The Impact of Entrepreneurial Climate on Youth Unemployment
A Study of This Relationship in Swedish Municipalities

Bachelor’s thesis within Political Science
Author: Tina Alpfält
Tutor: Benny Hjern
Per Viklund
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Abstract

The purpose of this thesis is to create a deeper understanding of the concepts entrepreneurial climate and youth unemployment as well as estimating the statistical relationship between them. This was realised through a use of multiple methods. A qualitative study that examined the causes and solutions to youth unemployment and one that investigated what factors constitute a good entrepreneurial climate. Some causes of youth unemployment are technological progress, globalisation, labour market regulations, the Swedish education system and the local entrepreneurial climate. Possible solutions to some of these causes are to reform the labour market regulations, incorporate more vocational training in the education system and improve the entrepreneurial climate. Factors that constitute a good entrepreneurial climate are business friendly attitudes, good service by the municipality and good communication between the firms and the municipality. The quantitative study was followed by a quantitative study with the hypothesis that the local entrepreneurial climate and the youth unemployment have a negative relationship in Swedish municipalities. The regression results for both years examined, 2006 and 2009, confirmed the hypothesis. When the local entrepreneurial climate improves, the youth unemployment decreases. An interesting finding is that the goodness of fit, indicated by the adjusted $R^2$, almost is twice as large for 2009, when the Swedish economy was in a recession, compared to 2006 when the economy was booming.
List of Abbreviations

EPA  = Employment Protection Act
EU   = European Union
LAS  = Lag om Anställningsskydd
OECD = Organisation for Economic Co-operation and Development
OLS  = Ordinary Least Squares
SBA  = Small Business Act
SCB  = Statistiska Centralbyrån
SKL  = Sveriges Kommuner och Landsting
SME  = Small and Medium sized Enterprises
SOU  = Statens Offentliga Utredningar
SVT  = Sveriges Television
VIF  = Variance Inflation Factor
Contents

List of Abbreviations ................................................................. ii

1 Introduction ................................................................................ 1
  1.1 Purpose & Research Questions ............................................. 2
  1.2 Method .................................................................................. 2
    1.2.1 Qualitative Method ....................................................... 3
    1.2.2 Quantitative Method .................................................... 4
  1.3 Limitations ............................................................................ 5
  1.4 Disposition ............................................................................ 5

2 Background Information & Previous Research ...................... 7
  2.1 Definition of Youth Unemployment ....................................... 7
  2.2 The Swedish Case ............................................................... 8
  2.3 Previous Research .............................................................. 9

3 Supply & Demand on the Labour Market ............................. 10
  3.1 According to Supply and Demand Theory ............................ 10
  3.2 Actual Situation .................................................................... 11
  3.3 Return to Equilibrium .......................................................... 12
    3.3.1 Removing the Wage Floor ........................................... 12
    3.3.2 Increasing the Demand for Labour ............................. 13

4 Youth Unemployment ............................................................. 15
  4.1 Causes of Youth Unemployment .......................................... 15
  4.2 Potential Side Effects Caused by Youth Unemployment ....... 16
    4.2.1 Poor Health ............................................................... 16
    4.2.2 Increased Public Costs and Tax Losses ....................... 17
    4.2.3 Criminality and Drugs .............................................. 17
    4.2.4 Negative Effects on Future Career ............................ 18
  4.3 Suggested Cures .................................................................. 18
    4.3.1 Internships and On-the-job Training .......................... 18
    4.3.2 Collaboration between Relevant Instances ............... 19
    4.3.3 Entrepreneurial Climate ............................................ 19
    4.3.4 Labour Market Regulations ..................................... 20

5 Entrepreneurial Climate .......................................................... 22
  5.1 Why is an Entrepreneurial Climate Important? ................. 22
  5.2 A Good Entrepreneurial Climate ....................................... 22
  5.3 Ranking of Municipalities’ Entrepreneurial Climate ........... 24

6 The Relationship between Unemployment & Entrepreneurship .......................... 28
  6.1 Presentation of Model and Variables ................................... 28
  6.2 Descriptive Statistics ......................................................... 30
  6.3 Regression Results ............................................................. 31

7 Discussion .................................................................................. 35

8 Conclusion .................................................................................. 40

References .................................................................................... 41
Figures
Figure 1.1: Triangulation of methods................................................................. 3
Figure 1.2: Outline of thesis. ............................................................................. 6
Figure 2.1: Unemployment in Sweden from 1976 to 2009. .............................. 8
Figure 3.1: The labour market according to theory ......................................... 10
Figure 3.2: The labour market in Sweden. ....................................................... 11
Figure 3.3: Increasing the demand for labour ................................................. 13
Figure 5.1: Components of the ranking. ......................................................... 25

Tables
Table 5.1: The ranking of 2010. ................................................................. 26
Table 6.1: Hypothesised effects of the variables ........................................... 29
Table 6.2: Descriptive statistics for 2006 ....................................................... 30
Table 6.3: Descriptive statistics for 2009 ....................................................... 31
Table 6.4: Regression results for 2006 .......................................................... 32
Table 6.5: Regression results for 2009 .......................................................... 33
1 Introduction

Unemployment has always been an important topic within both economics and politics. However, it does not seem to hit the labour force evenly. Many studies have shown that young citizens are unemployed to a larger extent than the older citizens (O’Higgins, 1997; Nilsson, 2010 & Lundin, 2007).

In the beginning of 2010 the youth unemployment in Sweden was 30%, which can be compared to 21.1% in the EU27 area, according to data from the European database Eurostat. That is a high number, indicating that almost one in three young Swedes does not have a job. Consequently the issue of youth unemployment was discussed intensively in debates prior to the 2010 general election in Sweden. It was called one of the most important topics by the magazine Kollega (Unionen, 2010), a magazine published by the Swedish labour union, “Unionen”. In addition, statistics published by “Sveriges Television” (SVT), the Swedish national television company, suggests that employment in general was the second most important topic for the voters when they decided which party to vote for, according to the exit polls (SVT, 2010).

As stated by Singel (1984) the consequences of being unemployed in the early years can be severe. People that have trouble to enter the labour market successfully when young, are more likely to be unemployed later on in life and have lower earnings. There are also many other reasons why youth unemployment is an important problem, such as the risk of permanent alienation and the large costs that it has on the society (Nilsson, 2010).

Due to the economical burden on the society one could argue that it should be in everyone’s interest to work towards a decrease of unemployment rates among youths. Arbetsförmedlingen (The Swedish Public Employment Services) is the authority that deals with the unemployed youths practically and they have various programmes designed to facilitate for them to enter the labour market. Their actions are governed by the government and decisions are thus made on a national level (Arbetsförmedlingen, 2010a).

According to Carling & Richardson (2004) the two most popular and common solutions used by Arbetsförmedlingen’s local employment offices are further education and work placement schemes. Both of these aim at increasing the competence of the unemployed person and thereby facilitate for them to find a regular job.

Nevertheless, high youth unemployment remains although youths are receiving more education and practical skills. It suggests that low skills and competence of the youths is not the only reason for the problem. Another important reason of the problem, as suggested by Rantakeisu, Starrin and Hagquist (1996), is that there are not enough jobs for the youths. Based on that the underlying assumption of this thesis is:

Without new job opportunities, and assuming no demographical changes, the youth unemployment can only decrease at the expense of another age group, ethnic group etc. Therefore the active support and promotion of local entrepreneurial climates become increasingly important if new job opportunities are to be created.

Therefore this thesis firstly sets out to investigate the phenomena youth unemployment and entrepreneurial climate in more general terms. Secondly the relationship between
youth unemployment figures and local entrepreneurial climates in Swedish municipalities is examined.

### 1.1 Purpose & Research Questions

The purpose of this thesis is twofold. The first aim is to create a deeper knowledge of the subjects youth unemployment and local entrepreneurial climate through a qualitative study. This means that definitions are examined as well as causes, effects and possible solutions of youth unemployment, this is developed further in the first two research questions stated below. The second aim is to examine, through a quantitative study, whether there is a relationship between a good environment for firms and low unemployment figures for youths, and if so is it negative or positive? Thus the research questions are stated as follows:

1. What are the causes of youth unemployment and are there any solutions to it?
2. What constitutes a good entrepreneurial climate?
3. How is the youth unemployment rate affected by the local entrepreneurial climate?

The hypothesis to be tested is the following:

There is a negative relationship between youth unemployment and entrepreneurial climate in the Swedish municipalities.

One should observe that a negative relationship for the variables in this thesis means that an improved entrepreneurial climate results in a lower unemployment. The term negative refers to the decrease seen in one variable as the other increases, which is seen as a positive effect for the youth unemployment and entrepreneurial climate.

### 1.2 Method

According to Halvorsen (1992) a method is a way to proceed with an investigation and there are mainly two such ways to proceed; hypothetical-deductive or inductive. The first he describes is the hypothetical-deductive way of work, which means that the researcher attempts to judge theories by testing hypotheses. This is usually done by quantitative methods.

The second way to work with a study is inductive, which means that no hypotheses exist a priori. The researcher instead attempts to develop an understanding for a specific phenomenon; the most common way to do that is by using qualitative methods (Halvorsen, 1992).

Boije (2010) tries to explain the difference between qualitative and quantitative analysis by showing how two studies focusing on the same variables can produce different outcomes as a result of the varying methods used. As she summarises, qualitative research literature is used to understand a field of research and the analysis builds on textual content from observations and interviews. Quantitative research, on the other hand, uses the literature to deduct hypotheses which are later on tested, often with statistical criteria and the results are based on numbers rather than text.
This thesis will make use of different methods, which is considered advantageous by some researchers (Eliasson, 2010; Halvorsen, 1992 & Denscombe, 2009) since it provides a broader view of a subject than one method only. In this thesis it is helpful since it provides a deeper knowledge of the subjects whose relation is to be examined. This is often called triangulation within the literature and it can be performed in several ways, which are easiest displayed by the graph in Figure 1.1.

The abbreviations in the figure represent qualitative methods, *qual*, and quantitative methods, *quant*. The first section, sequential studies, means that the methods are used after each other; sequentially. One can start with a qualitative study and then continue to make a quantitative study of some phenomenon or the other way around. In some cases the first methods used can be repeated, as shown in the third column in Figure 1.1.

The second way to combine the qualitative and quantitative methods is to use them simultaneously. The last combination discussed by Denscombe (2009) is when the methods are used on different levels. Quantitative methods can be used to look at a phenomenon on the macro level, whereas the qualitative methods can be used for deeper micro level studies.

