepreneurial firms as well (Carland, et al., 1984; During, 1990; Krueger, 2003; Locke, 1993). For this reason, invention is often used as an intermediate variable to measure entrepreneurship (Carree & Thurik, 2003). Meanwhile, a majority of authors also agree on the function of entrepreneurs as innovators (Tucker, 1988), i.e., one can be an entrepreneur, just putting together a new combination of previous productive means.

Some claim further that inventing or innovating is not enough to be an entrepreneur—entrepreneurs must also exploit the value of their ideas (Carland, et al., 1984). In other words, being inventor or innovator does not matter to be an entrepreneur. The important fact is that their innovations or inventions is economically irrelevant unless they are carried into economic practice; therefore, not all innovators or inventors are entrepreneurs (Schumpeter, 1934).

Owners vs. Entrepreneurs

One group of authors claims that the function of an entrepreneur is to organize, manage, and run organizations or firms. (Begley & Tan, 2001; Gartner, 1985; Wennekers & Thurik, 1999); however, some claim that entrepreneurs don't run just any type of organizations or firms. Carland et al (1984) clarifies this idea, saying that 'innovation' is the key word often used to distinguish entrepreneurial organizations from others.

In addition, other authors claim that while entrepreneurs may be an owner or manager of a firm, this is not obligatory (Garavan & O'Cinneide, 1994; Schumpeter, 1934). Schumpeter

²⁹ Black and white thinking is a cognitive characteristic. Glad explains “a tendency to dichotomize the world into absolute categories (i.e., to not see intermediate individuals and classes), to engage in black-and-white thinking” (Glad, 1983, p. 38).

(1934) claims that business owners may be shareholders, who are merely capitalists. He further points out that entrepreneurs do not have to be leaders of a company since it only takes a manager to operate an established business (Schumpeter, 1934). An example of entrepreneurs who are not owners or managers are individuals called ‘intrapreneurs’ or ‘corporate entrepreneurs’; they do not hold a leading position in the company, but rather engage in entrepreneurial activities as a part of an organizational team (Carree & Thurik, 2003). From this standpoint, although entrepreneurs are often small business owners, the term ‘small business owners’ cannot be used as a synonym for entrepreneurs, since entrepreneurial activities can be found within large corporations (Carland, et al., 1984). Schumpeter (1934) argues further that one can no longer be labeled an entrepreneur after he or she has built up the business and settled down to running it like other people do.

Risk-taking

Many authors agree that the risk-taking propensity is an important and unique characteristic trait of entrepreneurs (Morris, Davis, & Allen, 1994; Tucker, 1988); in fact, it is one of the most used characteristics in psychological studies (Bifulco, 1997; Gartner, 1985). While this is true, there are some theoretical and empirical studies which argue that it cannot be a definitive attribute, since the degree can be quite moderate, when it is not a zero. Schumpeter (1934) explains that the entrepreneurs are never the risk bearers because they are not required to possess wealth which might be lost in the process of business failure. In other words, a direct economic responsibility never falls onto the entrepreneur acting as an entrepreneur, but it may fall onto him or her as a capitalist or possessor of goods.

Schumpeter (1934) further argues that entrepreneurs are often not risk bearers even if they are capitalists/business owners because typical entrepreneurs pull out when they sense the business is at risk. This is an attitude of avoiding risks. Tucker (Tucker, 1988) also stresses that entrepreneurs are not necessarily risk takers. He makes this point using McClland's study:

[Entrepreneurs] avoid gambling situations because even if they win, they get no sense of personal achievement since winning is the result of luck, not skill. They prefer to take personal responsibility for their decisions and they want the outcome to depend on their own skill or ability (Tucker, 1988, p. 260).

In fact, some empirical studies found the risk bearer attribution was statistically insignificant. For example, one of the empirical studies Carland et al. (1984) examined concluded no statistical difference in the risk preference patterns between a group of entrepreneurs and a group of managers. Tucker's empirical study also rejected the idea that entrepreneurs are most likely to be people with a low degree of aversion to risk (Tucker, 1988). After performing a cross-cultural comparison, Thomas (Thomas & Mueller, 2000) concluded that the risk taking attribution is a culturally bounded variable; specifically, he found that as cultural distance³⁰ from the U.S increased, the risk taking propensity decreased. Therefore, the risk-taking tendency can be found in entrepreneurs, but it is not a universal characteristic.

Pioneer of the path vs. Follower of the existing environment

One of the major characteristics of entrepreneurs is that entrepreneurs tend to have internal locus of control; in other words, they are independent or are described as self-centered individuals

³⁰ Cultural distance is a cultural measure Thomas used in his study. He derived it from the work of Hofstede (Hofstede, 1980); Cultural distance was utilized to determine whether systematic variation exists across cultures. It indicates how much one country is culturally different from the United States.

because they prefer working on their own rather than negotiating with teams (Gartner, 1985). Schumpeter (1934) further points out that not only do entrepreneurs not rely on tradition, but they often break the old to create a new tradition. These descriptions give the impression that entrepreneurs are mavericks who prefer to be independent so that they can make their own decisions, and also pioneers who are not afraid to pursue their business outside the box. However, that could just be one side of their character in a particular context. Entrepreneurs accumulate, reorganize and utilize resources, including their social institutions (Gartner, 1985; Wennekers & Thurik, 1999). In fact, they tend to heavily rely on their social network; as a result, an entrepreneur often starts a business related to their former occupation, because that is where their information resources and social networks are located (Davidsson & Honig, 2003). Moreover, they do respect the existing system in order to get their product out on the market while they can and do adapt to outside environments such as business norms and regulations.

It is also important to recognize the existence of collective entrepreneurs within a company, where the internal locus of control is more limited. This shows that the level of internal locus of control differs according to context. Thomas and Mueller (2000) found that this also is a cultural specific characteristic; as a culture gets closer to that of the US, internal locus of control becomes more important.

2.2.2 The Importance of Entrepreneurship

Entrepreneurs are present in every country and every culture (Minniti, Bygrave, & Autio, 2006). Although discussion of entrepreneurship is mostly happening within the field of business and economics, the importance of fostering entrepreneurship is recognized in different fields, including sociology and psychology (Djankov, et al., 2006). Fostering entrepreneurship is a way

for a country to enhance human capital; it cultivates creativity and innovation, which are necessary to create a better community and society (Nelson, 1977). Therefore, maintenance of human and social capital through entrepreneurial activities can generate benefits for a society (Sluis, et al., 2005).

Studying entrepreneurship is important because it is a neglected research area, especially from education; very few studies have been done; therefore, the discourse lack depth. Moreover, due to the lack of a theoretical framework linking entrepreneurship to growth and the constraint of measuring entrepreneurship in a cross national context, studies are absent to assess the power of entrepreneurship for the unit of observation of “country” (Carree & Thurik, 2003). In addition to lack of research, there are two major reasons why entrepreneurship is important; first, entrepreneurship is related to economic growth, and second, entrepreneurship is a skill which benefits the current and future economic environment.

2.2.2.1 For Economic Development

The motivation to study entrepreneurship is mostly due to its potential as an economic booster. As mentioned previously, measuring the direct relationship between entrepreneurship and a nation’s economic growth is quite difficult (Carree & Thurik, 2003); however, entrepreneurship has been increasingly recognized as a crucial function for a successful economic development (Djankov, et al., 2006). In fact a number of researchers claim entrepreneurship has a positive impact on economic growth. For example, Audretsch and Thurik (2000) found that countries among the OECD that have experienced a greater shift from a managed economy to an entrepreneurial economy have had lower levels of unemployment. Carree (Carree & Thurik, 2003) also found that countries that have experienced an increase in entrepreneurial activity have also enjoyed a higher rate of growth.

The role of the entrepreneur is regarded as a prime cause of economic development (Schumpeter, 1934) because it functions as a vehicle for innovation and change (Carree & Thurik, 2003), and it becomes an engine of economic growth (Begley & Tan, 2001). A number of politicians and economists have an intuitive sense that new possibilities for growth, innovation, and creating jobs come from small and new firms (Wennekers & Thurik, 1999). In fact, one study has concluded that the miraculous economic growth in the second half of the 20th century in East Asia is the result of the emergence of entrepreneurship, which has been encouraged and sanctioned by the governments (Wennekers & Thurik, 1999). The critical element that humans add in the economic growth process is not physical resources but ideas (Klein & Hadjimichael, 2003), that is obviously relevant to entrepreneurship.

For developing regions, Klein and Hadjimichael (2003) believe entrepreneurship has an even stronger power—the power to empower the poor, to mobilize them, and enable them to break out from poverty. They believe that giving out jobs is not a solution, but rather that openness to new ideas, technology, and competition, which provide incentive to adopt better practices, are key factors for poverty reduction. Carree and Thurik (2003) also claims that while in the past several authors reported a negative relationship between economic development and business ownership rate, the reverse has been true in modern economies. The truth is that many old and large firms lose ground to smaller, newer and more entrepreneurial counterparts, as an economy progresses.

The function of entrepreneurs is seen differently according to the level of economic development (Thomas & Mueller, 2000). For developed countries, increasing entrepreneurial activity is seen as a means to revitalize stagnating industries, to provide new jobs, to enhance economic flexibility, and to act as an incubator for product and market innovation. In the

developing regions, on the other hand, entrepreneurial activities are encouraged to stimulate economic growth in order to empower the marginalized segment of the population and to create job opportunities, since the new ventures tend to be more labor intensive (Thomas & Mueller, 2000). In the case of a transition economy, entrepreneurs act as economic reformers in that often entrepreneurs in transition regions do in fact carry out tasks of devising the new way of doing business (J. McMillan & Woodruff, 2002).

The role of entrepreneurship in economic development has garnered renewed attention in recent years (Wennekers & Thurik, 1999). Panglaykim (1979) claimed that no economy can develop or grow without the help of entrepreneurs; they are not only a vital, but also a determining factor in a national economy. This claim, in fact, has been reinforced by many scholars. Given that structural change and substantial relocation of resources are required to adapt to globalization and Information & Communication Technology (ICT) (Wennekers & Thurik, 1999), entrepreneurship may be more important for economic growth than it has ever been. Entrepreneurship can translate these new economic demands into new business opportunities.

New ways of doing business are often devised by entrepreneurs, but not at the instruction of a government policy (J. McMillan & Woodruff, 2002). In other words, regardless of government initiation, entrepreneurial activities will take place as a part of economic function. Schumpeter (Schumpeter, 1934) claims that if business can never be absolutely perfect, new possibilities and discoveries are continuously being added in order to approach a relative perfection. If that is the case, it is important to handle the seeds of this economic booster in the policy process as well. Here, as a note, the relationship between economic development and poverty reduction should be mentioned. Since entrepreneurship is assumed to bring economic

growth, often it is talked about as a strategy of poverty reduction; however, Klein and Hadjimichael (2003) warn it is possible but not automatic. In other words, macro level of economic growth does not directly lead to reduce poverty and could in fact enlarge the gap between poor and rich.

2.2.2.2 For Knowledge Based Economies

Second, entrepreneurship is important because it is necessary for the future of any economy. Economic structure has been changing from consisting of mostly large corporations rooted in management by a government-running cooperation or a large financial clique toward small firms, and this trend is consistent across countries (Carree & Thurik, 2003). For example, the employment share of the 500 largest US firms dropped from 20% in 1970 to 8.5% in 1996 (Carree & Thurik, 2003). The shift toward a knowledge-based economy is the driving force behind this transition (Carree & Thurik, 2003). The ILO (1998a) explicitly states that small and medium enterprises are critical factors in economic growth and development; they are taking a greater part in creating jobs throughout the world. Within this kind of economic environment, individual workers in all kinds of organizations are required to be more creative and take more responsibilities (Durning, 1990).

A knowledge-based economy relies primarily on the use of ideas, which unlike physical resources, cannot be easily copied by competitors and transferred to lower cost countries. This type of economy also relies on the application of technology rather than the transformation of raw materials or the exploitation of cheap labor (World Bank, 2003b). Although the economy of each region develops at its own speed, every economy moves from an agricultural economy to an industrial, then further, toward a postindustrial (service) economy (Soubbotina & Sheram, 2000). As an economy progresses, then, less physical labor is required and knowledge becomes more

valuable in labor activities. Therefore, the ability to apply knowledge to economic practice is a skill which is practical and required in today's constantly changing economy.

Knowledge is critically different from information. Information consists of facts, such as the weather in New York, which is easily transmitted through technology, while knowledge consists of ideas that are subjective, uncertain, and difficult to explicitly write down (Audretsch & Thurik, 2000). Knowledge adds qualitatively different input into the production process compare to machinery and workers in an assembly line (Audretsch & Thurik, 2000). Within a knowledge economy, individuals are allowed to move into a new situation to create and to try out new ideas and knowledge which might be rejected in other places (Audretsch & Thurik, 2000). This is common ground for entrepreneurial societies; this environment is conducive to innovative activities; thus, people are encouraged to explore new ideas and knowledge, and actively commercialize those ideas (Audretsch & Thurik, 2000). It is obvious that in a knowledge based economy, entrepreneurship functions as a vehicle to generate growth (Carree & Thurik, 2003).

As Stiglitz (1999) claims, the organization of industry shifts from a top-down hierarchical structure to a flatter structure as there is a shift toward a knowledge-based economy, i.e., autonomy and self-directed behaviors are more recognized and required in the working context. It becomes easier to start new firms and explore or implement new ideas, for both self-employed entrepreneurs and entrepreneurs within the organization. These firms have proved to grow rapidly and expand employment (Audretsch & Thurik, 2000).

An individual who can create new ideas and implement them is highly valued in a knowledge-based economy because, unlike unskilled workers, they are not disposable; as a result, a higher wage or earning can be maintained and greater employment opportunities can be

provided within the knowledge-based economy (Audretsch & Thurik, 2000). These abilities are relevant to entrepreneurial skills, and they are not only appropriate but also desired in the knowledge-based economies.

As discussed in this section so far, knowledge based economy is usually referred to an advanced economy; however, having examined the characteristics of the knowledge based economy, I believe it could be exist in anywhere, even in the developing rural farming regions. If there is the economic culture which encourages people to innovate and create or add new values into their products with knowledge, then, it is a new type of economic activities. Economic studies point out that this new kind of economy is transforming the demand in the labor market in economies throughout the world; thus, education and training institutions need to prepare workers for it (World Bank, 2003b).

2.2.3 Relationship between Entrepreneurship and Education

In this section, I explore the literature which discusses the relationship between entrepreneurship and education. First, I discuss the impact of education on the labor market experience. Second, I discuss educational options and their relationship to entrepreneurship. And finally, I note some reported arguments about the limited or negative impact of education on entrepreneurship.

2.2.3.1 Impact of Education on Entrepreneurship

Historically, a business opportunity is produced by demand and supply factors. On the demand side, there is a demand for a product or service; on the supply side, the social capacity to equip entrepreneurs with skills, knowledge, and energy to fulfill those demands must exist (Locke,

1993). In other words, if a community has a greater ability to educate people, a greater possibility of opportunities will arise.

The relationship between education and entrepreneurship varies depending on the situation, and the effect of education on entrepreneurship is not easy to determine because education is deeply related to cultural heritage and the technological situation. As a result, there are many challenges in studying this relationship, both qualitatively and quantitatively (Locke, 1993; Sluis, et al., 2005). However, it is said that the contribution of education and entrepreneurship to economic development should not be underestimated (Nelson, 1977), and should be recognized more. In fact, several empirical studies have shown that education often produces a positive effect in supporting the probability of becoming entrepreneur or in achieving success (Davidsson & Honig, 2003).

Education can be related to entrepreneurship or entrepreneurs in several different ways; for example, several studies show that education can affect entrepreneurial activities or success, entrepreneurs' occupational choice, income and skills; all of these studies attempt to measure, predict, and make suggestions with regards to education as a way to better entrepreneurial outcomes.

Impact on entrepreneurial activities

The relationship between education and entrepreneurial activities is not straight-forward but rather conditional. According to Sluis and his colleagues' meta-analysis (2005), which draws its conclusions from among 203 observations of the relationship between education and performance, the effect of schooling is positively related to entrepreneurial activities. Also, among the graduates from business school at the University of Arizona, Charney and Libecap (2000) found that the graduates from entrepreneurship programs were three times more likely to

be involved in new venture creation than non-entrepreneurship business graduates. Acs, et al. (2005) also found that education is positively related to entrepreneurial activity. However, this claim might be dependent upon the economic level of country, since the results are limited to high-income countries.

Impact on occupational choice

Education generates a higher level of expected entrepreneurial ability and performance in terms of profit and firm size, which in turn seems to result in an increase in favor of choosing an entrepreneurial occupation (Sluis, et al., 2005). One study of minority entrepreneurs found that better educated entrepreneurs are found more often outside the less profitable retail and personal service industries (Bates, 1985), i.e., those well-educated entrepreneurs tend to run more profitable ventures compare to uneducated ones. Sluis et al.'s (2005) meta-analysis also supports this claim; it finds a large amount of literature showing that more educated individuals seek out non-farm entrepreneurship opportunities, which tend to be more profitable compared to farming.

The effect of education tends to be stronger for women in urban areas and also in the least developed economies, where agriculture is more dominant and literacy rates are lower (Sluis, et al., 2005). Education allows women to enter more profitable informal business, and the profit of female micro-businesses comes close to men's (Addison, 2001).

Sluis et al. (2005) point out how education specifically can affect occupational choice and performance of entrepreneurship in less economic developed agricultural areas: 1) educated farm workers can engage in more full time entrepreneurial activities during the off-season, 2) the education level of household members may determine who does what when operating a non-farm enterprise to offset uncertainty in farming outcomes and 3) education may be associated with household wealth; i.e. it can make it easier to start a business or get access to the loan. I

should point out that those ‘education’ mentioned in this section does not refer specifically to ‘entrepreneurship education’ but to general education.

Impact on economic outcomes: Venue, profits, and income

Domestic capability, which is a function of human capital, determines the significance of the effect of foreign direct investment (Klein & Hadjimichael, 2003). It is well discussed that education shapes human capital, i.e., education is a key to determining a country’s capabilities. The UNESCO study ‘The Economics of Education’ estimated that less than 50% of a country’s economic growth can be attributed to increases in conventional means of economic investments such as capital, land, labor and other factors of production, with residual factors being infrastructure, education and entrepreneurship (Nelson, 1977). In other words, education contributes a great deal in the process of economic development by producing competent wage workers and by affecting entrepreneurship. T. W. Schultz (1980) also claims a significance of investing in human capital in order to enhance entrepreneurial ability, i.e., the quantity and quality of entrepreneurial efforts can be enhanced by investment in entrepreneurial ability (Wennekers & Thurik, 1999). More specifically, Schultz (T. W. Schultz, 1980) claims, “the abilities of entrepreneurs to deal with the disequilibria that are pervasive in a dynamic economy are a part of the stock of human capital” (p. 437).

At the enterprise level, one study has shown that an additional year of schooling raises enterprise income in developing economies by an average of 5.5 percent (Sluis, et al., 2005). Charney and Libecap (2000) found that emerging companies that were owned by or employed entrepreneurship program graduates had sales and employment growth 5 times greater than those that employed graduates of non- entrepreneurship programs.

An effect of education was found at the level of the individual as well. Bates (1985) found that the relationship between minority entrepreneurs who had above average education and profitability was positively related as compared to minority entrepreneurs with less than average education. More significant results can be found in Charney and Libecap's study (2000); They found that entrepreneurship graduates working for large firms earned about \$23,500 more per year than did other business school graduates. In addition, they found that Entrepreneurship Education at the University of Arizona increased a graduate's annual graduate income by \$12,561, and they accumulated 62% more in personal assets after graduation than their non-entrepreneurship counterparts.

Another study points out the relevance of education to entrepreneurship Audretsch & Thurik (2000) claim that untrained, uneducated workers with few skills may be able to start new firm, but rarely the kind of firm generating stable jobs and higher wages. This infers that educated workers are more likely to establish the latter type of business.

Impact on entrepreneurial skills

In general, schooling is acknowledged as a sign of productive ability in the labor markets when lacking full information on a candidate (Sluis, et al., 2005); however, in reality, education takes place not only in the classroom but also elsewhere. Entrepreneurial human capital can be obtained through both schooling and real life experience. For example, some skills which are suitable to obtain in a formal education setting are skills in management, bookkeeping, or business plan-writing (Davidsson & Honig, 2003; Iyigun & Owen, 1997), while skills such as finding business opportunities or networking are gained more effectively through work experience. Studies on education/training and entrepreneurship conclude that both types of skills are necessary in order to produce successful entrepreneurs as well as to achieve economic

development (Carland, et al., 1984; During, 1990; Gartner, 1985). Education certainly can fill the role of helping people to gain both technical and social skills. Therefore, as individuals are able to increase their knowledge and skills with both formal and non-formal education (Davidsson & Honig, 2003), it is important to understand how different educational agencies contribute to fostering entrepreneurship.

2.2.3.2 Types of Education

In most statistical analyses, 'education' refers to some kind of schooling. However, in reality, people learn professional skills not only at school but also from real life experience. Indeed, one of the most accepted education and employment theories, the human capital theory, clearly states that education can take any form. In this section, therefore, I discuss the impact of different types of education over the entrepreneurship.

Schooling and entrepreneurship

It is well known that schooling raises wage earning; if schooling proves to be positively related to entrepreneurship performance and earning as well, investing in entrepreneurial education through schooling only make sense (Sluis, et al., 2005). The 2005 Global Entrepreneurship Monitor (GEM) Executive Report shows the population dynamics of entrepreneurs and their educational level (formal schooling) in the global context (Figure 5).

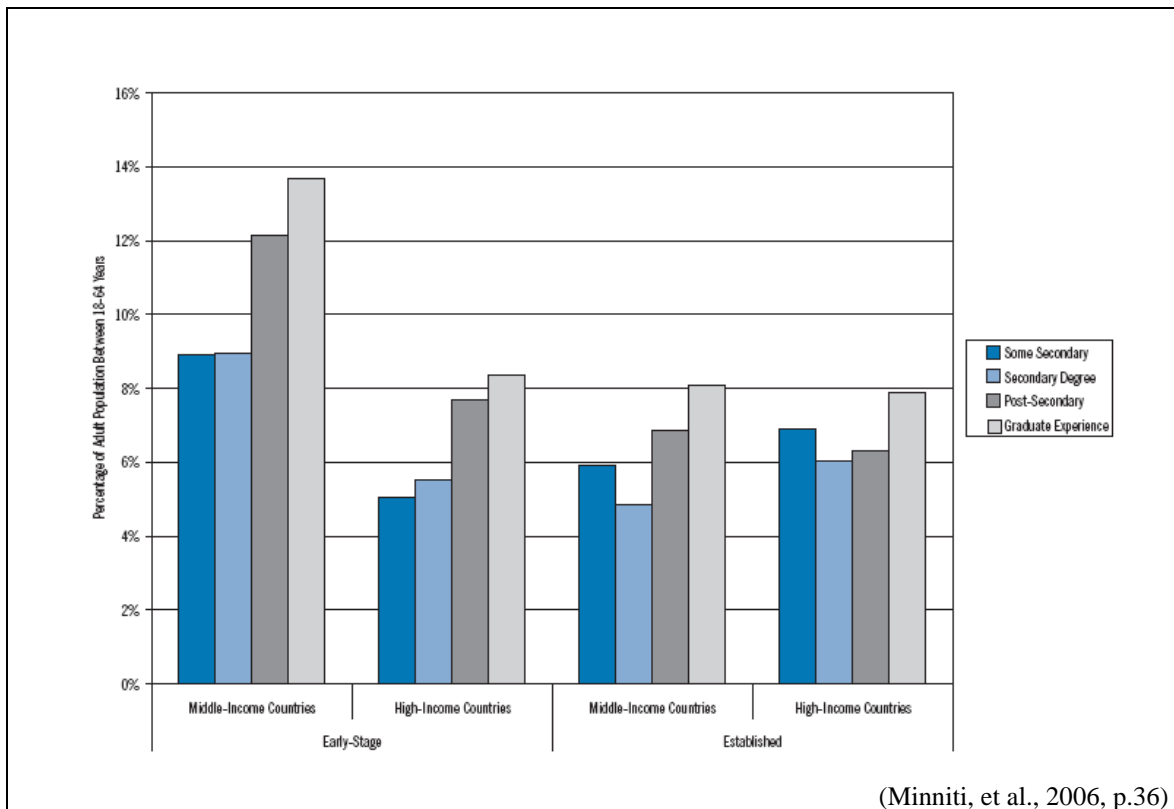


Figure 5: Entrepreneurial Activity by Education and Country Clusters

Percentage of labor population and educational level are positively related in early stage entrepreneurial activities in both middle and high-income countries. However, the distribution shape is different among the established, i.e. older entrepreneurs. This graph shows that the entrepreneurial activities used to be engaged in by many uneducated individuals in both middle and high income countries; but recently it has become a economic activities which is chosen by more educated people (Minniti, et al., 2006). Minniti (Minniti, et al., 2006) explains that the educational profile of entrepreneurs, especially in highly developed countries, has changed over time, and the younger and highly educated individuals are now starting businesses, such as in high-tech industry. Since any economy theoretically moves from agricultural toward

industrial/post-industrial economy, it can be inferred that as economics develops, schooling become a significant factor for bringing productive entrepreneurial activities. This argument also explains Sluis's (2005) finding in developing regions, where economic structures are still primitive. He found the choice of becoming an entrepreneur seems to be more popular for those who only have a low level of formal education, and it is falling for those at the higher level in these regions. This result seems to indicate that education has a negative impact on producing entrepreneurs. However, this is because, 1) educated youth are privileged in developing regions; thus, they are more likely to find wage employment, and 2) entrepreneurs in developing regions are qualitatively different from the one in the advanced economy—they mostly create either marginal firms with a low probability of survival or engage economic activities with relatively low profit.

Therefore, in general, if the goal is to produce sustainable entrepreneurs which create new opportunities with higher wages, investing in schooling seems to be an effective strategy in places where education no longer guarantees one's employment. Investment in both types of schooling, formal and non-formal education³¹, may prove effective.

a) Effect of formal education on entrepreneurship

Entrepreneurial education in formal school is a relatively young discipline³², and it may assist in the accumulation of explicit knowledge which may provide skills useful to entrepreneurs (Leo Paul, 1992). However, general education also has a positive effect in supporting the probability

³¹ A formal school is an educational institution which is chronologically graded and located in a hierarchically structured education system, spanning lower primary school to tertiary school. A non-formal school is any organized systematic educational activity carried on outside of the formal education system in order to provide a selected type of learning. (Coombs & Ahmed, 1974).

³² It was first incorporated in a Japanese university in 1938 then grew dramatically in the next few decades in the United States (Leo Paul, 1992).

of becoming an entrepreneur (Davidsson & Honig, 2003). Sluis et al (2005) also claim that educated farm workers engage in more full time entrepreneurial activities and their performances are positively related to the education they pursue. Compared with an unschooled individual, one yields 19% more gain from a primary education , 34% more in a secondary school, and 140% more in post-secondary school in terms of income, earning, or profit (Sluis, et al., 2005). As technology becomes more complex, the importance of schooling increases, because the abilities acquired from schooling are useful for dealing with changes (T. W. Schultz, 1980). Schultz (T. W. Schultz, 1980) argues that investment in education accrues when considering its importance in developing entrepreneurial ability, particularly farmers in agricultural areas.

Although the returns of formal education seem to be conditional and researchers are not in complete agreement about the effect of formal school on the entrepreneurship, Sluis et al. (2005) found that 85% the of the studies he examined drew the conclusion that upper secondary school is significantly positively related to entrepreneurial activities. A larger education effect occurs in societies with lower literacy rates and more extensive agricultural areas (Sluis, et al., 2005). Formal education is particularly significant for female entrepreneurs, while it is depends on the industry and level of education for men (Davidsson & Honig, 2003).

b) Effect of non-formal education on entrepreneurship

Technical schools, often takes a form of non-formal schooling, can focus on business development, and they seem to have a more direct effect on entrepreneurship, since this type of school is targeted to equip students with specific skills. Some critical skills which can be learned through this type of education are: 1) raising of awareness which leads to business incubation, 2) developing of business plans, which leads to the formal beginning of a business, 3) developing of a marketing and finance plan which would enable an actual tryout of the business, and 4)

developing of management capability, which leads to early and extended growth of business (During, 1990).

There is certainly a demand for this type of schooling. During (1990) reports that entrepreneurs who took a course at the University of Technology found the course useful for starting up a business and achieving early growth. About 70% of entrepreneurs in the study were interested in receiving further education in areas such as marketing, selling techniques, and management of a small firm. However, it is noteworthy that this type of schooling may not promise an increase in the number of entrepreneurs; for example, Locke (1993) found that a marketing course did help to make existing entrepreneurs successful, but it did not create new entrepreneurs. Nonetheless, this type of education is still quite important in that it can generate economic development through entrepreneurs.

Informal education

Informal education is the lifelong process through which one acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and exposure to the environment, such as at home, at work, and at play. Generally it takes an unorganized, unsystematic form (Coombs & Ahmed, 1974). Entrepreneurial skills are also obtained through informal education; thus, in this section, I will explore literature discussing two types of informal education: experience and socialization. I also include a section on how entrepreneurship is influenced by culture.

a) Experience

Experience and practical learning which takes place on the job are important sources of human capital accumulation (Davidsson & Honig, 2003). Labor market experience is theoretically predicted to increase human capital (Becker, 1970). Davidsson and Honig (2003) analyzed several empirical studies and recognized that results are mixed in this respect; however, they stress that there certainly are studies showing that labor market experience, management experience, and previous entrepreneurial experience are significantly related to entrepreneurial activity, particularly when controlling for factors such as industry and gender. In fact, their empirical study also found that start-up experience was a predictor of the entrepreneurial activities (Davidsson & Honig, 2003). The experience of growing up in the family business influences attitude and intention toward entrepreneurship, i.e., prior experience influences perception of future opportunities (Krueger, 2003). Iyigun and Own (1997) also stress that human capital accumulated through informal education such as working experience plays quite an important role in developing entrepreneurial skills; furthermore, they express concerns that overinvestment in schooling instead of focusing on gaining experience may preclude effective economic growth within developed countries. Some scholars, such as Schultz (1980), argue that skills learned from experience have become less relevant compared to the ones acquired from school because the skills acquired from experience tend to be obsolete in this era of rapid technological change. However, as has been demonstrated in the literature, there are some elements of skills or perceptions which can effectively be acquired through experience.

b) Socialization

Education also takes place in the process of socialization. One learns attitudes from family and friends and this affects entrepreneurial activities (Coombs & Ahmed, 1974). The social environment plays an important role affecting entrepreneurship (Djankov, et al., 2006), and

social networks are an important medium through which entrepreneurial knowledge and skills are transferred (Li, Zhang, & Matlay, 2003). A strong influence of family socialization indicates strong ties within the family (Davidsson & Honig, 2003); in fact, parenting can affect entrepreneurship in two ways: with a general parenting effect and entrepreneurial profession effect. General parenting influences development of children's personal traits such as the need for achievement and autonomy; thus, it can contribute to generate an entrepreneurial propensity within a society (Davidsson & Honig, 2003; Thomas & Mueller, 2000). Moreover, parents being engaged in an entrepreneurial profession seem to have some effect on children's occupational choice. Djankov et al. (2006) found that entrepreneurs have nearly three times more entrepreneurs in their family; they also point out that childhood and adolescent friends are an important factor. They found that entrepreneurs have 0.84 entrepreneur friends out of five from childhood and 1.27 from adolescence compared to 0.55 and 0.44, respectively, among non-entrepreneurs (Djankov, et al., 2006).

Another family influence that Djankov et al. (2006) found is that the parents of entrepreneurs are more likely to be bosses or directors, and they tend to be richer on average. This factor may affect access to financial resources in order to start a business.

c) Cultural influence

Even if all countries had the same economic conditions and policies, one country could still be more entrepreneurial than others because of the effect of culture (Poole & Wall, 2004). Entrepreneurship is affected by culture at both the social and organizational levels (Morris, et al., 1994). Culture provides a basic framework which individuals make sense of their lives and live in and adapt their world (Acs & Virgill, 2010). It also provides a framework for social interaction and represents a cohesive element among the individual members of a society; culture is a

learnable, socially transmitted set of behavioral standards (Douglas & Bernard, 1977; Morris, et al., 1994). The impact of cultural dimensions on entrepreneurship and economic growth has been suggested by a number of authors, and it could be quite significant; however, its mechanism is not straightforward (Wennekers & Thurik, 1999).

Because participation in entrepreneurial activities is related to culture, different degrees or outcomes among different cultures are expected to be observed. For example, a recent survey found that more than 70% of adult Americans would prefer being an entrepreneur to working for someone else, while in other countries this number is less than 50% (Poole & Wall, 2004). Numerous authors have point out the high level of entrepreneurship within the United States. The reasons given for this vary. For example, one claims that it is due to a cultural value such as freedom, independence, self-sufficiency, individualism, achievement, and materialism (Morris, et al., 1994), while another suggests that it is a result of the fact that the United States is an immigrant nation; the ancestors of the U.S. citizens all took a risk and migrated from halfway around the world in search of a better life, and this sprit was inherited by the current generation (Poole & Wall, 2004).

Specific characteristics of entrepreneurs are sometimes culture specific. For instance, the role of individualism and collectivism in facilitating entrepreneurship in organization is culture bounded (Morris, et al., 1994). In the western countries, such as the United States, entrepreneurship and individualism seem to have a stronger relationship, but it is not necessarily the same in Asian countries, where collectivism is socially valued (Morris, et al., 1994). Japanese engineer Mr. Koichi Tanaka, who won the Nobel Prize in Chemistry 2002, has never taken his achievement as an individual accomplishment. He states:

Rather than to mention only my excellence, I believe it is more appropriate to say that the overall support of the research team was excellent. We were also probably influenced by the climate

within Shimadzu Corporation, which provided a large degree of freedom for this type of research to a team composed of such young members (Nobel Foundation, 2003, 19th paragraph).

This is an example of how Japanese corporate entrepreneurs envision their role and accomplishments. The outcome of entrepreneurial activities might differ as well. Morris et al. (1994) claims that collectives are viewed as more able to generate a continuous stream of incremental innovations, while individuals are the ones who periodically generate major breakthroughs.

For this reason, research and education need to treat entrepreneurship as culturally sensitive subjects. Ignoring this point could result in implementing an inappropriate policy for a community. Begley and Tan (2001) point out that since shifting to creativity education from rote memorization in order to increase innovation, East Asian countries have been struggling to foster creativity in its citizen, despite expectation. He claims that the problem is not education, but beliefs formed through cultural system. Those efforts lack feasibility in the local context. This 'culture bounded' characteristic makes it difficult to define entrepreneurship or entrepreneurs, because 'entrepreneurs' could indicate totally different professional situations

2.2.3.3 Limitations of Impact through Education

The relationship between education and entrepreneurship is not always confirmed. Some studies claim that there is only a limited or even no relationship; furthermore, some even claim a negative relationship between them. This is because entrepreneurship is quite a complex concept and its outcomes differ depending on the context, such as a level of economic development, culture, and other resources. It is probably safe to say that education has a positive influence;

however, it may be conditional. In this section, I would like to include some arguments which claiming that education is not a robust factor in developing entrepreneurship.

For instance, the impact of education on entrepreneurship is swayed by economic level, industry, gender, urban-rural area, level of education, (Davidsson & Honig, 2003). A number of authors claim that education as a solo incentive will not bring out entrepreneurial activities. In addition to human capital, other capital, such as financial and physical capital, is necessary for establishing viable business operations (Bates, 1985).

Another weakness of claiming an effect of education on entrepreneurship is the fact that there are very few studies which explain the entrepreneurial learning mechanism (Krueger, 2003). For example, significance of education with respect to entrepreneurial activities has been shown; however, years of education do not make much difference³³, which can raise a question about learnability of entrepreneurial skills in school. Meanwhile, there is a study which found that there was no difference in cognitive score or excellence in education between entrepreneurs and non-entrepreneurs (Djankov, et al., 2006). With these findings, a group of scholars claims entrepreneurial success is a consequence of environmental factors, but not individual capabilities (Djankov, et al., 2006; Locke, 1993). As mentioned in this section, even though a considerable degree of positive findings can be found in the literature, the power of education with respect to entrepreneurship still has not been adequately demonstrated.

³³ Sluis (Sluis, et al., 2005) found that even though the majority of his examinations claim a significance, the impact of lower secondary schooling showed no more positive than that of upper elementary schooling, He further argues that the impact of post secondary and college education is not always different from that of no schooling.

2.2.4 Entrepreneurship and Policy

As repeatedly mentioned in this section, entrepreneurship is probably cultural specific concept; therefore, it is difficult to draw generalizing policy recommendations to fit in different contexts. In order to bring about more policy dialogues in the cross cultural context, more extensive theoretical debates is necessary to understand the mechanism of entrepreneurship. At this point, there are only two universal policy principles to promote entrepreneurship: 1) social stability and 2) the institutions (Minniti, et al., 2006)—they are essential regardless of a country's situation. While social stability increases people's motivation and ability to exploit new opportunities, institutions, such as governmental guidelines, provide a framework which supports economic activities, removes uncertainty, and makes the actions of others predictable (Minniti, et al., 2006).

How can the importance of entrepreneurship be addressed within a policy discussion? Only recently, has the study of entrepreneurs been internationalized to compare psychological, societal, and economic factors that motivate or impede the start-up of new firms (Thomas & Mueller, 2000). According to Thomas and Mueller (2000), international entrepreneurship is typically investigated in two ways. First, some researchers look at the demand condition of increasing entrepreneurship rate and its contributions to the economic development or vitality of a country. Second, others look at causes of economic success, with many claiming that an abundance of individual entrepreneurs is a key supply condition for economic success. In this section, I will discuss both arguments. I briefly discuss some suggestions for organizing the social environment, which involves creating a demand for entrepreneurship. Then I will discuss suggestions focusing on fostering the supply side of entrepreneurial activities—entrepreneurial education.

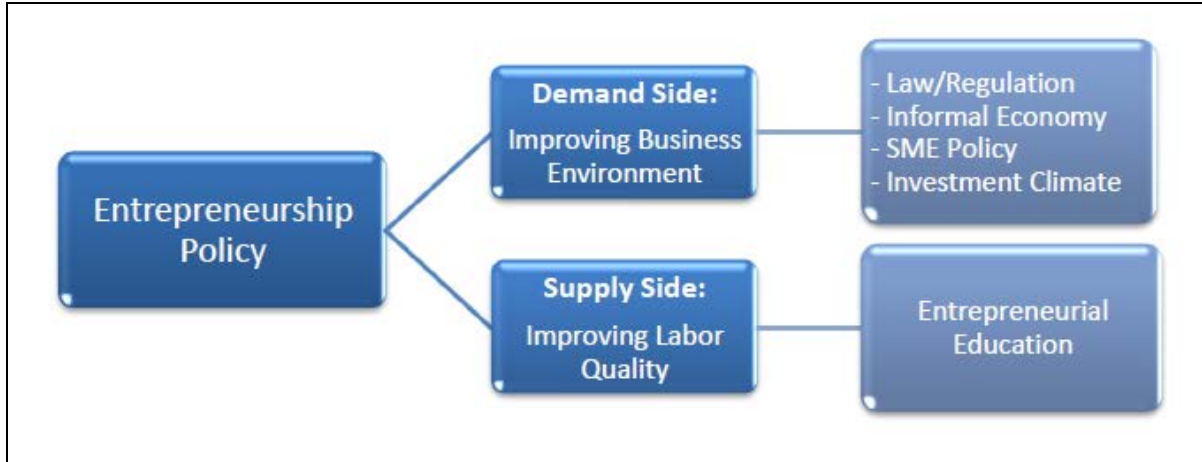


Figure 6: Entrepreneurship Policies

2.2.4.1 Creating a Demand—Environmental Intervention

Improving laws and regulations is suggested in the literature as one way to encourage entrepreneurship. There are two types of policies targeted at encouraging entrepreneurial activities: passive and active. According to Poole and Wall (2004), passive policies facilitate entrepreneurship by establishing institutions, laws and regulations in order to reduce the cost of running a business, whereas active policies are targeted tax breaks, subsidies and so forth, which are meant to direct resources into particular business activities by creating specific incentives. They argue that the success of the US has resulted from ensuring proper passive policies, because passive policies allow entrepreneurs to pick the most promising areas to pursue, as opposed to picking one of the governments' choices, which often is a wrong identification

Policy intervention can also play an important role in the informal economy. In developing areas, low productivity household enterprises are often observed in informal

economies, especially when workers are shifting from agriculture to industry (Sluis, et al., 2005). Household surveys administered throughout several countries in the late 80's, and it revealed a great deal of hidden entrepreneurial activities which contributed to household income (Sluis, et al., 2005). In fact, the average size of the informal economy, as a percent of official GNI in the year 2000, was estimated at 41% in developing countries, 38% in transition countries and 18% in OECD countries (Schneider, 2002). For example, the informal economy comprises about 43.2% of the GNP in Kazakhstan, 49.8% in Kyrgyzstan and 34.1% in Uzbekistan (Suhir & Kovach, 2003). Because those economic activities are not recognized by officials, this is a tremendous loss of regional economic resources, tax revenues, and human and social capital. Suhir and Kovach (2003) explain that these losses result from ill-designed laws and regulations and poor government practices. A well-established legal system is essential in cases like this, since informal business eventually register when their operation becomes large and successful (Sluis, et al., 2005).

An improvement Small Medium Enterprise (SME) policy is appropriate for encouraging entrepreneurship, since SME is an important source of regional economies (Suhir & Kovach, 2003). Poole and Wall (2004) claim that establishing a business as a legal entity also allows entrepreneurs greater access to credit markets which are denied to informal firms; however, if credit markets are overregulated, even legally established entrepreneurs may have difficulty financing their ventures. For instance, SMEs in Kyrgyzstan have limited access to credit and resources due to administrative barriers and heavy regulations, in addition to the corruption (Suhir & Kovach, 2003).

Improving the investment climate promotes creating a condition in which people can innovate and spread improvement in economic practice (Klein & Hadjimichael, 2003). Raising

money, and/or building infrastructures are a part of this (Klein & Hadjimichael, 2003). In addition embedding the spirit of entrepreneurship in disciplines, educating people about the potential of entrepreneurship (Klein & Hadjimichael, 2003; Thomas & Mueller, 2000), and providing a choice of entrepreneurial opportunities (Klein & Hadjimichael, 2003) are also suggested. For example, Locke (1993) claims that the reason why Germany and the UK were successful during the industrial revolution was that they had this kind of environment; countries' citizen could express opportunities for entrepreneurial potential, but not because they were intellectually advanced or had a high risk-taking culture.

Although the importance of improving better regulation and environment are stressed, it should also be noted that having good laws and regulations does not guarantee growth of entrepreneurial activities; the Scandinavian countries have among the best institutional arrangements to allow entrepreneurship; however, only 30% of Scandinavians prefer to be entrepreneurs, while 70% of the people in the US, which has a less conducive environment for entrepreneurs, express a preference to become entrepreneurs (Poole & Wall, 2004). Therefore, political, cultural factors are a constantly stand as a challenge.

2.2.4.2 Fostering a Supply—Entrepreneurial Education Policy

All of these policy suggestions discussed in the previous section deal with the business environment, i.e., how to organize the business environment to make it easier for entrepreneurs to start or run firms. They are all important and necessary; however, the supply side factor of the labor market, i.e., empowering potential entrepreneurs through education and training (Thomas & Mueller, 2000) should be also discussed. In response supply side factor, a large number of national incentive and education programs have, in fact, been administrated in Asia, Latin

America, and transition economies in Central and Eastern Europe in order to stimulate new venture development (Thomas & Mueller, 2000).