This thesis is a sequential study starting with a qualitative study and continuing with a quantitative study, which is equivalent to the method in the first column in Figure 1.1. Those methods are explored further in the following two sections.

### 1.2.1 Qualitative Method

Qualitative methods are used initially in this thesis and applied in Chapter 4 and Chapter 5, where the aim is to develop an understanding of youth unemployment and entrepreneurial climate.

More specifically, the grounded-theory approach is used for this part of the thesis. This strategy was developed by Glaser and Strauss in the 1960’s as an attempt to improve the quality of qualitative research (Glaser & Strauss, 1967).
Eneroth (1984) describes with examples how the grounded-theory method is applied to an actual study. What one does is to systematically categorise the collected data. The central concept in Chapter 4 is youth unemployment, thus the literature examined that is related to youth unemployment is gathered together. In the second step the concept can be divided into subcategories. In Chapter 4 the subcategories are causes of youth unemployment, potential side effects of youth unemployment and possible solutions. In the third step all of these categories are divided according to their various dimensions. For example: globalisation, technological progress, the entry of women in the labour force, content of education, entrepreneurial climate and laws.

As seen the data is grouped in several levels which then become easier to analyse. Except for this way of coding data Glaser and Strauss (1967) highlight the importance of which data that is included. The focus should be on collecting data from various groups so that as many aspects as possible are covered. Diversity is thus believed to provide more information of the phenomenon studied.

Therefore the data for the Chapters 4 and 5 were collected from many various sources. There are official documents published by the government, reports written by specialist organisations such as the Ungdomsstyrelsen (Youth Council), interest organisations, books, journal articles and articles from other magazines.

Due to the wideness of the subjects chosen for deeper investigations and their macro importance for society it would have been difficult and time consuming to aim for primary data. Halvorsen (1992) says that in some situations using primary data is not an alternative, especially in cases where the phenomenon examined is historical or related to the macro level.

1.2.2 Quantitative Method

Quantitative methods are used in Chapter 6 in this thesis where the aim is to explain the relationship between youth unemployment and entrepreneurial climate. The specific method used is what Halvorsen (1992) calls a bivariate analysis. The concept refers to an analysis of two variables. Nevertheless, the actual regression model used for the statistical testing of the relationship between the variables will make use of more than two variables due to the difficulties of creating an entrepreneurial climate variable.

The regression is of a linear type and is tested by the regular Ordinary Least Squares (OLS) method in the statistical software E-views. The data used is statistical data of secondary nature. Even though the focus is on more local relationships, i.e. on the municipal level, than the previous sections there are too many municipalities in Sweden to make it possible to collect primary data within a reasonable time frame.

According to Descombe (2009), official statistics are usually credible, based on facts and objective. Also Halvorsen (1992) defends the usage of secondary data in form of official statistics and states that Statistiska Centralbyrån (SCB), Statistics Sweden, is the most important producer of statistics is Sweden. The data used for the unemployment variable is based on raw data from SCB. Even though one of the problems with official statistics is number of unreported cases there is no better alternative with available statistics for all Swedish municipalities.
Other sources of statistics, according to Halvorsen (1992), are interest organisations and public bodies. The data used for the proxy variables of entrepreneurial climate are based on data from the business promoting organisation Svenskt Näringsliv.

1.3 Limitations

Sweden is divided into 290 municipalities which are to be studied in this thesis over two different years only. The reason for that is that it is more interesting, for this particular study, to see if there are any geographical variations at one point in time, equivalent to a cross-sectional model, than examining a few municipalities over several years; which constitutes a time series model.

Additionally, it is interesting to examine whether the relationship differs between recessions and booms. Based on that, the years 2006 and 2009 have been chosen as years studied. The reasons are several, for example it is more interesting to look at more recent years in order to get results that are as up to date as possible. The most recent year with a recession was 2009. The financial crisis erupted in the autumn of 2008, so most of that year was not characterised by a recession.

Another exogenous factor that affected the choice of year was the change in the definition of an unemployed person, which was altered to better suit a harmonised EU definition in October 2007; nevertheless SCB has recalculated data from April 2005 using this new definition. Thus 2006 is the first year where the same definition applies to all months of the year and therefore it was chosen as the boom year.

This thesis exclusively examines the entrepreneurial climate and its potential effects on youth unemployment and not the employment decisions made by the municipalities themselves. One of the main reasons for this focus on the private sector and not on the public is that the rules by which the private firms must adhere are shaped by the public sector. Therefore the municipalities are seen as governing bodies shaping the entrepreneurial climate in this thesis and not a source of employment.

1.4 Disposition

The outline of this thesis is presented graphically in Figure 1.1. As is seen the introductory chapter is followed by a background chapter describing the definitions of youths and unemployed persons, presenting facts about the Swedish situation and a summary of previous research within the field of entrepreneurship and unemployment.
Figure 1.2: Outline of thesis.

Chapter 3 presents some theory on the supply and demand on the labour market and is followed by three empirical chapters; each answering one of the research questions presented previously. Chapter 4 discusses causes, side effects and solutions to the youth unemployment problem, whereas Chapter 5 discusses the significance of an entrepreneurial climate and what factors that constitutes it. Chapter 6 examines the statistical relationship between unemployment and entrepreneurial climate and Chapter 7 discusses the findings from all three empirical chapters. The thesis is concluded with the conclusions of the study and suggestions for future research in Chapter 8.
2 Background Information & Previous Research

Before starting the analysis it is helpful to make some definitions of youth unemployment and get an impression of the Swedish situation. This chapter concludes with some previous research on the hypothesis to be tested: the negative relationship between entrepreneurial climate and youth unemployment.

2.1 Definition of Youth Unemployment

The definition of youth unemployment varies from source to source. In the statistics presented by Arbetsförmedlingen there are only two categories of unemployment statistics to choose from; either for the whole working age of 16-64 years of age or for the subgroup aged 18-24. Looking at other reports and articles several variations are found. In a report by Arena för tillväxt (2010), the unemployment of youths aged 15-24 is mentioned already in the prologue. Later on the interval 18-24 years of age, as used by Arbetsförmedlingen, is discussed as well as the age group of 20-24. In an official report by the Swedish government, statens offentliga utredningar (SOU), from 2003 (SOU, 2003) the age group of 16-24 is discussed.

Clearly there is no consensus within this field of literature regarding the age constituting youths. However, the definition of being unemployed is not easily defined either. In the statistics provided by Statistics Sweden the labour force consists of two parts; unemployed and occupied. With occupied one refers to either a person who has worked a minimum of one hour during a reference week or a person who was absent from work for various reasons such as vacation or health problems (SCB, 2009). The category unemployed is also divided into two subgroups; those who are full time students looking for employment and those who are openly unemployed with no other occupation. This is part of a new definition from 2007, which was made in order to increase the level of coherence between intra-EU statistics. Prior to 2007 the full-time students were not included in the labour force at all (SCB, 2007). Neither were participants in some labour market programs or people who are not actively applying for jobs (SCB, 2005).

The statistics provided by Arbetsförmedlingen has two main categories (Arbetsförmedlingen, 2010b); those who are enrolled at an employment office and those who are not. As mentioned by Arena för tillväxt (2010), this measurement does not say anything about those youths that have not enrolled at their local employment office, but still lack an employment. Among those included in the enrolled category there are three major subcategories, those who are openly unemployed and could start working immediately, those who are unemployed and participating in labour market programs and finally those who are employed where the employer receives economic support for them. This last category is usually not included when calculating unemployment figures since they technically have an employment.

To conclude this section one can say that the definitions of youths, employed and unemployed seems to differ from case to case. Therefore one should be careful when looking at statistics and reading about youth unemployment before making comparisons.
2.2 The Swedish Case

In order to get a glance at the history of unemployment in Sweden data was collected on an annual basis from SCB, both for the total labour force, aged 15/16-64 years, and for the youths, which in this case is referring to unemployed persons aged 15/16-24. The compiled results are seen below in Figure 2.1.

![Unemployment in Sweden](image)

**Figure 2.1:** Unemployment in Sweden from 1976 to 2009. (Source: SCB)

A few technical things should be pointed out when looking at the graph. Firstly, the definition of unemployment changed in 2005, which causes a structural break in the time series (SCB, 2005). Thus the large increase seen in the last years displayed cannot be directly related to the previous years. What is nevertheless interesting is the large gap between the youths and the total labour force in the last five years. The definition of unemployment has changed recently and most full-time students are relatively young. As a result it is difficult to say whether the last five years have experienced such a large increase in youth unemployment as Figure 2.1, suggests or whether it is a result of the change in the definition. Secondly, when the definition was changed in 2005 Statistics Sweden also changed the range of the data, from starting at the age of 16 to the age of 15. Thus the last five years in the graph contains one extra year group of youths.

What can be observed in the graph is that the youth unemployment has been much higher than the overall unemployment throughout the time studied, not only in the last few years. Thus this is not a new problem for the Swedish society or a result of the inclusion of full-time students in the new definition.
Another observation one can make is that the youths seem to be the affected more severely by a recession than employees in general. This is what could be expected considering the regulations on the Swedish labour market.

### 2.3 Previous Research

Much research has been conducted on the topic of entrepreneurship and entrepreneurial climate in general. Some research has been conducted on the same topic as this thesis, the relationship between the entrepreneurial climate and unemployment, but they have focused on other regions. Their main findings are presented below.

The Organisation for Economic Co-operation and Development (OECD, 1998a) states that after the economic crisis, which hit Sweden in 1990, the result was increased productivity in the Swedish industries rather than increased employment. This has shifted the focus towards entrepreneurship and small and medium sized enterprises (SME) which are the source of the future jobs; if some of the existing obstacles are to be removed.

Another Study by Faria, Cuestas and Mourelle (2010) claims that there is a division in the literature between researchers that have intended to study the effects entrepreneurship has on unemployment and those who have intended to study the opposite relationship; the effects on entrepreneurship caused by an increased unemployment. In order to establish which one is the most appropriate or whether there is bidirectional causality between entrepreneurship and unemployment they perform a granger-causality test on data from several developed countries; such as Australia, Germany, the United Kingdom and the United States. They find that there is a bidirectional relationship between the variables for all countries they studied. This implies that not only does the amount of entrepreneurship affect the unemployment rate but high unemployment is promoting more entrepreneurship.

Audretsch and Fritsch (1994) performed a study on start-ups of new firms in West-Germany and found that the rate of newly established firms is negatively related to the unemployment rate. Thus the more new firms that are established the lower is the unemployment rate. A similar study was performed on Italian data by Garofoli (1994). He also found this negative relationship between unemployment and start-ups.
3 Supply & Demand on the Labour Market

This chapter outlines the technicalities of the labour market and discusses how the labour market should work, according to theory, how it actually works and some ways to retain the equilibrium on the labour market. Only when knowledge of the economic mechanisms is gained can one discuss the political remedies to the disequilibrium.

3.1 According to Supply and Demand Theory

Within most economic markets a supply and demand schedule, like the one displayed in Figure 3.1, can be of use. The Y-axis shows the wage level (W) and the X-axis the quantity of labour (Q), or number of persons on the labour market. The downward sloping line, DL, shows the demand for labour and is downward sloping since the lower the wage for each worker the more workers a firm could, or wishes, to employ. The upward sloping line, SL, shows the supply of labour which builds on the assumption that the higher the wage level the more persons are willing to work (McDowell, Thom, Frank & Bernanke, 2006).

![Figure 3.1: The labour market according to theory (Source: McDowell et al., 2006)](image)

When combining the supply and demand one gets an intersection, point A; this is the equilibrium point. In this point the number of persons wanting a job is equal to the number of persons that the firms are willing to hire. Therefore the $W^*$ indicates the equilibrium wage paid in this market and the $Q^*$ the equilibrium number of persons employed.

Nevertheless if the labour market would be in, for example point B instead of the equilibrium point A, the firms are willing to hire more workers at a lower price although fewer persons are willing to take a job at that low wage, see point C. As a result the
wage will be driven upwards to the point where the market comes to a rest; the equilibrium point.

3.2 Actual Situation

Often the reality differs from the theories. The labour market in Sweden is no different. Sweden has received criticisms for its rigid labour market from OECD (2008). According to OECD (2008), there are no legislated minimum wages in Sweden, instead the labour unions and the employers agree upon collective agreements ensuring that the affected workers get a certain minimum wage; which is very high compared with those in other countries. As stated by McDowell et al. (2006) about 90% of the Swedish labour force holds a membership to a union. Thus there is no need for a legislated minimum wage; the labour unions efforts affect most workers anyway.

The result of this is a different version of the supply and demand scheme than the one shown previously in Figure 3.1. The new scheme will contain the minimum wage resulting in a disequilibrium of the market, which is displayed in Figure 3.2.

![Figure 3.2: The labour market in Sweden. (Source: McDowell et al. 2006)](image)

Like previously, the Y-axis shows the wage level and the X-axis the number of persons on the labour market. $W_{Min}$ represents the minimum wage, which works like a price floor on the market; the wage cannot fall below it. As a consequence the number of persons seeking employment is indicated by point C and the number of persons the firms are willing to employ is indicated by point B. These are translating to $Q_D$, the quantity of labour demanded, and $Q_S$, the quantity of labour supplied on the X-axis. The gap between them represents the excess supply. Due to the presence of the minimum wage the equilibrium cannot be reached resulting in unemployment.
Usually high unemployment puts downward pressure on the wage levels but not in this case. This can be explained partially by the presence of a $W_{\text{Min}}$ which in turn can be partly explained by the insider-outsider model as described by Dornbusch, Fischer and Startz (2004). It says that the firms and labour unions only negotiate with those who already have a job, the insiders. Therefore there is no pressure to lower the wages and allow for more of the unemployed, the outsiders, to acquire a job since lowering the wages for the outsiders would automatically give the insiders a lower wage too.

### 3.3 Return to Equilibrium

It was established in the previous section that the labour market in Sweden is in disequilibrium, the number of people willing to work does not equal the number of employees the firms are willing to hire. A possible reason for this is the presence of the wage floor created by the strong labour unions. This section discusses what can be done in order to return to the equilibrium. That is various policy areas that could be reformed to encourage employment in Sweden.

There are three ways to do it, although, only two of them are discussed in this thesis; removing the wage floor and increasing the demand for labour. This is because the third, to reduce the supply of labour, is difficult to do through policy changes and also a bit immoral. The municipalities or the state does not have the moral right to exclude some people from the labour market in order to make the unemployment figures look more appealing. This approach would not solve the problem with an economic burden on the society since those excluded still would need some kind of income to survive, such as income support from the municipalities.

#### 3.3.1 Removing the Wage Floor

The first potential solution to the disequilibrium is to remove the floor that is obstructing downward movements; in this case the minimum wages. This would imply a return from Figure 3.2 to Figure 3.1. Since the minimum wages are not created by Swedish laws it is not as easy as to simply change the “malfunctioning” law in order to correct the problem.

Policies, and possible new laws, would instead have to be directed towards the labour unions. For example there could be a policy saying that no wage increases are to be negotiated when the unemployment is above a certain level or the economy is in a recession. Since the tradition of labour unions is so strong in Sweden it would be difficult to introduce a policy saying that the labour unions must accept reduced wage levels so a policy of no increases in such situations would have to be sufficient.

This displays another weakness of policy setting. In democratic states the president or the prime minister is elected in general elections. The sitting president or party of course wants to be re-elected; therefore it is not in his/her interest to introduce policies that will be negatively welcomed by the voters. Such a thing could cost him/her the victory in the next election. Thus the politician always attempts to perform restrictive policies in the beginning of the administration period and the closer the elections come the more he or
she attempts to expand the economy so that the unemployment decreases (Dornbusch et al. 2004).

Nevertheless a decrease in unemployment as a result of lower wages for everyone is probably not seen upon mildly. This can be referred back to the insider-outsider model (Dornbusch et al. 2004); those who are on the inside do not care about those on the outside.

### 3.3.2 Increasing the Demand for Labour

The second way to return to equilibrium is to work actively to stimulate an increase in the demand for labour through targeting various policy areas. The sought after effects on the supply and demand schedule are displayed in Figure 3.3.

![Graph](image)

**Figure 3.3:** Increasing the demand for labour.

What separates Figure 3.3 from the previous Figure 3.2 is the outward shift of the DL line, from DL to DL\textsubscript{New}. When the demand for labour increases as a result of changed policies the whole line moves to the right and creates a new intersection. The new equilibrium point becomes point C, which coincides with the minimum wage level.

Policy areas that could be targeted in order to achieve such a demand increasing effect are the rules regarding the hiring and firing of employees and the employment tax. That is other factors that affect the cost of having employees; apart from the wage they get paid. According to Ekonomifakta (2010), Swedish employers pay between 36.53\%-46.73\% in social fees on the wage the employee receives. Thus an employee that has a salary of 25,000 SEK per month before the income tax is deducted will cost the firm
between 34,132.50 and 36,682.50 SEK per month\(^1\). It should be emphasised that this section only is concerned with economic effects and initiatives and disregards the benefits for the workers induced by the social fees.

The existence of rigid rules on the labour market is another factor that is potentially contributing to the high unemployment. When it is difficult and costly to fire an employee firms may be more careful with hiring employees when needed, especially youths (OECD, 2008). Therefore the labour protection rules could also be targeted when making policies to decrease the unemployment. In Sweden lagen om anställningsskydd (LAS), equivalent to the Employment Protection Act (EPA), is potentially contributing to high youth unemployment by stating that the last employee hired is the first to be fired in case of downsizing of the firm. The younger an employee is the less time he/she has had available to work and the more likely he/she is to be one of the newest recruits of a firm. Svenskt Näringsliv is one of the actors that advocate a reformation of the LAS, and especially these rules about the turn-taking (Svenskt Näringsliv, 2010a). This topic is discussed further in section 4.3.4.

Others claim that improved entrepreneurial climate increases the business creation and as a result the job creation (OECD, 1998b; SOU, 2008:121 and Rönn, 2002). Another way to decrease the unemployment and contribute to the rightward shift of the demand for labour could therefore be to improve the entrepreneurial climate in the Swedish municipalities. How this could be done is discussed to a greater extent in Chapter 5 and the hypothesis that improving the entrepreneurial climate really leads to a lower unemployment is tested empirically on Swedish data in Chapter 6.

\(^1\)25000*1.3653=34132.50
25000*1.4673=36682.50
4 Youth Unemployment

This chapter discusses the first research problem; why the problem with high youth unemployment exists at all, together with some research made on the side effects as well as possible solutions, whereof one is to improve the entrepreneurial climate.

4.1 Causes of Youth Unemployment

The problem with high youth unemployment has many reasons, which can be divided into two categories, or levels; the macro level and the micro level.

The macro level contains issues that are of more international character which individual countries cannot directly affect through interventions, laws and various programmes. One such factor is globalisation which has increased the international competition over the years according to Faria et al. (2010). This is also acknowledged by Cerny (2010) who says that there are two categories of people within a state; one that gains from globalisation through the possibility of making their business transnational, and one that loses from globalisation through higher unemployment and lower wages. Munch (2010) has examined the Danish labour market and the effects of outsourcing and found that it increased the unemployment, at least in the short run. The jobs that tended to disappear were industrial jobs requiring relatively low skills; jobs which youths have a larger chance of getting.

Arena för tillväxt (2010) also discusses the issue of technological progress and the resulting effects on the Swedish society. The technological progress together with globalisation has made it possible for “new countries” to enter the world market; some examples of such countries are China and India. When many industries have been established in Asia, or relocated from developed countries, the tendency in developed countries has been a transition from reliance on industries to a heavier reliance upon services. The industrial jobs that remain in the developed countries are often more specialised and more knowledge demanding, which makes it difficult for youths to enter those firms as well.

A third factor that has been claimed to contribute to the high unemployment figures, at least in the short run, is the entrance of women in the labour force (Singell, 1984). He looks upon the case in the USA where only 28% of the women participated in the labour force in 1940 whilst that proportion had risen to above 50% in 1978. Such a structural change increases the labour force rapidly and the risk is that the demand for labour is increasing too slowly to provide jobs for them.

On the micro level there are larger variation between countries since these factors are more easily altered by governments and local councils. The first factor discussed by OECD (2008) is the content of the education. Sweden is being criticised for having an education system with too much focus on theory. Those that do attend programmes focusing on vocational training still lack important skills when they graduate, which makes it difficult for those youths to acquire a job. This is also emphasised by Arena för tillväxt (2010), which says that more focus should be put on internships and entrepreneurship.
Related to that topic is local entrepreneurial climate. When the international competition intensifies, innovations and entrepreneurship become more important than previously. Since entrepreneurship is something that is embedded in individuals it is of larger importance that effort is put on the local entrepreneurial climate in order to encourage those with good business ideas to develop them. This topic is discussed further in chapter 5.