One of the types of education is Entrepreneurial Education (EE), which teaches skills to be competent entrepreneurs. However, the vigorous policy debates on EE are still lacking—one of the reasons is that entrepreneurship itself remains such an uncertain concept. The father of entrepreneurship, Schumpeter, does not formulate any concepts for the role of government in stimulating “innovative entrepreneurship”. Baumol points out that this is a shortcoming of Schumpeter’s theory (Wennekers & Thurik, 1999). Because of this situation, it is understandable that a policy for entrepreneurial education is not explicitly explained anywhere; it might be still an ongoing process how this issue should be addressed within the policy framework. However, Acs et al. (2005) warns that inappropriate entrepreneurial policies may result in adverse effects on the economic growth.

Schramm (2005), who is the president and chief executive of Ewing Marion Kauffman foundation, made a speech to express a need for a new way of implementing entrepreneurial education at the Technology Transfer Society Annual Conference in 2005 regarding policy application. She states:

For entrepreneurial economies to work, we must give up the illusions of certainty and control. We cannot remain in the old Industrial Triangle mode of thinking that imagines a stable future balanced on the trivet of big government, big labor, and big corporations. Every day we live, our lives are more dependent on the entrepreneurs and the practicing intellectuals, scientists, discoverers, innovators, and inventors (Schramm, 2005, p. 5).

In addition to Schramm, a number of authors suggest taking a nontraditional policy approach for entrepreneurial development because typical economic and employment

development policies won't work (Carree & Thurik, 2003). However, although some general and ambiguous recommendations are found, no literature clearly states specific implementation plan, based on certain theory or evidence. This might be a sign of the fact that policymakers are facing a serious challenge in finding an appropriate way to implement entrepreneurial education.

In order to make effective entrepreneurial education policies, it is essential to understand what entrepreneurial education (EE) is. Here, I would like to note that there is conceptual difference between small business management course and entrepreneurial education. According to Winslow;

Generally, small business management covers considerable information on how to successfully manage the business in order to expect normal sales, profits and growth. This includes coverage of planning and organizing the business, selecting and leading employees, business operations, marketing goods and services and financial planning and control. **On the other hand, entrepreneurship courses emphasize information in which the principle objectives of the entrepreneur are profitability and growth.** Entrepreneurs are usually seeking rapid growth, immediate and high profits and a possible quick sellout with a large capital gain (Winslow, Solomon, & Tarabishy, 1999, p. 2).

If this definition of entrepreneurial education is correct, how much of the so called "entrepreneurship course" provided in formal and non-formal education would be fit in this definition? As an example, I examined and attempt to categorize all the courses listed in the 'business/entrepreneur' section from the course catalog of local community college. These courses are non-degree classes, called community education. A complete list and description of the classes are listed as appendix B.

Table 6: The Course List from the Section of Entrepreneurs/business (CCAC, Fall 2009)

<p><i>Small business management</i> (22)</p>	<p><i>Accounting for the non-accountants,</i> <i>Business writing,</i> <i>Buying a franchise,</i> <i>Catering as a business,</i> <i>Managing telecommuters (key to telecommuting success,</i> <i>Supervising telecommuters,</i> <i>Leadership issue in telecommuting),</i> <i>Enterprising woman—Microenterprise ownership certificate program,</i> <i>Financing a small business,</i> <i>Getting listed on google,</i> <i>How to start a small business,</i> <i>How to start a specialty food business,</i> <i>How to write a business plan,</i> <i>Leadership in a changing business climate,</i> <i>Marketing & promoting your small business,</i> <i>Networking skills—how to use them effectively,</i> <i>Using social networking to grow your business or organization.,</i> <i>Project management,</i> <i>Promoting your business on the internet,</i> <i>Promoting a special event,</i> <i>Small business basics certificate program,</i> <i>Strategic negotiating skills,</i></p>
<p>Technical skill development (12)</p>	<p>Court appointment special advocates—CASA, Electrician, Event planning as a career, Property & casualty insurance career preparation, Black powder gunsmithing, Landscape design professional, Property management & land loading, Serve safe food safety prep & exam, Manicurist technician, Sound mixing & effects, Stand-up comedy, Real estate fundamentals & practice</p>
<p>Personal Development (2)</p>	<p>Acting—theater skills, (public speaking) Fear of public speaking,</p>
<p>Business inspiration (3)</p>	<p>Starting over without starting at bottom Using personality to find the right job Free introductory seminar—small business; is it for me?</p>
<p><i>Source; Community education Fall 2009, The Community College of Allegheny County³⁴ p. 11-14</i></p>	

³⁴ “The Community College of Allegheny County is the largest institution of postsecondary higher education in Pennsylvania. The college serves 30,000 credit students through 170 degree and certificate programs, and offers thousands of lifelong learning non-credit and workforce development courses to 35,000 students annually”. (http://www.ccac.edu/files/PDF_Document/7f42b4ec2b174976874109ba77dfa935.pdf)

As this table shows, 39 courses were provided through the Community College of Allegheny County in Fall, 2009 under the category of entrepreneurs/business course. However, based on Winslow's definition and course description, more than half of the courses can be considered small business management classes. Others are teaching specific technical skills or personal development, which according to Winslow do not fall under the course of EE. There are three courses to stimulate one's carrier choice; however, they are not really focusing on the skills or information to bring about rapid profit, i.e., they are not really entrepreneurial education courses neither. In other words, none of these 39 courses are devoted to teaching a strict definition of EE, regardless of the section title. This example illustrates that there is a lack of understanding of the concept of entrepreneurship and difficulties to address the content.

Then, what should we do? Having recognized that what we know is limited and that entrepreneurship tends to be specific to context, there are some general policy suggestions as to how EE should be integrated into educational institutions. For example, some scholars point out the necessity of more exposure to the entrepreneurial subject from early age at school. Ronstadt (1985) argues that elective entrepreneurship courses are not enough to reach all potential entrepreneurs, and Nelson (1977) suggests that entrepreneurship concepts should be integrated into all education programs at all levels as well as at home and in the community. However, how to actually integrate these suggestions are still not clear.

For more specific notes, some suggestions can be still made, under conditional circumstances such as the level of economic development. For developed countries, the goal of entrepreneurial education should be a focus on maintaining competitiveness and sustaining the innovation rate; In order to reach this goal, advanced entrepreneurship education within the higher education is inevitable (Minniti, et al., 2006). For transitional countries, they need a

strong commitment to entrepreneurship education, especially in elementary and secondary schools because it will be necessary to educate the population about entrepreneurship (Minniti, et al., 2006). As for the developing countries, conventional application of the theory is not appropriate (Kiggundu, et al., 1983; Thomas & Mueller, 2000). The GEM report suggests that these countries need to focus more on building fundamental institutional conditions which encourage the development of an active market, rather than building on the entrepreneurial framework (Minniti, et al., 2006). These low-income countries need a strong commitment to education and training at both the elementary and secondary level, because those without formal education will end up being entrepreneurs out of necessity rather than out of choice, and it is difficult to secure a better-paying job for them.

2.2.5 Concluding Remarks

It is still unclear the position, role, and importance of entrepreneurship and its education in the practical world. Obviously, there are groups of people who claim the necessity of maturing this field; however, it seems no one knows how to make sense of it, or in which direction to head; it seems like whole communities are lost. In addition, research on this topic in the education field is very limited. Although education is mentioned here and there, not many researchers would be interested in tackling this problem from the perspective of educational policy. As matter of a fact, I suspect that there are very few researchers who believe entrepreneurship is an “education” matter.

The question of whether entrepreneurial skills are learnable and/or teachable remains to be unanswered, since quite a small number of researchers have attempted to discuss the issue with scientific evidence. Even so, there is the fact that hopeful finding and milestones are

accumulating little by little. As for the entrepreneurial education, Ronstadt (1985) argues that there is a strong indication that EE will produce more and better entrepreneurs and, more recognition and acceptance of the fact that entrepreneurship is a process that can be learned and hence, is teachable; these remarks hopefully will become an engine of further research.

Domestic capability, which is a function of human capital, decides a nation's economic capability; however, spending resources on education does not promise true capability; i.e. spending has to be strategic (Klein & Hadjimichael, 2003). Investing in entrepreneurial research and education is one strategy because not only does it have a mission to help small business (Li, et al., 2003), but it also sensitizes students to the entrepreneurial possibilities and guides them to become successful entrepreneurs (Ronstadt, 1985). Entrepreneurship skills may be related to other dimensions of life; i.e., it stimulates the creativity and innovation necessary to create better community (Nelson, 1977).

Entrepreneurship exists in every society. Gartner (1985) claims that we need to understand the multi-faceted nature of entrepreneurial thinking, if we are ever to understand entrepreneurship. Then, discussing how to educate people in entrepreneurial thinking might be a first step in establishing an effective education policy. As for now, the role of entrepreneurial education might be to help make entrepreneurship more visible to younger generation as a career possibility (Ronstadt, 1985), until researchers discover more concrete principles and develop a holistic approach to define entrepreneurship and how it works in society.

2.3 SUMMARY

The main purpose of this study is to discover the role education plays in fostering entrepreneurship to address chronic youth unemployment problem. Young people need competencies to participate in local economies either within a firm or as a self-employed individual. However, the evidence available to help us define relationships among education, entrepreneurship and economic development is not clear.

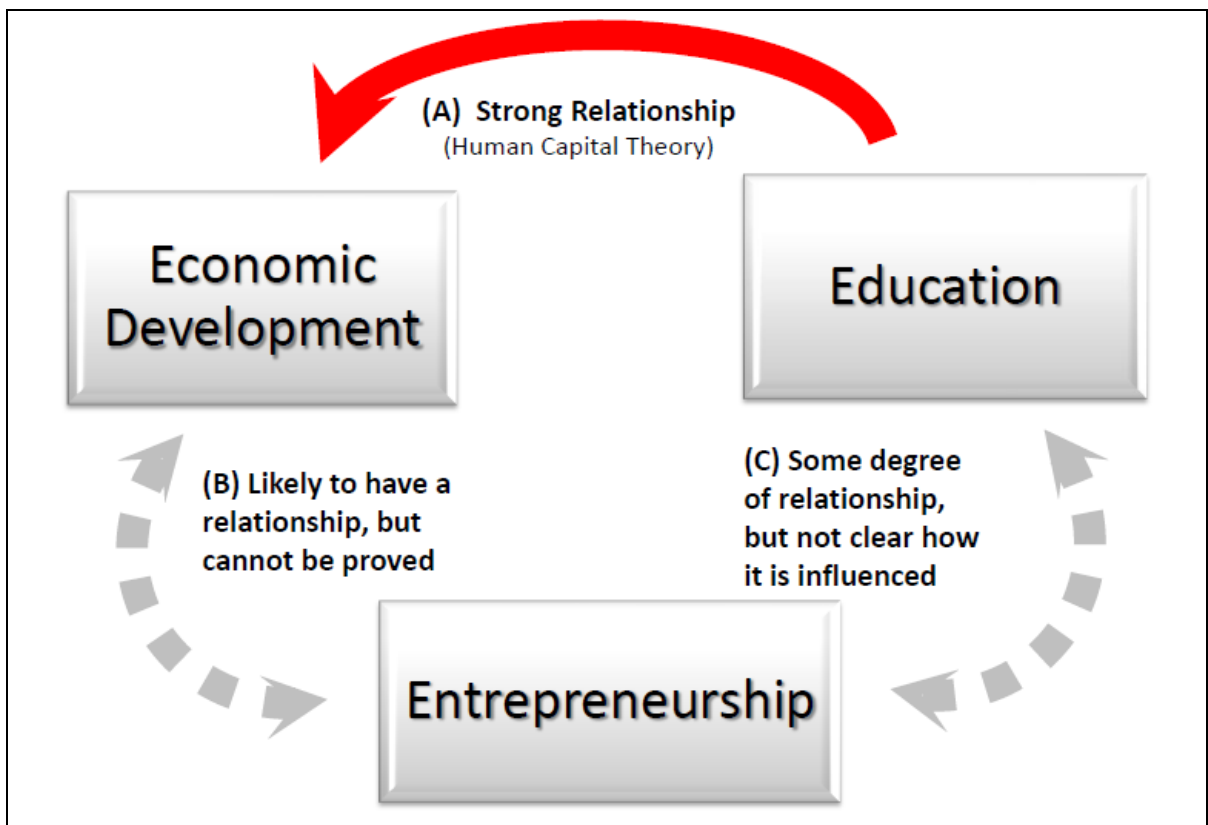


Figure 7: Relationship among Education, Economic Development and Entrepreneurship

As mentioned earlier, the contribution of education to economic productivity, which ultimately leads to economic development (Relationship (A) in the figure 7), has been well established (Becker, 1993; Charney & Libecap, 2000; P. Schultz, T., 1994; Sluis, et al., 2005; Thurow, 1975). That contribution is brought about through entrepreneurship; however, the actual mechanism is still unknown. There is a great deal of speculation about this mechanism, especially when talking about job creation (Minniti, et al., 2006). Without a spirit of entrepreneurship, economic development is limited. And since economic development is measured at the aggregated or macro level, it is almost impossible to prove the contribution of the individual entrepreneur (Carree & Thurik, 2003; T. W. Schultz, 1980) (Relationship (B) in the Figure 7). The relationship between entrepreneurship and education is ambiguous as well. Although there is training called “entrepreneurial education”, often it is not designed to create new entrepreneurs (Locke, 1993). Since most of these so-called “EE” courses teach technical aspects of business establishment and management, they mostly help to make existing entrepreneurs successful. Several empirical studies show that general education also has a positive impact on entrepreneurial activities or economic outcomes (Bates, 1985; Sluis, et al., 2005), but they do not explain how or why education works in this way. Therefore, how education can effectively create entrepreneurs and entrepreneurship competency is still not clear (Relationship (C) in Figure 7).

In this study, I particularly focus on the relationship between education and entrepreneurship (Relationship (C) in Figure 7). I attempt to understand how the world of employment, education and job creation seems to be working, using a form of mapping called social cartography. This is a research methodology that utilizes spatial dispersions of ideas and makes the relationship among ideas explicit (Nicholson-Goodman, 1996). Nicholson-Goodman

(1996) states, “social cartography represents an effort to excavate the elusive through a recognizable, if not definable, methodology which is based on an anti-foundational perspective (P.7)”. In other words, with relative waypoints in visual form, mapping can make a valuable contribution in areas when either contested or unknown factors are existing. By utilizing this methodology, I intend to bring this unknown area to the surface, to make it recognizable, and to visualize how things might be related each other. In chapter three, I will discuss this methodology in more detail.

3.0 RESEARCH METHODOLOGY AND DATA ANALYSIS PROCEDURE

—SOCIAL CARTOGRAPHY

This study is based in qualitative research. Mapping has been developed to analyze highly complex issues where a scholarly consensus may not be possible, and therefore, an understanding of multiple valid perspectives is required. This methodology is increasingly used by researchers who need to aggregate fragmented scholarship into meaningful comparative and international perspectives. Social cartography, sometimes called mapping, is one kind of qualitative research method which can provide a visual representation in order to articulate a mapper's view of the social world. This visual representation can be seen as a narrative—it allows viewers to interpret information. Because it has a perspectivist nature, it does not claim one ultimate and objective truth.

For this particular study, I believe social cartography is more appropriate methodology than others, because 1) not much is known about the factors related to the relationship between education and entrepreneurship; 2) mapping allows me to compare particular understandings about the relationships between education and self-employment skills; and 3) since the goal of this study is to contribute to the knowledge base needed for policy discussions, social cartography provides a way to capture and assess the currently ambiguous status of the research field; and hopefully, it can provoke policy dialogues.

Only in recent years have data on entrepreneurial activities, mostly in OECD countries, become available to researchers, and even then, the data are still scarce. This type of data may allow an investigation of the educational impact on entrepreneurial activities; however, it does not allow an examination of how education contributes to the skill building process. It indeed is a challenging task to examine and draw conclusions without measurable data. Clearly, I will not be able to prove definite causal relationships. However, addressing youth unemployment issue within the saturated state of labor market is a critical policy issue and it should not be ignored just because a lack of measurable data.

I chose this methodology not for ideological reasons, but because the nature of the study field I am focusing on. As mentioned, the intersections of education, entrepreneurship and job creation for employment are murky at best. My interest is to define space which previous theoretical and empirical studies leaves empty. I believe that the mapping methodology enable me to put the small pieces of puzzle together to make sense of the dynamics of particular relationships and create something comprehensive to contribute to the research field.

In this methodology, I pay close attention to Paulston's ground-breaking work because there has been very little study done in education field using social cartography. His work provides a basis for how this methodology can be appropriately utilized within education research.

3.1 WHAT IS SOCIAL CARTOGRAPHY?

3.1.1 Social Cartography as a Research Methodology

Liebman and Paulston (1993) states, “The social world cannot be measured, but it can be viewed, reported, and compared” (p. 10). Social scientists often create maps in order to view, report, and compare social realities. The purpose of these maps is to bring to light differences between or among social entities (Seppi, 2000). A social map is a representative methodological work, especially for those conducting authoritative research, that seeks to include contested voices in the research (Ito, 2001). When researchers confront knowledge claims, the research is enhanced by revealing how these knowledge claims are interrelated with each other, i.e., displayed as a map (Paulston & Liebman, 2000). Visual representations are useful tools for summarizing and communicating information; thus, researchers encode information as image rather than words. (Huff, 1990)

Paulston claims “our task today is to de-code and pattern this new reality of information networks and electronic communication without naïve essentialism or undue nostalgia for the world we have lost” (Paulston, 1996, p.28). That is the role, or rather, the mission of mapping. Without being overly complex, sometimes these images can simply be words in juxtaposed in different visual relationships. Table and charts can be examples of this type of mapping. In order to better understand social cartography, in this section of the chapter, I discuss the history, the feature and the contributions of social cartography.

3.1.2 History of Visual Representations

Visual representation has its own history. Since its beginnings in the 1960's, it has taken several forms, which Paulston (1996) labels as Technical Rationalist (TR), Critical Rationalist (CR), Hermeneutical Constructionist (HC), and Deconstructive Perspectivist (DP). The TR representation has been dominant since the late 1960s. Its view is mimetic of reality³⁵, where the viewer is assumed to be an independent observer. Paulston (1996) states;

[T]he TR view favors a geometricalized, rationalized, essentially intellectual concept of space... It seeks –by presenting an abstract and quantitatively conceptualized space –to de-eroticize the visual order, to foster de-narrativization de-textualization and de-contextualization (p. 5).

The TR visual representation attempts to generate a 'mirror of nature' by insisting on the literality of realism. It is realist and often begins with quadrant framing (Paulston, 1996). Figure 8 is one example of a TR representation, showing levels and stages using vertical and horizontal lines. As you can see in this figure, the visual representation simply categorizes different structural domains in order to show their relationship to one another.

³⁵ Mimetic of reality means that it attempts to imitate a reality as closely as possible.

<i>Classification of Vertical and Horizontal Relationships</i>		
Level	Age Range	
IV	(25)	STAGE 6 Postgraduate Study
III	(21/22)	STAGE 5 <i>Example</i> Higher Stage of Univers. Professional Schools Study, Teacher Training
	(18/19)	STAGE 4 <i>Examples</i> Advanced Technical Schools Lower Stage of Univers. Study, Teacher Training Undergraduate Colleges
II	(14/15)	STAGE 3 <i>Examples</i> Full-time and part-time Vocat. Schools Upper Section of High Schools, Grammar Schools, Gymn. Teacher Training
	(10/11)	STAGE 2 <i>Examples</i> Upper Section of Elementary Schools Lower section of High Schools, Grammar Schools Gymnasiums Intermediate Schools
I	(5/6/7)	STAGE 1 <i>Examples</i> Primary Schools
↑ Compulsory School begins		Pre-School Education <i>Examples</i> Nursery and Kindergarten

Source: (Hilker, 1963, p. 57)

Figure 8: Example of TR Visual Representation

This figure describes how school systems are organized based on children’s development. This ‘map’ is straight forward; it does not ask readers to do any extra interpretation.

Critical rationalists (CR), who appeared during the 1970s, not only attempted to capture the hierarchy structure, and they also seek a more egalitarian structure. They therefore problematize and critique the hierarchy (Paulston, 1996). CR representations can be presented in several ways, such as by indicating bi-polarizaion of paradigms, schemes reforming inequality,

or positions or interactions of superordinate and subordinate (Paulston, 1996). Figure 9 is an example, showing one ethnic education program’s efforts to overcome inequality.

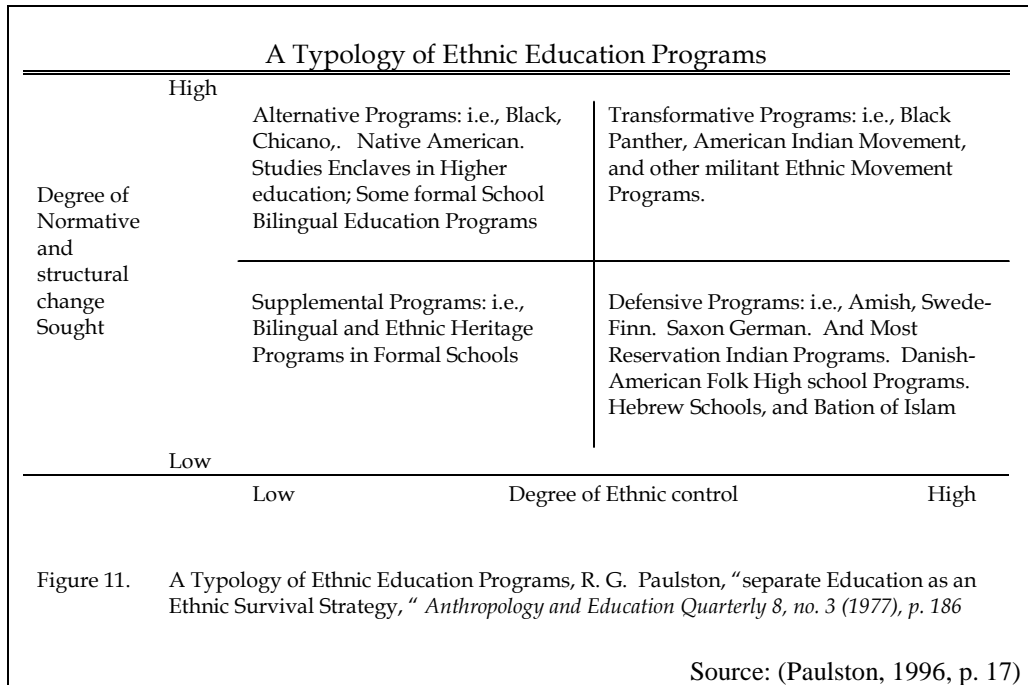


Figure 9: Example of CR Visual Representation

This visual representation also uses vertical and horizontal lines; however, in addition to its simple categorization, it also highlights the hierarchal situation in the ethnic education programs by using “high” and “low”. This particular figure shows different types of ethnic educational programs, but it is organized to draw an attention where certain programs are located and its level of political involvement. CR visual representation tends to display equity issues and elicit a level of judgment from the viewer. Use of these continuums provides an awareness of this problematic hierarchy, which can result in policies supporting creation of a more egalitarian structure.

During the 1980s, Hermeneutical constructivists (HC) attempted to find patterns in ‘voice’ i.e., the creators’ own interpretation of their understanding of the situation. For this reason, their visual representations involve narratives and art. HC is a belief that stories and images possess the power to change minds and bodies, and it refuses to be fixed and over-determined (Paulston, 1996). Figure 10 is an example of an HC representation; it does not mirror a reality, but it shows possible relations, contacts, and influences (Paulston, 1997).

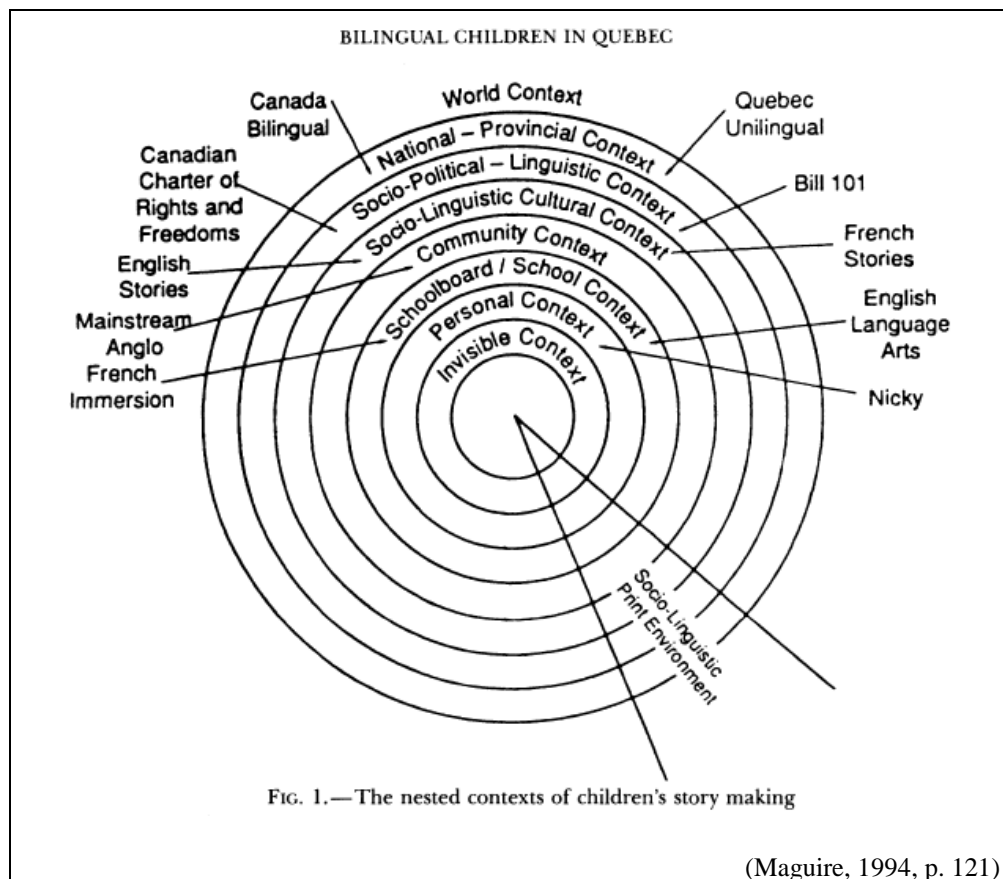


Figure 10: Example of HC Visual Representation

This particular figure (figure10) attempts to show how bilingual children may build their knowledge. It shows how different cultural contexts are layered to form socio linguistic environment.

The most recent form of visual representation is the Deconstructive Perspective (DP), which has provided a basis for the social mapping method. This method came into education discourse after 1992. It provides a deconstructive view, different from all the modes of representations described so far. It accepts and reframes all theories, codes, language game simulations or visual forms. As Nichololon-Goodman (1996) states, “the PostModern era began with a dawning awareness that ‘reality’ is composed of disconnected fragments” (p.9). As she suggested, mapping is a way of reconnecting those fragments and attempting to capture the interrelationships, even though they can be only portrayed in an abstract form. Figure 11 contains two examples of DP representation: one by Paulston and one by Rust.

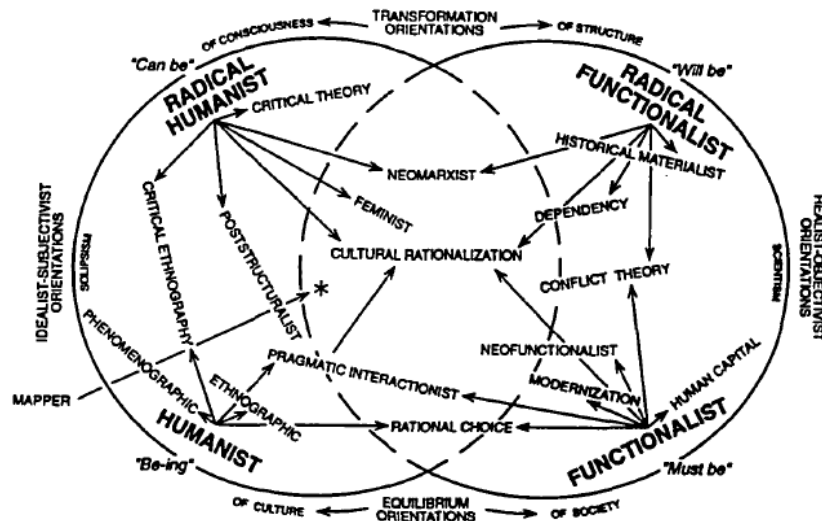


Figure 22 Macro-mapping of Paradigms and Theories in Comparative and International education. R.G.PAULSTON, (1992) Comparative education as an Intellectual Field: Mapping the Theoretical Landscape. Paper presented at the 8th World Congress of Comparative Education, Charles University, Prague. Czechoslovakia, July, p. 31

Paulston, 1997 #172, p. 142}

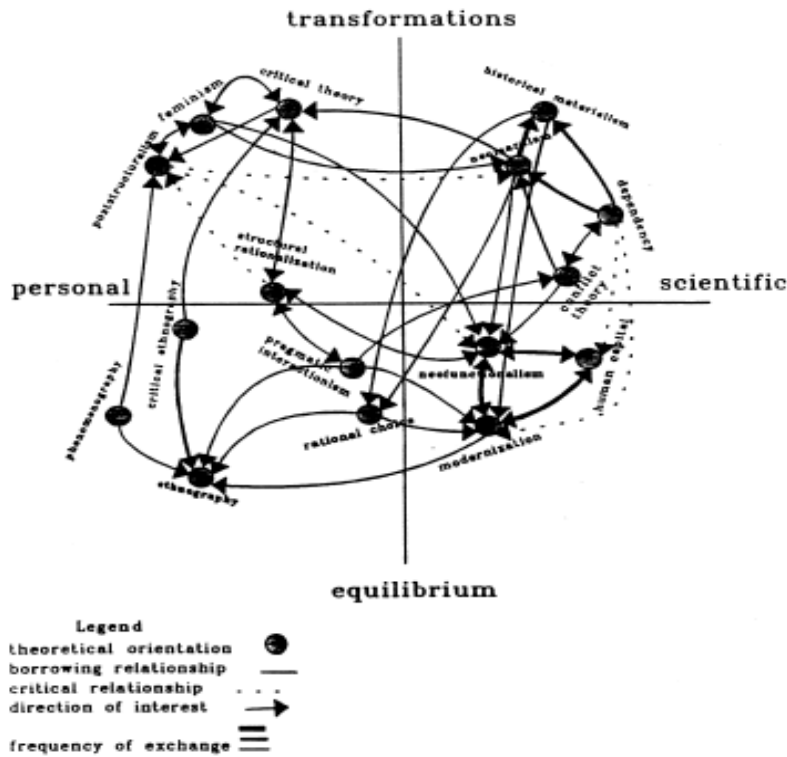


Figure 2. A revised macro-mapping of paradigms and theories in comparative and international education.

(Rust, 2000, p. 48)

Figure 11: Example of DP Visual Representation

Both visual representations in the Figure 11 have common basis showing how major contesting educational theories are related each other. With the upper map (Figure 22), Paulston created two spheres which represent cultural consciousness (left) and social structure (right), and identified the locations of these theories then showed their influential sources. On the map, he located himself where he stands as scholar. With the bottom map (Figure 2), Rust adapted Paulston's map and created his own version of visual theorizing. He took out the spheres and reinstated the vertical and horizontal axes. This makes it easier to see where these theories are located among four philosophical positions. He did have influential lines, but he focused instead the quality of interactions among the theories by using different legends.

3.1.3 The Features of Social Cartography

Mappers claim that any or all knowledge can be mapped as a cognitive map, because knowledge can be transferred to spatial explanations in not only in physical science but also in social science and the humanities (Rolland G. Paulston, 2000). Within the social sciences, scholars have been attempting to find patterns, sometimes incongruities in social realities. The outcomes of these efforts are often called theories, paradigms, or intellectual discourse communities (Rolland G. Paulston, 2000). In order to understand the unique characteristics of this methodology, I discuss some features of social cartography in this section; First, I discuss general natures of social cartography, and then, I pay close attention to two notable characteristics of mapping: the visual representation of spatial relationship and open ended results.

3.1.3.1 General Features

Mapping can be classified as a hermeneutic approach³⁶, focusing on developing personal understanding of social reality rather than increasing generic knowledge (Nicholson-Goodman, 1996). One advantage of using social cartography is it allows us to include cultural clusters or knowledge which tends to be ignored in traditional research approaches (Nicholson-Goodman, 1996). This could be very important for some studies in the future, because as figure 11 shows, it can show how close or far one cultural domain is from another and how each domain interacts with its surrounding environment. It is most useful in areas where causal hypotheses cannot yet be tested.

Paulston (1993) explains that social cartography is a form of post-modern cognitive mapping, which “reinscribe[s] and structure[s] ways of seeing social and education phenomena embedded in the semiotic space of literary text and the intertextual space of educational practice” (p. 18). It is a valuable tool to capture text and context, and translate these into a cognitive map so that it opens deeper discussion (Paulston, 1993). In this sense, mapping is somewhat similar to content analysis; however, it does not limit to count or quantitatively analyze the chosen unit of texts which frequently used in content analysis (Huff & Fletcher, 1990). The conceptual mapping takes a form of comprehensive visual representation in order to illustrate relationships of elements. In other words, social cartography can function as a vehicle to articulate interrelationships between and among elements of an abstract concept (Nicholson-Goodman, 1996).

The assumption of how knowledge is built with social cartography is somewhat different from conventional research methodology. According to Liebman and Paulston (1993), it is

³⁶ Hermeneutic approach: which deals with study of the methodological principle of interpretation. (Merriam-Webster, 2001)

assumed that “understanding occurs presumably when controls and manipulation are not methodologically enforced on the object” (p. 4). In other words, mapping does not enforce causal thinking into the research. It assumes people can make better sense of an issue when capturing a bigger picture rather than capturing one specifically designed to find a specific part of a knowledge canvas. For this reason, social cartography emphasizes the importance of providing a comprehensive portrait of the object rather than presenting information selectively. For example, instead of measuring the impact level of mathematic score to one’s future earnings, social cartography attempts to include many other influential factors, such as Social Economic Status of family or cultural background in order to indicate their relationships. Social cartography does this because it believes that the inclusive approach will offer more comprehensive knowledge of social reality.

Mapping requires processes of acquiring, coding, decoding, aggregating, recalling, amalgamating, and storing information. A mapper shifts earlier modernist vocabularies into the postmodern way of seeing and representing knowledge (Nicholson-Goodman, 1996). The result of mapping is an unique visual representation that uses space to represent distance (Nicholson-Goodman, 1996; Paulston, 1993). It is a cognitive art—a cultural portrait which is the artist’s scholarship (Paulston & Liebman, 2000); therefore, the format of these maps varies depending on the mapper (Paulston, 1993). This cognitive transformation creates a visual representation, which is a space peculiar to a point in time (Paulston & Liebman, 2000). This representation can be seen as a narrative which allows the viewers to interpret information. According to Paulston and Liebman (2000), mapping provides “a better understanding of social milieu and gives all persons the opportunity to enter a dialogue to show where they believe they are in society” (p. 23). It is a useful means for deepening knowledge or situating ways of knowing (Nicholson-

Goodman, 1996) as it provides the perceived location and relationship of objects and perception in the social milieu (Rolland G. Paulston, 2000). Because of this nature, it moves the focus away from formal theories and emphasizes how contingent knowledge may be (Paulston, 1996). This is how a map shapes a system of objects, creating a possibility for new knowledge (Paulston, 1993; Paulston & Liebman, 2000).

The strength of this type of visual representation is its capacity to portray multiple social realities of different views. It is not only reveals acknowledged inclusive, but it also leaves room to include new social group and ideas. Having this eclectic nature, mapping is quite a human way of looking at the world (Liebman & Paulston, 1993; Paulston & Liebman, 2000). A visual representation portrays only the mapper's perception of the social world; it does not necessarily provide ultimate truth, as it represents the truth as the mapper sees it. Given this nature, social cartography specifically creates a space for disputation. It can encourage healthy dialogues within "disputatious communities" (Nicholson-Goodman, 1996, p. 8). These two features, "the spatial relationship" and the "open-ended results" are important characteristics of social cartography; therefore, I discuss them separately in following section.

3.1.3.2 Visual Representation of Relationships

A map is more than a portrait of an area. For instance, a geographical map for tourists can show how far one restaurant is located from a landmark building, i.e., it illustrate its distance, direction, or points of interest between them. In order to make a map more comprehensive, the mapper often excludes less significant information, such as private homes in the area. This logic is applicable to the conceptual map as well. A conceptual map is a tool to understand a complex and often confusing reality, highlighting spatial relationship between one element to another (Huff & Fletcher, 1990).

Creating a map requires dealing with conceptual space. Conceptual distance and physical connections are drawn in order to clarify positions, identify the relations between entities and explore the convergence and divergence of ideas (Stromquist, 2000). Maps can illustrate how and why the represented spaces of entities are placed, crossed, or hardly crossed (Stromquist, 2000); therefore, social maps cannot be empirically, mathematically correct representations of realities (Liebman & Paulston, 1993). Maps make us aware of the differences, similarities or relationships; the spaces are located in specific places or sometimes divided by borders, although Stromquist (2000) claims that border crossings and border-work are not easily used. Borders are sometimes drawn to break down unjust established boundaries (Paulston, 1993).

Stromquist (2000) discusses in detail further the meaning of borders in social cartography. She states that borders not only protect and preserve identities, but also function as lines to indicate separations or cooperation. Separation borders, sometimes called border-work, strengthen the boundaries of a sphere, whereas, crossing borders, which lead the viewer from one sphere to another, create opportunities for developing shared values (Stromquist, 2000). Border-crossing is especially important because it means that different entities, i.e., cultures, come into contact, and there is the possibility of finding a place to recognize similarities and differences (Stromquist, 2000).

3.1.3.3 Open-ended Results

One of the distinct features of mapping, compared to traditional methodologies, is that it does not claim one ultimate truth. Because mapping is based on post-modern perspectives, it is eclectic; therefore, the resolution of ideological and theoretical controversies is not its issues (Paulston & Liebman, 2000). The accuracy of the depiction of the map, i.e., the allocation of space or the genealogy of relationships is not so important as mapping is a research domain that accepts all

points of view and presents abstract representations; its general validity leads to discussion opportunities (Liebman & Paulston, 1993; Nicholson-Goodman, 1996). It encourages holistic synthesis of the actor's or mapper's world (Huff & Fletcher, 1990).

A map is presented in order to open dialogues and to deepen the understanding of unknown and contested relationships (Mausolff, 2000). Viewers who disagree are encouraged to redefine the space, debate, and even personalize (Liebman & Paulston, 1993; Nicholson-Goodman, 1996). Liebman and Paulston (1993) further claim that social maps cannot be finalized with any exactitude. A map allows the readers to deliberate the relationships of the analyzed parts as well as the picture as a whole. As Paulston states (Paulston, 1996); "every social map is the product of its makers and open to continuous revision and interrogation" (p. 2). Therefore, it is not replicable by other social mapper (Liebman & Paulston, 1993).

3.1.4 Contributions of a Map

Then what can a mapper present in his or her visual representation? A map provides a comprehensive scaled model of a social milieu. It can help viewers to interpret the relativism and growing fragmentation created by multiple valid points of view in this post-modern era (Liebman & Paulston, 1993). It can help to bring awareness and understanding of different cultural values (Liebman & Paulston, 1993; Paulston & Liebman, 2000). This is especially useful when seeking a resolution or change when competing valid knowledge claims or values are present in a specific context (Paulston & Liebman, 2000). Social cartography is a way to illustrate the knowledge enmeshed in the larger boundaries disputes (Paulston, 1993). It can present a different way of seeing.

In summary, what does a map make possible? It allows us to perceive locations, cognitive spaces and distances which would not be visible otherwise (Stromquist, 2000). This leads to the inclusion of marginalized and excluded entities into social dialogues (Rolland G. Paulston, 2000). In addition, social cartography situates the mapper her/himself in the map as a participant in a particular world view; thus it enables the viewer to perceive the mapper's visions—how social entities are related to each other regardless of viewers' standpoint (Liebman & Paulston, 1993), and that leads to the provoking of awareness of invisible relationships.

3.1.5 Types of Maps

There are three types of maps in social cartography, although they often overlap: the Phenomenographic map, the Conceptual map, and the Mimetic map (Liebman & Paulston, 1993)

The phenomenographic map locates phenomena in relation to one another (Liebman & Paulston, 1993). It is ways of seeing the world, i.e., “the empirical study of the differing ways in which people experience, perceive, apprehend, understand, conceptualize various phenomena in and aspects of the world around us” (Liebman & Paulston, 1993, p. 13). The conceptual map is more open to the mapper's idea and views; it develops perceived relations within or between categories (Liebman & Paulston, 1993). The mapper often resides within the map and participates in a particular world view. Liebman and Paulston (1993) also note that the intensity of research and reference is not as important in the conceptual map. The third type of map, the mimetic map, attempts to imitate reality as closely as possible (Liebman & Paulston, 1993). Since the intention of this study is to find an empty space in the research field (education, entrepreneurship, and self-employment for youth unemployment policy), and attempt to fill the gap with my perceived view, this study is most likely categorized as conceptual map.

There are several types of relationships the mapper can express in a map; for example simple connotative association (A reminds me of B); degree of similarity (A and B are different); relative value (A is more important than B); or causal linkage (A causes B) (Huff, 2000). The type of map is chosen by the mapper, dependent on their purposes. Huff (Huff, 2000) discusses five generic maps which go along with purposes: 1) Maps that “assess attention, association and importance of concepts,” 2) Maps that “show dimensions of categories and cognitive taxonomies,” 3) Maps that “shows influence, causality and system dynamics,” 4) Maps that “show the structure of argument and conclusion,” and 5) Maps that “specify schemas, frames and perceptual codes.” (Table 7)

Table 7: Five Generic Types of Map

- 1) Maps that assess attention, association and importance of concepts:** This type of map acts as a source of methodological and theoretical ideas for strategy research, such as in the area of discourse analysis³⁷. For example, a mapper may examine the usage of related concepts by specific group to find out strategic emphasis, and then look for the association of these words to infer a mental connection to a critical theme. Studying language use allows the researcher to identify synonyms and compare words used. This is a quantitative analysis.
- 2) Maps that show dimensions of categories and cognitive taxonomies:** This type of map can illustrate more complex relationships among concepts. It shows hierarchical relationships among broad concepts and more specific subcategories. This type of map is utilized to define competitive environments and to explore choices perceived by decision makers.
- 3) Maps that show influence, causality and system dynamics:** This type of map shows causal relationships among cognitive elements. A causal map allows the mapper to focus on action, i.e., how one situation can explain or estimate a subsequent situation. System theory can provide a means of analyzing future outcomes.
- 4) Maps that show the structure of argument and conclusion:** This type of map attempts to show the logic behind conclusions and decisions to act. The mapper draws causal beliefs in the map, and examines the text as a whole to identify the cumulative impact of varied evidence and the links between longer chains of reasoning.
- 5) Maps that specify schemas, frames and perceptual codes:** This type of map seeks deeper understanding of underlying structures. The creators of this type of map claim that a deeper understanding of one underlying framework is required in order to comprehend the link between thoughts and actions, because it affects all the relationships drawn in any type of map, especially in areas such as politics, philosophy, cognitive psychology, and comparative culture. Theoretical framing is one of the examples.

(Huff, 2000 , p. 163-165)

³⁷ This example is my own.

3.2 WHY MAPPING IS APPROPRIATE TO THIS STUDY

There are three main reasons why I chose social cartography as the methodology of this study: 1) currently there are too many unknown causal relationships in the highly complex field of entrepreneurship, education, and self-employment: 2) Mapping allows me to articulate and present a particular understanding of this: and: 3) Mapping is useful tool for policymakers, when the researches and data is limited.

First, mapping is an appropriate methodology because the relationship between self-employment competencies and education contain too many unknown, blurred and ill-defined factors. At the same time, it is a policy issue that is too important to be ignored. The literature is thin, and available data is even thinner; yet we need to know what debates currently exist. It is difficult to examine these ambiguous debates using more traditional quantitative methodologies. For this reason, a different way of building knowledge, i.e., using a “post-modern perspective” is needed. It can accommodate a lot of ambiguity and therefore, is a better fit for this particular study. Social mapping allows us to account for and interpret unclear and/or competing perspectives and thus provides the possibility of enhanced understanding that can lead future research or policy reform (Liebman & Paulston, 1993).

Mapping juxtapositions, for example, can excavate embedded meaning by presenting it in a more recognizable form (Nicholson-Goodman, 1996), thereby making it a little more visible. Mapping not only highlights underlying assumptions, but it can also provide a larger vision of the enmeshed or competing factors (Paulston, 1993). Why? Because any known disputes can be included in a map (Liebman & Paulston, 1993). Capturing this larger frame enables a researcher to fill in some gaps with fragmentary clues or interpretation (Huff, 2000). Liebman and Paulston (Liebman & Paulston, 1993) claim that research can be enhanced by providing a framework that

shows how knowledge claims are interrelated. This is especially important when addressing competing knowledge claims. Mapping will allow me to lay out the puzzle pieces of education, entrepreneurship and self-employment into one picture. Mapping is a way to actualize Liebman and Paulston's claim, that by juxtaposing competing knowledge claims, research can be enhanced.

Second, mapping is also appropriate because it allows me to articulate a particular understanding of the realities. The fact that different institutional actors exist, produce and represent different world views is undeniable (Stromquist, 2000). The map which a researcher creates will be at least somewhat subjective, because it must be based on his or her experience. It can however, provoke worthwhile debate (Huff, 2000). Mapping, then, forces the researcher to express his or her ways of seeing the world. It also forces the researcher to recognize alternative points of view. It encourages viewers to situate themselves within the postmodern panorama (Rolland G. Paulston, 2000).

Mapping is deeply influenced by phenomenographic studies. These are based on humanist philosophies which focus on the center of culture, creativity and emotion reaching into personal and social identity. Phenomenography is a qualitative research methodology that focuses on how people think or experience that which is being studied (Paulston, 1993). In the context of comparative education, Paulston characterizes the phenomenographic study as:

[H]ow researchers see, apprehend, and think about knowledge constructs such as 'paradigms and theories' at different times and in different knowledge cultures and subcultures. Through empirical studies as well as textual analysis, phenomenographic studies seek not to describe things 'as they are', but how they have been presented as sedimentations of ways of thinking about the world (Paulston, 1993, p. 17).

Mapping, influenced by phenomenography, is a powerful tool in cognitive studies, especially when a researcher is attempting to explain relationships, concepts or social entities (Huff, 2000). Mapping is a process of reality making, and it is a constructive way to apprehend a bigger picture, because as Paulston (Paulston, 1993) claims, “[this type of study] promises to capture more of the continuous production of social reality in human interaction than do correlation studies” (p. 9). This particular methodology, then, allows me to examine and articulate not only how human and social capital exist, but also how they are thought to be related to each other within a framework of a job creation process.

Finally, mapping is appropriate to this study because this is both a theoretical and a policy study. Mapping is a method that can be used to identify changing perceptions of values or ideologies. It is, therefore, useful for assessing both current status and directions of movement, especially when a situation is changing. Mapping enables us to make things visible in part, so it can provoke policy dialogue (Nicholson-Goodman, 1996). For example, there was a time in the 1950s and 1960s when comparative education projects aimed to discover a wide range of cognitive, pedagogical, and curricular universals. Projects from this time learned about the importance of unintended outcomes of schooling as well as about the danger of too much data and too little conceptual modeling (Paulston, 1993). This example illustrates that data intensive policy research without enough conceptual debate could be irrelevant, if it is insensitive to a meaning of inputs in a context. In order to construct meaningful policy, we need to consider “the consequences of educational embedding in complex webs of cultural, economic and political relations” (Paulston, 1993, P. 6). This means paying attention to local context and not reflexively applying locally specific results which were found elsewhere. In other words, before we attempt correlation modeling, we may need to first debate data availability and quality. We

also may need more time to develop rigorous theoretical frameworks. Mapping can help in both cases. Finally, this study can also provide applications for future policy-making in the area of entrepreneurial education and self-employment.

3.3 DATA COLLECTION AND ANALYSIS PROCEDURES

This study examines the research literature in an effort to better understand the structures of human and social capital in the job creation process. By using a form of mapping, it attempts to examine a connection among these relationships for the purpose of strengthening entrepreneurial education policy and programs in the future. As stated in the previous chapter, this study pays close attention to the dynamics of education for self-employment because increasing employability for waged work is no longer enough to meet growing demand. Large youth bulges in many countries are outstripping national labor absorption rates, placing new pressures on governments to help develop the private sector through self-employment and entrepreneurship. The relationships between the skills and conditions needed for education and successful self-employment are, however, still sketchy at best.

As a consequence, there may be doubts as to whether or not current entrepreneurial education policies have been effectively designed. Addressing these mechanisms, i.e., how education and entrepreneurship works, is an increasingly critical aspect of educational policy development in many developing countries.

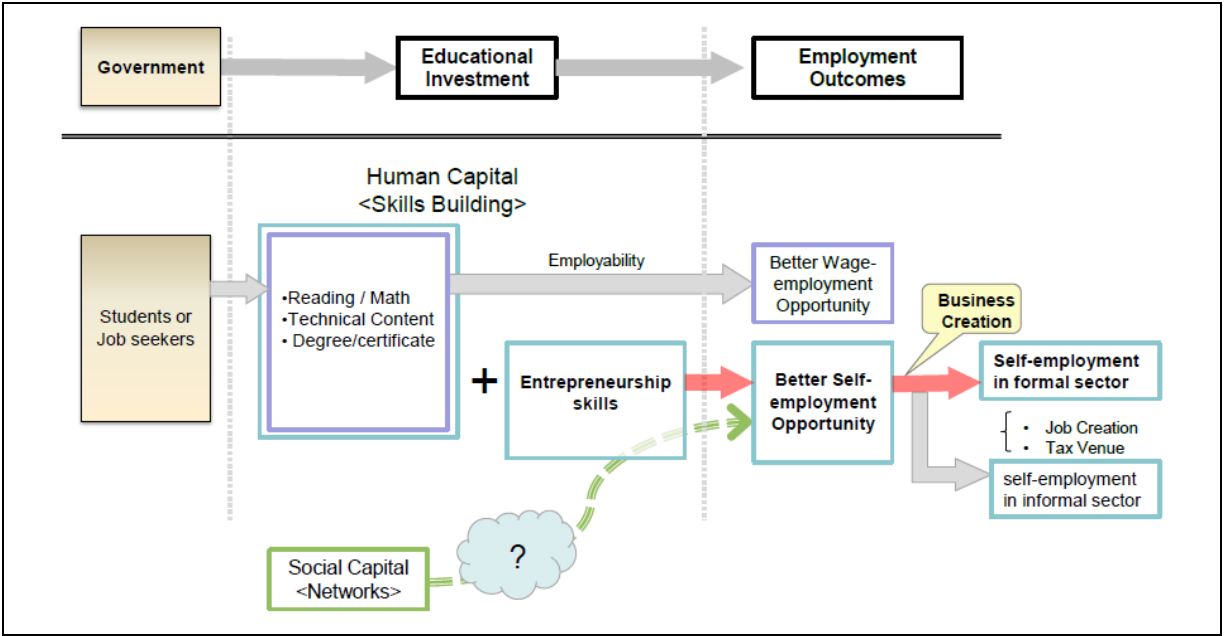


Figure 12: Focus of the Study

Figure 12 illustrates the focus of this study; it examines what types of human capital investment, specifically for entrepreneurship skills are thought to be needed to bring about better self-employment opportunity in formal sector. It also examines the less known factors of social capital (networks and socialization), and how it might be related to educational investment. This study is designed to help policy makers capture contemporary educational perspectives so that they can debate, design, and implement programs in order to create productive and sustainable self-employed labor in the future.

In order to achieve this goal, I asked the following research questions to make sense of the mechanism of entrepreneurship and education.

Primary Research Question:

What are the current debates related to the roles of education in the development of entrepreneurship skills that lead to both self-employment and business creation?

Supporting Research Questions:

- i) What types of human capital³⁸ are currently thought to be needed for self-employment and business creation?
- ii) To what extent is social capital³⁹ thought to enhance business creation for self-employment?

The process of data collection and analysis is similar to other literature review studies. It first involves locating, reading, categorizing and analyzing the literature, before making conclusions and tentative recommendations (Borg & Call, 1989). This section discusses how data was collected and analyzed through the construction of two maps. First, in section 3.3.1., I explain how the literature was selected and categorized through the first map. Second, in section 3.3.2., I discuss how categorized and selected literature was analyzed in order to construct a second map.

³⁸ As discussed in Chapter 2.1., human capital refers to personal resources such as skills and knowledge. It maximizes one's productive ability in the labor market (Caspi, et al., 1998).

³⁹ As discussed in Chapter 2.1., social capital is used to mean social resources which are relevant to economic activities. Examples are social networks or environments where one can learn values (Caspi, et al., 1998; During, 1990; Putnam, 2000).

3.3.1 Data Collection—Selecting Literature by Using a Map

Currently available literature was used to investigate my research questions. Data were selected from economics, business, and education disciplines, and published from 1934 to 2010. From these areas, I selected literature related to: 1) education related to employment outcomes, including human capital and social capital, 2) entrepreneurship, and 3) business creation. Each area of literature is closely related to my research questions. They were collected from various sources such as library collections, electronic journal sites and the publications of international organizations. I included classic theoretical literatures, such as Becker's "*The Concept of Human Capital*" (1970) for the analysis, but also included current articles, such as from the four leading peer-reviewed entrepreneurship Journals. More specifically, I examined all the articles which were a) published from *Level I* journals from John Carroll University Classification⁴⁰ (*Journal of Business Venturing, Small Business Economics, Entrepreneurship: Theory & Practice, and Journal of Small Business management*), b) published between 2008 and 2010, and c) searched by following keywords: education, entrepreneurship, human capital, social capital, and entrepreneurship education.

The next section first explains how I identified literature that impacted my research questions and then discusses how I determined an appropriate framework for the literature gathered. The first map serves as a vehicle for this process.

⁴⁰ This classification for the entrepreneurship journal was done by John Carroll University. They ranked 23 peer-review journals and classified them into three levels (Katz & Boal, 2002).

3.3.1.1 Literature Identification

Within the vast arena of related literature, I needed to choose the literature most relevant to my research questions. This section explains how I identified useful literature for my analysis. With initial readings, first, I identified two *types* of research: theoretical and empirical. *Theoretical studies* were defined as 1) studies which attempted to develop theory, i.e., they described relationships among key concepts that developed a general explanation or provided systematic views of phenomena; and 2) studies which were also summaries and analyses of existing knowledge and empirical investigation (Ary, Jacobs, & Razavieh, 1996; Best & Kahn, 1998; Borg & Call, 1989; Wiersma, 1975). For this study, I also included any generic studies that discussed conceptual debates about the relationships between investments in education and employment. *Empirical studies* are generally defined as studies which involved the collection of first-hand information or direct observation (Wallen & Fraenkel, 2001). For this study, I also included any study that had analyses and observation in a specific context as ‘empirical study’, such as case studies, statistical analyses, or descriptive policy literature.

Second, I identified three *foci* of employment options: self-employment, wage-employment, and employment in general⁴¹. At first, these fell into two categories: focus on self-employment⁴² or no focus on self-employment. I labeled this type of study as ‘wage-employment’ research. Upon further review, within the ‘wage-employment’ group, I found a

⁴¹ I read literature in these three areas because self-employment literature is quite thin compare to wage-employment and employment in general; thus those literatures will help me conceptualize my focus area.

⁴² It seems like the definition of employment status has not reached ultimate consensus even within the ILO. *Key Indicator of laborer market (KILM)* distinguishes it as three categories (a) wage employment, b) self-employed workers, and c) contribution family workers) (ILO, 2009a), meanwhile other document, such as *ILO-Comparable Annual Employment and Unemployment Estimates* states ‘Unpaid family workers’ are categorized under the self-employment, and paid apprentices are categorized as wage employment (ILO). For the purpose of the simplification of the model, I will use the later definition in this study.

group of studies which did not explicitly mention either self-employment or wage-employment as their focus; therefore, I added a third category ‘employment in general.’

Among these types and foci of studies, I chose the ‘theoretical study of self-employment’ as my primary area of focus for the analysis, because these studies were most likely to provide generalized knowledge about self-employment mechanism. I also used studies classified as (a) theoretical studies of employment in general, and (b) empirical studies of self-employment. Since concepts used in these categories overlay my primary focus, I felt they would provide useful concepts to help address my questions. Studies in these areas became my secondary area of focus.

In order to identify and construct meaning for this literature, I created a map. Plotting the literature by type (theoretical or empirical) and foci of studies (wage, self-employment, and employment in general), I was able to identify literature located in my primary and secondary areas of focus. Specifically, I constructed six categories⁴³ and located them within an X-Y axis map. The vertical axis (axis Y) represents the type of research, either *empirical* (upper) or *theoretical* (bottom). The horizontal axis (axis X) represents the foci of study, i.e., categories of employment options. I placed *wage-employment* on the left and *self-employment* on the right. The categories in the middle were created for the studies which do not specifically mention their type of employment, so I labeled them *general*. The map is categorical; therefore, the scale of the axes does not reflect either degree or extent. The non-scalable X axis describes the type of research, and the non-scalable Y axis describes the focus of the study.

⁴³ Six categories are: 1) empirical study of wage employment, 2) empirical study of employment in general, 3) empirical study of self-employment, 4) theoretical study of wage-employment, 5) theoretical study of employment in general, and 6) theoretical study of self-employment.

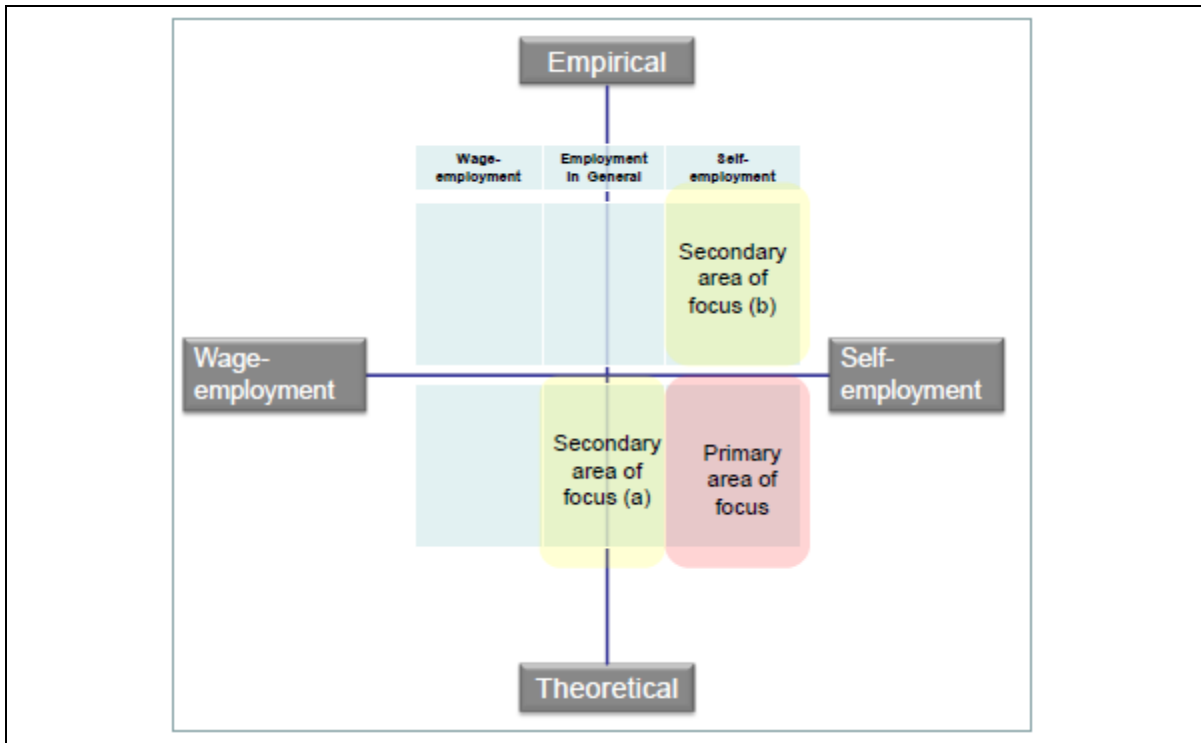


Figure 13: Categories for Data Literature and Location of Data Sources

As indicated in this map, the areas of secondly focus are directly juxtaposed next to the area of primary area of focus. I closely examined the studies in shaded area, i.e., my primary and secondary area of focus, in order to address my research questions. In sum, I classified literature in six categories on the map; therefore, this map does not show the extent or scale, but shows the relationships of the categories. Additional literature outside the scope of this map was also used to get a more complete picture of existing research related education and employment.

3.3.1.2 Determining Data-literature with Framing Concept

Among the literature related to my research questions: (1) education related to employment outcomes, 2) entrepreneurship, and 3) business creation), I needed to determine the framework of

my literature review in order to effectively make my selections. From these literatures, I chose ‘investment in education’ as my first framing concept in order to limit and clarify the framework of the literature review. “Investment in education” is thought to be the best way to increase human capital; therefore, I expected that the literature within this framing concept would provide knowledge about mechanisms of self-employment as much as it does wage-employment. This literature generally discusses the traditional concept of human capital, such as skills and screenings with certification.

I was concerned that there might not be enough literature available to analyze in the area of “theoretical study for self-employment” within the first framing concept (investment in education). I therefore also chose “social capital and employment” as a second framing concept because it is a relatively new concept that has appeared in the education and employment literature. I believed that this framing concept might help to thicken what might be thin in education literature.

First, I plotted the human capital literature, my first framing concept, on the map. If the number of theoretical studies of self-employment appeared to be comparable to other categories, especially other theoretical studies (waged or general employment), it might suggest that “human capital” might be able to help to explain the mechanism of self-employment as it is in wage-employment. Second, the social capital literature, which is my second framing concept, was overlaid on the existing map. This allowed me to examine if social capital literatures might help close a potential gap between studies of self and wage employment.

I did not try to fill every categorical space equally, because any economy, developed or not, wage-work constitutes the majority of employment and it was expected that much more wage-employment literature exist in education than self-employment literature.

3.3.1.3 Performing Pilot Map for Data Identification

I first constructed a pilot map using the human capital framing concept, ‘investment in education’. ‘Investment’ here uses as a larger sense; it is not only the monetary commitment to education, such as budgetary input, but also the time one commits to education, such as years of education. I mapped 31 studies which discussed the relationships between employment and ‘investment in education’ i.e., human capital, and located them on a map as described in the previous section. These studies are drawn from the available studies⁴⁴ used in Chapter 1 (background) and Chapter 2 (literature review). I revisited those studies one by one from the top of reference list, and examined if they discussed about employment outcomes related to investment in education. Because it is a pilot map, I stopped this process when I reached 64th study, which was about a half of my reference list. In addition, I included one particular study to the sample—Schultz’s “*Investment in Human Capital*” (T. W. Schultz, 1970b). Even though his study was listed toward to the end, I believe it is important to include his study in the pilot map to cover theoretical work of human capital, since he is one of the founders of “human capital theory”. As mentioned in previous section, the literature on ‘investments in education’ includes not only traditional skills-based human capital studies, but also studies that frame educational credentials as screening mechanisms which signaled the job market.

For the pilot map, each study was assigned an identification number (Appendix C). First, as explained earlier, I classified the studies according to type of research as either theoretical or non-theoretical⁴⁵. Some studies had both theoretical and empirical discussions; thus they were

⁴⁴ Some policy documents which were used in chapter 1 and 2 are updated to newer version and they are no longer available on-line. Those documents were excluded from this analysis.

⁴⁵ As described, theoretical studies are 1) studies which attempted to develop theory, 2) studies which were also summaries and analyses of existing knowledge and empirical investigation, and 3) any generic studies that discussed conceptual debates about the relationships between investments in education and employment. The empirical

placed in both locations, but marked with apostrophes. Once the studies were categorized according to type of research, I further broke them down based on the focus of employment options: self-employment, wage-employment, and employment in general.

When plotting studies on the map, I further categorized them based on how they approached education with respect to employment. This additional categorization was not necessary at this point; however, it would help to organize my data-literature for further analysis. Studies fell into four general groups. First, those that looked at the *level or length of education in relation to employment* (L). Studies which fell into this group were ones that examined a certificate level, such as graduates of primary or secondary education. The second group of studies addressed the *content of the curriculum in relation to employment* (C). An example of this group would be studies that examined the relationships between employment and specific programs, such as entrepreneurship education. The third group of studies examined *other specific educational components* (O). Those that fell into this group were studies that considered educational investments in relation to something else, such as budgetary inputs instead of the level or content of education. The final group of studies had *no specification of the type of education being discussed* (outside of the categories box). Figure 14 displays the results (*Map 1-HC* (Pilot)). As mentioned, this is a categorical map. Although the data points in a map are usually continuous; here, this is not the case. In this map, the "borders" are drawn to separate the categories. What this categorical map does is to illustrate how close or far these categories are from and how crowded or thin a particular category is. Again, some studies needed to be mapped in more than one location; thus those were marked with apostrophes.

studies are 1) studies involved collection of first-hand information or direct observation, and 2) studies analyzed and observed in a specific context.

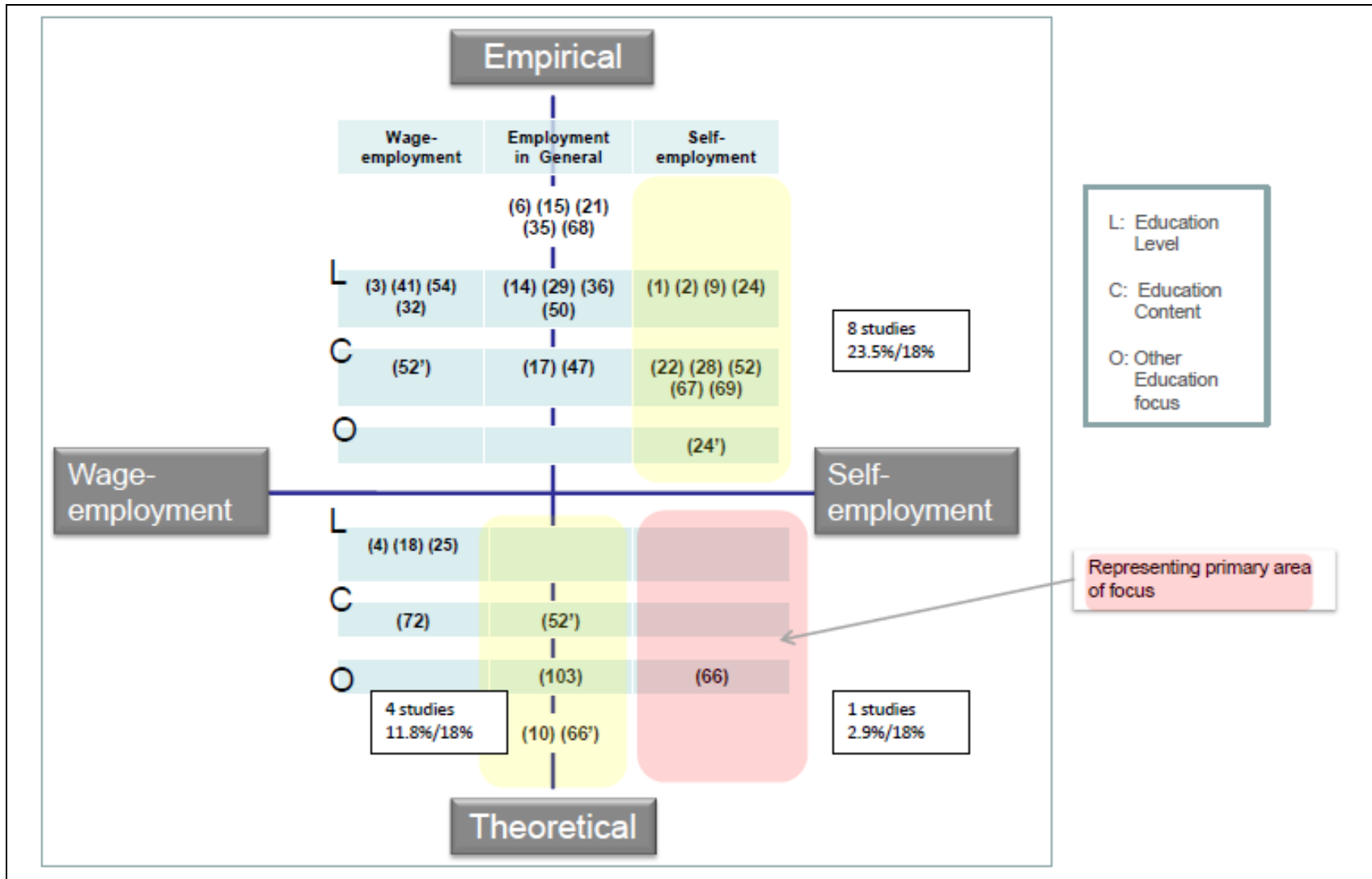


Figure 14: Map 1-HC (Pilot): Studies Which Discuss the Relationship between Educational Investment and Employment Outcomes

The numbers with the parentheses in the map indicate each study I explored, and these numbers are the identification numbers of the data-study listed in Appendix C. For example, (24) in the Figure 14, which is located in the empirical study of self-employment, refers to study #24 on the list of the Appendix C (*Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs Journal of Business Venturing, 18(3), 301-331*). The (24) is located in the box labeled **L** because the investment in education is discussed from level of the education. However, the study #24 also discusses “experience” as a human capital investment, with neither length nor content. Therefore, the study #24 is also located in the box labeled **O**, but indicated with an apostrophe (24'). This pilot map, drawing on the literature using a human capital framework of ‘investment in education’, showed a relatively empty space between the theoretical and self-employment dynamics (primary area of focus in Figure 14). Specifically, only one out of 31 studies could be located in this area. If, for example, studies equally covered the six research areas, then each category box on the first map should yield close to 18% of the research (the three types of employment foci in each research type). Currently however, only 2.9%⁴⁶ of studies could be found in the boxes for the primary area of focus.

Indeed, it is not too surprising that more empirical studies have been produced than theoretical studies. However, for such a critical area of education and development, and one that has been increasingly touted as a key to prosperity in the 21st Century, this pilot indicated that the theoretical work on education and self-employment might still be quite thin.

⁴⁶ Although the number of studies examined was 31, the aggregated number of data points on the map is 35, because some studies are located in more than one category area. Because the study #24 is located twice within the same category, #24 was counted as one data study within the empirical/self-employment category. Therefore, 2.9% was calculated using following equation; $1/34 = 0.0294$.

This scarcity was also important to notice, because it might indicate that human capital based ‘investment in education’ might not be as appropriate a conceptual framework indicator as it is for wage-employment. This preliminary result of scarcity led to at least two possibilities:

The first possibility was that this scarcity did not represent the current research landscape. It might simply have resulted from the limited number of studies in the pilot; therefore, with sufficient additions, this apparent anomaly might be reduced. This seemed most likely, because a human capital framework currently forms the core conceptual basis for education and employment debates.

The second possibility was that this scarcity did reasonably represent the current research landscape within this framework, i.e., the theoretical debate about the construction of the concepts of self-employment within the human capital framework is indeed quite thin. If this were so, then this scarcity might be the result of omitted debates, where newer, somewhat less developed concepts, such as social capital, might be making important contributions to the policy debates around theoretical work on education and self-employment.

Subsequent procedures: Determining the framing concept with a map

The preliminary result of the pilot map drew two possibilities for the further procedures regarding to framing concept. This subsection discusses the subsequent procedures I took after the pilot map. It was a three step procedure. First, I looked at if the additional searches within the human capital concepts (literature on ‘investment in education’) would meet my expectations and would reduce the scarcity of the studies in my primary area of focus (theoretical study about self-employment). Second, I overlaid the social capital debate literature onto the human capital map to see if I could find more connections related to the theories in self-employment.

Accordingly, I made decision about my framing concept depending on the result of the procedure 1 and 2.

Procedure 1: Examining volume issue (Adding more human capital literature on the pilot map)

As stated in the previous section, the anomaly in the pilot map might have resulted from the limited number of studies examined in my pilot study; therefore, it was possible that the anomaly could be reduced with sufficient additions. I continued working with the categorical map with additional human capital literature and revised the pilot to create new human capital map (*Map 1-HC*). In the pilot map, the studies in my primary area of focus were found 2.9% out of all the categories; therefore, if this percentage in the new human capital map increased close to 18%, it would indicate that the anomaly of the pilot study was the result of insufficient literatures. This in turn might suggest that self-employment outcomes may reasonably be associated with, to some extent, traditional human capital definitions of educational investment, including both skills and screening.

Procedure 2: Examining omitted debate (Overlaying social capital literature on the human capital map)

After adding more human capital based literatures on the pilot map, I also examined the second possibility—omitted debates in the landscape of the map. First, I extended the framing concept and included literature which examined the relationship between social capital and employment outcomes. I overlaid these studies onto the human capital map and created a new map with both human and social capital literature (*Map 1-HC/SC*). If the percentage of the studies in the primary area of focus increased, then it might suggest that the social capital literature might help inform the conceptualization of how education might improve self-employment.

Procedure 3: Determining the framing concept

After having examined both possibilities, I determined my framing concept for data analysis. I planned that to examine my research questions within a framework of the *Map1-HC (Pattern (A) in Figure 15)*, if scarcity in the primary area of focus was reduced with the addition of more human capital studies. In this case, the issues in the social capital would be analyzed separately.

In that case that addition of more human capital studies still indicated scarcity in the primary area of focus, I planned that take a closer look at the possibilities offered by the social capital literature (*Map 1-HC/SC*). Even after adding the social capital literature, if a difference was still not apparent, the social capital concept might be less relevant for the analysis. If that was the case, I planned to exclude social capital concept for further analysis and address my research questions within the human capital framework (*Pattern (B) in Figure 15*). The issues of social capital would then be analyzed separately in this situation.

If, however, the percentage of the studies in the primary area of focuses increases significantly in the *Map 1-HC/SC*, I would further examine my research questions through the lenses of both human and social capital literature (*Pattern (C) in Figure 15*). Figure 15 shows these procedures.

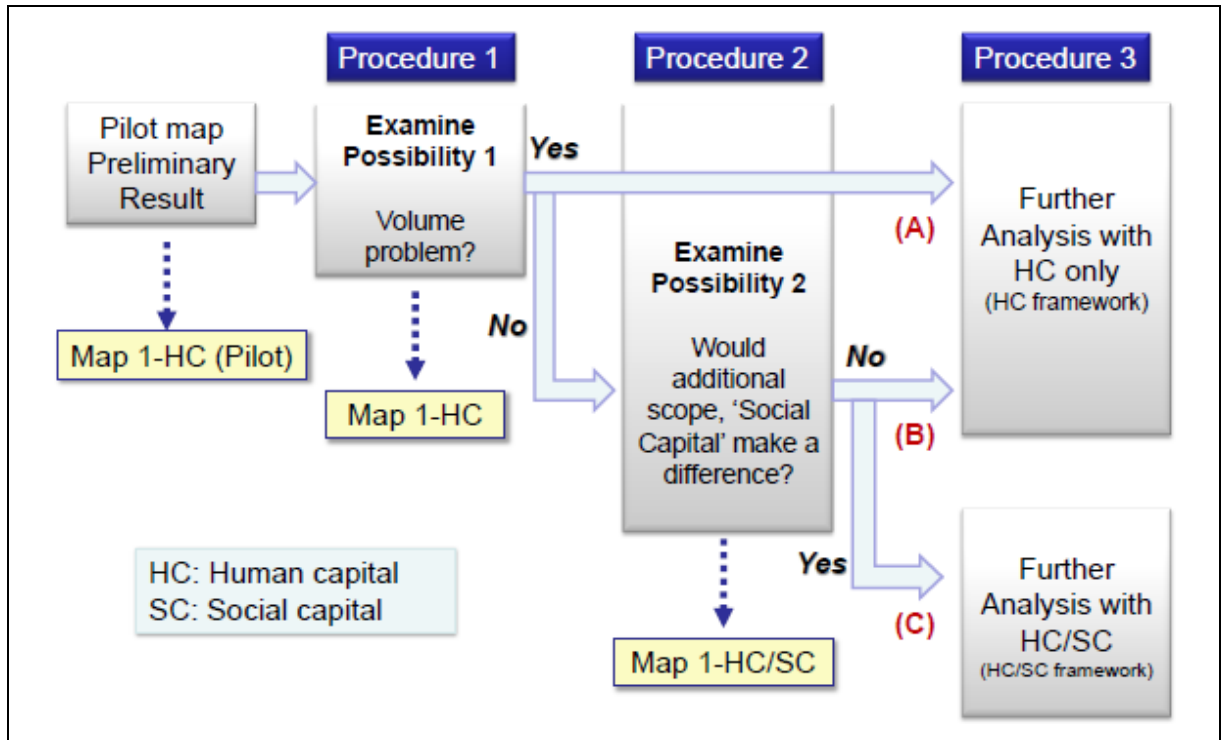


Figure 15: Procedures for Determining the Framework for the Analysis

Once I determined my framing concept for my framework, I pursued further analysis. In addition to the studies in the Map 1, I also reviewed studies related to entrepreneurship and business creation which was 2nd and 3rd categories in my literature selections. These literatures were most likely not on the map, unless they were somehow related to employment/education, human capital, or social capital. Including those literatures, however, was necessary and important to better understand how human capital, social capital, and education may be related within the context of entrepreneurship and business creation process.

3.3.2 Data Analysis Procedure—Meta-Study

Having categorized and mapped human and social capital literatures in the first map, I then, analyzed these studies and attempted to synthesis their findings and concepts in a second map. For this process, I referred to Paterson’s qualitative *Meta-study* model. It is a research approach involving two steps: first, A) the analysis of study findings, methods, and theory and then B) the synthesis of these insights into new ways of thinking about phenomena. There are three types of meta-study: 1) *meta-data-analysis* sometimes called meta-analysis, is the study of the findings; 2) *meta-method* is the study of the rigor and epistemological soundness of the research method used in the studies; and 3) *meta-theory* involves analysis of the underlying structure (theory) (Paterson, Thorne, Canam, & Jillings, 2001). Figure 16 shows the process of a meta-study, including all three types of analysis. Since I am going to analyze the findings of related studies, this study takes the process in the center of the figure, meta-data-analysis.

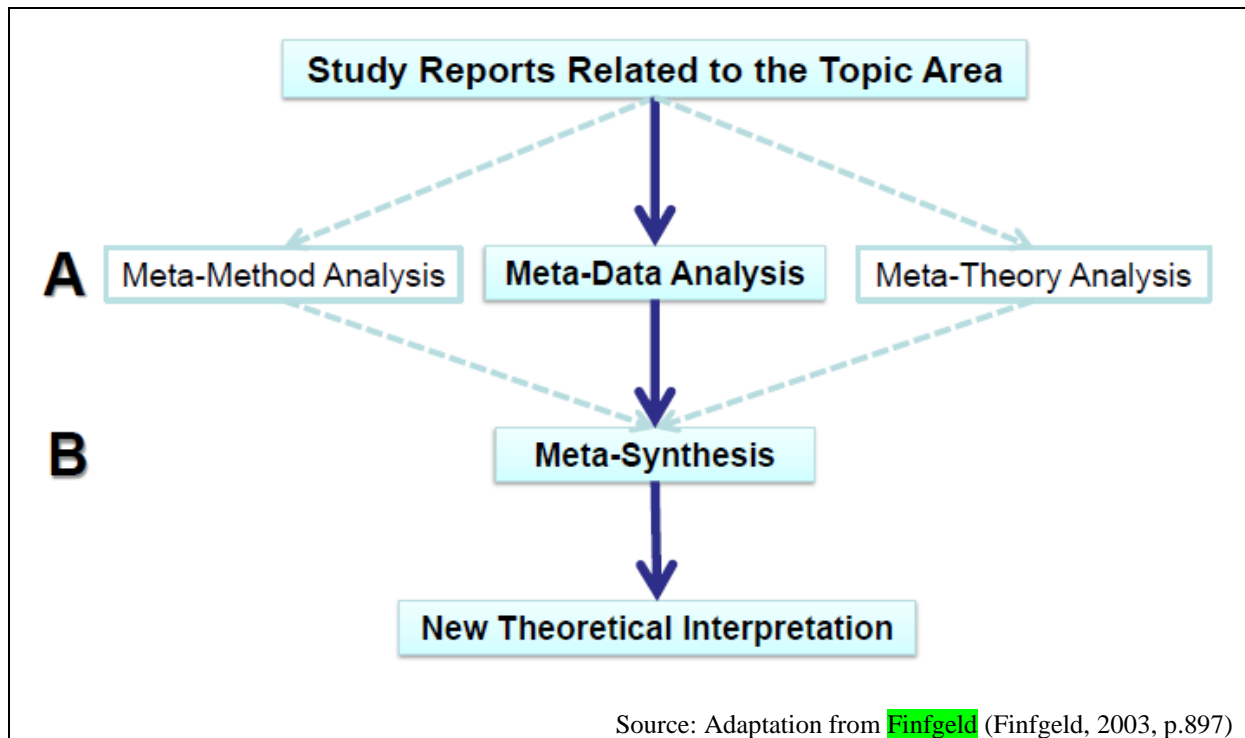


Figure 16: Meta-Study Process

Meta-analyses have been developed to improve the time required to review many studies on the same topic (Glass, 2006; Norman & Fraenkel, 2001; Paterson, et al., 2001). Often researchers take quantitative data from different studies and average the results in order to determine central tendencies or an overall index (Norman & Fraenkel, 2001; Paterson, et al., 2001).

While quantitative meta-analysis was my preferred method, there were not enough quantitative data available; thus, I could neither determine central tendencies nor investigate the mechanisms of education and self-employment outcomes in this way. In order to assess the overall topography of the research field, I instead applied a qualitative approach of meta-analysis to examine studies. I analyze their issues and conclusions, and identify underlying common structural and conceptual roots (Krathwohl, 1993). A qualitative meta-data-analysis is an

interpretive qualitative research approach based on a constructivist orientation to epistemology. It attempts to understand how individuals construct and reconstruct knowledge about phenomenon (Paterson, et al., 2001). As mentioned, meta-study consists of two consecutive parts: A) an analysis of previous studies: and B) a creation of a new interpretation of a phenomenon by synthesizing previous analyses.

For the first part, in analyzing the data-literature, a researcher functions as an interpreter, translating what has been written by the original authors in order to reveal connections to other studies and developing theories (Paterson, et al., 2001). A researcher interprets previous research and present possible meanings of the phenomenon such as the relationships across categories of data. A researcher compares each study and attempts to find some common foci (Paterson, et al., 2001). This process allows isolated pieces of information to be integrated into a larger body of knowledge about a particular phenomenon. I followed this process with my collected data literature. In this study, my focus is to find relationships between education and successful self-employment for job creation. For example, there are already studies investigating some of the elements related to social capital or business creation; however, they do not necessarily connect with the perspective of education or human capital, i.e., knowledge and skill building. Therefore, I used the findings or concepts from these identified studies to create a more holistic picture of the dynamics related to human capital building and self-employment, and possibly to policy.

After the analysis is done, I proceeded the second part of my analysis—meta-synthesis. Meta-synthesis is a creation of a new interpretation of phenomenon that accounts for the data studied by others (Paterson, et al., 2001). Meta-synthesis represents constructive outcomes of the analyses, because meta-study intends to build theoretical approaches that extend what is

currently possible, rather than merely adding new ideas to a collection. Paterson, et al. (2001) claim that this process creates “the possibilities of looking beyond, imaging something better and contributing to a more complex and infinitely interesting scholarship” (p. 111). Meta-synthesis draw on prior analysis and brings the insights they produces together to form theory in a new way (Paterson, et al., 2001). These extensions may help inform both current and future policy.

There is neither an explicit nor a generalized procedure in this step. Paterson, et al. (2001) intentionally avoided discussing this process;

[W]e remain intrigued by the mystery and magic of how knowledge can be inductively derived through the full range of meta-study process. So we resist definitive procedural steps and encourage instead a dynamic and iterative process of thinking, interpreting, creating, theorizing and reflecting (p. 112).

The end-product of the meta-synthesis described above cannot have a fixed form, because it is impossible to predict the degree to which new theory can be synthesized until the products of meta-analysis are individually and collectively interpreted (Paterson, et al., 2001). I however, planned to use a map as a final product of this meta-synthesis because visual representations would allow us to see the relationships and gaps, if any, that might exist. I planned to include following elements in this new second map: 1) types of human and social capital, 2) the role of education, and 3) business creation.

3.4 LIMITATIONS OF THE STUDY

Mapping enables us to perceive the locations of social entities, such as institution, group, or ideologies. It is especially useful for highlighting how they are related to each other. There are

however, several limitations to this methodology. First, a map cannot show multiple dimensions in the given space (Stromquist, 2000). Therefore, the visual representations which are presented here can only be a perceived truth with limited angles.

Second, since the process involves analyzing manually, subjective interpretation of the data is unavoidable. For example, this interactive process may elicit overly rational maps and theories due to the researcher's imposed order. Also, some information in the data study which will not be considered is likely to emerge during the data processing process (Huff & Fletcher, 1990). Therefore, the findings of the study will not provide hard facts, but rather, they will be appropriate and useful for practitioners to improve their understanding of focused topics.

Finally, since this is a type of qualitative research, some of the typical limitations of qualitative research may also apply to this study, such as 'data overload'⁴⁷, or 'positive and negative instances'⁴⁸.

These limitations of mapping are relevant to this particular study as well. For example, I would choose the specific labels to be included in the maps when creating a map to show the relationships. Other relevant labels therefore, might be excluded from the map, thus creating a limited view of the knowledge. I am also aware that the data, i.e., findings from existing studies, used in this study would not cover all possible studies. Having recognized these limitations, I believe they are not overwhelming, given the situation in this specific research field. The purpose of this study is not to find probabilities from a vast majority of studies, but to find new meanings and knowledge. It allows me to represent a way of seeing the world of education and

⁴⁷ 'Data overload' happens when many aspects of a situation must be considered, researchers may be fooling themselves in thinking that they are using more of the information than they really are (Krathwohl, 1993).

⁴⁸ 'Positive and negative instances' are cases when researchers are more likely to notice the evidence which support their tentative hypotheses in comparison with negative ones (Krathwohl, 1993).

employment. Creating a comprehensive draft of what we already know provides a basis for further research. It is the first step in illuminating mechanisms of education and self-employment competencies.

4.0 DATA ANALYSIS

The purpose of this study is to contribute to the research field of youth employment policy from an education perspective. This study focuses on education for self-employment as an alternate approach to increasing employability for wage employment. Having acknowledged that studies for increasing employability can benefit large populations, studies for self-employment are critical for current labor markets. The reason is not only because it is a neglected area, but also this is a time to face the fact that available jobs are simply short; as a result, this is causing a serious problem in both developed and developing areas. In this era of job shortage, neither relying on existing jobs nor merely providing ones is enough to maintain a sustainable labor market (Klein & Hadjimichael, 2003). This paper approaches to this issue from an education perspective. What role can education play to create new business so that youth can employ themselves? To address this question, this study explores the relationship between education and entrepreneurship within a context of self-employment.