Laws and rules also contribute to the high youth unemployment many researchers claim. According to OECD (2008), the minimum wages in Sweden, in combination with a heavy regulated labour market that makes it very difficult for firms to fire employees, aggravate for youths to get an employment. The same argument is put forward by Singell (1984) for the US labour market and by O’Higgins (1997) in a European perspective.

4.2 Potential Side Effects Caused by Youth Unemployment

Unemployment among youths is known to have negative effects on both the society and the unemployed themselves. Some of the aspects are discussed in the following sections.

4.2.1 Poor Health

One common example of side effects that hit unemployed, according to many researchers, such as Hammarström (1996) and O’Higgins (1997), is the deterioration of their health. According to Rantakeisu, Starrin and Hagquist (1996), there are three types of health problems that are central in this situation. Firstly, it is common for unemployed persons to get struck by depression and other psychological problems, which can create a great amount of stress on the body. Secondly, physical problems, such as an increased blood pressure, appear as a result of the psychological stress. Lastly, unemployed persons may adopt new habits or types of behaviour that are bad for the health; such as smoking, the use of narcotics and an increased consumption of alcohol.

Some psychological problems that affect unemployed youths, according to Hammarström (1996), are anxiety, insomnia, abeyancy and impeded self confidence. The longer the spell of unemployment is, the higher is the risk of getting psychological problems. Among youths the risk of getting psychological problems is about three times higher, when being unemployed as compared to someone who is not unemployed.

What is quite dangerous about the psychological problems is that they affect the physical health as well. Hammarström (1996) observes several common problems among the youths she is interviewing and having contact with. Many of the physical problems the youths have are related to the stomach; such as lowered appetite, stomach pains and gastric catarrh. A problem that is also affecting the stomach is worsened eating habits. Many unemployed youths start eating junk food and, as previously mentioned, consume much alcohol. Apart from problems with the stomach this can also lead to overweight (Hammarström, 1996).
Unemployment has a tendency to increase the risk of starting to smoke cigarettes at young age Hammarström (1996) finds in her study. If one already is a smoker, unemployment often seems to increase the consumption. The same is the case for consumption of alcohol. However, Hammarström (1996) points out that the causality sometimes is difficult to define since some people may have difficulties finding a job because of high alcohol intake and not the other way around. The general finding is nevertheless that there is a correlation between consumption of alcohol or cigarettes and unemployment.

4.2.2 Increased Public Costs and Tax Losses

Unemployment is the largest economical problem the municipalities face, according to Svenska Kommunförbundet (1997). The municipalities are regularly assisting with labour market programs (Lundin, 2008), which is costly. In addition the municipalities are the ones responsible for providing the economic support to the inhabitants in need. Nilsson (2010), estimates that about one million of the Swedish citizens are being provided for by the transfer payment system, either in form of economic support or various kinds of disability pensions. Nilsson (2010), continues by demonstrating how costly unemployed youths are, especially if they have other problems as well. A troubled youth that needs help from several authorities, such as employment offices, health care, Försäkringskassan (the Swedish Social Insurance Office) and so on will cost about 15 million SEK until the retirement at the age of 65. Thus it must be worthwhile to spend, even quite large amounts of money, to break the alienation and help him/her to become a regular working citizen.

Another aspect of the cost for the municipalities is put forward by Ungdomsstyrelsen (2006). As they point out there is not only the higher costs that worsen the economy of the municipality, but also the lower revenues from taxes and consumption. The smaller is the labour force the less tax money is collected and less money can be spent on health care, education and other essential functions (Nilsson, 2010). The same conclusion is drawn by Lundin (2008), who claims that the municipalities, as a consequence, have a great interest in labour market policies even though the general policies are decided on a national level and the tasks administrated by the local employment offices.

4.2.3 Criminality and Drugs

Another side effect that is negative, not only for the unemployed youths themselves, but for the society as a whole is the increased risk for drug usage and the increased risk of drug abusing youths committing crimes (O’Higgins, 1997). As Singell (1984) explains, when the number of legal opportunities is beginning to peter, illegal activities are exploited instead. In Hammarström (1996), it is stated that a higher unemployment of youths increase the use of cannabis. The same effect is found by Hammer (1992) in a study of Norwegian youths.

It is not only the risk of drug abuse that increases when the youth unemployment increases, also the amount of property crimes tend to increase. A study by Britt (1994) on American time series data indicated that the amount of property crimes, such as robbery and burglary, did not increase when the youth unemployment did. However, he
found a relation between the lagged unemployment variable and the number of property crimes. This suggests, like Singell (1984), that unemployment does not immediately turn the youths into criminals, but as the spell of unemployment increases the risk of them committing crimes increases.

4.2.4 Negative Effects on Future Career

Even if the unemployed youth manages to find a job the negative effects are not over. According to Nordström Skans (2004) the risk of being unemployed again within the next few years is larger if one ended up unemployed after the upper secondary school. The same discussion is held by, for example, O’Higgins (1997) and Singel (1984). As O’Higgins (1997) states, a period of unemployment early in ones career may damage one’s future job prospects as well as the wage level. This is also observed by Singel (1984) who says that early work experience is significantly connected to the wage received as an adult.

Gartell (2009) has made a study of Swedish youths after their graduation from a university; as opposed to graduation from the upper secondary school like Nordström Skans (2004). What she finds is in line with the observations made by Nordström Skans (2004); early unemployment damages the future career opportunities. She also finds that youths who become unemployed when they graduate from the university tend to have a yearly wage that is 30% lower than the yearly wage of those youths who managed to find a job when graduating. This wage gap does not seem to disappear over time for the university graduates, as Nordström Skans (2004) states will be the case for the students with an upper secondary education only.

4.3 Suggested Cures

As seen in previous sections there are many reasons for the high figures of youth unemployment and the effects from it are many and severe. The suggested cures for this problem are numerous and some of them are presented in more detail in the following sections, including the one which this thesis focuses on; entrepreneurial climate.

4.3.1 Internships and On-the-job Training

To increase the amount of internships and the contact with the business world within the education is one of the most common suggestions made by various actors. According to OECD (1998c), the reforms made in the Swedish education system in the 1990 have resulted in 16 national programs on the upper secondary level. Two of them are preparing the students for university studies and 14 of them are focusing more on vocational training, although they also give eligibility for university studies. These vocational programs are supposed to include a minimum of 15 weeks of on-the-job training during the three years of education. Some studies object and say that this is not sufficient in order to prepare the students for their future careers and give them contacts with potential employers (Arena för tillväxt, 2010 & Schröder, 1997).
A study made by Hall (2009) indicates that when the new reform of the upper secondary school in Sweden took place, prolonging the vocational programs from the former two years to three years of education, this had a negative effect on the completion rates. The probability of a student dropping out of its education, increased by 3.8 percentage points when the duration of the program increased.

In a report from the Ungdomsstyrelsen (2009a) the alienation of youths is examined in Denmark, Netherlands and the United Kingdom. The unemployment figures for the youths presented are much lower in Denmark and the Netherlands than they were in Sweden during the same time period. One of the large differences between Denmark, Netherlands and Sweden is that their education systems incorporate internships and on-the-job training to a much larger extent than does the Swedish educational system.

Another report from Ungdomsstyrelsen (2009b), suggests that on-the-job training not only is of importance within the educational system but also as a labour market program. Larsson (2003) found that labour market programs that focus on workplace practice are more successful than those focusing on pure educational training. The same result is found in a study by Carling and Richardson (2004).

4.3.2 Collaboration between Relevant Instances

Another common suggestion is the need of a better collaboration between various instances; such as the employment offices, the municipalities, the Försäkringskassan and the social service centres (Ungdomsstyrelsen 2009b, OECD, 2008).

In a report from 2007, Ungdomsstyrelsen describes some attempts of collaboration, in navigator centres, within some municipalities. Funds were provided by the government through the Ungdomsstyrelsen and the money was split between 28 municipal projects. The report tries to make an evaluation of the projects through interviews with those responsible for the projects as well as coworkers. What can be said is that the collaboration has increased between the authorities the unemployed youths have contact with. As a result of these projects the youths only have to go to one place where most assistance needed can be found (Ungdomsstyrelsen, 2007).

According to Ungdomsstyrelsen (2009b), the navigator centres described above are examples of projects that have been successful in helping youths solve their possible problems and then moving on to finding jobs or start studying. As is reported by Ungdomsstyrelsen (2009b) it is important to identify the troubled youths early and by collaboration between the municipalities and other agencies that can be done.

Successful methods that have been seen within local projects, such as the navigator centres, are the flexibility of the institution and their careful mapping of the individuals and their history. If all aspects of the youth’s problems are known it is easier for the officers to adapt the solutions to him or her (Ungdomsstyrelsen, 2009b).

4.3.3 Entrepreneurial Climate

Another suggestion is to improve the local entrepreneurial climate in the municipalities. This is one of the recommendations OECD has for lowering the high level of
unemployment Sweden had in the 1990’s (OECD, 1998b). Since not much has changed, with regards to the unemployment situation, one can assume that it still a valid recommendation. It states that small and medium sized enterprises (SME) are “important for raising the employment-generating capacity of the economy” (OECD, 1998b, p.65).

OECD (1998a) says that because of the important role of SME:s one should focus more on improving their situation. That could mean a lowering of the obstacles to start new businesses and also to facilitate the rules with which they have to comply. The same suggestion is made by Ekberg (1997).

In Rantakeisu et al. (1996) one can read how it is common for the government to attempt to solve the adult unemployment with structural measures, but for the youths there is a focus in individual measures. The measures used are usually education and some on-the-job training. According to Rantakeisu et al. (1996) this will only lead to increased competition among the youths since the amount of jobs not is increasing. Thus the logic thing to do should be to encourage more job creating measures.

Arena för tillväxt (2010) finishes their report by stating five concluding advices for the policymakers. One of them is to stimulate the entrepreneurial way of thinking among the youths and to improve the local entrepreneurial environment in order to increase the amount of jobs available.

4.3.4 Labour Market Regulations

The last category of solutions to the youth unemployment is to change the labour market regulations, which was also discussed in Chapter 3. One example of a regulation that is disadvantaging youths is the LAS (SFS 1982:80). One of its areas of regulation concerns who will be made redundant first, in a case of downsizing of a company. It says that the last one in will be the first one out. If two employees would have worked for the company for the same length of time the one who is youngest is made redundant.