This study examines the research literature in an effort to better understand the structures of human and social capital in the job creation process, and how it might contribute to education policy. Using two research methods, mapping and meta-study, it attempts to examine the interactions which takes place among human capital, social capital, and education. An understanding of this interaction can strengthen entrepreneurial education policy and programs in

the future. As mentioned, this paper pays close attention to the dynamics of education for self-employment. To serve the purpose of this study, I asked following research questions:

Primary Research Question:

What are the current debates related to the roles of education in the development of entrepreneurship skills that lead to both self-employment and business creation?

Supporting Research Questions:

- i) What types of human capital⁴⁹ are currently thought to be needed for self-employment and business creation?
- ii) To what extent is social capital⁵⁰ thought to enhance business creation for self-employment?

This chapter addresses my research questions. It consists of two parts. The first part is dedicated to mapping employment literature which related to human capital and social capital. Mapping, sometimes called social cartography, is a qualitative research method which provides a visual representation in order to present the mapper's view of complex issues. By using a space, a map allow viewer to a) clarify position, b) identify relationship between among entities, and/or c) to explore the convergence and divergence of ideas (Stromquist, 2000). In this section, the maps were created to locate the data studies for further analysis. This map allowed me to locate useful

⁴⁹ As discussed in Chapter 2.1., human capital refers to personal resources such as skills and knowledge. It maximizes one's productive ability in the labor market (Caspi, et al., 1998).

⁵⁰ As discussed in Chapter 2.1., social capital is used to mean social resources which are relevant to economic activities. Examples are social networks or environments where one can learn values (Caspi, et al., 1998; During, 1990; Putnam, 2000).

data studies, as well as related data studies for this study. In addition, it allowed me to capture the convergence and divergence of research field. In this way, the maps served to highlight studies critical for the meta-analysis. With these maps, I showed how many studies are available in my primary and secondary area of focus for further analysis. As discussed in Chapter 3, in this chapter, I examined additional human capital studies as well as social capital studies.

The second part of this chapter presents findings related to my research questions derived from a Meta study. The Meta-study is an inductive research method involving a) data analysis and interpretation of research findings across studies (meta-data analysis), and b) the synthesis of this work to formulate new interpretations (meta-synthesis) (Finfgeld, 2003). This part of the chapter discusses the findings of the meta-data analysis using the studies identified in the first part of the chapter. In this section, I address my supporting research questions related to human and social capital. Then, it presents the possible relationships between education and self-employment within the business creation and self-employment process as a part of meta-synthesis. In the end, this subsection presents a visualization of the results of the meta-synthesis. This section served to address my primary research question.

4.1 MAPPING THE LITERATURE

In order to answer my research questions, I reviewed employment literature related to human and social capital as a way to investigate the relationship between self-employment and education. In order to identify useful data-studies for the meta-analysis in the later phase, I first selected

human capital studies and categorized them into six categories⁵¹. Among these six categories, I chose ‘theoretical studies of self-employment’ as my primary area of focus of the literature for the meta-analysis, and chose ‘theoretical studies of employment in general’ and ‘empirical studies of self-employment’ as my secondary source of literature⁵². Then, I placed the categorized literature onto an X-Y axis map. I created a map because it allowed me to visually capture 1) the locations of the critical literature (my primary and secondary area of focus) and 2) the overall balance of the data-literature.

I created the pilot map in Chapter 3 using a total of 31 studies. These studies were drawn from the available studies used in Chapter 1 (background) and Chapter 2 (literature review). I revisited these studies one by one from the top of the reference list which was used for Chapter 1 and 2, and examined whether they discussed employment outcomes related to investment in education. I started pilot-mapping when I reached about the half of the reference list for the pilot’s purposes. Upon examination it became clear that there was a dearth of studies in my primary area of focus. Consequently, I had to develop a three-step subsequent procedure for data-study identification. First, I proposed adding more human capital studies onto the pilot map to see if scarcity was related to quantity, i.e., if I added more studies, the apparent lack of studies could be reduced. I called this the volume issue (procedure 1). After that, I proposed reviewing and mapping social capital literature and overlaying it on the human capital map to see if scarcity was a conceptual issue i.e., if I added social capital studies the convergence or divergence could

⁵¹ The 6 categories are: 1) empirical study of wage employment, 2) empirical study of employment in general, 3) empirical study of self-employment, 4) theoretical study of wage-employment, 5) theoretical study of employment in general, and 6) theoretical study of self-employment.

⁵² I choose the ‘theoretical studies of self-employment’ as my primary area of focus, because it would most likely provide generalized knowledge about self-employment mechanism. My secondary focus, ‘theoretical studies of employment general’ and “empirical studies of self-employment’, overlay the concepts of my primary focus; thus, they would help conceptualize my research questions.

be more balanced. I called this the omitted debate (procedure 2). After examining both possibilities, I then would make a decision how to frame the meta-analysis (procedure 3). If scarcity in my primary focus of literature was reduced with the additional of further human capital studies, then I would extend my examination to within the framework of human capital. If the social capital studies contributed to reduce scarcity significantly, then I would use both human capital and social capital concepts for further analysis.

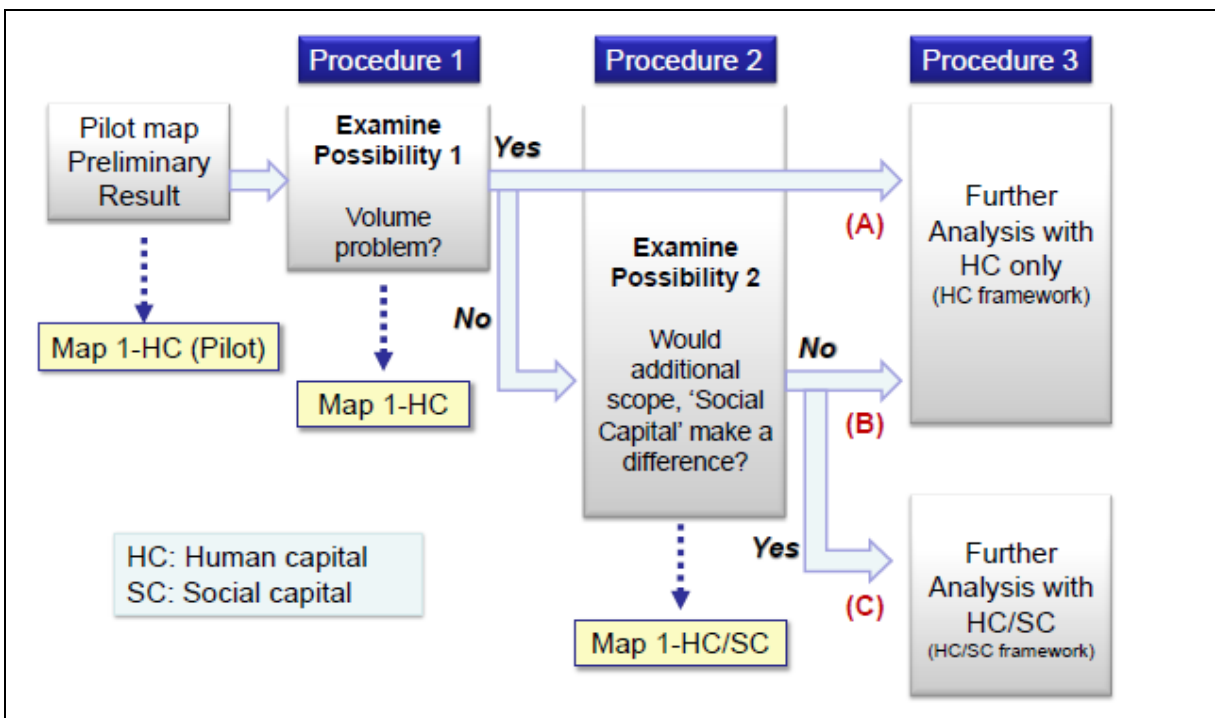


Figure 15 (Re-exhibit): Procedures of determining a framework for the analysis

As presented in chapter 3, Figure 15 depicts the flow of decision making at this stage. Below, I discuss how I used the results obtained after following this three-step procedure to determine my framing concept for further meta-analysis.

Data sampling for meta-analysis

The purpose of the above procedures was to systematically identify data-studies useful for meta-data-analysis, which is the first step of any meta-study. I chose to map the studies because it is a way to allow me to clearly identify those which would most likely contain useful knowledge for the meta-data-analysis. Specifically, the studies located in area of my interests (primary and secondary focus of literature) became data-studies. As discussed, in creating the maps (Map 1-HC, Map 1-SC), I drew studies from all the available studies⁵³ used in Chapter 1 (background) and Chapter 2 (literature review). In addition to these studies, I added all the applicable studies published since 2008 from four leading peer reviewed entrepreneurship journals⁵⁴. In total, 51 studies (44 studies from rest of the reference list⁵⁵ and 7 studies from current entrepreneurship journals) were additionally reviewed as part of the procedure. Therefore, 115 studies (64(pilot) + (51 additional) were reviewed for this process.

Although sample size is an important consideration, there is no clear guideline for what constitutes an appropriate sample size for qualitative meta-study (Finfgeld, 2003). It depends on the study design, data quality, and also the experience of the researchers⁵⁶. Finfgeld (2003) encourage to continue sampling as much as possible; however, he also pointed out that an overly

⁵³ Some policy documents which were used in chapter 1 and 2 are updated to newer versions and they are no longer available on-line. Those documents were excluded from this analysis.

⁵⁴ Four journals are published from *Level I* journals as classified using John Carroll University Classification (Journal of Business Venturing, Small Business Economics, Entrepreneurship: Theory & Practice, and Journal of Small Business management). All the articles were searched using the following keywords: education, entrepreneurship, human capital, social capital, and entrepreneurship education.

⁵⁵ Thirty studies which were used in the pilot map were drawn from the first 64 studies on the reference list, which were used for Chapter 1 (background) and Chapter 2 (literature review). In addition, Schultz's "Investment in Human capital" (1970) was also included to ensure coverage of the basic theoretical work. The "rest of the reference list" refers to the 65th studies to the end.

⁵⁶ Finfgeld claims that more sampling data is usually required if the scope of the study is broad, but also that it can be less, if the quality of the data is rich and the researcher is experienced, since s/he can draw inferences and see links within the data quickly (Finfgeld, 2003).

large sample can impede deep analysis. Determining the sample size of the meta-study depends on “understanding of the context, the [research] questions, and the state of the art (Paterson, et al., 2001, p. 37)”, i.e., it largely relies on the researchers’ judgment. In the end, Finfgeld (2003) and Paterson (2001) suggest to proceed a basic qualitative sampling procedure to determine the sample size for a qualitative meta-study; i.e., to ask “is data saturated?” Marshall (1996) also discusses data saturation in qualitative sampling, i.e., how to determine appropriate sample size. He claims when to stop becomes obvious to the researcher as the study progresses since new ideas stop emerging from the data.

The 115 studies (64(pilot)+51(additional)) cover the area of youth employment (chapter 1) and the theoretical debates about the relationship among education, employment (chapter 2.1.) and entrepreneurship (chapter 2.2). For this study, therefore, I presumed that the study samples drawn from these 115 studies would be large enough to answer my research questions, yet small enough to analyze them in depth. Paterson and her colleagues (2001) argue that at least a dozen, but less than one hundred studies make a meta-study meaningful and manageable (Paterson, et al., 2001), validating that my number of 115 seems adequate. In the end, however, I needed to add 5 more studies to fill in gaps to address my research questions as the procedure progressed. Those additional 5 studies are also on the map in this section. Therefore, the grand total of the studies I reviewed turned into 120 (115+ 5).

The 120 studies I reviewed for this study included ones written from a variety of epistemological perspectives. Some researchers may object to interpreting findings resulting from different epistemological perspectives while others embrace the opportunity to synthesize studies from different epistemological perspectives (Finfgeld, 2003). There still is no consensus about this matter; however, I support the latter group, because I believe that the multiple

perspectives complement each other and provide a depth in the analysis. For this study, I believe they have helped me to construct a more comprehensive understanding of the area. Finfgeld (2003) supports this point of view, reporting that credibility has the potential to be enhanced when meta-synthesis is formed from multiple perspectives, and it has been more respected as a recent trend.

4.1.1 Adding Human Capital Studies – Testing the Volume Problem (Procedure 1)

This procedure allowed me to 1) identify useful data-studies for further analysis, and 2) see if the scarcity found in pilot program would continue to be present. After the pilot study, an additional 56 studies were reviewed, and I identified 27 studies which discuss the relationship between education (human capital) and employment outcomes. I categorized and mapped them in the same manner as the pilot map in Chapter 3⁵⁷. Figure 17 displays the results (*Map 1-HC*) after mapping the additional human capital literature. As mentioned previously, the map is categorical; therefore, the scale of the axes does not reflect either degree or extent. Also note that the "borders" are drawn to separate the categories, although the data points in a map are usually continuous. Again, any studies that needed to be mapped in more than one location are marked with apostrophes. The numbers in the map refer to the study number, and the details of the studies are listed as Appendix D.

⁵⁷ I classified the studies according to type of research (theoretical or empirical). Then, I broke them down based on the focus of employment options (wage-employment, self-employment, and employment in general). I further categorized them based on how they approached education with respect to employment (1) *level or length of education in relation to employment* (L), 2) *the content of the curriculum in relation to employment* (C), 3) *other specific educational components* (O) and 4) *no specification of the type of education being discussed (outside of the category box)*

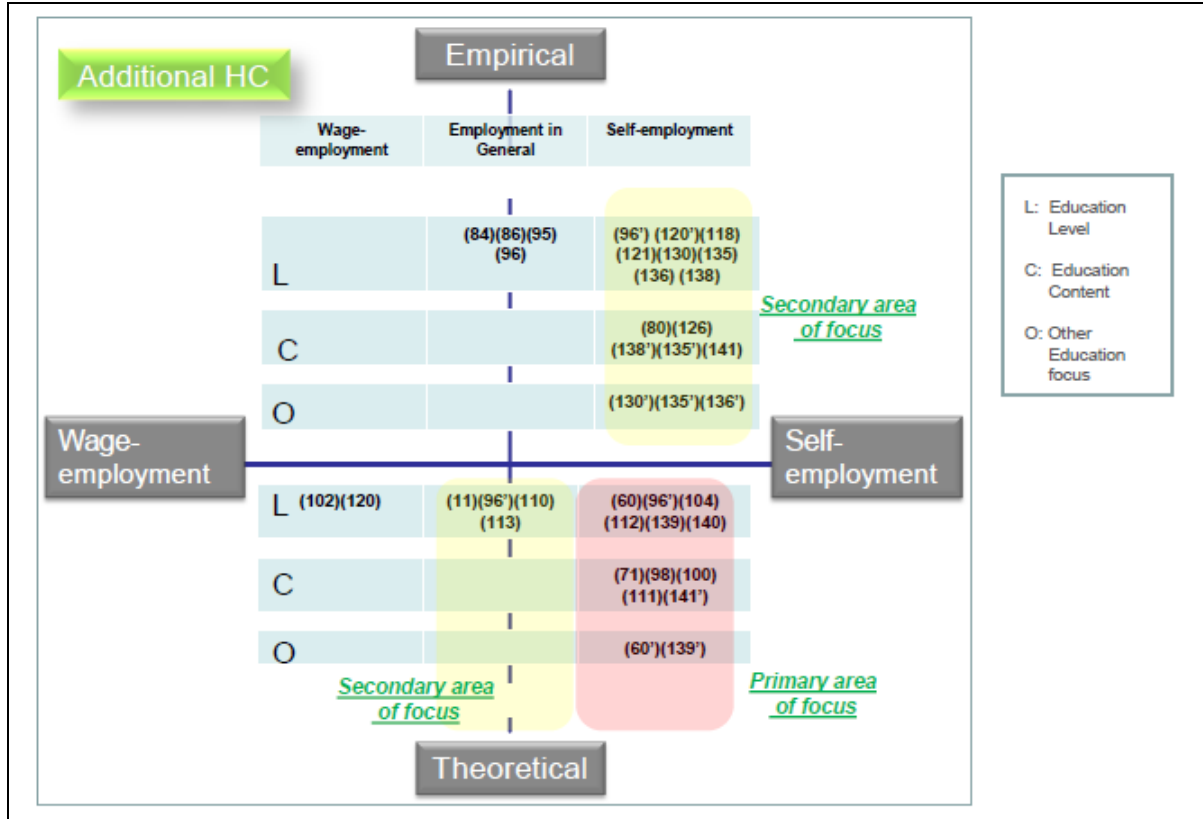


Figure 17: Additional Human Capital Literature

In order to see what volume issues may have existed in my areas of focus, I needed to aggregate the two human capital literature maps, the pilot map (Figure 14) and additional human capital map (Figure 17). Figure 18 shows the aggregated result.

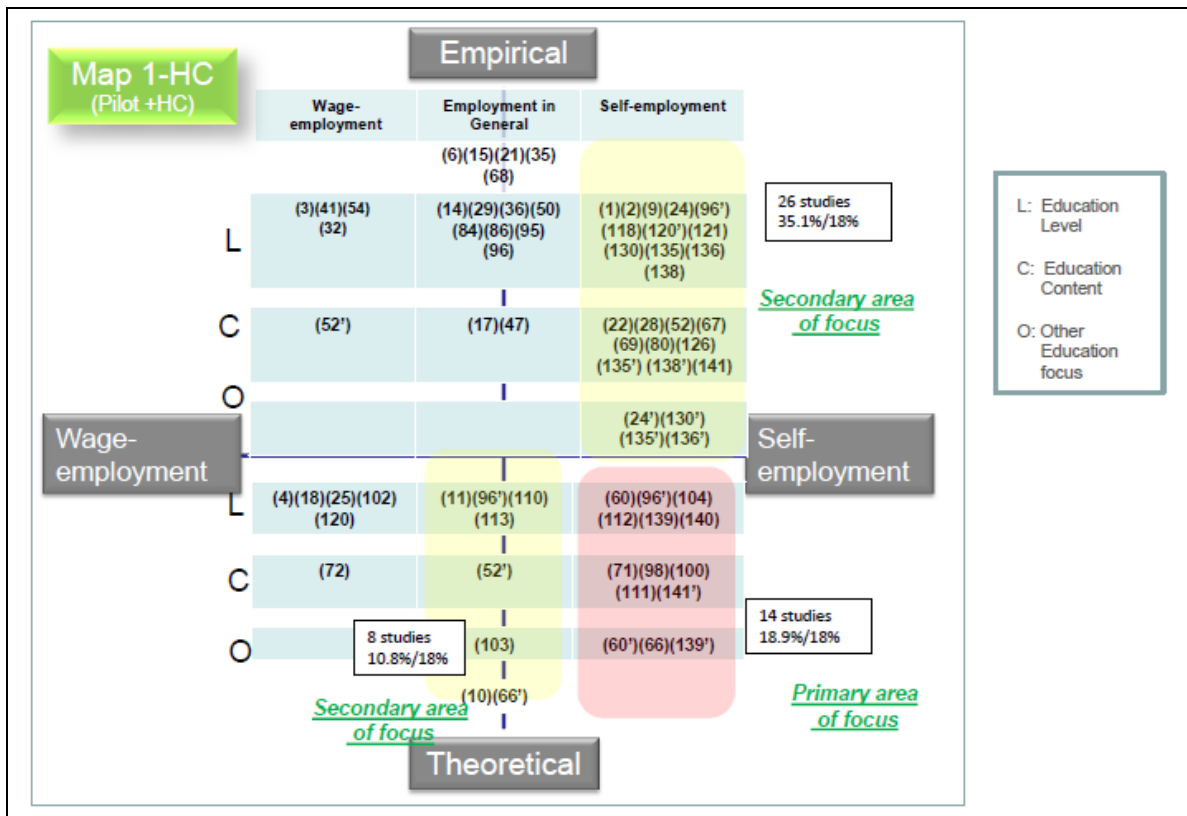


Figure 18: Aggregated Human Capital Literature (Map1-HC)

The structure of this map provided me with a sample of 35 studies (pilot 12+add HC 23) for further meta-analysis, which were placed in my primary and secondary area of focus.

As proposed in Chapter 3, I recalculated the amount of the literature in my primary and secondary focuses of literature in order to see if scarcity still existed, especially in my primary focus. If scarcity was resulted from sample size (volume issue), then the percentage of studies in

my primary area of focus should have increased from 2.9% (pilot) to close to 18%⁵⁸ after adding human capital literature.

Fifty eight studies (31: pilot, 27: additional) on the HC map after adding more literature. Now, the quantity of studies in the primary literature category increased from one study to 11 studies⁵⁹, 2.9% to 18.9% as shown in Figure 18. The studies in secondary areas of focus then increased from 28.6% to 35.1% (empirical study in self-employment) and from 11.4% to 10.8% (Theoretical study in employment in general) of the total human capital literature. What does this result mean to this study? I will discuss this in detail in section 4.1.3.

4.1.2 Adding Social Capital Literature—Testing Omitted Debate (Procedure 2)

I also reviewed social capital studies which demonstrate some relevance to employment outcomes, especially to self-employment because it is to the focus of related to my second supporting research question⁶⁰. Studies were drawn from the same pile of studies I used for human capital mapping. Within 120 studies 19 studies discussed relationship between social capital and employment outcomes; therefore, they are mapped in same manner as I did with human capital mapping. Although some studies did not explicitly discuss employment issues, I included and placed them outside of the map boundaries, if they discussed social capital's connection to education. They are important for this study to investigate education role.

⁵⁸ Since there are 6 categories, I assumed that the research field would be balanced when the rate of studies in each category would be equal (18%).

⁵⁹ Study #60 overlaps within the same category, i.e., two different education approaches were discussed.

⁶⁰ Supporting Research question ii): To what extent is social capital thought to enhance business creation for self-employment?

Studies which were also mapped on the Map-HC, i.e., overlapped with human capital studies, are marked with apostrophes (‘), and studies placed in a different category within the social capital map are marked with double apostrophes (“).

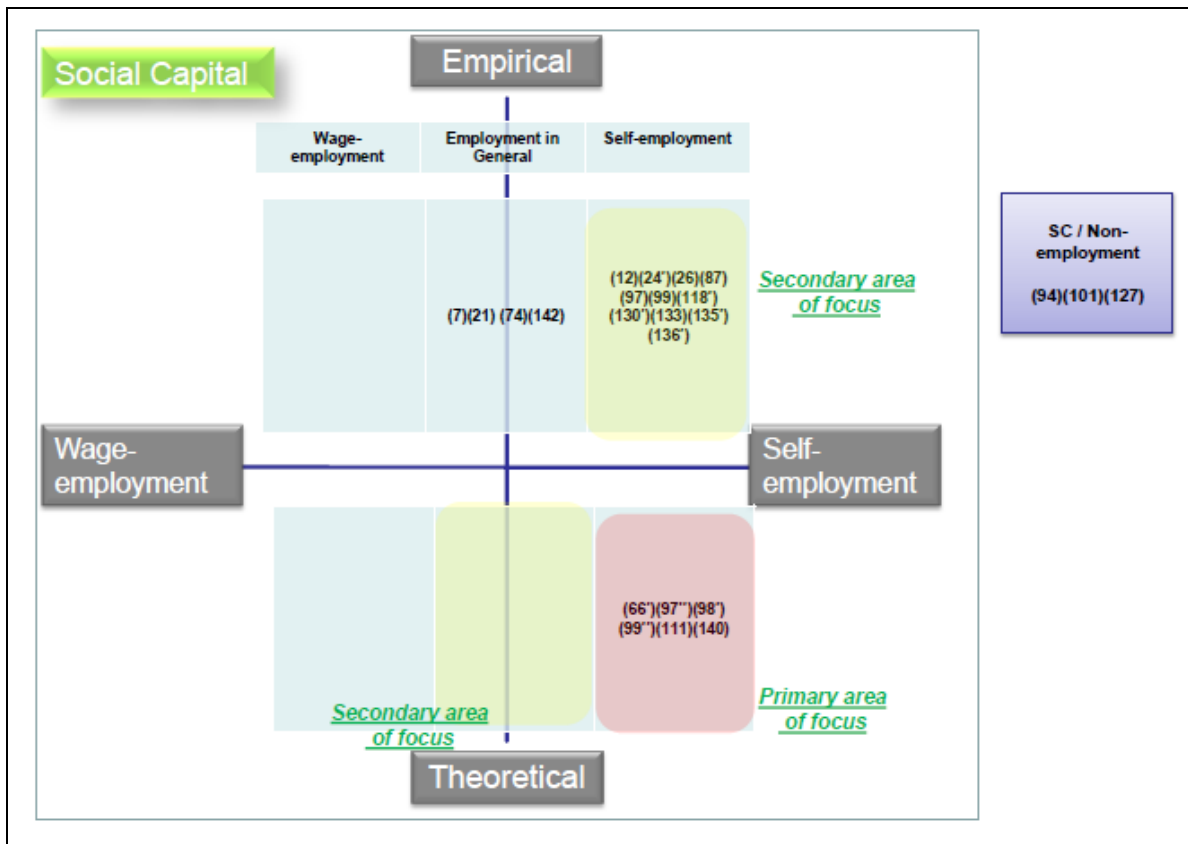


Figure 19: Social Capital Literature Which Discusses Social Capital in Relation to Employment Outcomes (Map-SC)

As discussed in the methodology section, I overlaid these studies onto the human capital map (Map 1-HC) in order to examine the contribution of social capital literature in this study. Figure 19 shows the results.

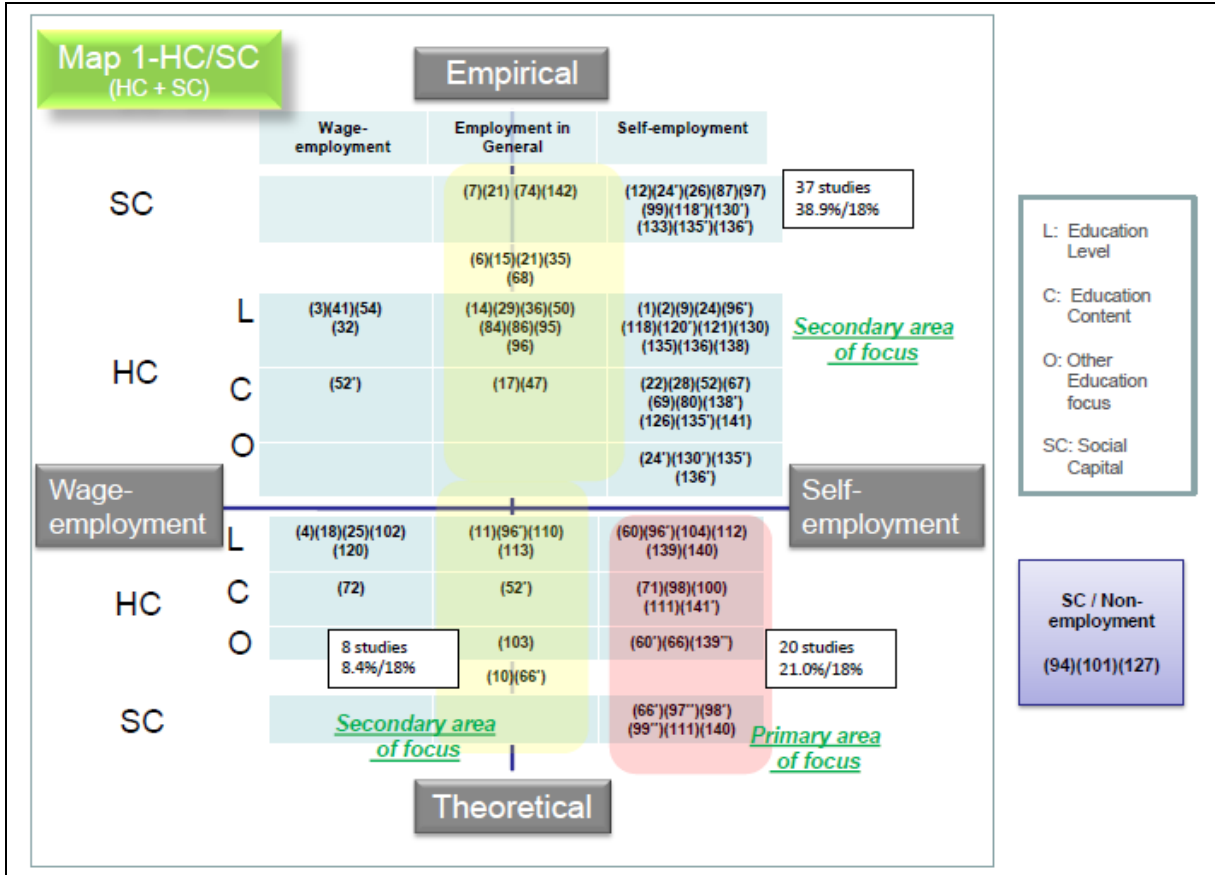


Figure 20: Human Capital and Social Capital Literature (Map 1-HC/SC)

Again, in order to capture the change in yield in the literature categories I am focusing on, I recalculated the amount of the literature in my primary and secondary literature. By adding the social capital literature to the map, the amount of literature in the primary area of focus on the map increased from 18.9% to 21.0%. As for the secondary focus area, the empirical studies focusing on self-employment account for 38.9% of the total literature on this map, an increase from 35.1% on the human capital literature map alone. While these two categories gained some

studies, no social capital studies were added in the theoretical studies on employment in general; as a result, this category accounts for only 8.4% of the total literature, a decrease from 10.8%.

4.1.3 Determining a Framing Concept (Procedure 3)

After reviewing the additional human capital literature and placing it on the map, the amount of human capital literature increased from 2.9% originally to 18.9%. As discussed, the categories would be balanced if each contained 18%⁶¹ of the total literature being studied; therefore, the number indeed improved greatly to move towards a balance in the literature. Adding in the social capital literature further contributed to increasing the amount of primary focus literature, bringing it up from 18.9% to 21.0%, which is even higher than the 18%. After including the social capital literature, the amount of empirical studies in self-employment also increased, to 38.9 % of the total, compared with when only considering human capital literature alone (35.1%). However, the percentage of studies of employment in general actually dropped (from 10.8% to 8.4%) because there was no addition to this category.

As discussed in the methodology section, the next step in the research process would be to determine the framing concept (procedure 3). After adding the human capital literature (procedure 1), the scarcity of theoretical studies in the area of self-employment outcomes was no longer obvious in the map, so it seemed that the human capital literature alone might be able to explain the relationship between education and self-employment outcomes. I determined then that my framing concept could, therefore, be human capital, and that I should closely look at the

⁶¹ Since there are 6 categories (1) empirical study of wage employment, 2) empirical study of employment in general, 3) empirical study of self-employment, 4) theoretical study of wage-employment, 5) theoretical study of employment in general, and 6) theoretical study of self-employment), I assumed that the research fields were balanced when the rate of studies in each category equaled (18%).

literature in my primary and secondary area of focus in the map1-HC (the Figure 18). As a result, the second supporting research question related to social capital was addressed independently, using the social capital map (Map1-SC).

Although my map suggested that “Human capital” alone would be appropriate to use as my framing concept, I would like to note a possible reason for why the map turned out the way it did— with a biased study sampling. First, recall that I clearly stated that I would not try to fill every category space equally because the main purpose of this mapping is to identify the data-studies for further meta-study, but not to conduct random sampling from the research field. Having noted this premise, the increase in the amount of the studies in my primary and secondary focus area actually became unavoidable for two reasons. First, many additional human capital studies were found and added from the entrepreneurship literature, because that is the area of focus I examine in the meta-study, and these studies mostly fall in the self-employment category when framed into the employment options. Second, I consciously and unconsciously might search for and collect studies which might fit in my primary focus area because the result of the pilot study suggested scarcity in this area.

Since the maps is not the results derived from random sampling, it might not justify how I determined the framing concept; however, I would like to stress that these maps still be considered valid and serve my original purpose.

4.2 META STUDY

A meta-study is an inductive qualitative research method, i.e., this is a type of research which involves finding categories and patterns that emerged from data rather than having been imposed

on data prior to data collection (J. H. McMillan & Schumacher, 2001). The procedure for conducting a meta-study consists of two stages: a) an analysis of literature (its findings, methods, or theories); and then b) an interpretation of the analysis, i.e., synthesis of insights into new ways of thinking about the phenomena under study (Finfgeld, 2003; Paterson, et al., 2001). The analysis stage of this study (a) is categorized as a meta-data-analysis since I analyzed the findings of data-studies⁶². For the interpretation stage of the meta-study (b: meta-synthesis), I attempted to make sense of the relationships among human capital, social capital, and education in order to contribute to policy and research. Figure 21 illustrates the process of meta-study used for this work.

⁶² Depending on the elements of the data-studies examined in the first stage, this analysis stage can take one of three different forms. They are: 1) a meta-data analysis, an examination of the findings, 2) a meta-method analysis, an examination of the rigor and epistemological soundness of the method used in the studies, and 3) a meta-theory analysis, examination of the underlying structure (Paterson, et al., 2001).

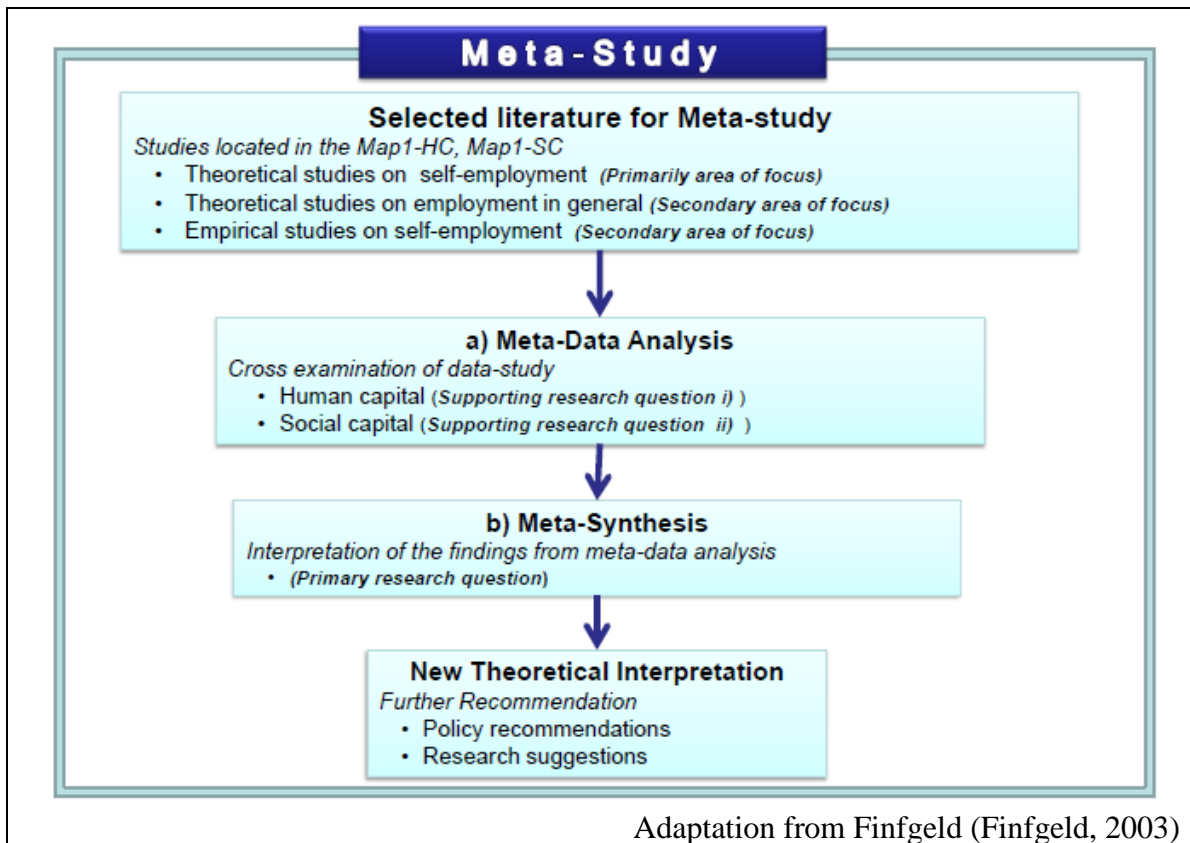


Figure 21: Meta-Study Process for This Study

As shown in Figure 21, using information from the meta-data analysis, the first part of this section addresses the first supporting research question related to human capital issues⁶³. Then it addresses the second supporting research question related to social capital issue⁶⁴. Again, the data studies included in the meta-data analysis were collected from the maps I created in section 4.1 (Map1-HC and Map1-SC).

⁶³ Supporting Research Questions: i) What types of human capital are currently thought to be needed for self-employment and business creation?

⁶⁴ Supporting Research Questions: ii) To what extent is social capital thought to enhance business creation for self-employment?

In the second part of this section, I summarize the findings from the meta-data analysis using a form of meta-synthesis. This section addresses my primary research question⁶⁵—the relationships between education and human/social capital—in order to contribute to development for education policies and research related to self-employment. This section also includes a series of maps that visualize the possible relationships between education and the self-employment process.

4.2.1 Meta-data Analysis

Meta-analysis⁶⁶ was developed as a way to reduce the time required to review many studies on the same topic (Glass, 2006; Norman & Fraenkel, 2001; Paterson, et al., 2001). For this study, I used a qualitative approach to meta-analysis called ‘meta-study,’ to assess the overall topography of the research field due to a lack of quantitative data.

A meta-data analysis, the first step of meta-study, is an interpretive qualitative research approach which attempts to understand how individuals construct and reconstruct knowledge about a phenomenon (Paterson, et al., 2001). A researcher interprets and compares previous research and then attempts to find common foci (Paterson, et al., 2001). The purpose of this is to integrate isolated pieces of information into a larger body of knowledge. For this study, I, as a researcher, interpreted and compared previous studies to identify possible relationships among

⁶⁵ Primary Research Question: What are the current debates related to the roles of education in the development of entrepreneurship skills that lead to both self-employment and business creation?

⁶⁶ The most common meta-analysis is quantitative nature. Researchers often take quantitative data from different studies and average the results in order to determine central tendencies or an overall index (Norman & Fraenkel, 2001; Paterson, et al., 2001). However, I could not determine the overall tendencies of the mechanism of education and self-employment outcomes in this way, due to a lack of quantitative data. The primary topic, however, was too important to be ignored; therefore, I took qualitative approach.

each finding, claim, and concept in the context of my research questions—related to human and social capital debates on self-employment success. For instance, with empirical studies, I used the findings; with theoretical study, I used the claims authors make; and with case studies, I used it as examples.

As mentioned previously, this subsection addresses my supporting research questions. The information found through meta-analysis allowed me to more comprehensively address my primary questions. For the first supporting research question, related to human capital, I paid close attention to the 36 studies which were located in my primary and secondary areas of focus in Map1-HC (Figure18). For the second supporting research question, related to social capital, I focused on the 15 studies located in my primary and secondary areas of focus in Map1-SC (Figure 19). Figure 22 is a modified version of aggregated map of Map1-HC and Map1-SC. Here I have shaded the areas of data studies I used in this section.

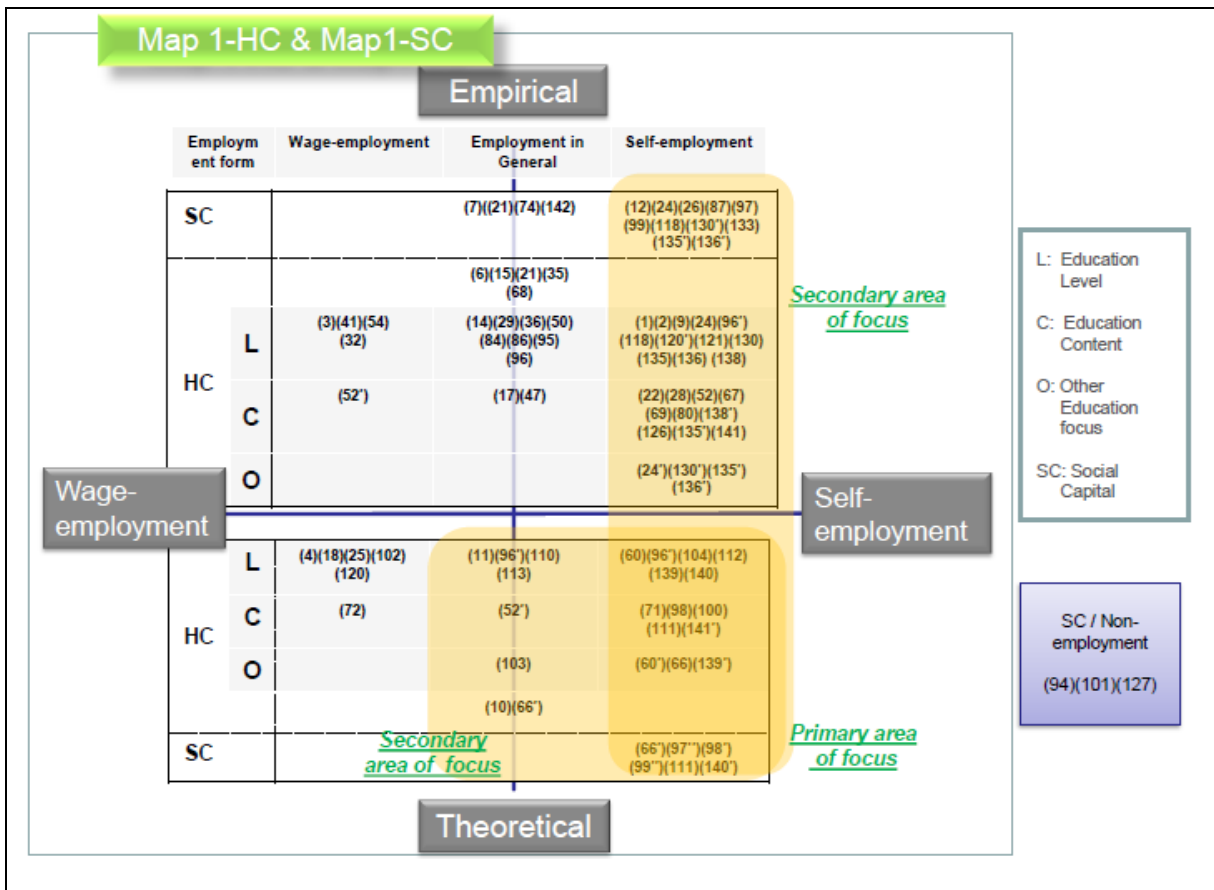


Figure 22: Location of Data-Studies

In order to address my research question, I organized the data into categories and identify patterns for both human and social capital studies as it is a standard inductive qualitative data analysis procedure (J. H. McMillan & Schumacher, 2001). Then I discussed education strategies for both human and social capital in order to find a role education play. The summary of the analysis is included in the end of this subsection.

4.2.1.1 Human Capital in the Self-employment Process

Supporting Research Questions:

- i) What types of human capital are currently thought to be needed for self-employment and business creation?

Relationship between education and self-employment

Although the vast majority of employment takes the form of working under an employer, there is an alternative form of employment as well—being self-employed. While labor economics' screening theory⁶⁷ helps explain the mechanism of both distributing existing jobs and filling individual positions, the more basic human capital theory⁶⁸ may be appropriate for explaining the relationship between education and productivity of self-employed individuals. Self-employed individuals, unlike hired individuals, are not chosen by an employer; therefore, if they are competent, they could be successful without educational credentials⁶⁹. For instance, Sullivan and his colleagues (2005) claim that some great success stories are populated by school dropouts

⁶⁷ Screening theory is an offshoot of human capital theory. It claims that education does not necessarily produce competencies, but merely sorts people according to generic competences, and educational background is considered one of the dependable indicator of productive ability of individuals, which can lower the training cost of an employer (Arrow, 1973; Riley, 1979; Sluis, et al., 2005; Thurow, 1975).