According to Sahlén and Kreicbergs (2009) there are many myths in the debate about the LAS and youth unemployment. Some claims that the problem is not the act itself, but the temporary employments which youths tend to get, and others that the youths would be the first to be made redundant even in the absence of the LAS. Sahlén and Kreicbergs (2009), examine employment and unemployment statistics carefully and finds that the LAS does hurt youths. In the category of temporary employments the percentage of youths that were laid off between 2008 and 2009 were not significantly higher than the percentage for the older workers. The main difference was seen within the category of permanent employments where the percentage of youths that lost their jobs within the same time period was five times higher than the percentage for older workers.

There are other regulations on the labour market that hurt youths than the Employment Protection Act. One example is the relatively high minimum wages in Sweden (Arena för tillväxt, 2010; OECD, 2008). As long as the minimum wage is relatively high it might be too costly for some firms to employ youths, since they in general are less productive as a result of their smaller amount of work experience than older workers. This way of thinking is also present in the work of le Grand (1997). He compares the
Swedish labour market with the Japanese, where the wages varies more with age. It is cheap to hire youths in Japan and, as a result, their youth unemployment is not as severe as the Swedish.

Apart from lower minimum wages there are other ways of making it cheaper to employ youths. One example is to subsidise employments for youths (Lundin, 2007). The employment offices in Sweden have the possibility to subsidise the employment of youths who have been enrolled with an employment office for at least six months; the employment may be temporal. The youths are then considered to be workers and are no longer listed as unemployed. Lundin (2007), finds that youths that have been included in the program and had a subsidised employment, more often than others, end their unemployment period and manage to find regular jobs.
5 Entrepreneurial Climate

This chapter discusses the second research question, what is meant with an entrepreneurial climate and discusses what factors that constitutes a good one. In addition the yearly ranking of all Swedish municipalities constructed by Svenskt Näringsliv is presented.

5.1 Why is an Entrepreneurial Climate Important?

The attention given to entrepreneurship and entrepreneurial climate is quite new. As described by Granfeldt and Hjort af Ornäs (2003), it was not until the 1990’s the discussions started to flourish due to the observations that towns with similar economic presuppositions and structures seemed to develop in very different directions. It was realised that there was something else, apart from these structural and economical factors, that steered the development and it was called “factor X”.

Later on it was realised that the “factor X” consisted of ideas, knowledge, thoughts and competence that is carried by humans and develops within their networks. According to Granfeldt and Hjort af Ornäs (2003) this social capital is of great importance for the local business life.

This view is shared by many. For example Jerkert (1999) says that the private firms are those that provide the new jobs and therefore it is of great importance that the municipalities appreciate that and collaborate with the firms. Not only is the job creation important per se, it is also an important source of income for the municipality; the more people who are employed the more taxes they can collect. In an SOU from 2008 it is said that Sweden needs new firms to establish themselves and provide jobs throughout the country. Thus entrepreneurship is of great importance for the future growth of both municipalities and the country in general (SOU, 2008:121).

The same view is held by Rönn (2002) who says that “the entrepreneurial climate has an essential importance for the wealth of a municipality or a country. Where the climate is beneficial the business life flourishes, ideas are realised and employment opportunities are created.” (p. 6, author’s own translation).

The importance is also highlighted from higher authorities such as the European Union (EU), where the Small Business Act (SBA) was presented by the European Commission in 2008. It contained several suggestions for improvements of the situation for the SME’s since they are of such great importance for the economic growth and creation of employment opportunities (EU, 2010).

5.2 A Good Entrepreneurial Climate

It has been suggested in the previous section that an entrepreneurial climate is of importance for economic growth of the municipality and also to lower the unemployment rate through job creation. This section focuses on the question of what constitutes a good entrepreneurial climate and what the municipalities can do in order to improve it for the private firms.
Jerkert (1999) is dividing factors into two categories; one relating to the firm itself and one to its employees and owners. In the first category he puts the importance of good networks between the firms, the municipality and other authorities. Important are also the attitudes held in the municipality, both by the municipal staff and among the inhabitants in general. Creating meeting places for entrepreneurs and business owners is also a factor appreciated by the businesses. In order to facilitate for the establishment and development of firms it is also important that the municipalities can assist with fundraising and that it can provide high quality labour. A nice blend of firms is also appreciated by business owners, according to Jerkert (1999).

In the second category Jerkert (1999) places fundamental factors appealing to the business owners and their employees. The first one mentioned is the importance of the municipality to have well managed finances. It is also important that the municipality can offer good quality schools and a good environment so that families can live satisfactorily in the area.

Another factor that Jerkert (1999) discusses is the importance of a well functioning infrastructure. This is important for both categories since the firms are dependent on the infrastructure transports to and from their firms and the employees for their commuting possibilities.

Another study enhancing the importance of attitudes is performed by Rönn (2002). According to him the existence of positive attitudes and a spirit of cooperation are very important in the long run for the new business development. He suggests some more concrete actions that the municipality can make in order to improve the entrepreneurial climate locally. The first is to establish a single department within the municipality which is responsible for all communication with the firms; this makes it more clear and easy for the firms when they need to contact the municipality. The second is to adapt the laws concerning building and construction so that entrepreneurship is stimulated. The third is to keep the taxes and other fees on low levels in order to not deter firms from establishing themselves in the municipality. The last suggestion made is to work actively to shorten the office turnaround time required for municipal permissions.

The municipalities have always been assumed to provide competent labour, good infrastructure, residences, premises for firms, schools, child care facilities and a range of leisure time activities (Granfeldt & Hjort af Ornäs, 2003). Most of these are important for the employees. Recently the demand for more business promoting services has increased and business owners demand that the municipality can offer a good social climate and cooperation with the private firms. This can be summarised as the identity of the municipality according to Granfeldt and Hjort af Ornäs (2003).

A study by Sveriges Kommuner och Landsting (SKL, 2010) claims that the entrepreneurial climate in a municipality depends on three categories of factors. The first regards factors and condition which the municipality are not able to affect, such as the geography. The second category concerns factors which the municipality can affect to some extent, such as infrastructural issues. The last category concerns factors of which the municipality is solely responsible for, such as how service-minded the municipality is towards the local firms.

The SBA presented by the EU in 2008 presents several suggestions for improving the entrepreneurial climate in the local regions of Europe (EU, 2010). For example the
member states should create an entrepreneurial climate that benefit family run businesses, SME:s and reward entrepreneurial thinking. The member states are also encouraged to make the public administrations more adherent to the needs of SME:s, shorten the office turnaround times, and create so called one-stop-shops. This is a place in the municipality where the firm can go with all its problems instead of contacting several instances. More information should also be given to firms of how to compete in public procurements.

A publication by Svenskt Näringsliv (2008) is discussing more practically how firms and municipalities can improve the local entrepreneurial climate. In order to create a good communication between the municipality and the private firms one could organise meetings and company visits, publish newsletters and improve the municipality’s webpage. According to Svenskt Näringsliv (2008) it is very appreciated by the business owners if representatives from the municipality participate in the meetings with local business associations. When there is no time for personal meetings the webpage of the municipality is a very useful tool. There should be easy to find information about public procurement and contact information as well as to download various forms.

Several researchers have enhanced the importance of attitudes within the municipality; Svenskt Näringsliv (2008) is one of them. Except for making an effort to learn about the local firms the municipalities could open up for competition within sectors where they do not need to operate. That allows for new firm establishments and the municipalities can focus on their core tasks instead of running companies on the side.

A suggestion made by Svenskt Näringsliv (2008) that is not seen much elsewhere in the literature is service warranties. This implies that the municipality obliges itself to handle various applications within a certain number of days. One example is to have a planning permit handled within 7 or 14 working days. This is a way for the municipality to signal to the firms that they are important and to increase the possibilities to plan ahead for the firms.

5.3 Ranking of Municipalities’ Entrepreneurial Climate

Several rankings that compare the entrepreneurial climate in the municipalities exist. The most known is Lokalt företagsklimat, a ranking made by Svenskt Näringsliv (Granfeldt & Hjort af Ornäs, 2003). It has been presented on a yearly basis since 2000. Another ranking concerning entrepreneurial climate is Företagarna om kommunen made by SCB but only for those municipalities that requests their participation. The results are not publicly presented after that but given to the participating municipalities (SKL, 2010). A ranking that is focusing more on the performance of the local firms as a measure of the entrepreneurial climate is Årets företagarkommun made by Företagarna and UC. Företagarna is an organisation working to enhance the interest of firms and UC is Sweden’s leading firm handling business and credit records (SKL, 2010).

The ranking, Lokalt företagsklimat, conducted by Svenskt Näringsliv is based on both official statistics and questionnaires. The questionnaires are sent to local business owners who are supposed to grade the municipality, where the firm is located, on several issues. In municipalities with less than 1,200 firms and less than 50,000 inhabitants 200 questionnaires are sent out to randomly selected firms. In medium sized
municipalities, with more than 50,000 inhabitants and more than 1200 firms, 400 questionnaires are sent out. In the larger municipalities, Malmö and Göteborg, 600 questionnaires are sent out and finally in Stockholm 1,200. This is supposed to make the collected statistics more reliable (Svenskt Näringsliv, 2010b).

The final ranking consists of three parts, where the questionnaires make up two of them and the official statistics the third. Each part weighs 1/3 of the total. This is displayed graphically in Figure 5.1.

The first section is official statistics which consists of six factors that each have a weight of 1/18. The first is the municipal tax level, which is simply the level of income tax in the municipality. The second component is contracts, which is the share of the municipal activities that are performed by private actors. The third is the share of the labour force that is employed; the inverse of unemployment. The fourth component is called business enterprise and refers to the share of private firms per 1,000 inhabitants and the fifth is the number of start-ups per 1,000 inhabitants. The last component in this category is the municipality’s share of wages that comes from private employers rather than municipal or national.

The second box refers to specific subjects related to entrepreneurial climate (Svenskt Näringsliv, 2010b). The first regards the perceived attitudes towards private firms within the municipality. The second factor is representing how the business owners perceive the municipality’s service. The third component relates to how the business owners perceive that the adaption of laws is working in the municipality. The infrastructure factor refers to the perceived quality of the infrastructure in the municipality. The fifth factor regards the possible competition the firms face from the municipality itself. The last factor refers to the access to competent and well educated within the municipality.

The third box is, like the previous boxes, a third of the total weight and contains a more general impression of the entrepreneurial climate in the municipality. Since it only contains one judgement question it is multiplied by six in order to give it the correct weight. The municipality with the best score for each question gets 290 points and the
municipality with the worst score 1 point. The points are then summarised to give an overall ranking (Svenskt Näringsliv, 2010). In Table 5.1, the ranking for the year 2010 is presented, for the best and the worst municipalities.

The municipality with the best entrepreneurial climate in Sweden is Solna, closely followed by Vellinge and Sollentuna. Thus two out of the top three municipalities are located in the outskirts of Stockholm, whereas the other, Vellinge, is located outside Malmö.

At the other end of the table, Sollefteå is found in place 290. It is preceded by Ragunda and Härnösand. All three of them are located in the north of Sweden.

Looking at the historical rankings by Svenskt Näringsliv (2010c) one can see that the three municipalities with best entrepreneurial climate are located at the top of the ranking for all four years displayed. Whereas the three municipalities with the worst entrepreneurial climate are found very far down in the ranking for all four years presented. The “best” position for these municipalities was held by Härnösand which was on place 275 in 2007, and Sollefteå, which held the same position in 2008.

Table 5.1: The ranking of 2010.

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Best Municipalities</th>
<th>Ranking</th>
<th>Worst Municipalities</th>
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<tbody>
<tr>
<td>1</td>
<td>Solna</td>
<td>281</td>
<td>Åsele</td>
</tr>
<tr>
<td>2</td>
<td>Vellinge</td>
<td>282</td>
<td>Hällefors</td>
</tr>
<tr>
<td>3</td>
<td>Sollentuna</td>
<td>283</td>
<td>Färgelanda</td>
</tr>
<tr>
<td>4</td>
<td>Trosa</td>
<td>284</td>
<td>Skinnskatteberg</td>
</tr>
<tr>
<td>5</td>
<td>Habo</td>
<td>285</td>
<td>Högsby</td>
</tr>
<tr>
<td>6</td>
<td>Danderyd</td>
<td>286</td>
<td>Storuman</td>
</tr>
<tr>
<td>7</td>
<td>Laholm</td>
<td>287</td>
<td>Eda</td>
</tr>
<tr>
<td>8</td>
<td>Härryda</td>
<td>288</td>
<td>Härnösand</td>
</tr>
<tr>
<td>9</td>
<td>Högmanäs</td>
<td>289</td>
<td>Ragunda</td>
</tr>
<tr>
<td>10</td>
<td>Sundbyberg</td>
<td>290</td>
<td>Sollefteå</td>
</tr>
</tbody>
</table>

Source: Svenskt Näringsliv

*Lokalt företagsklimat* has received some criticism from municipalities and other organisations. The municipality of Jönköping has conducted a study of several rankings, where one of them was *Lokalt företagsklimat*. Their criticism mainly concerns the sampling of firms, which is made in Svenskt Näringsliv’s own member register. It is also questioned whether any conclusions can be drawn based on what the municipality of Jönköping considers a low answering frequency, 55 % for the last ranking (Jönköpings kommun, 2010). SKL also criticise the ranking for the high weight that is placed on structural factors, which bears a low correlation of 0.33 with the opinion of
the local firms. In addition, the selected firms that fill out the questionnaire have not necessarily been in contact with the municipality. This can affect the ranking of the municipalities (SKL, 2010).
6 The Relationship between Unemployment & Entrepreneurship

Based on the background, theory and qualitative discussions presented in the previous chapters this chapter conducts a quantitative empirical study on the Swedish municipalities and the connection between entrepreneurial climate and youth unemployment.

6.1 Presentation of Model and Variables

This study sets out to investigate the relationship between youth unemployment and entrepreneurial climate within the Swedish municipalities. This is already from the outset a difficult relationship to model considering the multifaceted term entrepreneurial climate. As was seen previously, in section 5.2 and section 5.3, the concept contains various factors ranging from good communication between firms and the municipality to good schools and housing for their employees. These variables are very difficult to measure, if not impossible. As a consequence this study will make use of two proxy variables attempting to measure the result of having an entrepreneurial climate instead of the entrepreneurial climate itself; this being the number of existing and newly established firms in the municipality.

In order to incorporate deviations from this simple relationship between entrepreneurial relationship and unemployment two additional dummy variables are included in the model. The final model used in this study is presented in Equation 6.1.

\[ U_i = \alpha_i + \beta_1\text{StartUps}_i + \beta_2\text{Firms}_i + D_1\text{Uni}_i + D_2\text{Car}_i + \varepsilon_i \]  \hspace{1cm} (6.1)

Closer descriptions of each variable and the sources of the data used are found below.

Unemployment (U)
This variable is the dependent variable and constitutes the unemployment in the age group 18-24, which has been collected from Arbetsförmedlingen. The data is presented in percentages for two groups, those that are openly unemployed and those that are participating in labour market programs. Since those youths that are participating in labour market programs do so because they are unemployed the two groups were aggregated into one variable; unemployment.

Newly established firms (StartUps)
This variable is one of the explanatory variables. It measures the number of newly established firms per 1,000 inhabitants in each municipality. The data is collected from another database provided by Svenskt Näringsliv named Företagsklimat. It is assumed that a higher value indicates that it is easier to establish new businesses within the specific municipality, which should indicate a good entrepreneurial climate.
**Existing firms (Firms)**
This variable is another of the explanatory variables and measures how many privately own firms there are in the municipality per 1,000 inhabitants. Also this data is collected from the database Företagsklimat described previously. A high value is assumed to be a result of a favourable entrepreneurial climate within the municipality.

**University (Uni)**
This is a dummy variable that takes the value of one when the municipality has at least one university campus and zero when it has not. This dummy is included to take into account any variations that may arise due to a high concentration of students, since full-time students looking for employment are included in the unemployment figure according to the latest definition (SCB, 2007). The data was collected from the website studeranu which is maintained by Högskoleverket (The Swedish Agency for Higher Education Services) and the Swedish universities.

**Car factories (Car)**
This dummy variable takes the value of one if there is a car factory present in the municipality and a zero if there is not. This dummy is included to account for the variations from the original model these municipalities may show due to the large negative impact the financial crisis had on the car industry. The municipalities having car factories are Uddevalla and Göteborg (Volvo), Trollhättan (Saab) and Ängelholm (Koeningsegg).

**Error term ($\varepsilon_i$)**
This term is included in the model to capture the effects from the omitted variables.

The summarised hypotheses regarding the variables in the model, based on the theory discussed previously, are presented in Table 6.1.

**Table 6.1: Hypothesised effects of the variables.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypothesised Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>StartUps</td>
<td>Negative</td>
</tr>
<tr>
<td>Firms</td>
<td>Negative</td>
</tr>
<tr>
<td>Uni</td>
<td>Positive</td>
</tr>
<tr>
<td>Car</td>
<td>Positive</td>
</tr>
</tbody>
</table>

As can be seen both the newly established firms and the existing firms are assumed to a negative effect on the unemployment; which means that as the number of firms increase the unemployment should decrease. The presence of a university in the municipality is assumed to have a positive effect on the unemployment due to the high concentration of youths. Lastly the presence of a car factory is also assumed to have a positive effect since they were severely hit by the financial crisis that erupted in 2008.
6.2 Descriptive Statistics

The descriptive statistics for both years examined are found below; the statistics for 2006 in Table 6.2 and the statistics for 2009 in Table 6.3.

Table 6.2, shows that the mean value of unemployment in 2006 is 9.06 in the Swedish municipalities. Nevertheless, there are large differences between the municipalities, as shown by their maximum and minimum values. The municipality with the highest level of unemployment has a figure of 23.56% and the municipality with the lowest unemployment only a figure of 1.21%.

Large differences are found for some of the other variables as well. Regarding the newly established firms in the municipalities the municipality with the “best entrepreneurial climate” saw 15.72 firms establish themselves, per every 1,000 inhabitants, in 2006 whilst the municipality with the “worst entrepreneurial climate” only had 3.23 new firms per 1,000 inhabitants. Looking at the variable for existing firms the municipality with the “best entrepreneurial climate” had 213.54 firms per 1,000 inhabitants whereas the equivalent figure for the municipality with the “worst entrepreneurial climate” was 47.42. This suggests that there is a difference of approximately 350% between the “worst” and the “best” municipality.

The mean values for the dummy variables, Uni and Car, can be interpreted differently than the other variables. Since the only values the dummy variables can have are zero and one the mean value is the probability of a one; thus the probability that a municipality has a university campus or a car factory. As can be seen in Table 6.2, the probability of having a university campus is 0.14. It also suggests that 14% of all Swedish municipalities have a university campus. By the same token only 1% of the Swedish municipalities have a car factory.

Table 6.2: Descriptive statistics for 2006.

<table>
<thead>
<tr>
<th></th>
<th>U</th>
<th>StartUps</th>
<th>Firms</th>
<th>Uni</th>
<th>Car</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>9.06</td>
<td>7.23</td>
<td>113.86</td>
<td>0.14</td>
<td>0.01</td>
</tr>
<tr>
<td>Median</td>
<td>8.72</td>
<td>6.93</td>
<td>108.82</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Max</td>
<td>23.56</td>
<td>15.72</td>
<td>213.54</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Min</td>
<td>1.21</td>
<td>3.23</td>
<td>47.42</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>3.72</td>
<td>1.82</td>
<td>32.58</td>
<td>0.35</td>
<td>0.12</td>
</tr>
<tr>
<td>Number of observations</td>
<td>290</td>
<td>290</td>
<td>290</td>
<td>290</td>
<td>290</td>
</tr>
</tbody>
</table>

The dummy variables are the same for 2009 and therefore their descriptive statistics have not changed, although the other variables’ statistics have. As can be seen in Table 6.3, the mean value of the unemployment was 12.36% in 2009, which is 3.30
percentage points higher than in 2006. Clearly the financial crisis has had an effect on the average Swedish municipality. What is interesting to note is that the variation in unemployment is larger in 2009, the maximum value is 27.62% and the lowest value 1.54%. This increase is also confirmed by higher standard deviation; 4.65 instead of the former 3.72.

The number of start-ups and established firms shows interesting trends, the mean value of start-ups is 7.3 in 2009 as compared to the 6.93 in 2006. The number of established firms has also seen an increase from an average of 113.86 per 1000 inhabitants in 2006 to 117.66 in 2009. This suggests that more private firms exist and more new ones are established on average in the Swedish municipalities even though the economy moved into a recession. This supports the study performed by Fario et al. (2010).