⁶⁸ Human capital argues that investment in human capital has a positive effect on the earning and employment of individuals, and education is the one of the best ways to invest in human capital. For this reason, this theory assumes that educated and skilled individuals almost always earn more than less educated less skilled ones (Becker, 1993)

⁶⁹ While education credentials may not mean a great deal when one chooses to be self-employed, there are a few situations in which educational credentials may have an effect. For instance, self-employed individuals may be screened when seeking resources from outside their social network; they may be judged by their educational credentials when applying for financial loans or starting business with new clients. Sluis (Sluis, et al., 2005) supported this idea and claimed that education is indirectly related to credit access. This happens because self-employed individuals are indeed screened by outsiders, and it is the nature of education to be a provider of credible background information regarding one's productivity.

or avoiders of advanced education, such as the great innovators Thomas Edison and the Wrights brothers. More recent examples of college dropout-entrepreneurs are found in High-Tec business, such as Mark Zuckerberg, founder of facebook, or Steve Jobs, co-founder of Apple Inc. Since my research questions are related to self-employment context, this section focuses on what types of human capital, i.e., resource, skills, knowledge or abilities are currently thought to be needed for successful self-employment.

Years of education and self-employment

The human capital theory claims education⁷⁰ makes individuals more productive in the labor market. For many years after this theory emerged in the 1970's, education and productivity were treated, but only to a limited extent. For instance, as seen in Becker's and Schultz's work, education was usually measured using 'length of education', e.g., length of 'on-the-job training' or 'schooling', and productivity was mostly measured using earnings (Becker, 1993; P. Schultz, T., 1994; T. W. Schultz, 1970a, 1970b).

When applying this theory to the self-employment context, it would seem that more education should equip individuals with a greater capacity for self-employment (Wiklund & Shepherd, 2008). Therefore, some researchers who used this theory to examine their studies use variables similar to Becker's or Schultz's, i.e., the relationship between the length of education or work and earnings/profitability. For instance, Sluis found that schooling and experience are main factors affecting the earnings of entrepreneurs (Sluis, et al., 2005). Plehn-Dujowich's theoretical study (2010) claimed that several studies found that a higher level of education increased the profitability of a self-employed firm.

⁷⁰ In human capital theory, education refers to all means--formal, non-formal, and informal (Caspi, et al., 1998; Davidsson & Honig, 2003).

While some researchers still use traditional variable, length of education and earning, often productivity of self-employment has been measured by looking at other factors. One of the reasons other factors are also used is the difficulty with measurement of pure earnings from self-employment (Sluis, et al., 2005). In fact, Schultz himself says:

Labor productivity of the individual is inferred readily only if the worker is paid wages; it is substantially more complex to measure the product of an individual who is self-employed or works without a wage in a family enterprise (P. Schultz, T., 1994, p. 23).

For this reason, variables such as market entry, entrepreneurial activities, or profitability of the firm may be used as alternative measures. Davidsson and Honig (2003) found that formal education and experience predict entry into nascent entrepreneurship. Wiklund and Shepherd (2008) found a relationship between well-educated individuals and portfolio entrepreneurship⁷¹. Stam and Wennberg (2009) found that an entrepreneur's education level was positively associated with new product development and Research and Development (R&D), and for this reason highly educated entrepreneurs were more likely to build innovative firms. Some researchers found that more educated individuals have been choosing the self-employed option in recent years (McGibbon, Moutray, Williams, & Headd, 2009; Terajima, 2006), indicating that there are positive connections between recent higher education and self-employment. As seen in these examples, human capital studies, i.e., "the return of education" in self-employment study, tend to have more variety.

Content of education and self-employment

⁷¹ The portfolio entrepreneur is an entrepreneur who runs multiple businesses concurrently (Plehn-Dujowich, 2010).

Having noted the variety of efforts to measure productivity of self-employment, the critical question remains, What is ‘human capital?’ Yes, there are definitions of human capital. For example, Caspi defines human capital as “the resources, qualifications, skills, and knowledge that are available to and acquired by individuals to maximize their own employability” (Caspi, et al., 1998, p. 427). However, what is not answered in this kind of definition is specific types of actual human capital, i.e., what are the exact “resources, qualifications, skills and knowledge,” we try to enhance through education? This is a critical question for educators, because without clear answers, it is extremely difficult to analyze, discuss, and build educational programs and policies for self-employment. And it is very relevant for the research question examined in this section, which is related to types of skills and knowledge, i.e., its content of education.

On the human capital map (Map1-HC), I focused on examining studies dealing with “content of the curriculum in relation to employment,” and “other specific educational components” within the self-employment study area⁷². The reason is because researchers who examined the content of education may have a specific type of resource, skills or knowledge in mind and may identify a specific type of educational investment—that may suggest the types of human capital. There are 20 studies total mapped in these areas. I organized these studies in such a way to identify types of human capital discussed in this literature. The next section discusses the organization.

Types of human capital—Organizing focused studies

⁷²As discussed in the methodology chapter, I categorized studies based on how researchers approached education with respect to employment outcomes. Studies fell into four general groups. First, those that looked at the *level or length of education in relation to employment* (L), such as certificate level or graduates of primary or secondary education. The second group of studies addressed the *content of the curriculum in relation to employment* (C), such as to specific educational program programs or skills. The third group of studies examined *other specific educational components* (O), such as budgetary input or experience. The final group of studies had no specification in terms of type of education being discussed.

The following table (Table 8) offers descriptions of each study. It identifies the discipline of each study, the context of the study (developing or developed regions), type of research (empirical or theoretical), and educational aspects the authors identified which can be invested in to increase human capital. It also notes the outcomes related to self-employment productivity that each researcher focused on.

The studies are listed in alphabetical order by last name of the first author of each study. Type of discipline was determined based on which area of discipline the studies was published in, or the nature of the publication based on the published organization it is associated with. Since the discipline of entrepreneurship usually is located in business schools in higher education, studies relating to entrepreneurship were categorized as business.

The context was either developing or developed based on the country the study was about; specifically, if the study was about one or more OECD countries⁷³, it was categorized as “developed;” if it was about transitional or third world countries, then it was categorized as “developing.” If there was no description about the countries of study in the text, I categorized it using one of three ways: 1) using descriptions about the context - if the study mentioned anything about development level, e.g., “rich countries” are categorized as “developed regions,” 2) using the general context of the study - if there is any description I could use to infer the level of development, e.g., if the context described an EE program in post graduate school, it was categorized as “developed regions” because the post graduate level of business school is not available to the majority of people in transitional or developing regions in most cases, or 3) if there was no context, a “-“ was used in both developing and developed columns.

⁷³ Organization for Economic Co-operation and Development (OECD) is an international economic organization which aims to promote policies to improve economic and social well-being of people in the world. OECD has been engaging in their missions since 1961, it now consists of the world’s most advanced 34 member countries (OECD).

The type of research was determined based on the study's location on Map-1HC. The theoretical studies were defined as 1) studies which attempt to develop theory, 2) studies which provide summaries and analysis of existing studies, and 3) generic studies that discuss conceptual debates about the relationship between investment in education and employment. Empirical studies are studies involving a) a collection of first-hand information or direct observations or b) analysis and observation in a specific context, such as case studies or descriptive policy literature.

In addition, the table shows the aspects of educational investment each study addresses and the types of human capital the authors believe could be enhanced through those investments. It also shows which outcomes of self-employment productivity each study discusses.

Table 8: Human Capital Studies Which to Content of Educational Investment for Self-employment Rerated

Author(s)	Study #	Discipline	Context		Types of research		Aspects of Educational Investment	Type of Human Capital (resource, skills, knowledge)	Self-employment productivity or outcomes influenced by HC
			Developing	Developed	Empirical	Theoretical			
Charney Libecap	22	Business		USA	X		Entrepreneurial Education (EE) in higher education	N/A	Creation of business Entrepreneurs' Income Growth of the company R&D , Transfer tec knowledge
Davidsson Honig	24	Business		Sweden	X		- Level - Experience	- Tacit HC - Explicit HC	Discovery, activity, business creation
During	28	Business		Netherland	X		EE in higher education	- Entrepreneurial skills - Managerial skill	Perception (Confidence level)
Harkema Schout	141	Education		Netherland	X	X	EE in higher education	-Problem solving - Attitude	N/A (Case Description)
ILO	52	Economics		Australia	X		Workshops, seminar	Information	N/A (An example of program)
Iyigun	60	Economics	Intermediate countries	Rich countries		X	- Experience - Schooling	- Entrepreneurial HC - Professional HC	Economic development
Krueger	66	Business	-	-		X	EE	Perception to success	Entrepreneurial behavior
Leo Paul	67	Business		Europe (Germany, Italy, France, Demark, Switzerland, Norway, Sweden)	X		Business education in higher education	(N/A) noted examples - management skill - entrepreneurial skill - operation skills	N/A (case description)
Li Zhang Matlay	69	Business	China		X		EE in higher education	- Management - competency	N/A (case study)
Locke	71	History		Germany, France, UK, Europe, USA, Japan		X	EE in higher education	(n/a)examples - Technical education (engineering, science, OJT) - management	N/A (description)

Table 8 (Continued)

Author(s)	Study #	Discipline	Context		Types of research		Aspects of Educational Investment	Type of Human Capital (resource, skills, knowledge)	Self-employment productivity or outcomes influenced by HC
			Developing	Developed	Empirical	Theoretical			
McGibbon	138	Economics		USA	X		R&D in higher education	R&D	New firm formation
Nelson	80	Business	Developing Country		X		EE in lower education	N/A	N/A (policy recommendation)
Plehn-Dujowich	139	Business		Developed country (US, UK reference)		X	- Education - Experience	- (Education Level) - Experience (Industrial Specific, Management)	New firm formation
Ronstadt	98	Business		Program in Business school		X	EE in higher education	Fact and concept of - Know HOW - Know WHO	More and better entrepreneurs
Schramm	100	Business		Program in Business school		X	Technology education at higher education	High technology skill	N/A (policy recommendation)
Singh	111	Education	Informal economy			X	General competency	- Cognitive, social - entrepreneurial HC - Technical Skills	
Soriano Castrogiovanni	135	Business		EU countries	X		- Specific knowledge - General knowledge	- Specific knowledge - General knowledge - Experience	Profitability Productivity
Stam Wennberg	136	Business		Netherland	X		Innovation	R & D	Product development, inter-firm alliances, employment growth (in over all & High-Tec firm)
Wikund Shepherd	130	Business		Sweden	X		- Better (higher level) education - Experience	- General HC - Specific HC	Portfolio entrepreneurs (business creation),
Winslow Solomo Tarabisy	126	Business		USA	X		EE at higher education	- Small business Management - Entrepreneurship	N/A (Description)

In this table, notice in the “Types of Human Capital” column that the vocabulary these researchers use is somewhat similar but not exactly the same. That is, in some cases, different author used similar terms, but infer different meanings. For example, Wiklund and Shepherd (Study #130) used “general human capital” to mean basic skills and knowledge which transfer across contexts and so they are not necessarily related to a business context. They referred to “specific human capital” as skills and knowledge valuable to entrepreneurial activity, such as previous start-up experience (Wiklund & Shepherd, 2008).

On the other hand, Soriano and Castrogiovann (Study #135) referred to “general knowledge” as knowledge gained to enhance managerial capacity to develop a superior business in general (Soriano & Castrogiovann, 2010). In other words, “general knowledge” is used to refer “general *business* knowledge” rather than general basic skills such as literacy, numeracy or problem solving skills. Soriano and Castrogiovan discussed two other types of human capital as well: specific knowledge and experience. For their work, “specific knowledge” referred to “*industry* specific knowledge,” e.g., insights and proficiency in a specific sector or market and “experience,” which referred to an entrepreneur’s previous business experience.

As shown in this example, Wiklund’s “specific” had very little to do with Soriano’s “specific” but was more closely related to Soriano’s “experience.” Moreover, Wikland’s “general” was not a concern in Soriano’s work, while Soriano’s “general” was something similar to what other researchers, such as During (1990), called “management skills”.

This confusion, the usage of different vocabulary and definitions, was observed throughout my data study. It was necessary, therefore, to investigate and re-label the types of the human capital to identify what was really discussed in the context of each study. After investigating the contexts, I identified the four most commonly discussed human capital-like

factors, i.e., factors that indicate knowledge, skills, and resources which can affect productive self-employment. I translated each researcher's language into these four generic types of human capital-like factors: 1) basic human capital, 2) specific human capital, 3) entrepreneurship, and 4) experience. *Basic human capital* refers to the most general skills, those used not only for business, but also to function in modern society, such as literacy, numeracy, problem solving skills, and social skills (Soriano & Castrogiovann, 2010). *Specific human capital* refers to knowledge which are necessary for self-employment activities but which may not be as useful outside of this context, such as management skills and technical skills. *Entrepreneurship* refers to skill-like factors which are necessary to inspire entrepreneurial activities. They are related to a creative process which can bring growth beyond the normal expectation (Winslow, et al., 1999). *Experience* refers to knowledge gained from what one has observed, encountered or undergone during the course of previous work involvement.

Table 9 shows the result of the re-labeling, i.e., the coding. It shows the original labels for the human capital and then the category each falls into after the coding. Note that one type of human capital in the original may translate into more than one category when relabeled and vice versa. The right half of the table provides a summary of the types of human capital or human capital-like factors that I found each these researchers paid attention to after relabeling.

Table 9: Re-labeling the Types of Human Capital

Author(s)	Study #	Type of Human Capital Mentioned (resource, skills, knowledge)	Re-labeling	HC		HC-like factors	
				Basic	Specific	Entrepreneurial	Experience
Charney Libecap	22	N/A	N/A				
Davidsson Honig	24	- Tacit HC - Explicit HC	- Tacit → Experience - Explicit → Specific HC (Mgmt.) & Basic	X	X		X
During	28	- Entrepreneurial skills - Managerial skill	- Entrepreneurial skills → Entrep HC - Managerial skill → Specific HC (Mgmt.)		X	X	
Harkema Schout ILO	141 52	- Problem solving - Attitude Information	- Problem solving → Entrep. HC - Attitude → Entrep. HC N/A			X	
Iyigun	60	- Entrepreneurial HC - Professional HC	- Entrep HC → Experience - Prof. HC → Specific HC (Mgmt.) & Basic HC		X		X
Krueger	66	Perception to success					
Leo Paul	67	(n/a) noted examples - management skill - entrepreneurial skill - operation skills	- Management skill → Specific (Mgmt.) - Entrep Skills → Entrep. HC - Operational Skills → Specific HC (Mgmt.)		X	X	
Li Zhang Matlay	69	- Management - competency	Management Competency → Specific HC (Mgmt.)		X		
Locke	71	- Technical education (engineering, science) - management	- Tec Edu → Specific HC - Management → Specific HC (Mgmt.)		X		
McGibbon Nelson	138 80	R & D n/a	R&D → Specific HC N/A		X		
Plehn-Dujowich	139	- (Education Level) Eperience (Industrial Specific Management)	- Management Experience → Specific (Mgmt.) - Industrial experience → Specific HC		X		
Ronstadt	98	Fact and concept of - Know HOW - Know WHO	- Know How → Entrep. - Know Who → social capital enhancement			X	
Schramm	100	High technology skill	Technology education → Specific HC		X		
Singh	111	- Cognitive, social - entrepreneurial HC - Technical Skills	- General Competency → basic HC - Technical/vocational → Specific HC	X	X		
Soriano Castrogiovanni	135	- Specific knowledge - General knowledge - Experience	- Specific knowledge → specific HC - General knowledge → Specific HC (Mgmt.) & Basic HC - Experience → Experience	X	X		X
Stam Wennberg	136	R & D	R&D → Specific HC		X		
Wikund Shepherd Winslow Solomo Tarabisy	130 126	- General HC - Specific HC - Small business Management - Entrepreneurship	- General HC → Basic HC - Specific HC → Experience - Small business management → Specific HC (Mgmt.) - EE- → Entrep. HC	X			X
					X	X	

Types of human capital –Analysis of the focused studies

In this subsection, I discuss what we can learn from these focused studies. I first note the existing climate with respect to discussion of human capital among the disciplines and its contexts. I also discuss how they might be related to the types of research. I then delve deeper into a discussion of types of human capital identified from these data-studies: basic and specific human capital, as well as entrepreneurship and experience.

What can we learn? –Existing climates

Disciplines

Table 10: The Number of Human Capital Studies Sorted by Disciplines

Business	Other Social Sciences	Education
14	4	2

Fourteen of the studies are from the business discipline, four studies are from other social sciences, namely economics and history, and two are from education. Although only a few studies were conducted from within the economic and education disciplines, it is still clear that each discipline shows particular characteristics with respect to research design. The business disciplines appear to be interested in examining various types of content in education, i.e., “what to teach.” For example, they discussed the importance of R&D (McGibbon, et al., 2009; Stam & Wennberg, 2009), or management skills (Davidsson & Honig, 2003; During, 1990; Iyigun & Owen, 1997; Leo Paul, 1992; Li, et al., 2003; Plehn-Dujowich, 2010; Soriano & Castrogiovann, 2010; Winslow, et al., 1999), to various types of self-employment productivity; e.g., business

creation (Charney & Libecap, 2000; Davidsson & Honig, 2003; McGibbon, et al., 2009; Perret-Clermont, 2004; Wiklund & Shepherd, 2008) or entrepreneurial activities (Davidsson & Honig, 2003; Krueger, 2003).

On the other hand, the economics discipline appears to be interested in measuring economic growth. They discuss about growth such as per capita (Iyigun & Owen, 1997) or firm growth (McGibbon, et al., 2009). Based on Table 8, McGibbon's work did discuss the effect of R&D investments on firm creations as might be expected of a study in the business discipline; however, this argument was made in a part of the section discussing small business and innovation. His main claim was that innovation provides a foundation for economic growth. In fact, the original study McGibbon used, which was done by BJK Associates (BJK Associates, 2002), actually was interested in both firm creation and economic growth, which was measured by looking at local employment growth. This infers that the economic discipline is interested in a more aggregated level of "growth" rather than individual firm or entrepreneur's outcomes.

Meanwhile, the education literature seems to be more focused on the behavior of "learning" and pays attention to individual learners. For example, Harkema and Schout's analysis (2008) started from defining "learning" and focused on "how to teach" rather than "what to teach". For example, in the end, Harkema introduced a program in the Netherlands based on the theory of "student-centered learning." Singh's (2000) context was totally different from Harkema's; however, he also had a section discussing how "learning" takes place in different environments and settings. He argued that learning environment had to take into account the learner's values and culture, and the environment should be built based on an understanding of the learner's competency.

Overall, the most obvious fact in looking at these numbers is that the vast majority of studies are from the business discipline. Obviously, entrepreneurship is directly related to business matters; however, what is interesting here is how small the numbers are in the other disciplines. One of the possible explanations for why there are not many studies from the economics discipline is that researchers in this area tend to measure education effects by years of education, which does not involve looking at the content of the education. The Map-HC1 supports this explanation as well. That is, while sixteen studies were located in the box (L)⁷⁴ in the self-employment category, ten of them (62.5%) were from the economics discipline and 6 (37.5%) were from business. Therefore, it can be inferred that entrepreneurship is not necessarily led by a business discipline, but that the business discipline is more interested in the content rather than the length of education. Meanwhile, it seems a bit strange that there is very little attention given to the content of human capital from the education discipline, even though skill and knowledge training is an education matter. The lack of a developed education perspective is summarized by Garavan and O’Cinneide (1994) as follows:

Entrepreneurship, as an academic discipline, lacks an appropriate forum – a number of articles presenting the results of entrepreneurial research frequently appear in journals but research related to curriculum development, programme content and problems associated with programme development, have, for the most part, gone unnoticed (p. 5).

Although this claim was made some time ago, the situation seems not to have changed much in the last decade. For example, more recent researchers, such as Henry & Treanor (2010), Fayolle & et.al (2006) or Hoing (2004) also still claim a lack of research on education for

⁷⁴ In Map1-HC1, studies are further categorized based on how they approached education with respect to employment. Studies that looked at the *level or length of education in relation to employment* were plotted in category box (L).

entrepreneurship. Singh (2000) also expressed the necessity of research on the scientific principles of job-specific education, which can lead to more integration of theory and practice for better learning. To sum up, compared to those in economics and education, the business community is more interested in knowing how education can build human capital by examining the content of the education, and they are leading debates about this issue. This may indicate that while these debates from the business discipline can help inform the education field, there remains a significant space that the education discipline can fill with knowledge of teaching and learning.

Contexts—The level of development

Table 11: The Number of Human Capital Studies Sorted by Context of Regions

Developing	Developed	Both	No context
3	15	1	1

Among the twenty studies examined, 3 studies discussed issues in the context of developing regions and 15 in developed regions. Only one study examined both developed and developing regions. One study did not have any regional reference because it was a cognition study about entrepreneurial thinking. Studies located within developing contexts appear to promote education for entrepreneurship as a strategy to build a core competency of livelihood. For instance, Singh claimed that general competencies are the key to increasing the economic potential of people in the informal economy (Singh, 2000). Nelson (1977) claimed that skills for entrepreneurship are necessary because they can be related to all dimensions of life, e.g., stimulating the creativity and innovation can lead to creation of a better community. Iyigun &

Owen (1997) found that entrepreneurial human capital, knowledge gained from working experience, was more important in developing regions. Although the focus of Li and his colleagues' study was entrepreneurial programs in higher education in China, they also stated that the pilot entrepreneurship education programs were perceived as competence and capability building in students. It seems, then, that studies focused on developing regions encouraged integrating entrepreneurship education into basic competency building for better livelihood.

The focus of the majority of studies in developed regions, on the other hand, appeared to focus on skill training in higher education; nine studies examined or discussed some elements of a program in higher education, such as entrepreneurship education at universities (Charney & Libecap, 2000; During, 1990; Harkema & Schout, 2008; McGibbon, et al., 2009; Ronstadt, 1985; Winslow, et al., 1999), business education at universities (Leo Paul, 1992), or technology education at universities.

As a whole, most of the studies which examined education content were done within the context of developed regions, especially in Europe, and very few studies presents the perspectives of developing regions. Moreover, only one study did a comparative study, i.e., examined the difference between developed and intermediate regions. This underrepresentation of studies in developing regions can be seen in the education field as well. The journal *Comparative Education Review* is one of the most respected English-language academic journals within the field of comparative international education (Bray, Adamson, & Mason, 2007). Even within the *Comparative Education Review*, the number of the articles published between 2000 and April 2011 which had the word “entrepreneurship” anywhere in the text was only eight⁷⁵. Three of these did not even have the word in the main body of the texts i.e., they were in a

⁷⁵ Eight studies are: (Andrés, 2008; Augusto, 2002; Compton et al., 2009; Niens & Chastenay, 2008; Ntshoe, 2004; Stephen, 2009; Suárez, 2007; Takayama, 2010).

footnote or in the reference list. Moreover, the phrase “entrepreneurship education” was found in only one article, and it still was not the focus of the study. This could indicate two possibilities regarding the position of entrepreneurial education in the comparative education field: 1) Researchers in the comparative education field are not interested in the issue, or 2) the body of research has not developed yet to conduct studies for developing regions. Considering the importance of the issue, a lack of information about developing regions as well as a lack of the comparative studies in the education field is very serious.

Types of research

Table 12: The Number of Human Capital Studies Sorted by Types of Research

Research Type		Discipline			Context			
		Business	Social Science	Education	Developing	Developed	Both	No Cntxt
Empirical	12	10	2		2	10		
Theoretical	7	4	2	1	1	4	1	1
Both	1			1		1		
Total	20	14	4	2	3	15	1	1

Out of the twenty studies examined, twelve are empirical in nature, and seven are more theoretical. One study had a theoretical discussion and an empirical example. In addition to showing the number of theoretical and empirical studies in total, Table 12 also shows breakdown in terms of discipline and context. Some characteristics are found from this table.

The business discipline, with ten empirical studies, has a much larger body of empirical studies compared to the other two disciplines. The number of empirical studies is also more than twice the number of theoretical studies in this discipline (10 and 4, respectively); the other social

sciences have many fewer empirical studies, but the number of empirical and theoretical studies is more balanced. In fact, the education discipline has actually more theoretical studies, since one of the education studies discusses both empirical and theoretical.

Looking at context, the empirical studies within the developed regions have the largest research body. Only one study which examined the difference between rich and intermediate countries is a theoretical study. The lack of empirical comparative study might indicate that the differences in research environments in developed and developing regions. For example, a lack of similar quality of empirical data in developed and developing regions may prevent to conduct comparative study.

What can we learn?—Types of human capital

As Caspi, et.al.(1998) defines, human capital is “the resources, qualifications, skills, and knowledge that are available to and acquired by individuals to maximize” their own productivity in the labor market. Coding of data-studies which discuss the content of the human capital allowed specification of the four human capital-like factors found in Table 8 above. In this section, I will discuss these four factors. First, I will discuss the basic and specific human capital, and then will discuss entrepreneurship and experience.

Basic human capital

As mentioned at the coding section, basic human capital refers to most general skills used not only for business, but also to function in a society. This includes skills such as literacy, numeracy, problem solving skills, and social skills (Soriano & Castrogiovann, 2010). These skills provide knowledge which is transferable across various situations and are fundamentals for the development of other competencies (Singh, 2000; Wiklund & Shepherd, 2008). Because it is transferable across situations, this type of human capital is considered a safe investment (Iyigun

& Owen, 1997). Basic human capital allows entrepreneurs to integrate and accumulate new knowledge and access information which provides more opportunities and assists them in adapting to new situations (Singh, 2000; Wiklund & Shepherd, 2008). For this reason, having basic human capital is a prerequisite condition to building vocationally specialized skills and knowledge (Singh, 2000). Basic human capital is often accumulated through formal school; therefore, the stock of basic capital is usually richer in developed economies (Iyigun & Owen, 1997).

Specific human capital

Specific human capital refers to skills, knowledge and resources which are necessary and helpful for entrepreneurial and self-employment activities but which may not be as useful outside of this context. Management skills, technical skills, and knowledge of specific industry are examples of specific human capital. It is a type of knowledge referred to as “know-what”; therefore, it can be obtained through formal or non-formal education (Davidsson & Honig, 2003). This is also considered low risk, but it is a more short-term investment (Ronstadt, 1985), because this type of knowledge tend to be directly connected to the specific work; therefore, the return of investment is relatively clear. Davidsson (2003) calls this type of human capital “explicit knowledge”, because it is usually conveyed through procedures, processes, and formal written documents. Because it requires logical thinking, which is associated with the left hemisphere of a brain, Leo Paul (1992) calls this type of human capital “a left hemisphere skill.”

Locke (1993) points out that these specific skills contributed industrial and economic growth in a particular era. For example, skills in technology made a big difference in the second half of the nineteenth century, and scientific-based management skills made the US economy strong after World War II (Locke, 1993). In contrast to basic human capital, specific human

capital may be more useful when learners are in specific business contexts (Singh, 2000). Because of this, specific human capital often assists entrepreneurs to actualize entering into the nascent process (Davidsson & Honig, 2003). For example, investment in specific human capital, such as research and development (R&D) in a university, inspires new firm formation in surrounding areas (McGibbon, et al., 2009).

Entrepreneurship—Is it human capital?

Entrepreneurship refers to skill-like factors which are necessary to inspire entrepreneurial activities. They are related to the creative process; however, often a clear definition or description of these skills is lacking. For example, Davidsson and Hoing (2003) call this type of skill “tacit knowledge;” they explain “[it] refers to know-how, the often noncodified component of activity” (p.306). For this reason, Leo Paul (1992) calls this types of skill a “creative right hemisphere innovation,” since creativity is associated with the right hemisphere of a brain. Entrepreneurship stimulates and leads to new growth (Winslow, et al., 1999). Innovation skills, creativity, opportunity identification and adaptation are some examples of this type of skill-like factors (Leo Paul, 1992; Li, et al., 2003).

Entrepreneurship is somewhat different from basic and specific human capital, but it includes unique and essential skills for successful entrepreneurs or intrapreneures⁷⁶ to possess. In fact, only this type of skill may separates entrepreneurs from regular business owners, because in definition, entrepreneurs are individuals who carry out new combinations of productive means (Schumpeter, 1934), i.e., engage in innovative economic activities. I believe it is an important skill or knowledge that maximizes one’s productivity and that it is a critical factor to analyze

⁷⁶ Intrapreneures do not hold a leading position in the company, but rather engage in entrepreneurial activities as a part of an organizational team (Carree & Thurik, 2003).

self-employment competency; therefore, I consider entrepreneurship as a type of human capital, call it “entrepreneurial human capital” for this study.

Experience—Is it human capital?

One of the challenges in analyzing the types of human capital in the literature was the various handling of “experience.” Experience is practical knowledge derived from direct observation or participation (Merriam-Webster); therefore, in this context it refers to knowledge gained from what one has observed, encountered or undergone during the course of previous work involvement. For instance, people learn business-languages or crafts, as well as derive creative inspiration through experience. Most researchers consider “experience” as a means or environment of accumulating any type of human capital, just like formal education; however, there is a group of researchers who use ‘experience’ in a more specific way (Davidsson & Honig, 2003; Iyigun & Owen, 1997; Soriano & Castrogiovann, 2010; Stam & Wennberg, 2009; Wiklund & Shepherd, 2008). For example, Wiklund & Shepherd (2008) consider “business start-up experience” to be a type of specific human capital. According to them, this is knowledge which has little to do with activity outside of the entrepreneurial activity. Then, is “specific experience” really a “specific human capital”?

There is an issue considering experience as human capital. The idea of “working experience” makes what constitutes human capital more ambiguous, because it is an aggregated knowledge of various incidents. For example, in the Wiklund & Shepherd’s case (2008), I assume they consider anything and everything entrepreneurs have learned through previous start-up experience to be “specific human capital;” however, they did not discuss what that particular knowledge might be. In order to analyze what are the “types of human capital” involved in that experience, the ‘experience’ needs to be broken down. My intention with this study is to

analyze the specifics of human capital which allow for successful self-employment; therefore, the idea of using general or specific working “experience” as a type of human capital does not provide insight for further analysis. For these reasons, I do not handle “experience” as a type of human capital, but will handle it as a means of accumulating human capital.

Summary—Types of human capital

In this section, I attempted to address the part of my research question which is related to identifying types of human capital in the self-employment process. By focusing on twenty studies located in the (C) and (O) box on Map1-HC, I analyzed how these studies approached the study of human capital, and what kind of human capital they discussed in their studies. Overall, business discipline seems to be leading the conversation of the field of content of human capital within the self-employment context and that very little attention has been paid to consider in the context of developing regions. Because the usage of vocabulary related to “human capital” in the original texts was varied, I conducted coding to clarify what was really discussed in the context of each study. In the end, three types of human capital like factors were identified: basic human capital, which refers to transferable skills across contexts; specific human capital, which refers to skills which are only useful within the business context; and entrepreneurial human capital which refers to skills related to the creative process that can bring more than expected growth. Experience was not considered a type of human capital for this study as it does not indicate specificity of skills or knowledge.

4.2.1.2 Social Capital in the Self-employment Process

Supporting Research Questions:

- ii) To what extent is social capital thought to enhance business creation for self-employment?

Types of social capital—Organizing focused studies

While human capital is embedded in individuals, social capital is embedded in relationships among people (Coleman, 1988; Werbel & Danes, 2010). It is the aggregate of actual and potential resources founded on a core of common values and behavioral norms and possessed by a group of individuals (Douglas & Bernard, 1977; McClenaghan, 2000). Unlike human capital, high/strong social capital itself does not promise productive economic outcomes (McClenaghan, 2000); however, it is a critical factor because the socio-cultural environment influences people's economic motivation and behaviors (Rodríguez & Santos, 2009). From this standpoint, many researchers claim that strong social capital is one of the most important institutional characteristics for a productive labor market (Klein & Hadjimichael, 2003; McClenaghan, 2000). As Davidsson & Honig (2003) claim, it enables individuals to extract benefit from their social structure, networks, and membership. And Putnam (2000) states “where trust and social networks flourish, individuals, firms, neighborhoods, and even nations prosper” (p. 319). Given these benefits, social capital plays an important role for self-employment; in fact, it is an essential resource for successfully running a business, especially in the informal economy (Singh, 2000).

The general definition of social capital and its relation to economic development are presented in section 2.3.3⁷⁷. Since the research question examined in this section is related to

⁷⁷ Social capital is social relationships which provide access to various types of resources, such as information and physical or financial capital, with lower transaction cost. For this reason, social networks can bring advantages in business, and, in turn, economic and social development.

self-employment, I here pay close attention to the studies which were mapped in the area of “self-employment” on the social capital map (Map1-HC). There are 15 studies in total which were mapped in the area of self-employment. As I did with the human capital literature, I listed studies in alphabetical order by last name for the first authors of each study. The type of discipline, the context of the study, and the type of research are shown at the left side of the table. While examining the studies, I was able to identify two types of functions of social capital related to the self-employment process. These functions are related to: 1) business advantage and 2) socialization. Business advantage refers to social ties which provide critical resources. An example would be positive business outcomes which resulted from being a member of a business network. Socialization refers to social ties which provide the basis for an individual’s core values. Family influence with regard to the occupational choice of being a self-employed would be an example in this category.

Table 10 shows the final results after organizing the studies. Brief descriptions of the social capital these researchers discussed are noted in the columns “biz advantage” i.e., business advantage, or “socialization.” The table also notes the outcomes/productivity which results from the social capital discussed in each study.

Table 13: Social Capital Studies Related to Self-employment

Author(s)	Study #	Discipline	Context		Types of research		Types of SC		Self-employment productivity (outcome)
			Developing	Developed	Empirical	Theoretical	Biz Advantage	Socialization	
Acs Virgill	140	Business	Developing Country			X	Tolerance of outsiders	Culture, Value, norms	Growth of business Entrep. activities
Begley Tan	12	Business	Indonesia, Philippine, Taiwan Singapore, Thailand	Australia, Canada, NZ, US, Korea	X			Supportive culture	Occupational choice
Davidson Honig	24	Business		Sweden	X		Biz network advisor	Biz owner parents/friends	- Entrep. activity - Exploitation - Business entry
Djankov Qian	26	Economics	China		X			Self-employed family	Occupational choice
Krueger	66	Business	-	-		X		Supportive perception	Occupational choice
Panglaykim	87	Economics	Developing countries (Singapore)	Japan, Korea	X		Network system		Economic growth
Rodríguez Santos	97	Business	Spain		X	X	Network	Social approval	- Entrep. behavior - Access to resource
Ronstadt	98	Business		Program in Business school		X	Know-who		Entrepreneurial success
Schneider	99	Economics	Developing & Transition nations	OECD	X	X	Network		Active in the informal economy
Singh	111	Education	Informal economy			X	Membership of nationality group	Helping family business	Livelihood in informal economy
Soriano Castrogiovanni	135	Business		EU countries	X		Advisor		Profitability and Productivity
Stam Wennberg	136	Business		Netherland	X		Inter-firm alliance		Firm Growth
Sullivan	118	Economics		USA	X		network	Family business	- Financing, customer, technical assistance, role model - Occupational choice
Werbil Danes	133	Business		USA	X		Work Family Conflict		Strain of new Business Venture Operators
Wikund Shepherd	130	Business		Sweden	X		Biz network Gov. link		New firm entry (Portfolio Entrepreneurship)

Types of social capital—Analysis of the focused studies

What can we learn? –Existing climates

Disciplines

Table 14: The Number of Social Capital Studies Sorted by Disciplines

Business	Other Social Sciences	Education
10	4	1

Ten of the social capital studies are from the business discipline, four from the other social sciences, namely economics, and one study is from the education discipline. Although the business discipline is again the discipline with the largest amount of studies, it is not as concentrated as it is with human capital literature. The business discipline tends to pay more attention to developed regions, compared to other disciplines. Most of the studies from business only discussed one function of social capital, and they are mostly the function of “business advantage.” Something unique about the business discipline is that some authors discussed the negative effect of social capital. For example, Acs and Virgill discussed the issue of “Tolerance of Outsiders,” claiming that a tight social network sometimes leads those inside the network to not trust outsiders, which can limit business opportunities (Acs & Virgill, 2010).

The studies in the economic discipline appear to have an underlying theme of “growth.” All other economic literature, except Djankov’s study, looked at networks which discuss business advancement (Panglaykim, 1979; Schneider, 2002; Sullivan, et al., 2005). Even though

Djankov's study (Djankov, et al., 2006) did not directly study the economic growth, they also stated that the rationale of studying entrepreneurship is its import role in successful economics.

Only the education literature discussed learning, specifically how learning takes place using the channel of social capital. For instance, Singh (2000) discussed a traditional apprenticeship within micro-enterprises, i.e., helping family business, as an example. He claimed that learning takes place through imitation and identification; therefore, by helping members of the family, children learn not only business knowledge, but also enhance their own social capital, (Singh, 2000). Singh claims that this is a socialization process.

As a whole, most of the studies are from the business discipline, then economics; the education discipline contributed least to the social capital literature. The lack of attention from the education field is more obvious in the area of social capital as compared to human capital. This is probably because social capital investment is less directly related to education than human capital investment. This balance of studies is somewhat consistent with the overall research balance in the area of social capital and self-employment. For example, by searching JSTOR⁷⁸ using the keywords "social capital" and "self-employment" published from 2000 to 2010, 62 articles were published from business, 61 articles were published from economics, and only 5 articles were published from education journals. Since these numbers are the result of a keyword search, the result may not reflect the exact climate of the research field; however, a lack of studies in education is evident. Moreover, although the number of articles published from business and economics are about the same, the number of studies on this topic is still very

⁷⁸ JSTOR is a non-profit digital archive of over one thousand academic journals and other scholarly content (<http://about.jstor.org/>)

small, considering the size of the disciplines⁷⁹. Djankove and his colleagues (2006) indeed claimed that research on entrepreneurship in economics is limited, despite of its importance and interest.

The majority of studies (12 out of 15 studies) discussed business advantage as a function of social capital, with the advantage claimed to be related to business growth or entrepreneurial activities. The socialization function, on the other hand, appeared to be looked at as the cause of occupational choice or entrepreneurial activities.

Contexts—The development levels

Table 15: The Number of Social Capital Studies Sorted by Context of Regions

Developing	Developed	Both	No context
4	7	3	1

Among the fifteen studies, four studies discussed only developing regions, seven studies discuss only developed regions, three studies discussed both types of regions, and one study did not have any regional reference because of the cognitive nature of the study. All the studies which examined only developing regions discussed the socialization function of social capital. On the other hand, all the studies which examined only developed regions discussed the business advantage function of social capital. These two groups show another contrast as well. While most of the studies about only developing regions (all except one) discussed both the business

⁷⁹ JSTOR lists 55 different disciplines in their search engine. In terms of number of journals each discipline involved, the business discipline is ranked at 5th (167 titles), economics ranked 6th (121 titles), and education is ranked as 7th (116 titles) along with political science (116 titles).

advantage and socialization, most of the studies about only developed regions (all except one) discussed only business advantage. This might indicate that the function of socialization is less relevant to self-employment in developed regions. One of the supporting thoughts about this analysis is that self-employed individuals tend to be more educated and technically advanced in developed regions (McGibbon, et al., 2009; Terajima, 2006); therefore, for example, skills and knowledge might be stronger factors leading toward self-employment than family influence.

Those studies which discussed cases of both developing and developed regions are very different. Begley and Tan's studies compared and contrasted not in terms of the level of economy but in terms of eastern and Anglo-Saxon (western) cultures. Their collections of the countries which are represented Anglo-Saxon culture were all OECD countries, while most countries representing east culture were non-OECD countries. Economic level, therefore, was not a concern for their study. The second, Panglaykim's study, exemplified the Japanese case—how social capital supported by the government contributed to the country's economic development—and he also described the similar situation in South Korea and Singapore, which happened to be not OECD countries. Panglaykim's intention was not comparing or contrasting the situation of Japanese vs. South Korea or Singapore, rather, he suggested applying their strategies to developing countries⁸⁰. The last study which included both developing and developed regions was Schneider's study (Schneider, 2002). His interest was in how to transfer economic activities from informal to the formal economy within all levels of regions (developing, transitional, and developed regions), and what determines the size of the informal

⁸⁰ Panglaykim suggested the economic strategies of more developed countries (Japan, South Korea and Singapore) to developing countries despite of the difference of the economic level. He did so probably because he seemed to believe that entrepreneurs have particular universal psychological traits. He claimed that entrepreneurs are special individuals with above average qualities who are motivated doers and not afraid of challenges and risks (Panglaykim, 1979).

economy in these regions. The social capital discussion was a part of the discussion concerning the characteristics of an informal economy⁸¹. Because of the nature of the study, he did not specifically contrast social capital issues for countries at different levels of economy. To sum up, even when the situations in both developed and developing region discussed in the same study, none of the study compared and/or contrasted a social capital situation.

As a whole, although the concentration of the studies in developed regions was much less than human capital literature, there are more studies about developed regions than developing regions. One of the possible reasons is probably the nature of self-employment studies which are related to entrepreneurship, i.e., entrepreneurial research is very scarce in developing regions.

Types of research

Table 16: The Number of Social Capital Studies Sorted by Types of Research

Research Type		Discipline			Context			
		Business	Social Science	Education	Developing	Developed	Both	No Cntxt
Empirical	9	6	3		1	6	2	
Theoretical	4	3		1	2	1		1
Both	2	1	1		1		1	
Total	15	10	4	1	4	7	3	1

Out of fifteen studies, nine are empirical in nature, four are more theoretical, and two have both a theoretical discussion and empirical example or examination. In addition to showing the number of theoretical and empirical studies, Table 16 also shows the breakdown of types of study for

⁸¹ In his study, Schneider claimed that strong social ties prevent people from transferring a business from the informal to the formal economy (Schneider, 2002).

each of the discussed disciplines and contexts. As with the human capital literature, empirical study in the business discipline is the largest body of research among the three disciplines. Economic disciplines had more empirical studies, while the education study was more theoretical.

As for the contexts, in developed regions, the most studies are empirical nature. In contrast, in developing regions more theoretical studies have been done. Again, this may reflect the difficulty of conducting empirical research in developing regions in the area of self-employment and social capital. As discussed in the above context section, finding trends among the studies which included both developing and developed regions is difficult since the focus of each study is quite different. As a whole, the balance of studies related to social capital in terms of discipline, context and type of research is more even compared to the collection of human capital literature in this study.

What can we learn?—Functions of social capital in self-employment

As mentioned, I was able to identify two types of functions of social capital related to self-employment process. These functions are related to: 1) business advantage and 2) socialization. In this section, I will discuss these two functions in order to consider the role of social capital in entrepreneurial and self-employment process.

Business Advantage

Social capital can reduce transaction costs⁸², thus making it easier for a member of a network to access information, to coordinate activities, and to make decisions (Acs & Virgill,

⁸² Transaction costs are business operation costs incurred in making economic exchanges to a unit outside the organization (Maia, Cerra, & Alves Filho, 2009). Strong social capital provides trust; therefore the costs for preparing for uncertainty or accessing information can be low (Wu, 2004).