<table>
<thead>
<tr>
<th>Table 6.3: Descriptive statistics for 2009.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>U</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Median</td>
</tr>
<tr>
<td>Max</td>
</tr>
<tr>
<td>Min</td>
</tr>
<tr>
<td>Standard deviation</td>
</tr>
<tr>
<td>Number of observations</td>
</tr>
</tbody>
</table>

The median values in Table 6.2., and Table 6.3., are often lower than the mean values for the same variables, except for the dummy variables. This suggests that there are some municipalities that have very high values of start-ups, established firms and unemployment which pushes the mean values upwards past the median values. There should thus be more municipalities with very high values than very low values.

### 6.3 Regression Results

In order to establish the relationship between the variables and to test the hypothesis made in section 1.1, an OLS regression was performed on the data. The results can be seen in Table 6.4 and Table 6.5.

White’s heteroscedasticity test was performed, as recommended by Gujarati (2003) when dealing with cross-sectional data. Heteroscedasticity\(^2\) was found to be present for

\(^2\) The variance of the error term, \(\epsilon_t\), is not constant, instead it depends on the x-value. If the problem is not remedied the estimated coefficients are biased and the whole result could be misleading (Gujarati, 2003).
the 2009 data and the remedy in a large sample, which this is assumed to be due to the number of observations being close to 300, is to use White’s heteroscedasticity consistent standard errors (Gujarati, 2003). Therefore the results presented below make use of White’s standard errors when computing the probabilities presented as p-values for the 2009 results.

When the heteroscedasticity was corrected it was found that the residuals for both data sets were not normally distributed. If the distribution is not normal the assumptions for the t-statistic, from which the p-value is calculated is not fulfilled and the values of them are misleading. One possible reason for the non-normality is the presence of outliers, observations that are situated far away from the rest in a plot. For simplicity, the observations being further than three standard deviations away from the mean were removed. This solved the problem so that the residuals for both regressions are normally distributed.

The results from 2006 show that there is a negative relationship between the dependent variable, unemployment, and the number of start-ups in a municipality. When the number of start-ups increases with one unit the unemployment decreases with, on average, 1.00 units, all else equal. The p-value always indicates the probability of the true value of the estimated coefficient being zero; thus tests the null hypothesis that the true value is zero. For the StartUps variable the p-value is 0.0000 which means that the probability of obtaining -1.00 when the true value is zero is about 0.000%. This is so small that one can reject the null hypothesis on all levels of significance commonly used.

Table 6.4: Regression results for 2006.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimated Coefficient</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>12.71</td>
<td>0.0000</td>
</tr>
<tr>
<td>StartUps</td>
<td>-1.00</td>
<td>0.0000</td>
</tr>
<tr>
<td>Firms</td>
<td>0.03</td>
<td>0.0000</td>
</tr>
<tr>
<td>Uni</td>
<td>1.59</td>
<td>0.0038</td>
</tr>
<tr>
<td>Car</td>
<td>-0.49</td>
<td>0.7532</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td></td>
<td>0.24</td>
</tr>
<tr>
<td>Number of observations</td>
<td>283</td>
<td></td>
</tr>
</tbody>
</table>

According to table 6.4, the estimated coefficient is 0.03 for the Firms variable and the p-value is very small, 0.0000, indicating that the null hypothesis can be rejected on all levels of significance commonly used. The Firms variable has a positive impact on the youth unemployment albeit small.

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3 The most commonly used levels of significance are 10%, 5% and 1%.
The first dummy variable in the analysis is the university variable Uni. The estimated coefficient is 1.59 and the p-value is 0.0038. This means that the true coefficient is significantly different from zero and the null hypothesis can be rejected on the 1% level. A municipality that has a university campus will, on average, have a youth unemployment rate that is 1.59 units higher than a municipality that do not.

The other dummy variable is indicating whether a municipality has a car factory or not. The estimated coefficient is -0.49 suggesting that the youth unemployment in municipalities with car factories is about 0.49 units lower than the youth unemployment rate in municipalities with no car factories. However, the p-value is very high, 0.7532, indicating that the null hypothesis cannot be rejected and the true value of the coefficient most likely is zero.

The estimated constant in this model was 12.71, which means that if all the other variables are zero the youth unemployment would be almost 13%. The p-value for the constant is 0.0000 indicating that it is significantly different from zero.

The last figure in Table 6.4, is the adjusted $R^2$. It indicates how much of the total variation in the youth unemployment that can be explained by this particular model. As can be seen the figure is 24%, indicating that approximately a quarter of the variation in the youth unemployment in the Swedish municipalities for 2006 can be explained with this model.

The results for the second year investigated, 2009, are seen in Table 6.5. For this dataset the RESET-test indicated that the model was misspecified; either some variables were stated in the wrong functional form or some variables are omitted from the model. Therefore the natural logarithms of the two independent variables were used and this solved the problem.

The constant in the model for this year is estimated to be 24.91 and the p-value is low enough, 0.0000, to allow for a rejection on all levels of significance. This suggests that when all other variables are zero, a municipality has no car factory, university campus or private firms, neither old nor new; the youth unemployment is approximately 25%.

Table 6.5: Regression results for 2009.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimated Coefficient</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>24.91</td>
<td>0.0000</td>
</tr>
<tr>
<td>$ln\text{StartUps}$</td>
<td>-12.93</td>
<td>0.0000</td>
</tr>
<tr>
<td>$ln\text{Firms}$</td>
<td>2.68</td>
<td>0.0013</td>
</tr>
<tr>
<td>Uni</td>
<td>-0.31</td>
<td>0.6088</td>
</tr>
<tr>
<td>Car</td>
<td>3.58</td>
<td>0.0393</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>Number of observations</td>
<td>288</td>
<td></td>
</tr>
</tbody>
</table>
The estimated coefficient for the variable $ln\text{StartUps}$ is -12.93, suggesting that a one unit increase in the number of start-ups causes the youth unemployment to decrease with $[12.93 \times (1/\text{StartUps})]$ units. Since the p-value is 0.0000 the null hypothesis that the true value of the coefficient is zero can be rejected on all levels of significance.

The variable $ln\text{Firms}$ has a coefficient of 2.68, indicating that for every unit increase in the number of private firms per 1000 inhabitants the youth unemployment would increase by $[2.68 \times (1/\text{Firms})]$ units. The p-value is 0.0013 and the null hypothesis that the true value is zero can be rejected on the 1% level of significance.

The first dummy variable Uni has an estimated coefficient of -0.31 suggesting that a municipality with a university campus on average has an unemployment rate that is about 0.31 percentage points lower than a municipality without a university campus. The p-value is 0.6088 and the null hypothesis of a true value of zero cannot be rejected.

The dummy variable Car shows an estimated coefficient of 3.58. This suggests that a municipality with a car factory on average had an unemployment that was 3.64 units or percentage points higher than a municipality that do not. Looking at the p-value, 0.0393 one can reject the null hypothesis of the true value being zero on the 5% level of significance.

The adjusted $R^2$ for the model on data from 2009 is 0.43. This indicates that 43% of the variations in the unemployment variable are explained by this particular model.
7 Discussion

The first research question posed in this thesis concerned youth unemployment, including questions like why is there such a thing as a youth unemployment problem, what can be done to improve the situation and what the side effects are that makes this problem so severe.

As seen in Chapter 4, the side effects are many and what is the most serious about them is that they all tend to affect the society at large in a negative way; not only the youths themselves. It was described, with an example from Nilsson (2010), how a youth who becomes alienated at young age will cost the society about 15 million SEK until its retirement, if nothing is done to help the youth enter the labour market. Even if the youth does not become alienated for a longer time period it still damages their future prospects on the labour market, in terms of wage levels and future employment prospects, according to O’Higgins (1997), Gartell (2009), Nordström Skans (2004) and Singell (1984).

As if those factors were not costly enough for the society Hammarström (1996) found in her study that unemployed youths often had psychological or physical problems induced by the unemployment spell. Additionally, the consumption habits also changed for the worse with a higher intake of alcohol and junk food. According to O’Higgins (1997), Britt (1994) and Singell (1984) the risk increased for drug abuse and property crimes when the youth unemployment increased.

Summarised it is obvious that these side effects have the potential of becoming very costly for the society if no actions are taken. A youth that turns to the criminal world is difficult to successfully help entering the labour market. The same is the case for those youths that develop serious health problems; they are more likely to be conceived as permanently ill rather than entering the labour force. With higher costs and lower revenues for the municipalities the quality of their services becomes lowered for all citizens.

Where does the problem originate then? As outlined previously there are two levels of reasons; one macro level and one micro level. On the macro level causes such as globalisation, technological progress and the supply shock induced when women entered the labour market were put forward by researchers. The supply shock explanation does not seem well founded anymore, women have been part of the labour force for a long time in Sweden and the market should have had time to adjust for that. Nevertheless the other two causes seem more plausible in the 21st century. The globalisation, in conjunction with the rapid technological progress seen, results in a shift of industrial production from the developed countries to some of the developing countries. Instead the production of knowledge intensive goods and the importance of innovations increase in the developed countries, which puts higher demands on the labour in, for example, Sweden.

This leads the discussion towards the micro level causes. The foundation of the human capital of the labour is laid partly in school and partly on the workplace itself. The Swedish education system has received much criticism from OECD due to its high theoretical content and lack of vocational training (OECD, 2008). In addition, large differences are shown in the report “Focus 09” presented by Ungdomsstyrelsen (2009a) when the education systems in Denmark, the UK and the Netherlands are examined and
compared to the Swedish. Out of these four countries it was found that Sweden had the highest youth unemployment figures and the lowest amount of vocational training.

In order to enable for a higher degree of vocational training within the Swedish education system the relations with the business-life must be strengthened. This is also pointed out as a problem; the lack of encouragement to improve the entrepreneurial climate and inspire for innovations. This particular issue has received much attention and the EU has suggested that more emphasis must be put on facilitating for the SME’s throughout Europe (EU, 2010).

The last cause that is given attention is the existence of rigid laws and regulations in Sweden. An employee is very costly for a firm since the minimum wages negotiated by the labour unions are relatively high, together with the high social fees the firm must pay. The regulations also make it difficult to fire an employee that does not live up to the expectations. As a result firms, especially SME’s, are scared of hiring new employees in the first place, and when they have to they prefer someone they know will make a good job; someone with relevant work experience and good references. Typically this person is not a youth.

When turning towards the solutions to the problem instead the macro level does not exist at all; a nation or a municipality can effect neither globalisation nor technological progress. All solutions therefore have a bottom-up approach; the intervention is made on a low level and hopefully that has positive effects upward towards the higher levels.

One of the most common suggestions is to reform the educational system in Sweden to incorporate more vocational training and internships. Another one is to reform LAS so that it becomes easier to hire and fire employees as well as reform the turn-taking rules that constantly disadvantage youths.

Another angle is taken by those who claim that the collaboration between instances such as the employment offices, the municipality and social service centres should be improved. This is believed to facilitate for youths that are unemployed to get assistance so that they can enter the labour market or start studying without too much complications.

What is quite interesting is that all these remedies discussed so far aims at increasing the competence of the youth or removing some regulations that aggravated their entrance on the labour market. Some youths do need that since they may have incomplete grades from the upper secondary school, which makes them more difficult to hire when the jobs become more advanced.

Still, changing LAS and educating youths will not automatically create more jobs; it will simply make more candidates qualified per job that is advertised. Therefore the suggestion to improve the entrepreneurial climate in Swedish municipalities is regarded very important in this study. Encouraging people with entrepreneurial minds and new ideas to start their own businesses will help to create new jobs.

This position is held by several other researchers who claim that the entrepreneurial climate is highly important for the job creation and economic development, not only in Sweden but in developed countries in general (EU, 2010; SOU 2008:121; Rönn, 2002 and Jerkert, 1999).
Regarding the practical meaning of entrepreneurial climate the researchers’ interpretations seem to be varying rather little. The most common factor pointed out as important is the attitudes in the municipality towards the private firms. Other common factors indicating a good entrepreneurial climate are company visits and meetings, the creation of a one-stop-shop for the firms in the municipal office, good infrastructure and to adapt laws and regulations so that they benefit the entrepreneurial climate.

Some researchers (Jerkert, 1999 and Granfelt & Hjort af Ornäs, 2003) divided the factors into two categories, one which is directly related to the firm and one that is more of importance for the employees. The latter category also included factors such as good schools, childcare facilities and housing. It is important that these factors are not forgotten since the well-being of the citizens may well be one of the key factors determining where entrepreneurs decide to establish their new firms.

The ranking produced by Svenskt Näringsliv is much in the same line of thought as those factors that are suggested to be of importance. Thus the ranking seems to be well-constructed and its results may be, at least, of guideline character. In the ranking presented for 2010 the most obvious trend was the concentration around major cities for those municipalities that made it to the top of the ranking, whilst those in the bottom were located in the north of Sweden.

One contributing factor to this trend that is not directly encompassed in the construction of the ranking is the wish of firms to locate near the large markets where most of the potential customers and the subcontractors live. Consequently, the scarce population in the North of Sweden and the long distance to the larger cities would disadvantage the northern municipalities regardless of their encouraging efforts. This would be in line with the agglomerating forces discussed within regional science.

The effect the entrepreneurial climate has on youth unemployment was examined in Chapter 6. Unfortunately unemployment figures were not published for both age and geography, so the proxy variable used cannot be expected to behave identically to the true youth unemployment. Nevertheless the regular unemployment figure and those for the youth unemployment were shown to correlate with approximately 93% on the national level so its use can still be defended.

The empirical results from the regression output for 2006 confirmed that the level of newly established firms in a municipality is negatively related to the youth unemployment of that municipality. Since the level of newly established firms is a proxy for entrepreneurial climate the hypothesis of the thesis is confirmed; the entrepreneurial climate does affect the youth unemployment negatively. When the level of newly established firms increase with one unit the unemployment will, on average, decrease with approximately 1.00 units, or percentage points. Thus it seems that the theory presented is working, when increasing the demand for labour, as shown in Figure 3.3, the excess supply diminishes.

This study thereby seems to confirm what other researchers have found (Fario et al. 2010; Garofoli, 1994 and Audretsch & Fritsch, 1994), namely a negative relationship between entrepreneurial climate and unemployment. However, some care should be taken since the database Företagsklimat is based on the members of Svenskt Näringsliv only. It cannot be assumed to be fully valid for those firms that are not included in the database.
The second proxy variable for entrepreneurial was found to be 0.03; the hypothesis regarding Firms is consequently rejected. The reasons for this could be several. Firstly there may be a relationship between Startups and Firms where Startups is the stronger one making Firms look insignificant in the regression output. However, if that would be the case the problem is not severe enough to create multicollinearity \(^4\) since the variance inflation factors (VIF) shows no sign of it, they are all well below 10. Secondly, the Startups variable reflects a flow whilst the Firms variable reflects a level. Therefore the changes in unemployment may be better corresponding to the changes in private firms, the Startups variable, since the value of the Firms variable is relatively small.

The first, out of the two, dummy variables Uni was significantly different from zero and had a positive relationship to the unemployment variable. The hypothesis presented for this variable was thereby confirmed. According to the regression output a municipality with a university campus has, on average, an unemployment figure that is approximately 1.6 units, or percentage points, higher than a municipality that does not have a university campus. With the new definition of unemployment, incorporating full-time students seeking employment, this is what could be expected.

The last dummy variable regarded municipalities with car factories and in the regression output based on the data from 2006 it was proved to be insignificantly different from zero. Thus the hypothesis made previously for this variable is rejected. The unemployment figures for municipalities with and without car factories are not statistically different from each other. Nevertheless, one should bear in mind that the data from 2006 reflects a year when the economy was strong in Sweden.

The overall goodness of fit of the model to the data is estimated with the adjusted R\(^2\). The figure presented in Table 6.4, indicates that 24% of the variations in unemployment can be explained by the model. This a fairly good value although it suggests that some influential factors have been left out by the model. This could be economic factors or possibly geographical factors which neither were incorporated in this model. Additionally, it could also be a result of lack of knowledge of the objects in the data. For example, the data states how large share of a municipalities population that is unemployed, however, it does not state the reason. In many cases persons that are unemployed may have a criminal background, problems with alcohol or drugs, which makes them difficult to hire even if new firms are being established in a municipality. It may also be the case that unemployed persons lack relevant competence making them unsuitable for newly established firms.

These findings help to show that as much as one can argue that educating youths is not a complete solution to the youth unemployment problem, neither is improving the entrepreneurial climate. In order to improve the situation for youths several measures must be taken and used together.

The regression output based on the data from 2009 provides more valuable insights. The most drastic change is that the dummy Car has become significantly different from zero on all levels of significance, indicating that a municipality with a car factory has an

\(^4\) Multicollinearity is the statistical term for a situation where the independent variables, those on the right-hand side in the regression equation, are correlated with each other. This can create inflated variances which in turn makes the t-values smaller. It thus seems that the variables are not significantly different from zero, even though they should be.
unemployment figure that is, on average, 3.58 units, or percentage point, higher than a municipality without a car factory. Thus, for this dataset the hypothesis regarding the Car variable is confirmed. Considering the change in economic situation in Sweden from 2006 to 2009 it seems reasonable.

Linked to the financial crisis that erupted in 2008 is the shift in the constant between the datasets; in 2006 it was approximately 13 and in 2009 almost 25. This suggests that the average municipality had a youth unemployment figure that was 12 percentage points higher in 2009 as compared to 2006, all else equal.

The StartUps variable is significantly different from zero and its hypotheses confirmed for this set of data as well. The Uni variable, however, is not significantly different from zero for this dataset. Looking a bit more carefully one can see that they have moved in the opposite directions; the impact of StartUps has increased whereas the impact of Uni has decreased. This suggests that the importance of a good entrepreneurial climate is of higher importance in recessions than in booms. Could this be interpreted to mean that the SME:s matters more in recessions as a result of large companies’ or public sector’s downsizings? If more firms are established in recessions, as the descriptive statistics indicate, but the youth unemployment still is higher the additional unemployment must originate somewhere. This would be an interesting topic for further studies.

The insignificance of the Uni variable first seemed surprising but when including psychology and expectations in the analysis it makes sense. In a recession full-time students may have lower expectations on the labour market and they might stop seeking employment, since they do not believe that they can acquire a job when the economic situation is that bad.

The adjusted $R^2$ for the regression output of the data from 2009 has almost doubled, when compared to the value from the 2006 year’s data; from 24% to 43%. This reinforces the discussion held previously that the entrepreneurial climate seem to be of higher importance in recessions.
8 Conclusion

The purpose of this thesis was to create a deeper understanding of the concepts youth unemployment and entrepreneurial climate as well as estimating the relationship between them. The hypothesis posed was that the entrepreneurial climate would affect the youth unemployment negatively in the Swedish municipalities, meaning that an improved entrepreneurial climate would lower the youth unemployment.

The answer to the first research question posed is that the causes of youth unemployment are several and exists on a macro level, globalism and technological progress, and a micro level, education system, entrepreneurial climate and regulations of the labour market. Nevertheless the suggested solutions are all originating at the micro level. For example the reform of labour market regulations, improvements of local entrepreneurial climates and more vocational training in the education system. The youth unemployment problem is severe to the society both due to the large costs it inflicts and the loss of revenues.

The answer to the second research question posed is that a good entrepreneurial climate is important for the economic development and job creation in a region. The most commonly suggested factors that constitute a good entrepreneurial climate are for example the attitudes in the municipality towards private firms, the service of the municipality and good communications in shape of company visits, newsletters, a one-stop-shop and a useful website. In addition it is important that the municipality can be appealing towards potential business owners and employees’ private needs.

The third research question regarded a quantitative analysis of youth unemployment and entrepreneurial climate in the Swedish municipalities and the result confirmed the hypothesis stated; the entrepreneurial climate is negatively related to the youth unemployment. This is in line with the studies made by Garofoli (1994), Audretsch and Fritsch (1994) and Fario et al. (2010).

Since the adjusted $R^2$ was fairly mediocre for both years examined it brings up the discussion of which other variables could be informative to include in this type of study. One suggestion made for future studies is to focus more on the impact of distances through transport costs from the larger cities in Sweden. Another suggestion is to look at the population of the municipalities to see whether firms’ strive to be located close to the potential customers is statistically important. A different angle of the topic would be to make case studies of unemployed to see in which extent they are difficult to hire even in the presence of job opportunities.
References


Lag om anställningsskydd. SFS 1982:80.