2010; Davidsson & Honig, 2003; Rodríguez & Santos, 2009). For example, in many countries small scale village traders, such as those who do business in an informal economy, often operate within a dense social network. However, transaction costs increase as the market extends to broader areas where cannot be covered by the personal network; hence, one must invest more resources to counterbalance the thinness of the social network (Klein & Hadjimichael, 2003). As discussed in the previous section, social capital can play a critical role in distributing existing jobs; however, how does social capital play a role within a self-employment context?

Social capital can assist self-employed individuals by enabling them to access critical information as well as diffuse it (Davidsson & Honig, 2003; Lancee, 2010). It creates opportunities and capacity to recognize and act on these opportunities (Audretsch, Keilbach, & Lehmann, 2006) so that entrepreneurs with better social capital do better than those operating without one (Singh, 2000). For instance, business network membership has a positive association with the pursuit of portfolio entrepreneurs⁸³ because entrepreneurs can leverage their business contacts to access the resources for new entry at lower cost (Wiklund & Shepherd, 2008). Not only membership in a business network, but also membership in particular nationality and friendship groups can also assist entrepreneurs in overcoming some of the disadvantage of small business, such as an access to potential client. This is especially important in developing regions (Acs & Virgill, 2010; Singh, 2000). Soriano & Castrogiovann (2010) found another benefit of social capital: having an unsuccessful former CEO-owner as a business advisor has a positive impact on both profitability and productivity of the company; because that failed CEO-owner can provide advices to help company avoid making their mistakes. These resources are a more intimate knowledge which can be transmitted through

⁸³ The portfolio entrepreneur is an entrepreneur who runs multiple businesses concurrently (Plehn-Dujowich, 2010).

only face-to-face communication, but not through mass media (Audretsch & Thurik, 2000). Such critical information can help access to further resources, such as finances, customers, technical assistance, role models, and contracts (Sullivan, et al., 2005).

More importantly, social capital empowers entrepreneurs to translate entrepreneur's aspirations into realities with the resources, i.e., social capital functions as the key enabler of innovation, mutual learning, and growth (Putnam, 2000). For this reason, social capital can be especially important when entrepreneurs initiate his/her ideas to begin the process of business creation (Davidsson & Honig, 2003). Audretsch, et al. (2006) support this by claiming that areas that does not have a rich entrepreneurial social capital experience lower likelihood of producing entrepreneurs, because recognitions of opportunity would be lower.

In poor communities, social capital can be the most important capital available to individuals who have fewer financial and educational resources (Putnam, 2000). Trust through social capital allows entrepreneurs in poor communities to proceed with risky transactions (Putnam, 2000; Wu, 2004) and also often translates into financial resources (Putnam, 2000). This is especially important for immigrant entrepreneurs. Immigrant networks often provide financial support in the form of a gift from family members or loans from rotating credit associations⁸⁴ to potential self-employed individuals.

However, while in most cases, social capital brings positive outcomes to entrepreneurs, in some cases, a dense social capital can negatively impact business growth. For instance, the business operations that exclusively rely on internal resources can limit the entrepreneurs from bringing in outside resources and knowledge and can impede a business success. (Acs & Virgill,

⁸⁴ A rotating credit association is a self-help micro funding; often form an ethnically based group, in which members make regular contributions to a common fund. This fund is available for those members in turn and crucial when formal credit institutions are unwilling to provide credit to borrowers (Putnam, 2000).

2010; Lancee, 2010). This is often observed in developing regions, such as in some African economies (Acs & Virgill, 2010).

Socialization

Another role social capital plays in self-employment is having an impact on socialization. People are motivated not merely by their own choices and circumstances, but also by choices and circumstances of neighbors (Putnam, 2000). This is because culture provides the framework in which people make sense of their lives and helps determine how they live in and adapt to their world (Acs & Virgill, 2010). In other words, the effect of family, school peer group and community have a powerful influence on individuals, especially on young people, and they can impact greatly one's opportunities and professional life (Putnam, 2000). For example, Dunn and Holtz-Eakin (2000) and Li, et.al. (2003) found social capital to be an important medium which transfers not only knowledge and information, but also entrepreneurial attitude. Several authors reported that having a self-employed family or friends within a close network had a positive relationship one's occupational choice of being self-employed (Davidsson & Honig, 2003; Djankov, et al., 2006; Krueger, 2003; Sullivan, et al., 2005). Having a self-employed family can also translate some industrial knowledge or management skills though experiencing family business (Sullivan, et al., 2005).

In the larger cultural context, i.e., society's value toward self-employment can be a factor which determines entrepreneurial activities. Begley and Tan (2001) found that people in Asian countries are more influenced by the social status of entrepreneurship and risk of failure compared to people in Anglo-Saxon countries such as the US or Australia. Therefore, culture, values, and norms, which are outcomes of social capital, can affect entrepreneurial activities, entry and general business culture (Acs & Virgill, 2010).

Summary

In this section, I attempt to address a part of my research question related to social capital and its role in the self-employment process. Focusing on the fifteen studies located in the self-employment literature on my Map1-SC, I organized these studies and analyzed how they approached study of social capital and how social capital functions in the self-employment context. Within the small scale of my sample, it appeared the business discipline is leading the discussion on social capital within the self-employment context, and again, very little attention is paid to this area in education field. Research has been done more in the developed regions, but the disparity between amount of studies conducted in developed and developing countries was not as evident as with the human capital literature. Two types of functions in social capital are identified through the analysis: the function of business advantage and a function of socialization. In terms of business advantage, social capital can reduce the transaction cost of business operation, such as with useful information; and in turn, it will bring positive outcomes to business operation. In terms of socialization, social capital can affect ones core values or culture; therefore, it can affect one's livelihood, such as with occupational choice.

4.2.1.3 Educational Strategies for Human and Social Capital

In order to determine the role of education in self-employment, it is necessary to consider the various types of human and social capital. This section explores the relationships between education and these capitals. It first discusses some education strategies for fostering each type of human capital, and then it discusses the relationship between social capital and education.

Education strategies for human capital

Although skills and knowledge for work can be also acquired through working in the industry, i.e., experience, in order to clarify the role of education, in this section, I limit the discussion to educational strategies which can help develop human capital.

I first discuss appropriate educational strategies for enhancing each human capital identified in the literature. In addition, I include discussions about cognitive theories which are related to effective human capital enhancement for self-employment.

Education for basic human capital for self-employment

As mentioned in the previous section, basic human capital includes the most general skills, such as literacy, numeracy, personal skills and attitude. These are skills required to function satisfactorily in the workplace as well as in a society. Because basic human capital increases the capacity for absorbing other types of human capital, it is becoming more important as technical skills become more complex, such as seen with technology in the workplace (Addis, 2003). These basic skills are generally taught in formal schooling from the primary level within the national education curriculum. Non-formal education, such as adult literacy programs can substitute for formal education for youths and adults who did not have a chance to attend to school. It is difficult to expect the employer to bear responsibility to train for basic human capital on the job because a return on the investment is low and it is transferable to other workplace (Addis, 2003). However, Singh (2000) claims that people in the informal economy have special needs with respect to education and training. He strongly advocates that basic human capital needs to be taught in the context of work processes, that it must be integrated into vocational education if it would be within a program (Singh, 2000). He also claims that special teaching strategies, such as student centered learning, making use of improvised techniques and a more context specific approach are appropriate in the informal economy (Singh, 2000).

Education strategies for specific human capital

Specific human capital includes skills and knowledge specific to business operations, including some operational skills related to entrepreneurial activities. It is mostly fact-based knowledge, or “know-what;” therefore, formal or non-formal education which specializes in targeted skill building is appropriate educational means. In this subsection, I discuss some examples of specific human capital which are often discussed in the literature

Education strategies for management skills

Management skills are knowledge of how to prepare to run a business in order to expect normal sales, profits and growth; these skills enable one to manage and operate existing organizations, firms, and/or projects (Soriano & Castrogiovann, 2010; Winslow, et al., 1999). More specifically, management skills include knowledge related to setting goals and objectives, leading, planning, organizing and controlling various businesses situations (Winslow, et al., 1999).

According to Locke (1993), management education was based on business practice until World War II, i.e., looking at real-life examples to establish better business practices. Recently, however, it has become a more scientifically based discipline, utilizing theoretical principles to improve business. For this reason, education for this type of human capital often takes place in a university or a business school. Courses are available providing a range of information, including on the legal, procedural, and strategic aspects of business (Davidsson & Honig, 2003). Specific examples of such courses are: marketing, sales, financial accounting, negotiating, bidding for and finalizing contracts, human resources, and information systems (Daring, 1990; Li, et al., 2003).

Management style is largely influenced by culture; therefore, the goals of the management skills vary according to the culture in which they are being taught (Locke, 1993). For example, some of the goals of American management education are conflict-resolution skills and individual top-down decision-making, while Japanese management education targets the cultivation of 'relation skills' and group-oriented consensual decision making in managers (Locke, 1993).

Education strategies for technical skills (vocational)

Technical skills, including vocational skills, are often taught in specialized formal or non-formal education. It is important that the technical training institution reflect the economic opportunities existing in the local market and respond to the needs of the competency of the labors in the area (Singh, 2000). In other words, local business associations and community initiatives should be a leading force of educational programs (Singh, 2000). There are several types of education for technical skills which researchers often discuss: 1) vocational education, 2) research and development (R&D), and 3) technology education.

One common type is vocational education, which provides students with practical skills that they can use to make a living. Vocational education ranges from programs which teach skills as basic as indigenous crafting to those which teach as advanced skills as medical assistance. In order to promote self-employment and job creation, vocational training needs to be planned with strategies. For instance, in an informal economy, Singh (2000) claims that the program should target individuals already active in production, so that the program can assist with the specific aspects of operation and push them enter to a labor market. Li et.al. (2003) also claim that vocational education should be targeted. For example, for managers and key members of rural enterprises, programs such as management and quality control would be more

appropriate than those dealing with specific technical skills because as a leader, such skills can assist in creating and operating an organized form of business effectively.

Another type of education for technical skills is related to Research and Development (R&D). R&D functions in two ways: 1) to build knowledge within the organization to generate inventions, and 2) to improve the ability of the organization to understand and absorb knowledge from outside (Soriano & Castrogiovann, 2010). For this reason, investment in acquiring R&D skills assists with profitable and sustainable business creation (Soriano & Castrogiovann, 2010). Charney and Libecap's (2000) study support Soriano's recommendation; they found that participating in an entrepreneurship program in a business school increased a graduate's probability of developing new technological products by almost 9% in the United States. Therefore, Soriano and Castrogiovann (2010) recommended including this type of program in entrepreneurial education in secondary and post-secondary education.

Another specific human capital often discussed in the literature is skills in technology, especially for developed regions. Schramm (2005) claims that entrepreneurial societies rely heavily on human capital which is trained, skilled, and innovative in high technology. We can infer that her claim is not for all societies, but for societies in which entrepreneurs are not entrepreneurs by necessity but by choice. If her claim is true, then technology education becomes significant as economies progress. This technology education ideally come from collaborations between entrepreneurs and universities, because Schramm (2005) believes that the academic research done in engineering, mathematics, and physical science in higher education results in innovation in private industry.

Education strategy for knowledge of a specific industry

Knowledge of a specific industry refers to possession of knowledge and skills related to the characteristics and/or insights of products and/or processes of a particular industrial sector (Soriano & Castrogiovann, 2010). This includes knowledge about the market and access to resources. It enables one to identify opportunities, improve the managerial capacity and increase the profitability of an organization (Soriano & Castrogiovann, 2010). There are very few studies which discuss educational strategies for industry-specific knowledge, because this type of knowledge is indeed often acquired through experience working in a particular industry. It however, can be acquired at specialized educational institutions as well. For example, specialized courses linked to specific knowledge of product, service, process or the market can prepare students to enter a specific industry.

Education strategies for entrepreneurial human capital

Entrepreneurial human capital is the knowledge and skills necessary to inspire entrepreneurial activities. These skills are related to the creative process, which bring new growth, creativity skills, problem solving skills and opportunity identification skills are example of entrepreneurial human capital. Unlike other human capital, a consensus on the most effective educational strategy in this area has still not been reached. While what to teach, how to teach and where to teach are questions the ongoing debate (Garavan & O'Conneide, 1994), a group of researchers are still debating even whether entrepreneurial skills are, in fact, a personal trait which would mean they are in fact unteachable (Harkema & Schout, 2008; Krueger, 2003). Moreover, as pointed out by several researchers, Schumpeter's entrepreneurship theory does not address how to stimulate innovative entrepreneurship, so it is difficult to try to determine how to teach entrepreneurial skills even if it is possible (Wennekers & Thurik, 1999).

Although controversy still remains, more researchers now believe that entrepreneurs are “made” not “born (Krueger, 2003), which makes education and training useful to promote entrepreneurial behavior. Because “learning-by-doing” is the appropriate training for creative thinking, it is often recommended that education for entrepreneurial human capital be facilitated within practical settings, such as within business contexts. It is, however, important to note that educational settings for teaching and learning entrepreneurial human capital are not exclusive to business contexts; skills such as creativity or problem solving are useful and can be applied in any real-life setting.

For this reason, experiential learning seems to be a dominant education strategy for learning entrepreneurial human capital. Experiential learning leads to observations and reflection by applying general concepts; as a result, new contexts then become the basis for further learning. In the context of entrepreneurial learning, this process leads to business innovation. For example, in Italy, where higher education does not generally consider business and entrepreneurship as an academic degree area, entrepreneurial skills are considered to be developed through practice, i.e., through informal education, using experiential learning. Potential entrepreneurs are encouraged to explore the business world to the walk through “learning-by-doing” approach (Leo Paul, 1992).

Indeed, informal education is certainly one option for providing entrepreneurial human capital; however, it does not inform us as to strategic educational approaches, because it utilizes “experience” as a source of knowledge, and it is neither organized nor systematic in form. However, several researchers, including Durning (1990) and Ronstadt (1985), have presented some efforts to enhance this type of human capital within the formal or non-formal education system. According to Winslow, et. al. (1999), the teaching of entrepreneurial human capital

within a formal education structure should be more integrative, comprehensive, and holistic than traditional forms of curriculum, and sometimes needs to take into account students' psychological needs. The courses should be flexible and provide opportunities to produce innovative solutions under the ambiguity and risk (Winslow, et al., 1999).

During (1990) discussed a training activity at The University of Technology Twente in The Netherlands as an example. In order to stimulate students' ability to recognize opportunity directions, they emphasized the need for awareness of realistic market opportunities for different products. To promote this awareness and to prepare entrepreneurs for the flexibility necessary to adjust the market, they utilize exercises in contingency planning along with anticipated event or development (During, 1990). Another example for building entrepreneurial human capital in formal education is found in the Oslo Business School. According to Leo Paul (1992), they have attempted to analyze the entrepreneurial process using a more scientific based approach. They believe that analyzing the basic rules of the creative process and learning the personal and organizational aspects of entrepreneurial behavior may result in the development of entrepreneurial human capital.

As a specific suggestion for teaching entrepreneurial human capital at school, Ronstadt (1985) introduces fourteen courses⁸⁵ entrepreneurship that education should include. He proposes teaching them using both structured components (lecture, case discussions, class visitors) and unstructured components (venture evaluation, venture feasibility plans, networking groups) to teach facts and concepts of entrepreneurial "know-how" and "know-who."

⁸⁵ The fourteen courses are: 1) Fact Versus Myth About Entrepreneurship, 2) Reality Testing Skills, 3) Creativity Skills 4) Ambiguity Tolerance Skills and Attitudes, 5) Opportunity Identification Skills, 6) Venture Evaluation Skills, 7) Venture Startup-Action Skills, 8) Venture Strategy Skills, 9) Career Assessment Skills, 10) Environmental Assessment Skills, 11) Ethical Assessment Skills, 12) Deal-making Skills, 13) Contacts-Networking Skills. 14) Harvesting Skills (Ronstadt, 1985).

One of the noteworthy integral approaches of “learning by doing” is creating a school-based enterprise. Students can then acquire skills under the supervision of established practitioners. This is especially effective for those in informal economies or developing economies, because this type of educational setting can provide incentives to students to go to school without the fear that schooling will deprive them of the means for earning a living (Singh, 2000). Since “learning by doing” allows learner to experience the actual problem, it can facilitate the reflective learning that improves the relevance of education. This is a major strength of this type of education.

Cognitive theories related to entrepreneurship and educational strategy

As mentioned in the previous entrepreneurial human capital section, there is very little theory to guide us in the study of entrepreneurial learning and teaching, even though the study of entrepreneurship cries out for extensive theory-driven research (Krueger, 2003). Indeed, the education strategies I have presented so far in this section are part of the ongoing debates; however, they are not necessarily endorsed by learning theories. Nonetheless, some cognitive studies in entrepreneurship have provided one of the few theoretical explanations of how education may positively affect promoting entrepreneurial activities.

Several researchers have studied the relationship between education and entrepreneurship from a cognitive perspective (During, 1990; Krueger, 2003; Peterman & Kennedy, 2003). These researchers used the cognitive states of entrepreneurs to predict entrepreneurial activities. For example, During (1990) reported that positive perceptions gained from an entrepreneurship course contributed to increasing participants’ confidence level; subsequently, this increase in confidence level led to further entrepreneurial activity regardless of actual gain of any human capital. If indeed there is a relationship between cognitive state and entrepreneurial activities, as

found in During's study, then cognitive educational theories can provide us with useful insights about teaching and learning in order to promote positive outcomes of entrepreneurial activities.

Social learning theory⁸⁶ is one of the few theories linking entrepreneurial skills and learning methods. According to Krueger (2003), "Albert Bandura's Social learning theory suggests an iterative process by which deeply held beliefs and attitudes co-evolve as learner, actively acquire, process, and organize new knowledge" (p. 130). Since it argues that motivation and one's behavior are greatly influenced by self-reactive behavior, social learning should be effective when training students in self-management skills. In other words, entrepreneurial motivation and/or behavior can be promoted by providing an environment in which students can pursue their initiative. This may be a base of experiential learning.

Related to the social learning theory, two paradigms in education should be noted: 1) fact-based learning and 2) constructivist learning, which is based on social learning theory (Harkema & Schout, 2008; Krueger, 2003). Fact-based learning mainly focuses on transmission of knowledge; therefore, students learn answers by such methods as rote-memorization or drilling, and, (Harkema & Schout, 2008). The constructivist method, on the other hand, focuses on the mental process that constructs meaning through a process of discovery and problem-solving; therefore, the cognition is regarded as situated; therefore, students learn from experience and build knowledge on one's own (Harkema & Schout, 2008). This process is more similar to how humans actually learn, i.e., one learns by trying, making mistakes, and fixing them within a social setting. Since motivation to be an entrepreneur is the central factor in business creation (Rodríguez & Santos, 2009), the constructivist method, which is based on social learning theory,

⁸⁶ The theory argues that people can be taught to exercise control over their behavior, by arranging environmental contingencies, establishing specific goals, and producing consequences for their actions (Frayne & Latham, 1987, p. 387)

is recommended and used more frequently in entrepreneurial training and is claimed to be the most popular and successful technique (Krueger, 2003). Harkema further claims that “learning in a classroom setting when it comes to entrepreneurship is far from ideal (p. 514)” (Harkema & Schout, 2008).

Another theory related to entrepreneurial thinking is self-efficacy theory. Self-efficacy theory⁸⁷ argues that one needs to not only acquire skills necessary for entrepreneurship, but also need to believe in the acquired skills to be successful (Krueger, 2003), because merely possessing the correct skills is not enough to fundamentally change how people think. Self-efficacy is central to realizing intentions with respect to entrepreneurship and it specifically influences the perceived feasibility of starting a business (Peterman & Kennedy, 2003). In addition, one study found that perceived efficacy determines one’s perceived occupational self-efficacy, which in turn directs occupational interest (Bandura, et al., 2001). Although researchers have found a correlation between self-efficacy and entrepreneurs or their activities, there is no suggestion for an educational pedagogy based on this theory, i.e., how to increase self-efficacy for self-employment using education, in the literature I explored. Other theories, such as the image theory⁸⁸ or the reward-cost orientation theory⁸⁹ also explain how certain

⁸⁷ Self-efficacy theory is the core of Bandura’s social cognitive theory. In social cognitive theory, self-regulation of motivation and performance attainment is governed by several self-regulatory mechanisms that operate together. One of the mechanisms is a process which involves working through people’s belief in their personal efficacy. This theory argues that one must possess not only the required skills but also a resilient self-belief in one’s capability to exercise control over an event in order to successfully accomplish goals (Bandura, et al., 2001; Wood & Bandura, 1989).

⁸⁸ The image theory argues that a decision maker envisions the “image” of the intended behavior or goal, then they can perceive how to get there, and that entrepreneurs tend to have this vision (Krueger, 2003).

⁸⁹ The reward-cost orientation theory argues that people process “rewards=hope” and “costs=fear” sequentially, and optimists, which have a positive relation to entrepreneurs, process the positive information first, and then adjust their thoughts according to negative information (Bandura, et al., 2001; Krueger, 2003).

cognitions is related to entrepreneurship; however, no researchers of these theories discussed how to educate people in those abilities or skills related to entrepreneurship. This again indicates the lack of education debates in the entrepreneurship/self-employment research.

Education and social capital

Educational strategies to enhance social capital are not obvious. Unlike physical or human capital, the investment in social capital does not benefit primarily to the person who makes the efforts; instead, the benefit goes to all the persons in the structure; therefore, such efforts, i.e., investment to improve social capital, usually won't take place (Coleman, 1988). Coleman explains that most forms of social capital are created or destroyed as by-products of other activities. For example, storing social ties among ethnic immigrants are made probably not a result of their efforts, but it is probably a consequence of their necessity for supportive system. For this reason, social capital evolves beyond one's intentions (Coleman, 1988). There are, indeed, some suggestions for building social capital, such as to organize the environment so that it makes easier to build social capital; e.g., to build a stable market and a legal system to increase trust (Acs & Virgill, 2010); however, these are usually outside of education policies

Having noted the ambiguity of the causal relationship between social capital and education, there, indeed, is some relationship between them. In fact, Putman (2000) claims that education is the most important predictor of social engagement, i.e., the density of the social network. This relationship is actually reciprocal: education has an effect on an individual's ability to exploit existing social capital, and social capital has an effect on the education process. World Bank report supports this claim as well; while education can improve a person's functioning as a social member, social capital also improves education (World Bank, 2003a).

Two types of social capital are related in the self-employment context: structural social capital and cognitive social capital (Lancee, 2010; Rodríguez & Santos, 2009). Structural social capital is a behavioral component of social capital; more specifically, it encompasses the social organizations, rules, procedures, precedents and social networks which lead to cooperation and collective action in order to obtain mutual benefit (Lancee, 2010; Rodríguez & Santos, 2009). In contrast, cognitive social capital is a mental process where ideas are “reinforced by culture and ideology, generating shared norms, values, attitudes, beliefs and trust” (Rodríguez & Santos, 2009, p. 50). It is related one’s core values such as perceptions of support and trust which contribute to the exchange of resource (Lancee, 2010). In the next section, I discuss these two types of social capital and their relationship to education, i.e., how (structural) social capital can be affected by education and then, how education can be affected by (cognitive) social capital in turn.

From education to social capital (Structural social capital)

First, the most obvious connection between education and social capital is the fact that education, including formal, non-formal, and informal, enhances the ability to exploit one’s social capital by adding knowledge to individuals (Davidsson & Honig, 2003). Education can positively influence various skills in order to enlarge resources for business operations. Trainings can range from basic social skills, such as how to dress properly or be accepted as a member, to relatively professional ones, such as public speaking or writing grant applications. This kind of education and training is aimed at giving access to or exploit existing structural social capital to benefit from it. For example, Stam and Wennberg (2009) found that investing in R&D, which is a specific human capital, increased the level of inter-firm alliance. In addition, education which enhances collective assets such as political stability, community

networking and/or economic performance is particularly desired, since these collective assets are associated each other⁹⁰ (McClenaghan, 2000).

From social capital to education (Cognitive social capital)

On the other hand, social capital can in turn influence one's education process. As discussed previously, cognitive social capital is social ties which contribute to one's socialization process. It is subjective and intangible, such as values which are transmitted from parents to children at home, and it stimulates collective action (Rodríguez & Santos, 2009). Since the value one place on education is embedded and resulted from cognitive social capital from childhood, how one accumulates human capital can be heavily influence by this type of social capital. In fact, Putnam (2000) found a link between social capital and school performance; he claimed that without strong social capital, variables such as SES or parental education level do not make difference in child's school performance. Colman (1988) also claims that parental educational level can be irrelevant to child's school performance, if parents are not an important part of their children's lives. Therefore, the quality of social capital is critical in a child's upbringing. Putnam (2000) claims that "the correlation between high social capital and positive child development is as close to perfect as social scientists ever find in data analysis of this sort" (p. 296). In other words, child development, including both formal and informal, is powerfully shaped by cognitive social capital (Putnam, 2000).

Summary

⁹⁰ McClenaghan claimed that there are the positive association among 'collective asset', such as community identification, civic participation, community network, political stability and economic performance; therefore, it is important to develop and support the education system to enhance the ability these collective assets (McClenaghan, 2000).

In this section, I explored education's role related to human and social capital within the context of entrepreneurship and self-employment. As for human capital, while formal or non-formal education appeared to be appropriate for basic and specific human capital, informal education, i.e., experiential education appeared to be appropriate for entrepreneurial human capital in general. However, in a specific context, such as in informal economy, education strategy needs to be feasible for the target population. Some of the few learning theories which connect education and entrepreneurship are found in cognitive studies. Constructivist learning, which is based on social learning theory, provides some rationale for how entrepreneurial skills can be built. This theory and method seems to offer a base for experiential learning, which is often advocated as an effective learning setting.

With respect to social capital, it is not clear how educational investment can directly contribute to build strong or effective social capital for self-employment, because most social capital is formed not as a result of intentional acts, but as a by-product of other activities (Coleman, 1988). However, there is a reciprocal relationship between education and social capital in some respects. While education can build the ability to exploit existing social capital, social capital can provide a platform to build core values, which in turn affects one's educational outcomes.

4.2.1.4 Summary of the Meta-data-analysis

In this section, I attempted to address my supporting research questions related to human capital and social capital. I also investigated educational strategies in order to understand the education role in entrepreneurial and self-employment process. By organizing selected studies that were identified from the map I created (Map1-HC, Map1-SC), I first analyzed general climates of research field from different perspectives, namely their disciplines, contexts and types of

research. Then I also discussed several features about human capital and social capital. Three types of human capital (basic, specific and entrepreneurial human capital), and two functions of social capital (business advantage and socialization) are identified in this study. Subsequently, I discussed education strategies which related to each human capital and social capital function in order to find education's role in entrepreneurial and self-employment process. While, structured education, i.e., formal and non-formal education, seems appropriate for basic and specific human capital, unstructured education, i.e., informal education, appears to be more appropriate for entrepreneurial human capital. The direct effect of education on social capital remains unclear; however, there is a reciprocal relationship between education and social capital. While education can build the ability to exploit existing social capital, social capital can provide a platform to build core values, which in turn affects educational outcomes.

4.2.2 Meta-synthesis from the Findings

In this section, I summarize the findings from the meta-analysis and address my primary research questions using a form of meta-synthesis, the second step of a meta-study. Meta-synthesis is the creation of a new interpretation of phenomenon that accounts for the data studied by others (Paterson, et al., 2001). It is neither a systematic review of literature, coding for research findings, nor a summing of research outcomes or concept analysis (Finfgeld, 2003). It is rather “the bringing together and breaking down of findings, examining them, discovering the essential features, and, in some way, combining phenomena into a transformed whole” (Schreiber, Crooks, & Stern, 1997, p. 314). The purpose for performing a meta-study is to build theoretical approaches that extend what is currently possible, rather than merely adding new ideas to a collection (Paterson, et al., 2001); therefore, findings from meta-synthesis have the potential to

enhance future research. The goal of meta-synthesis is to produce a new integrative interpretation of findings which is more substantial than those individual data studies (Finfgeld, 2003).

In addition to textual descriptions, I include a visual map to show possible relationships among human capital, social capital and education for self-employment. This conceptual map allows us to see differences in each category, thereby allowing us to do a relative comparison of the phenomenon (Paulston, 1993). The application of social cartography to the result of meta-synthesis will help me to draw further implication. In order to identify the role education plays in entrepreneurships and self-employment process, I asked following primary research questions.

Primary Research Question:

What are the current debates related to the roles of education in the development of entrepreneurship skills that lead to both self-employment and business creation?

The challenge to synthesize the findings from previous section was to provide a somewhat integrated picture of how human and social capital might be linked to the self-employment process. However, I was able to do so by defining a framework for synthesis—the stages of business creation and management. I used this framework to link each type of human and social capital with a role in education. I chose the time line of the self-employment process as the framework because it is the natural flow of a business' development. Timeline also enable to group learners based on the learner's stages in the entrepreneurial and self-employment process; therefore, policy implications can be made to targeted group. In addition, a timeline is one way to frame mapping (Rolland G. Paulston, 2000); therefore, this is an appropriate framework from the social cartography perspective as well. In this section, I first discuss this

framework; then, I discuss how human capital, social capital and educational strategies might fit into this framework.

4.2.2.1 Synthesis Framework—Stages of Business Creation and Management

For this study, I decided to use the business creation and self-employment stages as a framing concept for synthesis. I was motivated to use this framing concept after examining Davidsson and Honig (2003) and Iygun and Owen's (1997) findings; they found that although human capital is necessary throughout the business creation process, different types of human capital might be critical at different stages of business creation. I choose the term "business creation" or "business establishment," instead of "firm creation" or "venture entry," because not all businesses take legalized forms, especially those in the developing regions and/or in the informal economy. In this study, "business establishment" infers the point when entering the market, i.e., the time when new business starts to work and begins to yield first sales as a part of regular business activities. For this study, the timeline needed to be extended to a point after "business establishment" in order to analyze productive self-employment. This conceptual timeline, therefore, includes the stages before and after business establishment. The assumption of this model is that the businesses newly established by self-employed individuals are the result of their own entrepreneurial activities. Although I am aware of the fact that not all entrepreneurs are or become business owners, and conversely, that not all business owners actually undertake entrepreneurial activities, I have simplified the sequence of business creation in order to map and understand the relationships behind human/social capital and education.

First, in order to be self-employed, one must have business ideas and undergo preparation for business launching. The period until one establishes a business entity I call the "entrepreneurial initiative." After successful entrepreneurial planning, one starts a business and

participates in the labor market as a self-employed professional. This period, an entrepreneur running his/her business, I call the “self-employment initiative.” In my model, these two initiatives are directly connected and sequential.

In the entrepreneurial initiative, there are two stages: the conception stage and the gestation stage (Polansky, 2010; Reynolds & White, 1997; Rodríguez & Santos, 2009). The conception stage is the time when one initiates the process of business creation. The gestation stage starts when one transforms his/her intentions to specific decisions and action for creation of the business; this stage ends when business is established, i.e., the new business opens and begins selling its products (Rodríguez & Santos, 2009). After a successful gestation stage, the entrepreneur’s relationship to his business becomes “management” in order to continue the business operation. Figure 23 is the visualized map which shows the relationships among these initiatives and stages.

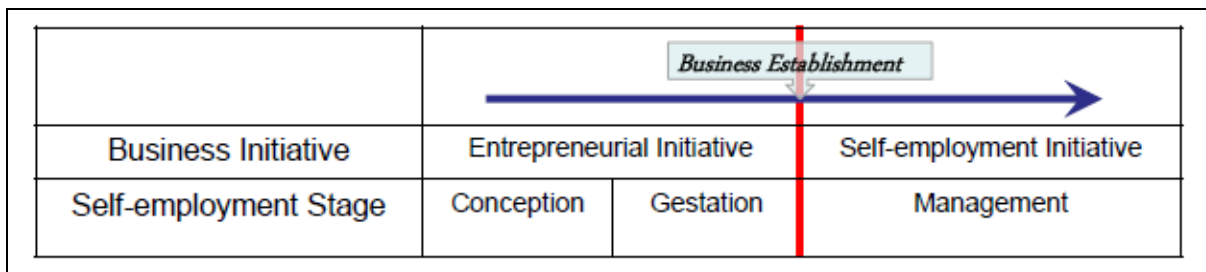


Figure 23: Initiative Phases and Stages of Business Creation and Self-employment

4.2.2.2 Human Capital and Educational Environment in the Business Creation Process

In this section, I attempt to synthesize the three types of human capital discussed in the meta-data analysis section within the framework of business creation and the self-employment process; recall that these three types are basic human capital, specific human capital, and entrepreneurial human capital⁹¹. Based on the pieces of findings from the data-studies, I attempted to put these types of human capital and educational environment into business creation and the self-employment process. As a result, several possible propositions have emerged.

***Proposition1:** While basic human capital is required throughout the process of business creation and management, the proportions of entrepreneurial and specific human capital required shifts as business creation progresses.*

Frist, basic human capital appears to be required throughout a business creation and management process to enable the business to function as well as to accumulate new knowledge. The investment in this type of human capital therefore, should be made before entrepreneurial activities and it should be maintained throughout the process. Although not many studies specifically discuss the relationship between basic human capital and the business creation process or management, I make this claim based on the fact that, these literature do point out that more basic human capital enables entrepreneurs to access and absorb resources (Singh, 2000; Wiklund & Shepherd, 2008). With respect to timeline, Davidsson and Honig (2003) found that general formal education, where basic human capital is typically accumulated, has little to do

⁹¹ **Basic human capital** refers to core skills and knowledge which are necessary for functioning not only within the business context but any social context, such as literacy or basic social skills. **Specific human capital** refers to skills and knowledge which are helpful for entrepreneurial activities but may not have application outside of the business context, such as management skills or industrial knowledge. **Entrepreneurial human capital** refers to skills and knowledge which inspire entrepreneurial activities, such as creativity or resourcefulness.

with engaging in entrepreneurial activities during the entrepreneurial initiative phase. This result indicates that there is no evidence that basic education increase entrepreneurial productivity in the early stage; however, there were also no studies suggesting that it increase or decrease productivity in the self-employment initiative period as well. Since no evidence was found related to its effectiveness in any particular initiative phase or stage, I assume that basic human capital is required throughout the process.

At the conception stage, potential entrepreneurs begin to conceptualize possible business ideas. In this stage, entrepreneurial human capital, which inspires the creative process, are probably more important than specific human capital. With respect to education, entrepreneurial human capital is often accumulated in an experiential learning environment. In fact, Davidsson and Honig's (2003) empirical study supports the idea that un-coded tacit knowledge gained from experience predicts engagement of entrepreneurial activities during the entrepreneurial initiative. In contrast, it seems that overinvestment in formal education at the conception stage can discourage entrepreneurial activities (Davidsson & Honig, 2003). Sluis et al.'s study (2005) who mostly looked at the developing regions support Davidsson's findings claiming that a higher level of education decreases the likelihood of entrepreneurship since people tend to seek safe employment options as opposed to creating a business of their own. This may suggest that providing a large amount of fact-based knowledge at the conception stage may prevent potential entrepreneurs from emerging.

As an entrepreneur moves further into establishing a business, more idiosyncratic resources and information are needed. In other words, education targeted to gain specific knowledge may become more helpful; in fact, such specific knowledge can act as a predictor for entrepreneurial activities in the later stage (Davidsson & Honig, 2003). This fact may indicate

that specific human capital, which can often be acquired from formal or non-formal education, becomes more and more important as a business approaches the management stage.

From these claims, it can be inferred that knowledge from experiential learning, including informal education, may play a more significant role in the earlier stages of business creation, while knowledge from formal education assists entrepreneurs in later phases, closer to the completion of business creation. As for the management initiative period, specific human capital, such as managerial ability enhanced through formal education, continues to assist non-nascent entrepreneurs (Sluis, et al., 2005). Figure 24 provides a representation of the transition in importance different types of human capital undergo. Specifically, it shows which types of human capital and educational environment may play an important role in each stage along the business creation and self-employment timeline. The figure also shows the study numbers which contributed to this conceptualization. The studies which do not have study number, i.e., were not on the Map1, are denoted using author(s) and year.

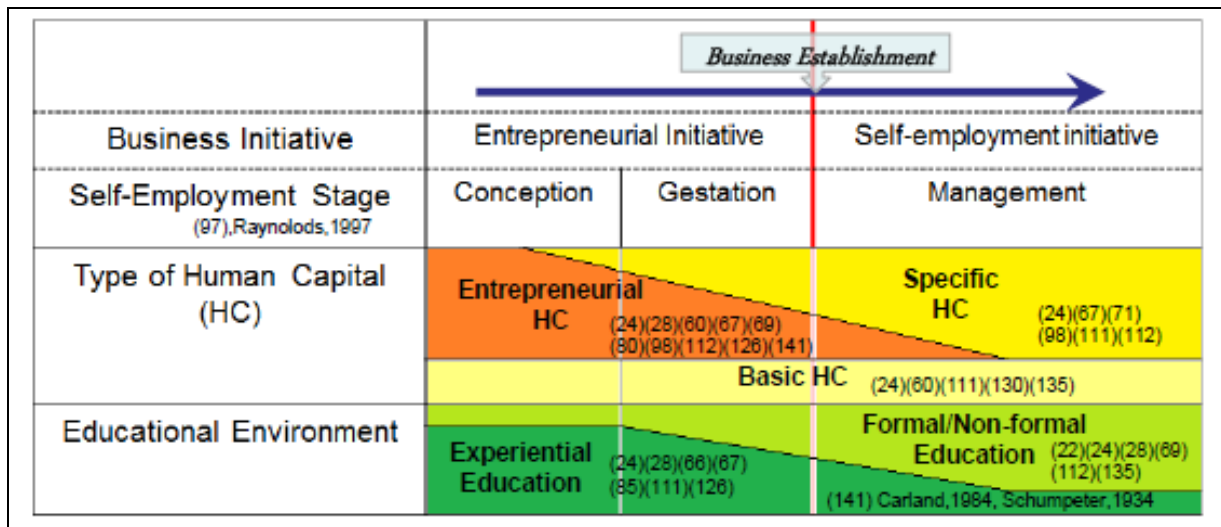


Figure 24: Transition of Types of Human Capital in the Business Creation Process (Part 1)

As shown in Figure 24, while basic human capital is consistently required throughout the business creation process, entrepreneurial human capital and specific human capital have a change in weight with respect to their importance. Entrepreneurial human capital is the dominant knowledge necessary to promote entrepreneurial activities; however, as the business creation process progress, i.e., as business creation has become more real, specific human capital plays more important role.

As for education environment, experiential education, including informal education, is a dominant environment to effectively accumulate entrepreneurial human capital; however, the formal education may be still necessary for accumulating basic and some specific human capital, even at the early stage of the job creation. Because specific human capital is taught effectively in formal or non-formal education, the proportion increases as business creation progresses; however, experiential educational also continue to be present in the later stage because entrepreneurs have to remain innovative to safeguard to continuity of their business even after launching the business(Carland, et al., 1984; Harkema & Schout, 2008; Schumpeter, 1934). The summary of Proposition 1 is as following:

- a) Basic human capital may be consistently required throughout the process.
- b) Entrepreneurial human capital and experiential education may play a more important role at the beginning of job creation and self-employment process, and their necessity may decrease in the later stages.
- c) Specific human capital and formal/non-formal educational environment may start off less important but their role then may increase later in the stage.
- d) Even in the earlier stages, formal/non-formal education can still be beneficial for accumulating basic human capital. Continuing with experiential education may be beneficial to maintain competitive growth.

Figure 24 presented above is a basic model of this transition; however I would like to add another layer of concepts to this model based on findings from Soriano's study. Soriano examined how management skills and industry specific knowledge impact the profitability and productivity of the created firm (Soriano & Castrogiovann, 2010). His findings led to proposition 2.

Proposition2: The importance of specific human capital which is related to business planning and management shifts as business creation and self-employment initiative progress.

Soriano found that business management skills contributed to the profitability and productivity of the firm only when it was acquired after the business was already functioning. He theorizes that this happens because management theories and concepts are hard to learn in the abstract; therefore, students gain such knowledge more effectively when they are actually running a business (Soriano & Castrogiovann, 2010).

In contrast, industry specific knowledge contributed only when it was acquired before starting the business. The reason might be that while this type of knowledge is beneficial for planning, discovery of such knowledge later in the process can be too late for entrepreneurs to shift the direction of their business (Soriano & Castrogiovann, 2010).

Although Soriano examined only industry-specific knowledge, his findings seem to be applicable to other specific human capital related to the planning process; for example, a mastery of a particular machine for processing (technical vocational skills) may increase the capacity of the business operations; consequently, it may change the investment in infrastructure of the

business. This finding is important to creating sustainable businesses as well as to planning effective educational programs. Figure 25 overlays this concept onto the previous figure.

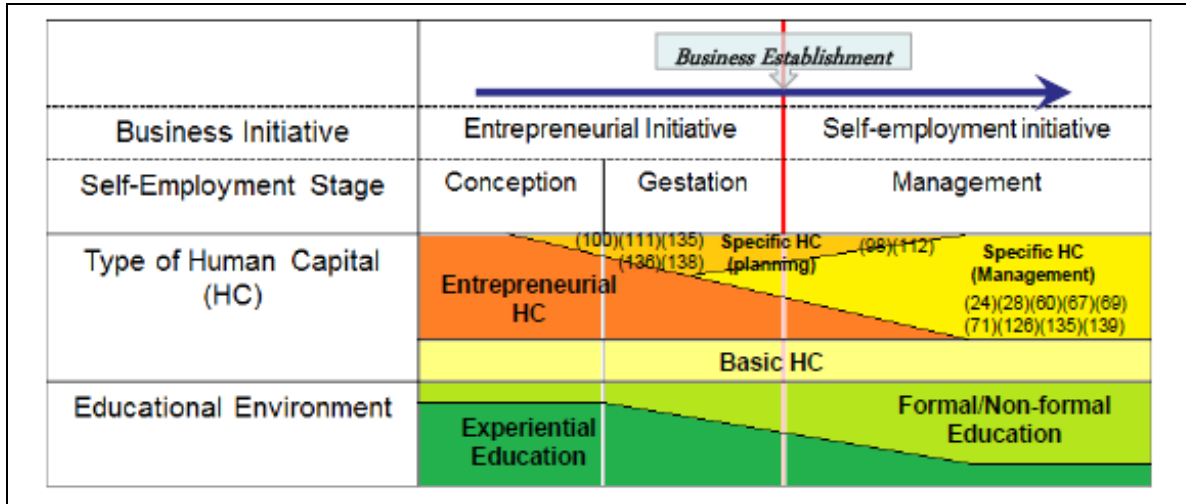


Figure 25: Transition of Types of Human Capital in the Business Creation Process (Part 2)

As discussed previously, management skills and knowledge prepare entrepreneurs to plan, e.g., industry-specific knowledge, are both specific human capital; therefore, they both are embedded in the “specific human capital” category. Figure 25 shows how specific human capital related to planning and management may shift their importance within the specific human capital zone.

Some authors specified his or her specific human capital is either related to planning or management; therefore those studies are placed in the corresponding place.

In summary, as Soriano found, the knowledge for planning is useful before launching the business, and the usefulness may decrease after launching the business. Management skills can be more beneficial once entrepreneurs have their own situation to relate—what information to gain and what problems to solve. Therefore, Proposition 2 can be summarized as follows:

- a) Within specific human capital, the skills related to planning may be more important in the earlier stage, especially before launching a business.
- b) Within specific human capital, the skills related to management may become more important after launching the business.

4.2.2.3 Educational Strategies in Business Creation Process

In this subsection, I attempt to integrate the additional layer of the concept educational strategies. So far, the literature I reviewed has suggested some relationships between educational environments and types of human capital; formal/non-formal education for basic human capital, specialized education in formal/non-formal education for specific human capital, and experiential education for entrepreneurial human capital. The question is how do we teach these types of human capital within these learning environments?

Some of the few learning theories which connect education and entrepreneurship are found in cognitive studies. The literature appears to suggest that social learning, which seems to offer a base for experiential learning, is appropriate and necessary both during entrepreneurial activities and during the self-employment period. The reason is because self-employed individuals must maintain the energy and motivation necessary to remain economically proactive, unlike employed individuals, who merely perform tasks as required by their employer. According to Krueger (2003), motivation is stimulated by their own proactive behavior, the core of social learning theory. Therefore, in order to incorporate educational strategies to this map, I decided to focus on the two learning/teaching methods: constructivist learning which is based on the social learning theory and the fact-based learning method as a contrasted approach.

Proposition 3: *Along with the shift of the educational environment, constructivist learning is appropriate in the early stages of business creation and self-employment process; however, as entrepreneurs require more specific*

knowledge as the process progress, fact-based learning may become more useful.

As mentioned above, however, there is very little knowledge to allow a concrete connection to be made between teaching/learning theory and entrepreneurship development. Neither constructivist nor the fact-based method are directly connected to the timeline of business creation and management; therefore, I had to revert to what practice suggests, just as occurred with business management education in the 1930's⁹²(Locke, 1993). In this process, I attempt to integrate these educational method into the map based on the connection to the types of human capital and/or educational environment.

Constructivist learning is a method based on social learning theory; therefore, it uses experience to build knowledge (Krueger, 2003). As a result, constructivist learning often considered to be suitable for teaching entrepreneurial human capital. A number of authors (During, 1990; Leo Paul, 1992; Ronstadt, 1985; Singh, 2000; Winslow, et al., 1999) advocate social learning techniques to enhance entrepreneurial human capital

In contrast, the fact-based learning method involves teaching learning “answers” by such methods as memorization. Although I did not find a theory which explains why this method might be effective in the context of entrepreneurship development, it is probably safe to say it is a traditional form of educational method. Although many specific skills can be learned by experience, some specific knowledge, such as management theories or knowledge about a specific market can be effectively learned using fact-based method. For example, a number of

⁹² According to Locke (1993), when business management education was still new and scientific based theories were still not available in the early twentieth century, scholars took the best business practice as an example and analyzed what they could do in a real situation.

authors advocate to utilizing university education to enhance specific human capital (Charney & Libecap, 2000; Davidsson & Honig, 2003; Li, et al., 2003; McGibbon, et al., 2009; Ronstadt, 1985; Schramm, 2005; Soriano & Castrogiovann, 2010; Winslow, et al., 1999). This implies that the fact-based method may be suitable within the formal or non-formal education environment. Figure 26 shows which specific methods might be effective in each specific stage in business creation and management process, and how they are linked to types of human capital and educational environments.

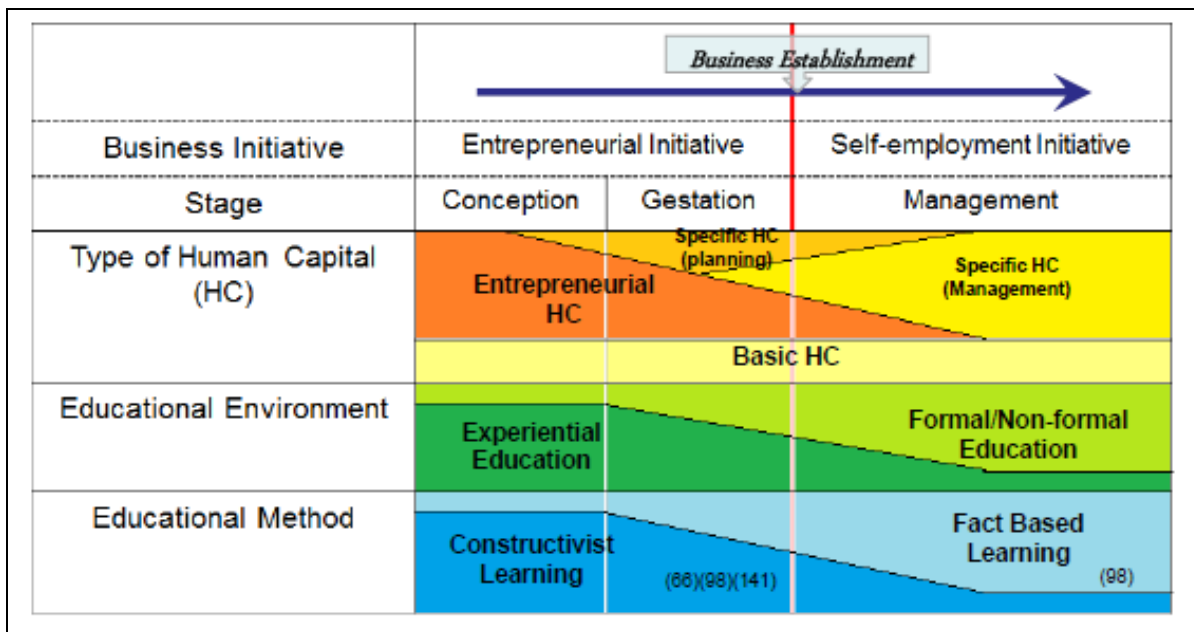


Figure 26: Transition of Types of Educational Method in the Business Creation Process

The constructivist learning method would be the dominant method to effectively learn necessary human capital in the early stage although some space is left for fact-based learning for basic and specific human capital. As the business creation process progresses, fact-based learning may become more useful; therefore, its importance increases; however, the constructivist learning

method continues to be present throughout the process, because social learning is essential for entrepreneurs. Notice that the educational method shift is parallel to that of educational environment. This possible finding is summarized as:

- a) The constructivist method is more important to teach entrepreneurial human capital; however, the fact-based method may become more important as specific human capital becomes required.
- b) The shift curve of educational method is parallel to that of educational environment.

4.2.2.4 Social Capital and Self-employment

This deliberation process leads to the integration of another layer of concepts—the relationship between social capital and business creation and self-employment. In this section, I attempt to integrate two types of social capital related to self-employment discussed earlier: cognitive social capital and structural social capital (Lancee, 2010; Rodríguez & Santos, 2009). A possible proposition has emerged regarding social capital.

***Proposition 4:** Cognitive social capital plays a more important role at the very early stage of the entrepreneurial activities; however, structural social capital becomes more important as business launching becomes more realistic.*

First, cognitive social capital is a network which forms a perception of support, reciprocity and trust; therefore, it influences one's value system, including how one thinks about the world of work, e.g. one's attitude toward self-employment (Lancee, 2010; Rodríguez & Santos, 2009). For this reason, it can be inferred that this social capital is closely related to "socialization." For instance, Bandura, et. al. (2001) found that parental expectations and aspirations influence children's occupational interest. Caspi, et. al. (1998) also found parents influence children's occupational perceptions. Further, Dunn & Holtz-Eakin (2000) found significant differences

between sons of those who were self-employed and never self-employed with respect to the occupational choices of self-employment. Elaborating on from this perspective, cognitive social capital plays an important role with respect to one's self-efficacy to be self-employed, and in turn ones' occupational choice. For this reason, cognitive social capital may be significant in the earlier stage of business creation rather than later. In fact, the impact of cognitive social capital may be existed even before entrepreneurial activities start.

Second, structural social capital is the social network which connects members of a network; therefore, it allows entrepreneurs to access information and resources. Lancee (2010) found that only structural social capital is associated with employment outcomes and income; therefore, it can be inferred that structural social capital is associated with the function of "business advantage."

Moving towards the end of the conception stage in the model, potential entrepreneurs start to recognize the importance of structural social capital and seek potential resources in their networks. At the beginning of the gestation stage, the impact of cognitive social capital is present to a considerable degree, and it probably remain throughout the entrepreneur's professional life in some degree as a personal value; however, the importance and influence of structural social capital increases as the business creation process moves toward establishing a business. In other words, the impact of social capital may shift from the basis where potential entrepreneurs develop their beliefs to a social basis where they seek available resources to actualize their beliefs. This possibility was also supported by Davidsson & Honig's (2003) empirical study. Business network, which would be categorized as structural social capital, was found to be a strong predictor of rapid and frequent entrepreneurial activities in gestation stage.

Figure 27 includes how social capital may be involved in the business creation process along with human capital and education.

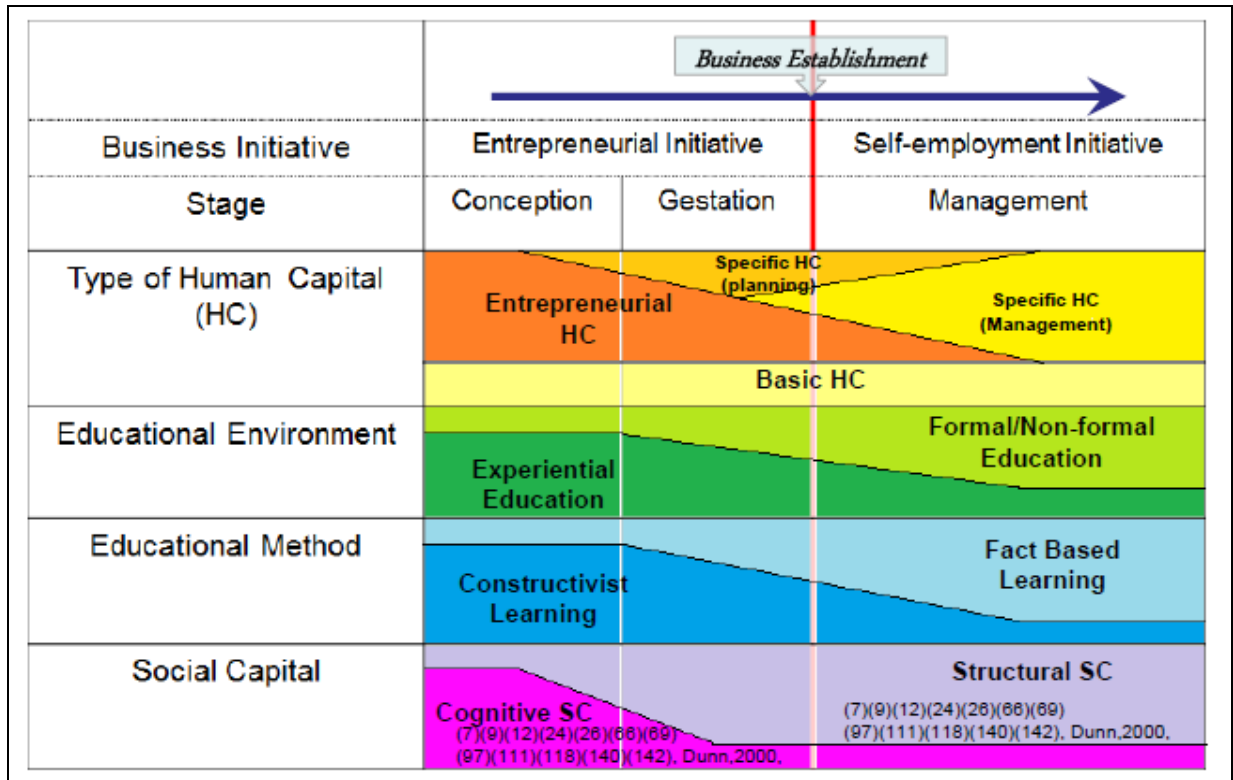


Figure 27: Transition of Types of Social Capital in the Business Creation Process

As seen in Figure 27, cognitive social capital may have a stronger impact on the individual entrepreneur at the beginning stage; then, as the entrepreneur starts thinking about creating a business, structural social capital may become more important to actualize the plan. Therefore, the summary of proposition 4 can be noted as the following:

- a) Since cognitive social capital is related to one’s professional values, it would have been important even before thinking about creating a business.

- b) Since structural social capital is associated with business advantage, it becomes more important to be able to exploit one's social network as business creation process moves toward establishing business.

Figure 28 is a map including all the information synthesized: types of human capital, educational environments and strategies and social capital within the timeline of entrepreneurial and self-employment initiatives. It also notes the numbers of all the studies which contributed to the conceptualization.

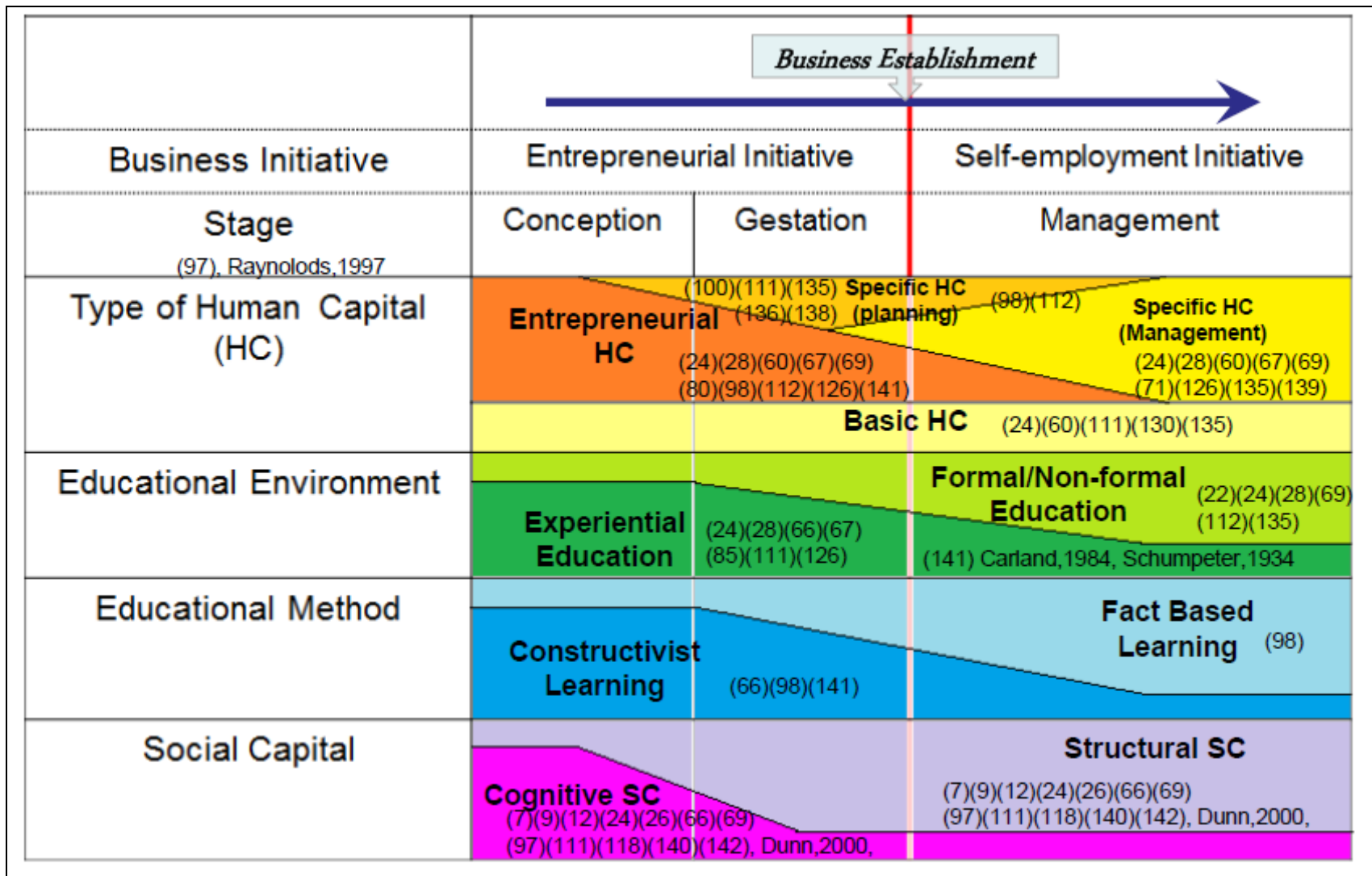


Figure 28: Transition of Types of Human Capital and its Educational Strategies and Types of Social Capital in the Business Creation Process

4.2.3 Supporting Evidence

The map I created as a result of the meta-synthesis is an effort to conceptualize how education can effectively contribute to the entrepreneurial education field. The model was created to capture aggregated knowledge to make some sense of individual knowledge pieces. Further research is necessary to examine whether this model indeed articulates some truth about how to structure an effective entrepreneurial education program; however, some supporting evidence for this model does already exist. The entrepreneurial education program at the Hague University of Professional Education in Netherland was designed based on similar stages of self-employment initiative. The program recognizes two different phases in the early stages of the process, a start-up phase, which is an invention and creation phase, and an innovation phase. Harkema and Schout claim that these phases have a great impact on the managerial competence of entrepreneurs in a later stage (Harkema & Schout, 2008). Students work in separate area of focus on their ideas: 1) they perform a feasibility study for innovative concept or idea, 2) they create a business plan for start-up, and 3) they create an innovative contingency plan for an existing organization. These three focus areas overlap, as seen in Figure 29.

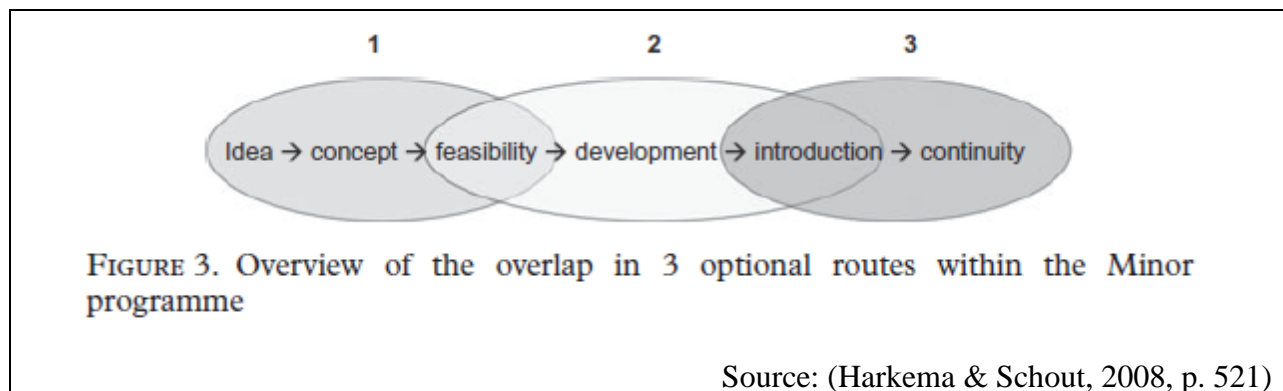


Figure 29: Three EE Programs in Hague University of Professional Education

The program is designed for students who choose to focus on the first stage to explore innovation and translating ideas into technological, commercial and organizational specification in the stage. The students who chose to focus in the middle stage analyze the business process method or a market to implement, and students who chose to focus on the third stage anticipate developments and analyze risks and opportunity for their business and keep innovating to improve their business (Harkema & Schout, 2008). What they teach in the first two stages is somewhat similar to my suggested model. Since the first stage focuses on innovation and the creative process, it seems they are building entrepreneurial human capital by actually exercising business creation. As the business idea develops, they introduce an analytical component of business process or product market, i.e., development of specific human capital required to prepare for business launching and management. Once a business has been launched, students in the last stage exercise the innovating activities necessary to running a competitive business. The students in this program only choose one stage, depending on their individual situation and interest. However, if one completed all 3 stages sequentially, the proportion of training might gradually

shift from entrepreneurial human capital then specific human capital for preparation, and finally specific human capital for management, because three stages are overlapping each other. This may suggest some supporting evidence of the model.

Again, the map created for this study does not claim any absolute truth, but rather is provided to act as the starting point for discussion. The example presented in this section can act as only partial supporting evidence to provide some legitimacy of the synthesized map.

4.2.4 Summary

Throughout the meta-study process, I found that the definition of human capital is used quite broadly in the entrepreneurship and self-employment literature. More specifically, the definitions and use and their interpretation varies depending on the researcher. After coding the use of “human capital” in the literature related to education, entrepreneurship and self-employment, three main features emerged: 1) basic human capital, 2) specific human capital, and 3) entrepreneurial human capital. Analysis of the social capital literature also revealed two types of social capital related to self-employment and education: a) cognitive social capital and b) structural social capital.

In order to understand the relationship between education and these types of human capital and social capital, I used a timeline of business creation and management of the business as a framework. I attempted to synthesize types of human and social capital and associated types of education into the time line of the business creation and self-employment. I created a map that shows basic human capital is constantly necessary throughout the process; however, the importance of specific human capital and entrepreneurial capital shift along with the progress of business creation. The educational environment and educational methods also shift parallel with

the types of human capital. The impact of the social capital also may shift within the business creation and self-employment process. The cognitive social capital, the social environment which builds one's values and belief system, has more of an impact in the earlier stage to determine entrepreneurial activities. Meanwhile structural social capital, the social environments which provide business opportunities, may become more important in the later phase of this process.

5.0 DISCUSSION AND RECOMMENDATIONS

The main purpose of this study is to increase understanding of the role of human capital and social capital in the job creation process. A better understanding of the role of each can inform entrepreneurial education policies and programs in the future so that education can better serve to enhance entrepreneur's capacity, in turn, helping them create their own jobs. A challenge to conducting this investigation was the fact that there exists no comprehensive discussion related to the development of entrepreneurship, only pieces of knowledge scattered throughout the research field. Moreover, studies in different discourses, such as business, economics, and psychology, hardly look at factors outside their own discourse (Djankov, et al., 2006). This made it difficult to capture a larger picture, and so in turn, difficult to apply this knowledge for enhancement of education policy. Therefore, I first interpreted the meanings of 'human capital' in each context by examining the research literature which used the different disciplinary discourses. I also explored social capital literature. Then, I organized the debates related to the role of human and social capital in successful business creation and self-employment. The organization and subsequent analysis of this information provided a picture of the overall climate of the research field and allowed me to capture three types of human capital (basic, specific, and entrepreneurial) and two types of social capital (cognitive and structural) as being represented in the literature. As a next step, I synthesized these findings to theorize possible relationships among human capital, social capital, and business creation/management. In the end, these

synthesized results were presented in the form of a map, making these relationships more visible by juxtaposing them with each other. The role of education in the job creating process is also made visible by this juxtaposing of information. The information on the map offers applications for policy making and research development.

As social cartography rejects no narrative (Liebman & Paulston, 1993), but rather allows the interpretation of the viewer, in this chapter, I interpret the meaning of some parts of the map, so that I can put my findings back into a policy and research context. For this reason, I organized the section to suggest policy applications and areas for further research. The discussion section, 5.1, describes my interpretations of the map for the purpose of applying them to future policy making. It also discusses what is not on the map to suggest areas that would be meaningful for further research. In the recommendation section, 5.2, I suggest possible policy and research directions based on the narrative which emerged from the interpretations. Concluding remarks are included at the end of this chapter (5.3).

5.1 DISCUSSIONS

At the end of Chapter 4, I presented a map that resulted from the meta-synthesis which shows the possible relationship among human and social capital and education within the context of self-employment. This is a conceptual map; it visualizes relative relationships among the concepts (Huff & Fletcher, 1990); thus, the mathematical accuracy of the shapes and/or boundaries are not important (Liebman & Paulston, 1993; Nicholson-Goodman, 1996). Where boundary lines were drawn is less important than how they were drawn. In this study, the exact timeline where the shifts starts or its area proportions are not my concern, since my intention was to show *how* shift

might happen within the business creation process. I am aware that the map itself presents a subjective view, since it is based on the interpretation of the data studies, i.e., the discussions in these sections are based on limited views, and only provide a starting point of further research (Stromquist, 2000). In this section, I first discuss what the relationships on the map indicate to me in order to apply those notions to further education policy. Meanwhile, because the map also informs us of what is not there, i.e., what cannot be interpreted from it, I also address the negative space in order to highlight implications for further research.

5.1.1 What is There: Interpretation of the Map

To date, the relationships between human capital and self-employment outcomes have usually been measured only at a particular given point in the entrepreneurial process. Although these studies contribute to the larger body of knowledge, there has not been a useful platform to connect these pieces of study together. This map acts as a platform on which to place these pieces of information, and places them on a timeline of the business creation and management process. This is significant because it allows us to see the transitions of each entity in the whole picture. By applying the pieces of information to the timeline, we can synthesize the point-by-point knowledge to form a shape which enables us to view the information from new perspectives. Visualization of these connections provokes awareness of invisible relationships, which is exactly a function of social cartography (Stromquist, 2000). Within this framework of the business creation and self-employment process, several phenomena have emerged. I would like to highlight three of them: 1) a proportional shift in entrepreneurial and specific human capital along the process; 2) the consistency of basic human capital along with the process; and 3) the importance of experiential learning environment.

1) Proportional shift in entrepreneurial and specific human capital

Firstly, the map shows how the relative proportion, i.e., importance, of entrepreneurial and specific human capital changes as the process of business creations progresses. At first, entrepreneurial human capital is the dominant human capital necessary for innovative thinking which leads to a business idea (conception stage). As the business idea becomes more mature, the need for more specific human capital which prepares for business entry gradually emerges. After having some preparatory specific human capital, potential entrepreneurs can move into the gestation stage, i.e., transform their business idea into a specific decision and action for creating their business. When the business entry comes close to actualization, the specific human capital which provides knowledge of business management becomes essential and this knowledge becomes increasingly important after entering into the market. The appropriate educational environment and methods also shift as the process progresses, because each type of human capital is accumulated effectively in particular ways. As a consequence, the transition curves of human capital, educational environment, and educational method are drawn with a similar shape throughout the whole process. These transitions and relationships can inform policy; for instance, the type of knowledge which is most useful differs depending on the stage of business creation one is at; therefore, providing learners in the entrepreneurial process with specific training at the optimum specific stage can maximize the effectiveness of their training.

Second, the map framed around the timeline reveals a difference between pre- and post-establishment of a business. The map can be seen as juxtaposed pictures: left in a pre-, and right in a post- business establishment. By comparing these two pictures, we can see that they possess totally different contents; in fact, they appear to be almost opposite. This may suggest that the educational role of entrepreneurial education programs currently in formal schools may need to

be reevaluated, considering the fact that most learners in formal education are in the “pre-business establishment phase.” The reason is because while the entrepreneurial human capital is the most effective human capital in the pre-business establishment phase, many entrepreneurship programs in formal schools focus on small business management, which would probably be useful after launching a business.

2) The consistency of basic human capital

Second, the map indicates a consistent need for basic human capital. Basic human capital is not present only throughout the entrepreneurial and self-employment processes; rather, basic human capital is constantly connected to entrepreneurial and specific human capital. In other words, basic human capital can provide a prerequisite base for the entrepreneurial process and it can make a significant difference in the accumulation of both entrepreneurial and specific human capital. This may suggest that even when teaching basic human capital (literacy, numeracy or social skills), utilizing an experiential approach in schools may encourage more entrepreneurial thinking and, in turn, may promote entrepreneurial attitudes in society.

3) The importance of an experiential educational environment

Constructivist learning in an experiential environment is crucial to encourage potential entrepreneurs and motivate them to pursue business creation processes. Although formal/non-formal education is still needed to enhance basic human capital, an experiential educational environment is also effective and is needed throughout of the process of entrepreneurial and management initiatives. This suggests the usefulness of informal education such as apprenticeships. However, it also implies that the policy interventions have some limitations, since informal education takes unorganized forms. This point becomes more critical in business

creation within the informal economy where many potential entrepreneurs do not have access to or interest in formal schooling. Relying on informal education to build skills and knowledge still remains a big challenge; therefore, it might be important to seek a connection with flexible non-formal programs. For example, partnering with local agents who take on teaching roles might be a feasible approach to build skills and knowledge in potential entrepreneurs, such as through workshops or youth group seminars.

5.1.2 What is *Not* there: Awareness of the Negative Space

One of the functions of social cartography is to highlight not only what is on the map, but also what is *not* on the map. This area, sometimes called ‘negative space’, can show the limitations of the map with a discussion of “what is beyond the map boundaries,” which refers to what is outside of the mapper’s framework⁹³. For this study, the issues located outside of the map informed me of the further research areas, or indicated the limitations of the map. In this section, I discuss some of these important issues which could not be included in the map.

A diversity of social conditions

First, I would like to point out that this map does not include potential differences in the relationships among human capital, social capital and education resulting from various social conditions; e.g., level of economy: developed vs. developing region, types of economy: formal vs. informal; types of self-employment: by choice vs. by necessity; and/or age groups: adolescent vs. adults. Because I chose the timeline of entrepreneurial activities as a framing concept, it would have been too complex to include all these aspects for my deliberation of the relationships

⁹³ The negative space also can show current gaps by drawing attention to “what is not on the map”.

among human and social capital and education in the self-employment context. These aspects may influence the shape of map because they are related to the market entrepreneurs about to enter. However, since these issues are not included in the map, I would like to discuss these diversity issues separately in this section.

Level of economy: Developed vs. developing regions

More developed, stable and formal economies often require entrepreneurs who can absorb high technology and create high growth businesses; developing regions, on the other hand, where most economic activities are carried out in an informal economy, may require more vocationally equipped entrepreneurs, i.e., more craftsman-type of entrepreneurs. Which market does my map reflect? It most likely reflects regions' whose economies are in a transition stage or have already developed, where stable and formal markets are available. The reason is because most of my data deal with the situation in developed regions, due to the lack of data on developing areas, which is a reflection of the situation in the general entrepreneurial research.

The most common consensus in policy research in international development is what works in developed countries does not work in developing countries, because so many prerequisite social conditions are simply not available in these areas. Promoting entrepreneurship is a socially and economically important labor strategy for developing countries (Acs & Virgill, 2010), then what do we do, if there is not much research available to apply? This model may not be applicable for developing countries, however, some studies shows that there are some commonalities among entrepreneurs, such as “innovation” or “work ethics”, regardless of their culture or the development levels of the region in which they are operating (Acs & Virgill, 2010; Thomas & Mueller, 2000); therefore, I can only hope this map still would help to conceptualize these commonalities of entrepreneurs, even those in developing regions.

Types of economy and self-employment: Formal vs. informal, by choice vs. by necessity

There are two types of economies and self-employed individuals—developed and/or formal where many individuals are self-employed by choice vs. developing and/or informal where most of individuals are self-employed because of necessity. People who become entrepreneurs by choice may have more ambition to build their business successfully; therefore they may consider more strategic investments for their future business. Meanwhile, individuals who become entrepreneurs by necessity are often a marginalized group of a labor force who have no resources to invest. The types of human capital, especially specific human capital for planning business, may be different in these economies because the market structure and the needs of the self-employed individuals are different. Accordingly, the types of educational strategies and contents of education needing to be provided would differ. For example, in developed regions, high technology based businesses are desirable, because they are innovative and profitable; therefore, training in research and development (R&D) in higher education might be appropriate. Meanwhile, in a particular developing region where the infrastructure is still being built, the village may need more electricians or carpenters; therefore technical skills at vocational school might be more desirable.

Age groups: Adolescents vs. adults

Another issue that the map does not contain information on is related to the diversity in age group of the learners. Although my intention for this study is to help youth to create new jobs, the human capital literature for self-employment rarely mentions generational issues. One of the reasons for this is probably related to the nature of entrepreneurship. Indeed, there may be particular industries where youth might have advantage or disadvantage compared to older; however, since most of my data-studies did not consider this issue as a generational matter, the

policy recommendations based on this map cannot be applied only to youth, but become more general across age groups.

In sum, the map can be useful to conceptualize educational strategies, but general policy recommendations cannot be made solely based on this map; rather, the context need to be taken into account when applying to a practice.

Social capital investment

Another aspect which this map does not inform us about is how to develop an educational strategy for building better social capital for successful self-employment. There seems to be reciprocal relationship between social capital and education; however, the literature does not explicitly address how to improve its quality through education. In fact, even outside of the educational approach, I did not find a strategic way to improve social capital. Unlike physical or human capital, investment to improve social capital does not benefit only the person who made the effort; the benefits are rather spread among all the persons in the structure; since people tend to be more interested in investing where they can expect direct returns, encouraging such investment is quite difficult (Coleman, 1988). As, Coleman (1988) claims, social capital is usually formed as a by-product of other activities; therefore, it usually is considered to be formed without intention. In other words, the personal return of investment in social capital can be very low. This is the probably the reason why there is not much discussion and research about this area and this aspect of investigation might be part of future research.

After the self-employment initiative

The last aspect I would like to discuss is what falls outside of the framed timeline, i.e., after the self-employment phase. This map illustrates the relationships from the entrepreneurial initiative,

and then follows the process through to the progress after the business is launched. The natural sequence after this phase would be an “Employer phase” if the business was successfully expanded. This is a state in which the entrepreneur becomes an owner of the business, expands his operations, and then starts to hire others working for him or her. This map does not show the possible dynamics among the human and social capital within the employer phase. Becoming a successful entrepreneurial employer may require different types of human capital or social capital. Accordingly, education strategies may be different at this stage. This would be an interesting aspect to investigate in future research; it would expand and improve the map I created for this study.

5.2 RECOMMENDATIONS

Mapping not only highlights underlying structure, but also provides a larger vision; thus it allows us to see relationships (Paulston, 1993). Having discussed what my map informs us of with its space on the map as well as outside the map, I would like to apply the information which emerged from the map to make some recommendations. Accordingly, this section discusses policy applications and research ideas for the future.

5.2.1 Policy Applications of This Research

According to Godfrey, there are two types of policy intervention: curative and preventative. Curative policies deal with existing problems, while preventative policies devise strategies to prevent future problems (Godfrey, 2003). Within the context of youth unemployment problems,

for example, providing jobs by creating public projects would be a curative approach, while providing means to increase the capacity of individuals for creating their own jobs would be a preventative approach. Education policies for employment serve as a preventative policy. Because they are mid or long term strategies, it often takes some time to see results; however, they are important policy plans which help to achieve sustainable development for both the economy and society. In this section, I suggest four areas of policy which might be developed based on the discussion in the previous section. The first three policy areas are grounded in the points discussed in 5.1.1 “What is there: The interpretation of the map”: a) a proportional shift in entrepreneurial and specific human capital, b) the consistency of basic human capital, and c) the importance of an experiential learning environment. The last area is grounded in the points discussed in 5.1.2, “What is not there: Awareness of the negative space”: d) diversity of social conditions.

a) Shift in entrepreneurial and specific human capital

Application 1: Building a pilot program based on the model

As discussed previously, the map revealed a relationship between entrepreneurial and specific human capital which shifts along with entrepreneurial activities. The first possible policy application is to build a pilot program based on the model, i.e., one in which the curriculum is formed by paying close attention to the skills and knowledge required in each stage. There are two ways to set up this pilot program. First, it can offer a long term curriculum which walks through the business creation process with potential entrepreneurs. This type of program may be appropriate within non-formal education, since the length of conception and gestation stages varies depending on the individuals. The courses appropriate for the earlier stage in

entrepreneurial activities can be embedded in the formal education system, such as in secondary or higher education, with follow up training and activities in non-formal education. This is a holistic approach to supporting entrepreneurial intentions or building an entrepreneurial society. Another way to set up the program is to target individuals. The program would not necessarily follow one student; instead, courses would be provided exclusively to potential entrepreneurs who are in a specific entrepreneurial stage. This type of program may be a more passive approach. This type of course focuses on the needs of individuals at this particular entrepreneurial stage. Educators may not be interested in or feel responsible for students' progress and outcomes, since the educator is not monitoring students' growth or failure. Acknowledging the passiveness, at the same time, it is a cost-effective way to provide training to appropriate individuals. Screening and sorting potential students by the stage of their entrepreneurial activity may help eliminate irrelevant training.

Application 2: Reevaluating entrepreneurial education in formal education

As described in the previous section, the human capital required pre- and post-business establishment appears to be totally different. Most students in formal school are in the pre-business establishment period. With this fact, it may be appropriate to assess if the entrepreneurial programs currently provided in formal school are suitable for pre-business training. The map suggests that it might be more effective to provide classes that allow students to accumulate entrepreneurial human capital, rather than providing information on business management. Entrepreneurial education in formal school should then perhaps be more abstract, i.e., offer more stimulus exercises to activate entrepreneurial activities rather than teach practical skills in the business context. Examples of this type of course can be drawn from Ronstadt's work, e.g., courses aiming to build reality testing skills, creativity skills, ambiguity to tolerance

skills, and/or environmental assessment skills (Ronstadt, 1985) Unlike business management courses, building these skills does not necessarily require a business context; thus, the building of such skills can be incorporated as early as elementary school.

The University of Houston, whose undergraduate program offers a major in entrepreneurship, provides us with a successful example of such a program as they were ranked the top entrepreneurship program among 2000 institutions in 2010 (Meyers, 2010). The courses offered for the entrepreneurship major appear to focus on building entrepreneurial human capital and some technical knowledge that can prepare students for launching a business. For instance, the requirement course “entrepreneurial strategy” covers strategies and tactics in developing ideas and allocating resources for entrepreneurs. Also the “entrepreneurial capital” course covers concepts and issues in legal forms of organization, capital choice, and sources of funding, (University of Houston, 2010). These courses supply knowledge distinct from that taught in management courses, and the knowledge students gain from these entrepreneurship courses are necessary for a pre-business establishment. The program combines academic with practical experience and utilizes unconventional educational environments such as using mentorship or “real-life, hands-on” learning approaches—this can be close to experiential educational environment.

b) Consistency of basic human capital

Application 3: Incorporating the constructivist method into formal education to enhance entrepreneurial human capital

Because entrepreneurial human capital is important in the early stage of business creation, the map shows that the constructivist method would be an effective way to prepare students for

future entrepreneurial activities. Although the appropriate educational environment for the constructivist method would be experiential education, such as that found in informal education, it is difficult to influence with education policy. Since formal education is already structured in most societies for the purpose of building basic human capital, the suggestion is to make use of this existing educational environment to enhance entrepreneurial human capital. More specifically, to teach basic human capital using a more constructivist method so that it can serve to enhance entrepreneurial human capital. As mentioned in the previous section, some entrepreneurial human capital does not have to take place in a business context; therefore, it may be possible to integrate building entrepreneurial human capital with building basic human capital. For example, instead of rote-memorization of historical facts, sometimes provide an opportunity for students to deliberate on and devise creative solutions for the problems in that historical context, so that students can experience an innovative application of basic skills.

C) Importance of experiential learning environment

The map suggests that an experiential learning environment is crucial, especially at the beginning of the entrepreneurial activities, but this type of environment is also required throughout the course of business development.

Application 4: Providing opportunities to exercise entrepreneurial skills

Apprenticeship is a classic exercise taking place in the experiential educational environment. Business knowledge is transferred to the next generation through “doing”. In fact, it is still a powerful tool to bring about self-employment in particular industrial areas. For instance, one study found that instead of working for paid unskilled jobs in the informal economy, 90% of apprentices worked unpaid one to two years because they believed that an apprenticeship

provides a foundation to start their own business after acquiring skills (Godfrey, 2003). This particular study found that the return of the apprenticeships is a little more than that of wage workers and four times more than that of unskilled workers in the informal economy. Entrepreneurial learning is effective in an informal environment, but it is a challenge for education policies to have an influence on informal learning. In order to incorporate the benefits of apprenticeship into the formal learning context, I suggest providing opportunities to exercise business planning and operation within the school system; for example, a school could offer the opportunity to participate in a school based enterprise, and partner with local business owners who are willing to be mentors for students. This would allow students to exercise business planning strategies within the structure of a school, while, also learning business operations from a mentor. In this way, students can learn the skills, attitude and values related to business planning and operation within an organized and directed environment (Singh, 2000). This type of environment provides the conditions which the constructivist learning method requires. It provides: 1) an environment to explore the meaning of action, while feeling safe and accepted; 2) frequent opportunities to confront new information and experience in the search for meaning and understanding, and 3) opportunities to explore and make personal discoveries at learner's own style and pace (Harkema & Schout, 2008). This type of systematic and reflective learning increases the relevance of education for later employment or self-employment (Singh, 2000). Within a framework of non-formal education, this type of program can provide opportunity to learn for those who need to work while getting an education.

Application 5: Building self-efficacy for entrepreneurial activity—Cognitive approach

Self-efficacy is an important cognitive characteristic which can predict entrepreneurial activity (Durning, 1990; Peterman & Kennedy, 2003). This may imply that policies can be created which

aim to build this cognition oppose to building actual skills and knowledge. Self-efficacy is believed to be built through experience and social influence; it is enhanced by mastering, experiencing, and participating in activities or events (Peterman & Kennedy, 2003). Within the context of entrepreneurship, one way to build self-efficacy is provide courses which simply expose more students to entrepreneurship or enterprise education with the intention of influencing their self-efficacy. The knowledge or familiarity students gain through such courses can enhance their level of confidence; as a result, more entrepreneurial activities could emerge. The level of self-efficacy toward entrepreneurial activities may even further reinforced by incorporating a constructivist learning method within this type of program.

d) The diversity of social conditions

The quality of economic activities in developing and developed regions is fundamentally different; it is a result of the stock of human capital as well as the capacity of physical and financial capital. For this reason, entrepreneurs in these economies play different roles. Entrepreneurs in developed countries are considered an engine for economic growth (Begley & Tan, 2001); they are expected to revitalize industry and generate jobs for others. Meanwhile, entrepreneurs in developing regions tend to become self-employed out of necessity; thus often they create marginal businesses with low productivity and low profit. In developing regions, the role of entrepreneurs is to stimulate economic growth and empower the marginalized segment of the population through participation in economic activities. These contextual differences mean that policy recommendations need to be made separately.

Application 6: Increasing innovation through providing R&D opportunities—For developed regions

The function of entrepreneurs in developed regions is to carry out innovation and change for economic growth (Begley & Tan, 2001; Schumpeter, 1934). Through innovation, they are expected to enhance economic flexibility and expand the business through their innovative economic activities, thereby providing new jobs in the market. For this type of economy, education which stimulates innovation becomes more important. Since high growth ventures tend to be highly technical in a modern economy, investing in courses which promote Research and Development (R&D) within higher education is recommended (McGibbon, et al., 2009; Stam & Wennberg, 2009). In fact, since new product development and R&D is a part of creative process, combining entrepreneurial and specific (technical) skills maybe the direction for the future entrepreneurial education within a higher education.

As previously discussed, within the literature I reviewed, no educational policies were found to specifically target youth to be entrepreneurs. There is, however, a stronger relationship between entrepreneurs and highly educated youth in growing businesses in developed regions (Minniti, et al., 2006). For example, those entrepreneurs in developed regions are pursuing their business in relatively new industries, e.g., high technology and/or knowledge-based industries (Minniti, et al., 2006). The skills required in these industries are quite specific and advanced; therefore, this phenomenon is identified in only developed economies. This may imply that providing educational opportunities to accumulate industry-specific knowledge, especially in high-technology industries, may differentiate youth's capacity from that of the rest of the labor force. For instance, entering an internet-related industry can be quite difficult for some adults who have not grown up those technologies. Skills and knowledge related to the latest technological advances taught at formal school can build competency among youth and may result in their creating more profitable businesses in the society.

Application 7: Providing basic human capital through non-formal education—For developing regions.

In developing regions, most economic activities are carried out in an informal economy by entrepreneurs who have become one by necessity and so their needs must be addressed accordingly. Often, access to and quality of formal education is not assured in such a society. One of the major characteristics of the entrepreneurs in this type of economy is that most of them are poorly educated. This happens because people who lack formal education have no choice but to give up schooling and engage in self-employment since it is very difficult for them to get a wage-employment job in the formal economy (ILO, 2002). In other words, they become self-employed out of necessity, not choice. Because informal economies in developing regions are an important source of economic activity (Acs & Virgill, 2010), education strategies need to be directed to address their social/economic needs. A challenge to providing better education and training for people in the informal economy is although most labor in an informal economy does not even have sufficient basic human capital(Acs & Virgill, 2010), they themselves may not see the need for training (ILO, 2002). In addition, people in such an economy won't be able to afford to enroll in school fulltime, because they are a marginalized segment in the economy system. For this reason, the standard method of educating them in basic human capital within the formal education may not be appropriate. Non-formal education would seem to be only way available, then to provide these people with basic human capital. Programs would have to be flexible to adapt to the situation of workers (ILO, 2002) and emphasize the relevance of the education to their real life. This might be the key to achieving sustainable training. Experiential programs such as school based enterprises might be a feasible program because students could generate income concurrent to building necessary human capital (ILO, 2002). Since social

capital plays an important role in business advancement, especially in developing regions (Acs & Virgill, 2010), providing a platform for networking within the training program might be appropriate for the context.

Application 8: Incorporating entrepreneurial education as early as possible

Although the map does not indicate an appropriate age to start entrepreneurial education, some studies suggest starting as early as childhood, because perception toward occupational choice evolves as socialization takes place (Acs & Virgill, 2010; Nelson, 1977; Peterman & Kennedy, 2003). Most entrepreneurial education occurs at the post-secondary level; some small amount at the secondary level. This is quite understandable, if entrepreneurship is considered to be skills specific in business, since it needs to have business contexts. This study, however, reveals that pure entrepreneurial skills, i.e., entrepreneurial human capital, do not necessarily require a business context, since they are related to the creative process. Enhancing abilities such as problem solving or self-efficacy might be able to be incorporated in an early stage of formal education in order to prepare students for future entrepreneurial activities.

5.2.2 Further Research

One of the main objectives of this study is to increase understanding of education's role in the entrepreneurial process. As discussed previously, the final product of this study, the map, is not the final product of the inquiry. It rather serves to open up further discussion and research. This section discusses several research ideas that might build on and extend the findings of this study.

Further research—Empirical studies

- Since the findings of this study only suggest possible relationships among basic, entrepreneurial and specific human capital through synthesizing studies from different discourse, it would be interesting to examine if empirical evidence supports these relationships. One way to examine if there is such a relationship is to interview successful entrepreneurs and compare his or her perceptions to the map.
- Another possible empirical study is to look at successful entrepreneurial programs and examine if actual practice supports these relationships

Further research—Theoretical studies

- This study used the business creation process as a synthesizing framework. It would be interesting to see what other frameworks can be used to synthesize different types of human capital. For example, the types of human and social capital could be synthesized using different economic levels, types of economy, culture, or industry sectors.
- As mentioned in the discussion section, my findings apply only up to the self-employment phase. It would be interesting to investigate how the relationships might change and/or develop after self-employment initiative phase; i.e., what happens after an entrepreneur becomes an employer who provides jobs to the local labor market?

Further studies on mapping

- This study made an attempt to create a base for further dialogue and discussion in the education discourse. As I mention repeatedly, the map I created as a result for this study is not the final product, but only the beginning. Even using the same framework and same data findings, there will be always space to improve the map. I invite any

researcher to modify the map, because this can only help to increase the understanding of the issues mentioned.

5.3 CONCLUDING REMARKS

This study is designed to help policy makers capture contemporary educational perspectives on entrepreneurship for self-employment so that they can debate, design, and implement programs in order to foster productive and sustainable youth labor for the future. I paid close attention to self-employment as an alternative approach to addressing the youth unemployment problem, because increasing employability for waged job is not enough to maintain a sustainable labor market, especially in areas where the job market cannot absorb the excess labor supply.

Self-employment, in this study, is considered a result of business creation. Entrepreneurship, which is believed to be an engine for creating business, has generated much interest and discussion among social scientists recent years because of its potential power to influence economic growth and bring about social change. However, research in this area has been developed only within individual discourse cultures—it has been developed from individual perspectives, using their individual measures; very little cross-disciplinary examination has been done (Djankov, et al., 2006). This might be one of the reasons why the research field of entrepreneurship is so underdeveloped. For instance, a definition of “entrepreneurship” is lacking; also how entrepreneurship is built and developed is still unclear, even though the fact that entrepreneurship has a positive influence on economy and society has been well-discussed. A part of the reason is a lack of theoretical work in the field (Thomas & Mueller, 2000), which makes it difficult to capture a bigger picture of these mechanisms. The education field might be

responsible for this ambiguity as well. Although development of ability is usually an educational matter, the lack of interest in the research field of entrepreneurship as developed through education is evident.

In order to understand how entrepreneurship can be developed effectively through education, this study closely looks at the role of human capital within the entrepreneurial competencies; i.e., the competency for creating and running a business. My intention was to enhance understanding of the relationships between human capital and job creation from the educational perspective so that this study can contribute to the policy making and future research in the field of entrepreneurship education. The relationship between education and development of entrepreneurship within the context of self-employment was examined using the methods of meta-study and social cartography, because both methodologies allow me to deliberate and theorize the phenomena. The meta-study allowed me to analyze insights of studies from different discourses and enabled me to structure possible relationships through use of the synthesizing process. Social cartography allowed me to visually illustrate the relationships and the end result provides a base for further deliberation.

I designed this study to assist policy makers and program designers to help understand current debates in this neglected but increasingly important policy area. I do recognize that my map, which presented as a conclusion of this study, is far from complete; it is rather a starting point. I can only hope that this map will lead to further theoretical studies and allow researchers to derive practical applications to improve education's role in entrepreneurship development, with the ultimate result of improving youth's competency in the labor market.

The youth unemployment and underemployment problem is embedded in complex social issues. These problems involve not only economical, but also sociological, political, and cultural

issues. Education is only one factor which can contribute to improve the situation. In fact, the impact of entrepreneurial education for productive self-employment is still an underdeveloped area of research (ILO, 2011); however, the positive outcomes of entrepreneurial educations make this area worth further investigation (Harkema & Schout, 2008). The findings of this study are very small part of the discourse. Nonetheless, I still believe that education can play a bigger role in the entrepreneurship research field, if more researchers deliberate issues from educational perspectives. Social problems are human related problems, and education is one of the few means to bring about changes from inside “humans.” This study is an effort to bring about change in the future. As repeatedly mentioned in this study, the ambiguity of how to approach entrepreneurship development has not been resolved yet today due to a lack of theoretical work within the field. Just as with business management education in the 1930s’ when business management theories were still not available ⁹⁴(Locke, 1993), we may still be in a phase of collecting examples from the practice, which can be used in extensive theoretical work in the future. If that is the case, I can only hope that this study will be classified as one of the early theoretical studies in this area when looking back decades from now.

⁹⁴ Locke provided historical view of business management education. In the early twentieth century, when business management education was still new and scientific based theories were still not available, scholars took the best business practice as an example and analyzed what they could do in a real situation As study field developed, researchers not only took examples from practice, but also analyzed and applied various types of knowledge to improve practice, which led the “business management education” field to become a more scientific research field (Locke, 1993).

APPENDIX A

ATTITUDE AND BEHAVIORS THAT MAY BE MANIFESTED BY ENTREPRENEURS

Year	Author	Characteristics	Normative	Empirical
1848	Mills	Risk bearing	X	
1917	Wber	Source of formal authority	X	
1934	Schumpeter	Innovation, initiative	X	
1954	Sutton	Desire for responsibility	X	
1959	Hartman	Source of formal authority	X	
1961	McClelland	Risk taking, need for achievement		X
1963	Dauids	Ambition; desire for independence; responsibility; self-confidence		X
1964	Pickle	Drive/mental; human relations; communication ability; technical knowledge		X
1971	Palmer	Risk measurement		X
1971	Hornaday & Aboud	Need for achievement; autonomy, owner; recognition; innovative/independent		X
1973	Winter	Need for power	X	
1974	Borland	Internal locus of control		X
1974	Liles	Need for achievement		X
1977	Gasse	Personal value orientation		X
1978	Timmons	Drive/self-confidence; goal oriented moderate risk taker; internal locus of control; creativity/innovation	X	X
1980	Sexton	Energetic/ambitious; positive reaction to setbacks		X
1981	Welsh & White	Need to control; responsibility seeker; self-confidence/drive; challenge taker; moderate risk taker		X
1982	Dunkelberg & Copper	Growth oriented; independence oriented; craftsman oriented		X

(Carland, et al., 1984)(p. 356)

APPENDIX B

CCAC COURSE LIST, FALL 2009 P.11-15

COMMUNITY COLLEGE OF ALLEGANY COUNTY

ARTS & CRAFTS • BUSINESS/ENTREPRENEUR

STAINED GLASS—BEGINNING

Discover how to create a variety of beautiful stained glass pieces. Instruction includes design theory and pattern making, glass cutting, leading, soldering, support lead work and lighting. Cost of supplies and materials is extra and will be discussed at the first class.

SPRING COURSE	TR-09-1101	200	3	0.000000
0.000000	7	022000	102000	
FALL COURSE	TR-09-1400	270	3	0.000000
0.000000	9	071000	1000	

EGG-DYING HOLIDAY EGGS

Discover how to dye using powders the traditional Ukrainian Red method. Instruction on preparing eggs will be given in the first session. Dyed eggs keep for years creating a tradition that can be passed on to your kids. Dyeing on empty egg cartons in the first class. All material fees are included in class fee.

SPRING COURSE	TR-09-1102	200	3	0.000000
0.000000	8	107000	0200	

WATERCOLOR PAINTING—HOW DO YOU DO THAT?

Students will be able to access that special art feeling a variety of watercolor techniques in a supportive atmosphere. The fun and techniques of watercolor will be presented through demonstrations, guided practice and experimentation. Materials are additional from course fee. A list of suggested supplies will be discussed during the first class.

SPRING COURSE	TR-09-1103	200	3	0.000000
0.000000	8	105000		

CRAFTS: BEADS & STITCH

0.000000	TR-09-1401	200	3	0.000000
0.000000	9	071000	0200	

CRAFTS: KNOTWORKS II

0.000000	TR-09-1402	200	3	0.000000
0.000000	9	071000	1000	

SPRING COURSE

0.000000	TR-09-1403	200	3	0.000000
0.000000	7	071000	0200	

FALL COURSE

0.000000	TR-09-1404	200	3	0.000000
0.000000	7	071000	0200	



Have a Great Idea for a Class? Would You Like to Teach a Course?

Contact: CCAC Community Education
West Hills Center
1000 McKee Road
Olathe, IA 51071

Please include your resume and an outline of your proposed course.

BUSINESS/ENTREPRENEUR

ACCOUNTING FOR THE NON-ACCOUNTANTS

This 25-hour course provides the student with the skills necessary to understand the accounting cycle required for small business. Topics include financial statements needed to complete a business plan, which are critical to obtaining financing to open a small business.

FALL COURSE	TR-10-1400	200	3	0.000000
0.000000	9	071000	0200	
SPRING COURSE	TR-10-1401	270	3	0.000000
0.000000	9	071000	1000	

ACTING—THEATRIC SKILLS

This 25-hour course is designed for those who are interested in the acting process and want to pursue and develop public speaking skills. Students are introduced to physical and vocal techniques and other ways to enhance spontaneous personal feelings.

SPRING COURSE	TR-10-1402	270	3	0.000000
0.000000	9	071000	1000	

BUSINESS WRITING

Write faster and more effectively by using elements of good business writing including clarity of purpose, conciseness, style, organization and tone. In this course your students will learn to apply these elements to their own writing samples or assignments. Final critiques will also be covered.

FALL COURSE	TR-09-1403	200	3	0.000000
0.000000	7	022000	0200	

BUYING A FRANCHISE

If you dream of opening a small business but the risks associated with the process are overwhelming, a franchise might offer the perfect solution for you. Students learn that franchises have a much higher success probability than independently-owned small businesses. Franchises come with instruction, support services and tried-and-true formulas for marketing and doing business. In this course, students will get a good idea of how franchises work and how to go about evaluating one for themselves. Topics include assessing the strength of a franchise, reading the UFOC (Uniform Franchise Offering Circular), working with a franchise consultant, obtaining financing, and making the choice of franchise and financial security within the structure of a franchise.

SPRING COURSE	TR-09-1201	200	3	0.000000
0.000000	8	105000	0200	

FALL COURSE	TR-09-1404	200	3	0.000000
0.000000	8	071000	0200	

SPRING COURSE	TR-09-1202	200	3	0.000000
0.000000	7	022000	0200	

FALL COURSE	TR-09-1203	200	3	0.000000
0.000000	7	022000	0200	

SPRING COURSE	TR-09-1204	200	3	0.000000
0.000000	7	022000	0200	

FALL COURSE	TR-09-1205	200	3	0.000000
0.000000	7	022000	0200	

SPRING COURSE	TR-09-1206	200	3	0.000000
0.000000	7	022000	0200	

FALL COURSE	TR-09-1207	200	3	0.000000
0.000000	7	022000	0200	

Managing Telecommuters

Demonstrate your knowledge, boost your employee productivity and your organization's bottom line. Benefit from an online certificate program from the Learning Resources Network (LRN), a leading provider of professional development and pioneer in telecommuting. Take the three online courses, take a 50-question test and document your knowledge in this important and growing area for business, government and nonprofit organizations. All three courses, plus exam and certificate is just \$495.

Online, September to mid-December, \$495 for all 3 courses. YOL-600-1400

Keys to Telecommuting Success

Telecommuting is becoming the "mainstay of corporate America," according to a recent MSNBC story. Telecommuters are 25% more productive than people who work in an office, meaning your company is more profitable. Come discover the keys to making telecommuting a success for you and your organization. For those new to telecommuting and those already working from home, includes 100-page guide to telecommuting.

Online, September 1-30, Julie Coates, lead instructor, \$145. YOL-600-1400

Supervising Telecommuters

You can supervise people from a distance better than people working down the hall from you in an office. But you have to supervise telecommuters differently than office workers. Telecommuting boost your organization's profitability. Recruit the best people regardless of where they live. Then take away the four core management practices to supervise telecommuters for a win-win for both your employees and management. Includes 112-page manual.

Online, October 1-31, Greg Marwick, lead instructor, \$145. YOL-600-1400

Leadership Issues in Telecommuting

Transition your organization leadership. Work smarter, faster, better, with enhanced customer service and top talent. Includes the instructor's "teaching book *After 5:00 Work, We're at Work* in the 21st Century". Online, November 1 to December 9 (except Thanksgiving week), William A. Draves, lead instructor, \$195. YOL-600-1400

What students do:

- In the online classroom, listen to audio lectures, view slides, even take an optional quiz to test yourself.
- Three post-contents in the online discussion with your fellow participants and the instructor. Your instructor logs on once a day to answer questions and join in on the discussion.
- You also get a list to read 20 pages a week.
- Participate anytime of day or night, as little or as often as you like. The ideal is to go online 2-3 times a week, but you decide.

It's easy! It's fun.

Technical requirements: Internet access with Internet Explorer, Firefox, Mozilla, or Safari web browser. Audio software such as Windows Media, Real, or Flash. Speakers to listen to audio.

For Community Education questions: Call 412.393.3703.

CCAC 11

YOUNG WOMEN'S BUSINESS LEADERSHIP PROGRAM
 This program is designed for young women who are interested in starting their own business. The program provides a comprehensive overview of the business process, from idea to launch. Participants will receive hands-on experience through a series of workshops and a final business plan competition. The program is free of charge and open to all young women aged 18-30.

WOMEN'S BUSINESS LEADERSHIP PROGRAM
 This program is designed for women who are interested in starting their own business. The program provides a comprehensive overview of the business process, from idea to launch. Participants will receive hands-on experience through a series of workshops and a final business plan competition. The program is free of charge and open to all women aged 18-30.

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**Enterprising Women—
 Microenterprise Ownership Certificate Program**

This 36-hour non-credit certificate program, offered in cooperation with the YMCA Greater Pittsburgh, is designed for women who want to start a microenterprise but do not know where to begin. A microenterprise is defined as a business with five or fewer employees and less than \$25,000 in start-up capital. This twelve-week course offers a step-by-step guide leading to the successful completion of a basic business plan. Topics include personal financial readiness, market analysis, legal structure, license and permits, marketing plans, business costs, basic financial statements and funding sources. Students who successfully complete course requirements will gain access to business support groups, as well as mentor training and marketing opportunities. They will also be assisted by business and the coaches and related to other small business support resources.

CCBC Allegheny Campus (North Shore)
 Tuesdays, 6:00PM-8:00PM
 Cost: \$140 (plus \$20 for workbook and course materials)
 For information and to register, call the YMCA Greater Pittsburgh at 412.255.6746.

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HIGH COURT APPOINTED SPECIAL ADVOCATES—CASA
 Court Appointed Special Advocates (CASA) works on behalf of the best interests of children in the juvenile dependency system. These trained volunteers speak up for children who have experienced the pain of being torn from their families by circumstances of neglect and abuse. The volunteers take steps to make sure a child has a voice in court and advocates for that child throughout the child welfare system to ensure a safe permanent home as quickly as possible. In this FREE, one-day all-hands-on-workshop, learn from experienced CASA staff about the child welfare laws and juvenile dependency system. Learn how you can make a difference in the life of a child. Upon completion of this workshop, each participant will receive a certificate of attendance from CCBC. If a participant desires, information will be provided to continue the full 30-hour CASA training.

WEDNESDAY COURSE
 10:00-12:00 PM
 FREE
 1 SEATING
 412.262.3762

ELECTRICIAN
 This program provides an overview of the electrician role in the production including a job description, marketing, safety, codes of electricity and safety systems. Learners will find theories in lecture and extensive lighting setups.

WEDNESDAY COURSE
 10:00-12:00 PM
 FREE
 1 SEATING
 412.262.3762

EVENT PLANNING AS A CAREER
 This course uses your creative and organizational skills to plan the perfect wedding, graduation, grand opening, wedding party, etc. Topics include getting started, sources of clients, lists, contracts and sources of information.

WEDNESDAY COURSE
 10:00-12:00 PM
 FREE
 1 SEATING
 412.262.3762

PROPERTY & CASUALTY INSURANCE CAREER PREPARATION
 This 10-week program will cover a complete review of the insurance industry including: insurance regulations; general insurance overview; property and casualty insurance basics; and an overview of various types of insurance coverage options. Students will receive an Insurance Professional Certificate in Property Casualty Insurance Career Preparation upon successful completion of this course. Students who successfully complete this program and pass the Pennsylvania Insurance Licensing exam will be prepared for immediate employment, in some cases at starting salaries of \$25,000 a year.

Insurance preparation expert, George E. Adams, CPCU, CLU, is the course instructor and the author of *Insurance Career Preparation* by George Adams. A Certified Underwriter in Life Insurance, Adams prepared and/or instructed over 200 prospective employees, many of whom are now qualified candidates. Cost includes tuition, study materials and software. For more information call 412.738.7325.

South Campus 412-442-3661 200-20 to Graham
 412-442-3661 8 10:00-11:00 AM

BUSINESS/ENTREPRENEUR

PROJECT MANAGEMENT

In this 18-hour course participants learn how to deliver high-quality projects on time and within budget using the art and science of project management. A project is a temporary endeavor undertaken to achieve a particular goal. From site preparation to a multi-national corporation, firms individuals in a range of business, all are involved in planning and implementing projects. Learn to apply the knowledge, skills, tools and techniques to a broad range of activities in order to meet the requirements of the particular project. Course material is based on the Project Management Institute's Project Management Body of Knowledge (PMBOK). All activities (required sets) are included in cost of course.

Allegany Campus 35A-009-1210 2:00 3.000000
 6.00000-6.00000 N 1022000 10220

HOW PROMOTING YOUR BUSINESS ON THE INTERNET

Learn about the tools you need to launch online promotions that will deliver prospective customers or clients to your website. In this workshop, students will learn to develop effective Internet promotions, as well as social strategies that deliver superior offers and incentives designed to increase sales. Topics include creating a dashboard, building a loyalty program and utilizing social media and search through the Internet.

Allegany Campus 35A-009-1210 2:00 3.000000
 6.00000-6.00000 N 1022000 10220

HOW PROMOTING A SPECIAL EVENT

Learn the who, what, when, where and why of special events marketing. In this overview course students will explore event marketing from concept to follow-up. Topics include where to do an event, what type of event it appears, how to sell an event to a sponsor, how to package a program, evaluate suppliers and build media and client relationships.

Allegany Campus 35A-009-1210 2:00 3.000000
 6.00000-6.00000 T 111000 10210

PROPERTY MANAGEMENT & LANDLORDING

In this 24-hour course students will learn about rights and responsibilities as they rent and manage property. They will explore legal topics that directly affect the management of residential or commercial properties. Topics covered include contracts, leases, rent collection, evictions, liability and safety, landlord-tenant rights and notification of changes to services.

Allegany Campus 35A-009-1210 2:00 6.000000
 6.00000-6.00000 W 971000 10190

CENTERS BODY 10 35A-009-1070 2:00 6.000000
 6.00000-6.00000 T 971000 10190

NFC 6.00000 35A-009-1040 2:00 6.000000
 6.00000-6.00000 T 972000 10220

South Campus 35A-009-1040 2:00 6.000000
 6.00000-6.00000 S 971000 10190

West Hill Center 35A-009-1140 2:00 6.000000
 6.00000-6.00000 S 962000 10220

SEAFood SAFETY PREP & TEAM

Learn about the latest developments and sanitation procedures in the foodservice industry as you prepare for and take the National Restaurant Association Educational Foundation (NRAEF) SeaSafe Food Preparation Manager Certification exam. In this course, approved by the PA Department of Agriculture, students will prepare for and take the SeaSafe examination. Topics include safe food handling involving preparation and storage; personal sanitation and foodborne illness; cleaning and disinfecting; including pest prevention and management; and components of good personal hygiene. The required sets, SeaSafe Exam, 5th edition, as well as the exam are included in the cost of the course. Upon successful completion of the exam (75 percent passing grade) students will receive the SeaSafe food safety certificate from the National Restaurant Association and will then be eligible to apply to the PA Department of Agriculture for exam certification.

Allegany Campus 35A-009-1210 2:00 3.000000
 6.00000-6.00000 T 971000 10220

SMALL BUSINESS BASICS CERTIFICATE PROGRAM

This 30-hour program will explore the necessary skills needed to work as a general operations manager in business. Topics and skills to be covered will include the fundamentals of starting a business including operation planning, financing, marketing, selling & fit, general business practices and record keeping. Topics will also include identifying sources of funding, bookkeeping and public. Students will create a business plan describing where they are and where their business is going. Also included will be various marketing, advertising and sales techniques designed for small businesses with limited budgets. Students will also have the opportunity to develop their marketing plan and budget to meet effectively promote and grow their business to increase profitability.

West Campus 35A-101-1040 2:00 12.000000
 6.00000-6.00000 W 971000 10220

South Campus 35A-101-1040 2:00 12.000000
 6.00000-6.00000 W 971000 10220

Manicurist Technician

This 220-hour course will prepare you to sit for the State License Exam to be a certified Manicurist. Students will learn sanitation techniques, nail sculpting, wrapping, painting and design.

All classes will be held at:
 Shell Center AVTS
 360 Lovett Hall Road
 Jefferson Hills PA 15102

Shell Center AVTS 35A-009-1070 2:00 12.000000
 6.00000-6.00000 W 971000 10220

The Gateway Seniors 6.00000-6.00000 10190 and 11140

For more information, please call 412.460.1222.

Allegany Campus 35A-009-1210 2:00 3.000000
 6.00000-6.00000 T 962000 10220

Sound Mixing & Effects

This detailed introduction to the sound department provides an overview of job problems and solutions with other departments during pre-production and production. Students will learn about pre-production and sound effects and suggest practical solutions to script limitations, sound recording, use of equipment, recording units in different environments, gels and camera and electric equipment to simulate an actual production.

South Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 102200 10220

STAND-UP COMEDY

Ever thought about doing stand-up comedy but were unsure how to get up the nerve to try? In this 12-hour course, students will be introduced to the world of stand-up comedy. They will learn how to write comedy, types of comedy material, and have the opportunity to develop and perform their own comedy routine. Dealing with stage fright, getting started in the comedy business and marketing their comedy talents will also be covered.

Allegany Campus 35A-009-1210 2:00 6.000000
 6.00000-6.00000 T 971000 10220

STARTING OUT WITHOUT STARTING AT A JOB

This course builds awareness that can help a person get to a destination faster while also impacting other important areas of life. The course teaches how to take your income and channel down into productive career goals. It helps show each one of those careers how to achieve results with a proven and practical strategy for success. The philosophy of this course led the entrepreneur, Mary Lou Cassano, to where she is today. In 1997, in the middle of a stressful divorce as a stay at home mother with four children under the age of nine, Cassano realized that she was going to be the sole provider for her children and herself. Cassano had a rare-type Allied Health degree in which she earned just \$27,200 a year when she felt as if she had children. While her children were young, Cassano had done a lot of volunteer work for organizations and decided to send letters to a local newspaper. Cassano was hired as a freelance reporter and went on to write for several publications. She then moved on to business writing consulting and worked as a trade association executive director. With a need for better health insurance and other benefits, Cassano entered the corporate world. She began to meet clients and because the absolute director of a hospital foundation. Now at 46, Cassano is the president and CEO of a large hospital foundation after only having worked full-time for roughly seven years. Learn first-hand what strategies helped her succeed.

Allegany Campus 35A-048-1210 2:00 2.000000
 6.00000-6.00000 W 102200 10220

STRATEGIC NEGOTIATING SKILLS

Negotiation focuses on solving a problem and sharing the pay between what both parties want. In this workshop students will learn how to successfully negotiate conflicts and solve many in a variety of situations. They will learn and practice communication and effective negotiating techniques to help them identify the problem or issue, understand it from the other's perspective, generate possible solutions and then agree on one that benefits both sides.

Allegany Campus 35A-009-1210 2:00 3.000000
 6.00000-6.00000 T 962000 10220

BUSINESS/ENTREPRENEUR

Real Estate Fundamentals & Practice

This 60-hour course will provide instruction to students who intend to become real estate agents or those interested in gaining general knowledge in the field of real estate. Students who successfully complete this course and meet attendance requirements 70 percent of class time will receive an official transcript. The book Modern Real Estate Practice 15th Edition or a 15th Edition (Syllabus) is required for class, but is not included in the course investment. Please bring a business calculator to class. For more information, please call 412.768.7206.

North Campus 35B-100-0940 2:00 26.000000
 6.00000-6.00000 W 10220 10220

Allegheny Campus 35B-100-0940 2:00 26.000000
 6.00000-6.00000 T 10220 10220

South Campus 35B-100-0940 2:00 26.000000
 6.00000-6.00000 T 10220 10220

NOTE: Minimum student enrollment required for each location.

USING PERSONALITY TO FIND THE RIGHT JOB

Happy in your current job? Considering a new career in the few-hour workshop, students will take and score the Myers-Briggs Type Indicator, a widely-used personality inventory that will help students make important career decisions. Improve work relationships and identify leadership and interpersonal communication proficiencies. Course covers the 50 occupations most frequently chosen by people of your type (as well as the least frequent 25), and customized personal and career issues to the person.

Allegany Campus 35A-009-1210 2:00 1.000000
 1022000-6.00000 T 1022000 10220

Real Estate, Accountant, Legal, Insurance & CEBS Professional Continuing Education Programs

Real Estate Fundamentals & Practice
 Fall classes will be starting in September 2009
 For more information, please contact 412.768.7206

Real Estate 14 Hours Continuing Education
 Fall classes will be starting in September 2009
 For more information, please contact 412.768.7206
 Public Accountant, Certified Agent & Other Tax Practitioner Classes
 Fall classes will be starting in August 2009
 For more information, please contact 412.768.7206

Paralegals Continuing Legal Education
 Fall classes will be starting in October 2009
 For more information, please contact 412.768.7206
 Property & Casualty Insurance Career Preparation
 Fall classes will be starting in September 2009
 For more information, please contact 412.768.7206

Certified Employee Benefits Specialist (CEBS) Program
 Fall classes will be starting in September 2009
 For more information, please contact 412.768.7206

Film Classes

ELECTRICIAN

This program provides an overview of the electrician's role in film production including a job description, terminology, safety, basics of electricity and union matters. Instructor will lead exercises in interior and exterior lighting setups.

South Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 102200 10220

FILM INDUSTRY IN PITTSBURGH

In this class, students will explore the industry's many facets, learn about training programs offered by CCAC related to film industry jobs and discuss union membership, which is required to work on the majority of productions in the state.

South Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 102200 10220

Grip

This program provides an overview of the grip job description, equipment review, terminology, safety, truck organization, union matters and operation of dolly, car and crane rigs. Instructors will lead exercises in interior and exterior lighting setups.

Allegany Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 971000 10220

PRODUCTION ASSISTANT

Students will receive a detailed overview of the production process—from pre-production to post-production—through instruction and practical exercises. The program covers script breakdown, budgeting, scheduling, the hiring hierarchy, deal making, equipment, locations and paperwork. Students will also learn about production manager relations with directors, department heads, production offices, accounting departments and actors.

South Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 102200 10220

VIDEO ASSIST

Students will receive a detailed overview of departmental problems and job descriptions and learn key skills in camera wrap, maintenance, gels, floors, dolly tracks, film and high-definition cameras. Instructors will lead practical exercises and tests in the operation of a Steadicam, dolly, crane and camera along with a workshop similar to accompanying a short scene.

South Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 102200 10220

WORKING ACTING

This 15-hour course introduces the student to the strategies and techniques to becoming a broadcast professional in commercial television work. This course includes techniques used for videotape, splice, delivery, sample scripts, script reading and casting agents. Students will receive a script to illustrate how they should.

Allegany Campus 35A-021-1210 2:00 6.000000
 6.00000-6.00000 W 962000 10220

West Hill Center 35A-021-1101 2:00 6.000000
 1019000-6.00000 S 962000 10220

South Campus 35A-021-1040 2:00 6.000000
 6.00000-6.00000 W 971000 10220

BUSINESS/ENTREPRENEUR

SCENE PAINTING

This program provides an overview of the scene painting department, including job descriptions and detailed lessons on industry standards, equipment, terminology, interaction with other departments, union rules and budgeting.

South Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 971000 10220

SET CONSTRUCTION

This program provides an overview of the set construction department, including job descriptions and detailed lessons on industry equipment, terminology, set construction, interaction with other departments, union rules and budgeting. Students will also receive an introduction to basic set construction, blueprints, use of tools and shop safety.

South Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 971000 10220

SET DECORATION & PROPS

Students will receive a departmental overview that includes job descriptions and a review of related departments during pre-production, shooting and wrap and include advance planning, interaction with other departments, continuity set operation, tabs and locks and track organization. The program covers budgeting, contracts, organization, packing, scheduling, working on-set, tabs and locks, transportation and union contracts and protocols. Instructors will provide hands-on experience in set dressing techniques, emphasizing the mastery of chosen and creative skills in the department. Students will receive lessons on in-camera effects, special effects, general safety and firearms.

South Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 102200 10220

SET SHOOT A FILM

Students will receive an overview of the production process from benefits review as a crew member in your area of interest.

South Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 111000 10220

South Campus 35A-019-1040 2:00 2.000000
 6.00000-6.00000 W 111100 10220

APPENDIX C

A LIST OF THE STUDIES USED IN THE PILOT MAP (FIGURE 14)

ID #	Reference
1	Acs, Z., Arenius, P., Hay, M., & Minniti, M. (2005). <i>2004 Executive Report: Global Entrepreneurship Monitor</i> .
2	Addison, T. (2001, March 20-31). <i>Reconstruction from War in Africa: Communities, Entrepreneurs, and States</i> . Paper presented at the CSAE Conference 2001: Development Policy in Africa – public and private perspectives., University of Oxford.
3	Adepoju, A. (2002). Fostering Free Movement of Persons in West Africa: Achievements, Constraints, and Prospects for Intraregional Migration. <i>International Migration, 40</i> (2), 3-28.
4	Arrow, K. J. (1973). Higher education as a filter. <i>Journal of Public Economics, 2</i> (3), 193-216.
6	Australian Bureau of Statistics (2001). <i>Australian Social trends 1995; Work-Unemployment: Youth Unemployment</i> (URL): Australian Bureau of Statistics.
9	Bates, T. (1985). Entrepreneur Human Capital Endowments and Minority Business Viability <i>Journal of Human Resources, 20</i> (4), 540-554.
10	Becker, G. S. (1970). The Concept of Human Capital. In M. R. Levin & A. Shank (Eds.), <i>Educational Investment in an Urban Society</i> (pp. 62-70). New York: Teachers College Press.
14	Bizuneh, G., Adino, T., Gesano, G., Guarneri, A., & Heins, F. (2001). <i>Work Status and Unemployment in Urban Ethiopia</i> . Roma, Italy: Institute for Population Research--National Research Council Irp-Cnr).
15	Brauns, H., Gangle, M., & Schere, S. (1999). <i>Education and Unemployment: Patterns of Labour Market Entry in France, the United Kingdom and West Germany</i> (Working Paper). Mannheim, Germany: Mannceim Center for European Social Research (MZES).
17	Brock, W. E. (1991). <i>What Work Requires of Schools: A SCANS Report for America 2000</i> . Washington, D.C: The Secretary's Commission on Achieving Necessary Skills; U.S. Department of Labor.
18	Brown, D. K. (2001). The Social Sources of Educational Credentialism: Status Cultures, Labor Markets, and Organizations. <i>Sociology of Education, 74</i> (Extra Issue: Current of Thought: Sociology of Education at the Dawn of the 21st Century), 19-34.
21	Caspi, A., Entner Wright, B. R., Moffitt, T. E., & Silva, P. A. (1998). Early failure in the labor market: Childhood and adolescent predictors of unemployment in the transition to adulthood. <i>American Sociological Review, 63</i> (3), 424-451
22	Charney, A., & Libecap, G. (2000). <i>Insights; Impact of Entrepreneurship Education</i> : Center for Entrepreneurial Leadership, Ewing Marion Kauffman Foundation.

24	Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs <i>Journal of Business Venturing</i> , 18(3), 301-331.
25	Decreuse, B., & Granier, P. (2002). <i>A theory of Education, Unemployment and Job Mobility</i> . Paper presented at the Econometric Society; 57th European Meeting, Venice, Italy.
28	During, W. E. (1990). Education for Entrepreneurship. In R. Donckels & A. Miettinen (Eds.), <i>New Findings and Perspectives in Entrepreneurship</i> (pp. 134-141). Brookfield, Vermont: Avebury Gower Publishing Company.
29	El-Hamidi, F., & Wahba, J. (2005). <i>The Effects of Structural Adjustment on Youth Unemployment in Egypt</i> . Paper presented at the Annual Conference of the Economic Research Forum (ERF). from http://www.erf.org.eg/cms.php?id=publication_details&publication_id=505
32	Gedeon, S., & Psacharopoulos, G. (1982). Unemployment, Education and Selection: The Case of a Bank Entrance Examination. <i>European Journal of Education</i> , 17(1), 81-86.
35	Godfrey, M. (2003). <i>Youth Employment Policy in Developing and Transition Countries Prevention as well as Cure</i> (No. 0320). Washington DC: The World Bank.
36	Groot, W., & Oosterbeek, H. (1994). Earnings Effects of Different Components of Schooling; Human Capital Versus Screening. <i>The Review of Economics and Statistics</i> , 76(2), 317-321.
41	Hungerford, T., & Solon, G. (1987). Sheepskin Effects in the Returns to Education <i>Review of Economics and Statistics</i> , 69(1), 175-177.
47	ILO (2002). <i>Decent work and the informal economy; Sixth item on the agenda</i> (Report). Geneva: International Labour Office.
50	ILO (2004a). <i>Global Employment Trends for Youth 2004</i> . Geneva: International Labour Office.
52	ILO (2005). <i>Fact on Youth Employment</i> : International Labour Office.
54	ILO (2006b). <i>Global Employment Trends For Youth 2006</i> . Geneva: International Labour Office.
66	Krueger, N. F. (2003). The Cognitive Psychology of Entrepreneurship. In Z. J. Acs & D. B. Audretsch (Eds.), <i>Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction</i> (pp. 105-140). Boston, MA.: Kluwer Academic Publishers.
67	Leo Paul, D. (1992). Entrepreneurial Education in Europe. <i>Journal of Education for Business</i> , 68(2), 74-78.
68	Levin, H. M. (1983). Youth Unemployment and Its Educational Consequences. <i>Educational Evaluation and Policy Analysis</i> , 5(2), 231-247.
69	Li, J., Zhang, Y., & Matlay, H. (2003). Entrepreneurship education in China. <i>Education and Training</i> , 45(8/9), 495-505.
72	Magnussen, O. (1979). Further Aspects of the Education -Employment Relationship: Youth Unemployment and Education. <i>European Journal of Education</i> , 14(3), 285-288.
103	Schultz, T. W. (1970). Investment in Human Capital. In M. R. Levin & A. Shank (Eds.), <i>Educational Investment in an Urban Society</i> (pp. 43-61). New York: Teachers College Press.

APPENDIX D

A LIST OF THE STUDIES USED IN THE LITERATURE MAPPING (FIGURE 17~20)

ID #	Reference
7	Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (2001). Self-Efficacy Beliefs as Shapers of Children's Aspirations and Career Trajectories. [Jan. - Feb.]. <i>Child Development</i> , 72(1), 187-206.
11	Becker, G. S. (1975). <i>Human Capital: A theoretical and Empirical Analysis, with Special Reference to Education</i> (Second Edition 1980 ed.). Chicago: The University of Chicago Press.
12	Begley, T. M., & Tan, W. (2001). The Socio-Cultural Environment for Entrepreneurship: A Comparison Between East Asian and Anglo-Saxon Countries. . <i>Journal of International Business Studies</i> , 32(3), 537-553.
21	Caspi, A., Entner Wright, B. R., Moffitt, T. E., & Silva, P. A. (1998). Early failure in the labor market: Childhood and adolescent predictors of unemployment in the transition to adulthood. <i>American Sociological Review</i> , 63(3), 424-451
24	Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs <i>Journal of Business Venturing</i> , 18(3), 301-331.
26	Djankov, S., Y. Qian, et al. (2006). "Who Are China's Entrepreneurs?" <i>The American Economic Review</i> 96(2): 348-3582.
60	Iyigun, M. F., & Owen, A. L. (1997). <i>Risk, Entrepreneurship and Human Capital Accumulation</i> (No. JEL classification # J24, O11, O40). Washington, D.C.: Board of Governors of the Federal Reserve System.
66	Krueger, N. F. (2003). The Cognitive Psychology of Entrepreneurship. In Z. J. Acs & D. B. Audretsch (Eds.), <i>Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction</i> (pp. 105-140). Boston, MA.: Kluwer Academic Publishers.
71	Locke, R. R. (1993). Education and entrepreneurship: and historian's view. In J. Brown & M. B. Rose (Eds.), <i>Entrepreneurship, Networks and Modern Business</i> (pp. 55-75). New York, NY.: Manchester University Press.
74	McClenaghan, P. (2000). Social Capital: Exploring the Theoretical Foundations of Community Development Education. <i>British Educational Research Journal</i> , 26(5), 565-582. .
80	Nelson, R. E. (1977). Entrepreneurship Education in Developing Countries. <i>Asian Survey</i> , 17(9), 880-885.
84	O'Higgins, N. (1997). <i>The Challenge of youth unemployment</i> . Geneva: ILO.
86	Palley, H. A. (1967). <i>Community Action, Public Programs and Youth Unemployment: A Case</i>

	Study of Newark, New Jersey. <i>The Journal of Negro Education</i> , 46(2), 100-110.
87	Panglaykim, J. (1979). The Entrepreneur and Growth and Development Corporations. <i>Asian Survey</i> , 19(7), 707-717.
94	Putnam, R. D. (2000). <i>Bowling alone: the collapse and revival of American community</i> . New York: Simon & Schuster.
95	Raffe, D. (1984). The Transition from School to Work and the Recession: Evidence from the Scottish School Leavers Surveys, 1977-1983. <i>British Journal of Sociology of Education</i> , 5(3), p. 247-265. .
96	Riley, J. G. (1979). Testing the Educational Screening Hypothesis. <i>The Journal of Political Economy</i> , 87(5), S227-S252.
97	Rodríguez, M. J. and F. J. Santos (2009). "Women nascent entrepreneurs and social capital in the process of firm creation." <i>The International Entrepreneurship and Management Journal</i> 5: 45-64.
98	Ronstadt, R. (1985). The Educated Entrepreneurs: A New Era of Entrepreneurial Education is Beginning. <i>American Journal of Small Business</i> , 10(1), 7-17.
99	Schneider, F. (2002, July 17). <i>Size and Measurment of the Informal Economy in 110 Countries Around the World</i> . Paper presented at the Workshop of Australian National Tax Center, ANU, Canberra, Australia.
100	Schramm, C. J. (Writer) (2005). Advancing Innovation and Entrepreneurship [pdf]. In E. M. K. Foundation (Producer). USA: Technology Transfer Society Annual Conference—2005.
101	Schuller, T., & Bamford, C. (2000). A Social Capital Approach to the Analysis of Continuing Education: Evidence from the UK Learning Society Research Programme. <i>Oxford Review of Education</i> , 26(1), 5-19.
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104	Schultz, T. W. (1980). Investment in Entrepreneurial Ability. <i>The Scandinavian Journal of Economics</i> , 82(4), 437-448.
110	Singell, L. D., & Lillydahl, J. H. (1989). Some Alternative Definitions of Youth Unemployment: A Means for Improved Understanding and Policy Formulation. <i>American Journal of Economics and Sociology</i> , 48(4), 457-471.
111	Singh, M. (2000). Combining Work and Learning in the Informal Economy: Implications for Education, Training and Skills Development. <i>International Review of Education</i> 46(6), 599-620.
112	Sluis, J. V., Praag, M. V., & Vijverberg, W. (2005). Entrepreneurship Selection and Performance: A Meta-Analysis of the Impact of Education in Developing Economies <i>The World Bank Economic Review</i> , 19(2), 225-261.
113	Somavia, J. (2006). <i>Facts on Youth Employment; Fourteenth Asian Regional Meeting</i> : International Labour Organization.
118	Sullivan, T. M. (2005). <i>The Small Business Economy; A Report to the President</i> . Washington D. C. : United Sates Small Business Administration
120	Thurow, L. C. (1975). <i>Generating Inequality; Mechanisms of Distribution in the U.S. Economy</i> . New York: Basic Books, Inc.
121	Tucker, I. B. (1988). Entrepreneurs and Public-Sector Employees: The Role of Achievement Motivation and Risk in Occupational Choice. <i>The Journal of Economic Education</i> , 19(3), 259-268.
126	Winslow, E. K., Solomon, G. T., & Tarabishy, A. (1999). Empirical Investigation into

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127	World Bank (2003). The Knowledge Economy and the Changing Needs of the Labor Market. Lifelong Learning in the Global Knowledge Economy: Challenges for Developing Countries. W. Bank. Washington D.C., World Bank: 1-19.
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133	Werbel, J. D. and S. M. Danes (2010). "Work Family Conflict in New Business Ventures: The Moderating Effects of Spousal Commitment to the New Business Venture." <i>Journal of Small Business Management</i> 48(3): 421-440.
135	Soriano, D. R. and G. J. Castrogiovann (2010). "The impact of education, experience and inner circle advisors on SME performance: insights from a study of public development centers." <i>Small Business Economics</i> DOI: 10.1007/s11187-010-9278-3.
136	Stam, E. and K. Wennberg (2009). "The roles of R&D in new firm growth." <i>Small Business Economics</i> 33: 77-89.
138	McGibbon, S. C., C. Moutray, et al. (2009). <i>The Small Business Economy: A Report to the President</i> . Washington D.C., U.S. Small Business Administration, Office of Advocacy.
139	Plehn-Dujowich, J. (2010). "A theory of Serial Entrepreneurship." <i>Small Business Economics</i> 35: 377-398.
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